

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-382
License No.: NPF-38
Report No.: 50-382/96-08
Licensee: Entergy Operations, Inc.
Facility: Waterford Steam Electric Station, Unit 3
Location: Taft, Louisiana
Dates: September 9-20, 1996
Inspectors: Ryan Lantz, Lead Inspector
Tom Meadows, Chief Examiner
Michael Murphy, Examiner
David Graves, Senior Project Engineer
Lee Keller, Senior Resident Inspector
Approved By: Tom McKernon, Acting Chief, Operations Branch
Division of Reactor Safety

ATTACHMENTS:

Attachment 1: Partial List of Persons Contacted
Attachment 2: Procedures Reviewed
Attachment 3: Simulation Facility Report
Attachment 4: Final Written Examination and Answer Key

EXECUTIVE SUMMARY

Waterford Unit 3 NRC Inspection Report 50-382/96-08

This inspection evaluated the competency of eight reactor operator license applicants to be issued operating licenses at your facility and also reviewed the licensed operator requalification program. The initial license examinations were developed by your facility using the pilot process program guidance and approved and administered by NRC examiners. Guidance for conduct of the pilot examinations was contained in Generic Letter 95-06 and Attachment 1 to Regional Office Interaction Memorandum 9525. The licensed operator requalification program was assessed to determine whether the program incorporated appropriate requirements for both evaluating operators' mastery of training objectives and revising the program in accordance with 10 CFR Part 55.59(c). The licensed operator requalification program assessment included an evaluation of the program's controls to assure a systems approach to training, and evaluation of operating crew performance during annual requalification examinations. This included review of the facility documents, observation of operating and staff crews during dynamic simulator scenarios and plant walkthroughs, and an assessment of the examination evaluators' effectiveness in conducting examinations.

The initial written examination was administered to eight reactor operator applicants on September 6, 1996. The operating tests were administered September 9 through 12, 1996. In general, all applicants displayed the requisite knowledge and skills to satisfy the requirements of 10 CFR 55 and were issued the appropriate licenses. No significant generic performance weaknesses were identified during the examinations. The facility's annual operating test for licensed operator requalification was administered September 16 and 17. The biennial comprehensive requalification written examination was not administered this cycle. All operators participating in the annual operating test for requalification passed their evaluated examinations. Although no examination compromise was indicated nor suspected, a potential vulnerability to the continued validity of the requalification examinations was identified in that the requalification program allows a substantial repetition of examination questions. Moreover, the requalification program allows the repetition of entire examinations during any given training cycle and during the comprehensive biennial written examination.

The inspection also included an evaluation of the plant referenced dynamic simulator used to conduct the examinations and the reference documentation used to produce the examinations.

Operations

- All applicants passed all portions of the initial license examinations and satisfied the requirements of 10 CFR 55.33(a)(2) and were issued the appropriate licenses in accordance with 10 CFR 55.51 (Sections O4.1, O4.2).

- Initial written examination scores ranged from 87 to 97 percent, with an average of 91.8. No generic knowledge or training deficiencies were identified (Section O4.1).
- All applicants displayed good communication skills, teamwork, plant system knowledge, and ownership of plant equipment (Sections O4.2, F8.1).
- Overall, the licensed operator requalification training program effectively implemented a systems approach to training (Section O5.4).
- Requalification annual examinations were comprehensive and discriminated at the appropriate level, with some observations of potential vulnerabilities noted (Sections O5.2, O5.3).
- The licensed operator requalification facility evaluators administered the examinations professionally and in accordance with accepted industry practices (Section O5.1).
- The requalification program was effective in tracking and maintaining operator license requirements (Section O5.4).
- The licensee's training bank of written questions, simulator scenarios, and job performance measures was diverse and satisfied the requirements of 10 CFR 55.59 (Section O5.5).
- The licensee's process for reviewing procedure changes and design modification for inclusion or changes in the training program was satisfactory (Section O5.6).
- Licensed operator requalification facility audits were comprehensive, self-critical, and identified areas for potential improvement (Section O7.1).

Plant Support

- Plant housekeeping was very good (Section F8.1).

Report Details

I. Operations

O1 Conduct of Operations

O1.1 General Observations

a. Inspection Scope

During the in-plant main control room section of the initial examination walkthroughs, the examiners observed the on-shift operators during routine operations of the facility. The facility was at 100% power for the duration of the inspection, and all observations were conducted during the day shift, coincident with conduct of the walkthrough examinations.

b. Observations and Findings

Crew communication was clear, unambiguous, consistently three legged, and consistent with communication observed in the simulator during conduct of both the initial and requalification simulator examinations. The on-shift crews exhibited professional demeanor and the senior operators maintained a position of oversight and command and control. Shift operators were professional, in control of plant activities, and aware of on going shift work. Operators were aware of current plant evolutions and work in progress.

c. Conclusions

The control room staff exhibited professionalism and good communications and command and control.

O4 Operator Knowledge and Performance

O4.1 Initial Written Examination

a. Inspection Scope

The initial written examination was developed by the facility and submitted to the chief examiner for review and approval for use as an NRC license examination. The chief examiner reviewed and approved the draft as submitted, with only minor editorial and construction type revisions. The examination was administered onsite on September 6, 1996.

b. Observations and Findings

The reference material provided by the facility was adequate to support final review of the examination. The facility was responsive and provided additional material, as requested, during final review of the examination.

The facility presented a draft written examination that was technically valid and discriminating. Only minor non-technical editing was required prior to examination administration. The post administration review did not identify any additional modifications, with the exception of an answer key error which was corrected.

The chief examiner graded the examinations with scores ranging from 87 to 97 percent, and an average score of 91.8 percent. Only one question was missed by 50 percent or more of the applicants.

c. Conclusions

All eight applicants passed the written examination portion of the license examination. The licensed operator training program was effective in adequately preparing license applicants for the examinations and subsequent licensed duties. Evaluation of the graded examinations did not identify any generic knowledge or training weaknesses.

04.2 Initial Operating Test

a. Inspection Scope

The operating test was developed by the facility, then reviewed and approved by the chief examiner. NRC examiners administered the operating test from September 9 through 12, 1996. The examiners evaluated the applicants in three areas to assess their ability to safely operate the facility. The first area, integrated plant operations, evaluated the applicants functioning in shift crews and responding to component and instrument failures, and a major plant transient or accident, and utilized the dynamic plant referenced simulator in two or more scenarios. The second area, control room and plant systems, required each applicant to respond to simulated tasks or plant conditions, using the appropriate facility procedures as a guide to complete the tasks. The third area, administrative topics, consisted of an oral examination of the applicants' administrative knowledge of facility operations.

b. Observations and Findings

The reference material provided by the facility was adequate to support final revision of the examination. The facility was also responsive to the pilot examination process, providing appropriate staff and draft materials early in the

examination development effort, working closely with the chief examiner. The licensee staff involved in development of the examinations signed an examination security agreement that was in effect during development and administration of the examinations.

The facility draft operating examination was technically valid and discriminating as submitted for review by the chief examiner. The chief examiner made only minor changes to the examination prior to final approval and administration.

During the integrated plant operations simulator examinations, the examiners observed that the applicants consistently used formal, three legged communication. The applicants referenced and correctly implemented appropriate procedures when required, and exhibited good control board awareness and operating and diagnostic skills. During the job performance measure and administrative areas of the operating test, the applicants exhibited good plant systems and administrative knowledge of the facility. All of the applicants passed all sections of the operating test.

c. Conclusions

All applicants passed the operating test with no significant generic weaknesses observed. Communications, command and control, and system knowledge were noted strengths.

05 Operator Training and Qualification

05.1 Regualification Examination Administration

a. Inspection Scope

The inspectors observed the administration of all aspects of the requalification examination to determine the evaluators' ability to administer an examination and assess adequate performance through measurable criteria. The inspectors conducted interviews to determine the knowledge level of the managers, supervisors, and instructors with regard to the requalification program implementation. The inspectors also noted the fidelity of the plant simulator to support training and examination administration.

b. Observations and Findings

The inspectors observed two crews of four licensed operators each, during conduct of the dynamic simulator scenarios and job performance measure evaluations. Six training staff evaluators were observed administering the examinations, including preexamination briefings, observations of operator performance, individual and group evaluations of observations, techniques for job performance measure cuing, and final evaluation documentation. Although

differences were noted by the inspectors in feedback to the examinee regarding simulated actions by the examinee, evaluators provided appropriate responses as necessary. The evaluators conducted the examinations professionally, with no inadvertent cuing, and were thorough in their documentation of observed weaknesses and areas for improvement. The evaluators passed all of the operators on all portions of the examinations. Although the inspectors were not coevaluating the examinations, the inspectors concurred with the facility evaluations.

The inspectors conducted interviews with two licensed operators, two trainers who were also licensed operators, the licensed operator training supervisor and the training manager. The inspectors questioned the staff to determine their level of knowledge of the facility training program, and their perception of the adequacy of the program to maintain licensed operator skills. Each staff member interviewed, and others not formally interviewed, were very knowledgeable of program requirements and held a generally positive opinion of the effectiveness of the program. The training staff was familiar with all requalification program requirements, however, the two operators that were interviewed did not have a good understanding of the regulatory requirements for an annual operating test and comprehensive biennial written examination. Each of the two operators gave different, incorrect answers when asked about the regulatory periodicity requirements for requalification examinations.

c. Conclusions

The facility evaluators effectively implemented the examination of operators to identify deficiencies or weaknesses in the trainees and the training program. The training staff was knowledgeable in the regulatory and facility requirements for requalification, however, in some instances, licensed operators relied on training department to ensure the requirements to maintain their licenses were met. The facility evaluators administered the examinations professionally and in accordance with industry standards.

05.2 Requalification Written Examinations

a. Inspection Scope

The inspectors reviewed the biennial comprehensive written examination that was administered August through September, 1995, and the weekly written examination that was administered during the inspection on September 19, 1996. The examinations were reviewed to evaluate their validity as a licensing examination and for compliance with facility program requirements.

b. Observations and Findings

The examinations were reviewed using guidance of NUREG-1021, "Operator Licensing Examiner Standards," for construction, scope of coverage, and cognitive level. The biennial examination questions tested at the appropriate level of comprehension and were linked to important learning objectives. The questions were operationally oriented and realistic. The examinations were well structured and comprehensive.

The examinations that were administered to reactor operators and senior operators were identical, tested at a reasonably high cognitive level of knowledge, and sampled from topics as required by the facility training procedure NTC-108, "Licensed Operator Requalification," Revision 5, and the regulations in 10 CFR 55.41 and .43. The current revision of training department instruction NTI-OP-004, "Examination/ Quiz Development," Revision 5, which implements NTC-108, requires that 5 of the 40 questions on the biennial examinations be identified as senior operator only. Revision 4 of NTI-OP-004 was in effect at the time the biennial exam was developed and administered, but was unavailable to reference. NTI level documents are not formally controlled by the facility document control program and are not required to be maintained after revision. A copy of revision 3 to NTI-OP-004 was located, and indicated that between revision 3 and 5 the requirement was added which quantified the number of questions on a biennial examination that should be SRO only. Common to all of the revisions was Attachment 8.2, "Written Examination/Quiz Checklist," which required the examination drafter to identify SRO unique questions, but not quantitatively how to disposition them. Also, Attachment 8.8, "Written Examination Worksheet," required the examination drafter to identify which questions are SRO only, although it does not give quantitative requirements. The inspectors reviewed the biennial written examinations and estimated that on average, the exams contained 2 to 3 questions that would be considered as senior operator only level of knowledge.

c. Conclusions

The biennial comprehensive written requalification examinations administered by the facility were valid licensing examinations, with appropriate scope, depth, and cognitive level. One potential vulnerability was noted in that testing reactor operators and senior operators at the same level may reduce the opportunity to evaluate the reactor operator on additional reactor operator level tasks, and conversely, may reduce the opportunity to test the senior operators in senior operator only type knowledges and abilities. The inspectors were unable to determine if the licensee failed to meet its expectation for examination development due to the unavailability of the applicable revision of the training instruction.

05.3 Requalification Annual Operating Test

a. Inspection Scope

The inspectors reviewed the annual operating test that was administered on September 16 and 17, 1996. The inspectors used the guidance in NUREG-1021 to determine the validity of the examinations to provide a basis for evaluating the examinee's knowledge of abnormal and emergency operating procedures and operation of plant systems. The inspectors also reviewed the licensee's administrative procedures for developing, administering, grading, and evaluating the examinations and conducted interviews with training management, instructors, evaluators, and examinees.

b. Observations and Findings

The licensee's training staff indicated that the guidelines of NUREG-1021 were substantially utilized for the development and administration of the licensed operator requalification examination, in addition to the facility requalification training procedures.

The job performance measures were in accordance with the guidance of NUREG-1021, contained performance standards that were clear and objective, and critical task acceptance criteria were well defined and measurable. The job performance measures adequately supported topic areas from the licensed operator requalification program 2-year training plan.

The scenarios were also developed using the guidance of NUREG-1021 and contained clearly stated objectives. The initial conditions of the scenarios were realistic and the scenarios consisted of related events. The scenarios had been previously validated by the training staff and allowed the evaluators to measure the examinees' competencies commensurate with the scenario objectives.

The simulator scenarios and job performance measures were reviewed to ensure that the task was current and that the procedures referenced in the examination instruments were current. All procedures referenced in the simulator scenarios and the reviewed job performance measures were found to be current.

c. Conclusions

The annual operating examinations were comprehensive and discriminated at the appropriate level.

O5.4 Review of Requalification Program Guidance

a. Inspection Scope

This portion of the inspection was conducted to determine the effectiveness of the methodology used to develop and construct the requalification examinations and to assess the effectiveness of the examinations to identify retraining needs and measure the examinees' subject knowledge. The inspectors utilized the guidance of NUREG-1220, Rev 1, "Training Review Criteria and Procedures," to evaluate the requalification program's ability to meet elements 4 and 5 of a systems approach to training. The inspectors evaluated the ability of the program to ensure that conditions of the operator licenses are met and maintained. This evaluation included review of the feedback tracking system and remedial training program.

b. Observations and Findings

The inspectors reviewed the requalification program guidance and verified that it met and implemented the requirements of 10 CFR 55.59, "Requalification."

The inspectors reviewed two remedial training programs that had been established for operators that failed a training cycle examination. The remedial program was focused on the identified weak areas and adequately retested the operator prior to returning to licensed duties.

The inspectors noted that the requalification program guidance permitted a 20 percent duplication of examination questions when comparing the developed examinations for a given training cycle, and that during a seven week training cycle where five examinations would be given, only three examinations were required to be developed. This policy would allow an examination to be generated that had no new questions when compared to other examinations in the same cycle, and would also allow a repeat of a previously administered examination to two of the five crews being tested. The inspectors expressed concern that this practice of not requiring some percentage of new questions on subsequent examinations to be a decrease in the effectiveness of barriers to potential examination compromise, and therefore examination validity. The licensee stated that, although this policy did remove one barrier to potential examination compromise, they were confident that additional compensatory measures in place provided adequate assurance for examination integrity. The inspectors agreed that no apparent compromise had been suspected or evidenced, and lacking definitive regulatory guidance, this practice did meet the requirements of the licensee's systems approach to training INPO accredited requalification program.

The inspector reviewed Operating Instruction OI-024-000, "Maintaining Active SRO/RO Status," Revision 5. The procedure contained all of the requirements of 10 CFR 55.33 regarding maintaining current SRO/RO active status and the steps necessary to upgrade an operator license from inactive to active status.

The licensee had a total of 12 licensed operators (10 senior reactor operators and 2 reactor operators) who were maintaining inactive licenses. All of the inactive licenses were in the training department with the exception of the operations manager. The inspector reviewed the documentation associated with reactivation of five licenses between March 1995 and June 1996. Control room operating logs were reviewed to verify that the individuals were logged into the log as part of the operating crew and in the appropriate position. All requirements were found to be satisfied for each licensee.

c. Conclusions

The licensee met the requirements of their requalification program and the governing regulations in 10 CFR 55.59. The licensed operator requalification program effectively implemented a systems approach to training to identify operator performance and training weaknesses and modify the training and evaluation program to correct the identified weaknesses. The requalification program accurately tracks, maintains, and controls the conditions of operator licenses and reactivation of inactive licenses in accordance with 10 CFR 55.53(e) and (f).

05.5 Examination Development Materials

a. Inspection Scope

The inspectors reviewed items in the licensee's examination bank, including simulator scenarios, job performance measures, and written examination questions.

b. Observations and Findings

The inspectors determined that the licensee's examination bank contained 205 different scenarios at the time of the inspection. The operations training supervisor stated that the scenarios were reviewed immediately prior to use to ensure that they were current with the effective procedure revision and were accurate with regard to expected and required actions. The scenarios utilized in the observed operating examination had been reviewed and approved by training department personnel several days prior to the examinations.

The inspectors reviewed the licensee's Licensed Operator Requalification Sample Plan and Two Year Guide. The sample plan provided good coverage of the topics referenced in the regulations. The 13 simulator scenarios developed for

use during the current requalification cycle were reviewed and compared to the plant transients and evolutions listed in 10 CFR Part 55.45(a). The simulator scenarios, in the aggregate, contained an adequate number of events to satisfy the requirements of the regulations.

The licensee's bank of job performance measures contained 1,577 job performance items including tasks for non-licensed operators, reactor operators, and senior reactor operators. Of those tasks, 78 had Knowledge and Ability ratings of 2.5 or higher, which is the minimum utilized for examination purposes. The licensee's training bank of written examination questions contained 4,325 items. Of that number, 851 items had Knowledge and Ability ratings of 2.9 or greater.

New test items were generated regularly as new procedures were issued, as information changed, or as program requirements were revised. Additionally, the licensee was in the process of updating the Knowledge and Ability reference for all items in the training bank to the August 1995 revision of NUREG 1122, "Knowledges and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors."

c. Conclusions

The licensee's training bank of written questions, simulator scenarios, and job performance measures was diverse and varied enough to satisfy the requirements of 10 CFR 55.59.

O5.6 Review of Design Change Training Feedback

a. Inspection Scope

The inspectors reviewed the procedure change process, the design modification process, and several design modification packages to determine whether training requirements were identified and implemented.

b. Observations and Findings

Operations Instruction OI-019-000, "Operations Procedure Administration Group," Revision 11, step 5.12.18, directed that the cover sheet from procedure changes, which identified the scope of the change, be sent to the training department for review. The training manager then assigned an individual to review the associated procedure change for inclusion, as necessary, into the training program and subsequent revision of training material as appropriate.

With regard to design changes, Site Procedure W4.102, "Design Changes," Revision 4, step 6.8.4, stated that, prior to operational acceptance of a design modification, required training, procedure changes, and surveillances that impact the equipment affected by the design change have been performed.

Ten design modification packages were reviewed to determine whether the changes were reviewed for training required or impact on existing training methods and materials. In all ten cases, the licensee provided the training requests, or similar documentation that verified that the modification had been reviewed for training requirement applicability. The training requests were sufficiently detailed to determine that the modification packages had been adequately reviewed and evaluated by the licensee, and that the necessary changes to the training program had been implemented.

c. Conclusions

The licensee's process for reviewing procedure changes and design modification for inclusion or changes in the training program was satisfactory.

07 Quality Assurance in Operator Training

07.1 Review of Operations Quality Assurance Audits

a. Inspection Scope

The inspectors reviewed the results of Quality Assurance Audit SA-96-003.1, "Performance, Training, and Qualification," conducted May 7 through June 18, 1996, which included an audit of the licensed operator requalification program. The inspectors reviewed an additional audit of the licensed operator requalification program that was conducted June 3 through 6, 1996.

b. Observations and Findings

The quality assurance audit and the additional audit both utilized personnel from outside the Entergy organization. Both audits were comprehensive and critical with items for improvement noted in both reports. Training requests were initiated and tracked regarding the identified areas for improvement. No items were identified related to licensed operator training or requalification that resulted in condition reports being initiated.

c. Conclusion

The audits performed in the area of licensed operator requalification were comprehensive, self-critical, and identified areas for potential improvement.

O8 Miscellaneous Operations Issues

O8.1 Review of the Updated Final Safety Analysis Report Commitments

A recent discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report description highlighted the need for a special focused review that compares plant practices, procedures, and/or parameters to the Updated Final Safety Analysis Report descriptions. While performing the inspection discussed in this report, the inspector reviewed the applicable portions of the Updated Final Safety Analysis Report that related to the areas inspected. The inspector verified that the Updated Final Safety Analysis Report section for licensed operator replacement and requalification training was consistent with the observed plant practices and procedures.

IV. Plant Support

F8 Miscellaneous Fire Protection Issues

F8.1 General Comments

The inspectors observed general plant housekeeping incident to administration of the in plant job performance section of the operating test. The facility was reasonably clean and well lighted and the floors were clear and free from debris. The applicants were conscientious to note discrepancies and inform the main control room.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the preliminary results to members of the licensee management at the conclusion of the inspection on September 20, 1996. The licensee acknowledged the findings presented. An interim exit meeting was held on September 13, 1996, when the chief examiner presented observations following the conclusion of the initial license examinations.

The licensee did not identify as proprietary any information or materials examined during the inspection.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Brown, Operations Training Supervisor
C. Dugger, General Manager, Operations
J. Fisicaro, Director, Nuclear Safety
B. Fletcher, Licensed Operator Trainer
C. Fugate, Shift Superintendent, Operations
T. Gaudet, Licensing Manager
S. Hymel, Licensed Operator Trainer
J. Lenz, Emergency Planning Manager
D. Matheny, Operations Manager
J. O'Hern, Training Manager
O. Pipkins, Licensing
R. Pradus, Senior Engineer, Licensing
M. Sellman, Vice President, Operations
H. Shrum, Shift Superintendent, Operations
W. Smith, Simulator Supervisor, Training
G. Wilson, Coordinator, Quality Assurance
A. Vest, Senior Instructor, Operations

NRC

T. Pruett, Resident Inspector
L. Ricketson, Inspector

ATTACHMENT 2

PROCEDURES REVIEWED

W4.102, Design Changes, Revision 4

OI-019-000, Operations Procedure Administrative Group, Revision 11

OI-024-000, Maintaining Active SFO/RO Status, Revision 5

Design Change Packages:

DCP 3076, Revision 2

DCP 3268, Revision 5

DCP 3311, Revision 2

DCP 3374, Revision 3

DCP 3383, Revision 4

DCP 3385, Revision 2

DCP 3390, Revision 0

DCP 3459, Revision 0

DCP 3460, Revision 2

DCP 3461, Revision 1

QA Audit SA-96-003.1, Performance, Training, and Qualification

Westrain Inspection of Waterford 3 Training Licensed Operator Requalification Program

NTP-101, "Operations Training Program," Revision 8

NTP-006, "Control and Administration of Examinations," Revision 7

NTC-108, "Licensed Operator Requalification," Revision 5

NTI-OP-003, "Control of Job Performance Measures," Revision 3

NTI-OP-004, "Examination/ Quiz Development," Revision 3 and 5

NTI-OP-005, "Examination/ Quiz Administration," Revision 4

NTI-OP-007, "Control of Simulator Events and Scenarios," Revision 1

NTI-OP-008, "Licensed Operator Requalification," Revision 1

NTI-OP-009, "Conduct of Simulator Training," Revision 1

1995 Licensed Operator Requalification Annual Written Examination
W-3-EXM-LOR-95501, 95502, 95503, 95504, 95505, 95506, 95507

1996 Licensed Operator Requalification Annual Operating Test

ATTACHMENT 3

SIMULATION FACILITY REPORT

Facility Licensee: Waterford Unit 3

Facility Docket: 50-382

Operating Examinations Administered at: Waterford Training Center, Killona, La.

Operating Examinations Administered on: September 9-17, 1996

These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility, other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

No simulator modeling or performance issues were identified during the preparation and administration of the examinations. The simulation facility displayed excellent fidelity, with only minor exceptions previously identified by the staff and specifically briefed to the applicants prior to each training scenario session.

ATTACHMENT 4

FINAL WRITTEN EXAMINATION AND ANSWER KEY

U. S. NUCLEAR REGULATORY COMMISSION
SITE SPECIFIC
WRITTEN EXAMINATION
REACTOR OPERATOR LICENSE
REGION 4

APPLICANT'S NAME: _____
FACILITY: WATERFORD III
REACTOR TYPE: PWR-CE80
DATE ADMINISTERED: 96/09/06

INSTRUCTIONS TO APPLICANT:

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. Each question is worth one (1) point unless otherwise indicated in parentheses after the question. The passing grade requires a final grade of at least 80%. Examination papers will be picked up four (4) hours after the examination starts.

| <u>TEST VALUE</u> | <u>APPLICANT'S SCORE</u> | <u>%</u> | |
|-------------------|------------------------------|-------------------|--------|
| <u>100.00</u> | | <u> </u> % | TOTALS |
| | <u>FINAL GRADE</u> | | |

All work done on this examination is my own. I have neither given nor received aid.

Applicant's Signature

1.

Clearance tags are being removed from Control Room AHU cooling coil D. The outlet isolation valve CHW 599D is required to be positioned $4 \frac{2}{3}$ turns open. As independent verifier how would you check this position?

- A. Visually observe the positioner throttling the valve to the correct position.
- B. Move the valve slightly in the closed direction and then return it to its original position.
- C. Inspect the last valve lineup sheet for verification signature and compare recorded valve position with the required position.
- D. Compare stem or indicator position with the remote indication position.

2.

You have to drain the Demin Water Storage Tank via the normally closed bottom drain valve due to a maintenance requested outage. How will this drain valve be documented open and documented restored after the outage.

- A. Open the valve, check level in tank every 2 hours until drained, then reclose valve. Document draining and closing in the Watch Station Log.
- B. Lock the drain valve open. Unlock and close the drain valve after the outage. Document IAW OP-100-009, Control of Valves and Breakers.
- C. Open the drain valve. Reclose the drain valve after the outage. Document opening and closing the drain valve with a clearance using an asterisked item.
- D. Caution tag the drain valve open. Remove the caution tag and close the valve after the outage. Document manipulations with a deviation sheet.

3.

What is a Radiation Worker's Total Effective Dose Equivalent (TEDE) if he/she received the following doses during a calendar year?

| | |
|---|-----------|
| Deep Dose Equivalent (DDE): | 1.060 REM |
| Shallow Dose Equivalent (SDE): | 1.735 REM |
| Lens Dose Equivalent (LDE): | 1.514 REM |
| Committed Effective Dose Equivalent (CEDE): | 2.078 REM |

- A. 2.795 REM
- B. 3.138 REM
- C. 4.309 REM
- D. 5.327 REM

4.

A valve reads 300 mr/hr behind 2 inches of lead. What will it read when the lead is removed?

- A. 600 MR/HR
- B. 6000 MR/HR
- C. 3000 MR/HR
- D. 30000 MR/HR

5.

In accordance with OI-002-000, Annunciator and Alarm Status Control, what documentation must be completed in order to clear the Equipment Out of Service checklist for a safety related annunciator and return it to operable status when a Temporary Alteration is to remain installed?

- A. No action is required to clear the Equipment Out of Service checklist.
- B. The Temporary Alteration safety and engineering review must be completed with a satisfactory response.
- C. A Condition Report must be generated stating the acceptability of operation with the Temporary Alteration installed.
- D. An immediate work Condition Identification must be generated to ensure prompt repair of the condition causing the installation of the Temporary Alteration.

6.

Which of the following best describes the condition in which the working hour policy (UNT-005-005) applies?

- A. a person working in training performing simulator operations
- B. a person working on a procedure revision for a quality related system
- C. a person working on a non-safety related system or component
- D. a person working on safety-related system or component

7.

Which of the following best describes how far back in the Station Log an oncoming operator must review, prior to shift turnover, if that individual has not been on shift for 60 days?

- A. since the last shift watch that was stood
- B. three days
- C. one week
- D. two weeks

8.

Fuel is being reloaded into the reactor vessel when the Shift Supervisor informs you that one startup channel neutron flux monitor has failed. Which of the following describes the required action?

- A. Fuel reload may continue provided backup boron samples are taken every 4 hours.
- B. Fuel reload may continue provided the inoperable channel is returned to operable status within 4 hours.
- C. Suspend core alterations until boron sampling has been initiated every twelve (12) hours for 36 hours.
- D. Suspend core alterations until the inoperable channel is returned to operable status.

9.

The limitation on secondary system specific activity ensures that the resultant off-site dose will be acceptable. This dose projection includes a _____ gpm primary to secondary leak on the affected S/G with a concurrent _____.

- A. 0.5, 1 micro curie primary activity
- B. 1.0, loss of offsite power
- C. 0.5, loss of offsite power
- D. 1.0, 1 micro curie primary activity

10.

Reverification of a field controlled copy of a procedure is required to be performed every _____.

- A. 1 day
- B. 7 days
- C. 14 days
- D. 30 days

11.

All of the following tasks are allowed to be performed as an Informational Use procedure except:

- A. Inserting or Withdrawing CEAs
- B. Adding hydrogen to the VCT
- C. Processing Waste Tanks to Waste Condensate Tanks
- D. Shifting Instrument or Station Air Compressors

12.

Which of the following is the bases for tripping the RCPs with RCS pressure <1621 psia following a LOCA?

- A. To eliminate RCP heat input to the RCS
- B. To minimize core uncover due to phase separation
- C. To prevent damage to the RCP impeller
- D. To prevent damage to the RCP seals

13.

Which hand held fire extinguisher is available at Waterford-3 for use on flammable liquid fires?

- A. Pressurized water
- B. Pressurized Aqueous Foam
- C. Dry chemical
- D. Carbon Dioxide

14.

Which ONE of the following interlocks/permissives in CEDMCS is provided by the reed switch position transmitters (RSPT)?

- A. Lower Group Stop.
- B. Upper Electrical Limit.
- C. Upper Control Limit.
- D. Upper Group Stop.

15.

The Primary Operator is withdrawing CEA's in the Manual Sequential mode during a Reactor Startup. Regulating Group 5 has just started outward motion from 0.0 inches. At what Reg. Group 5 position should Reg. Group 6 start outward motion?

- A. 50 inches
- B. 75 inches
- C. 100 inches
- D. 125 inches

16.

WHICH ONE (1) of the following describes the generation of a CEDMCS CEA Withdrawal Prohibit (CWP)?

- A. Initiated by the pulse counter CEA Position Indication System in response to a 2/4 PRETRIP condition on DNBR and prohibits ALL outward movement of regulating CEAs.
- B. Initiated by the Plant Protection System (PPS) in response to a 2/4 PRETRIP condition on DNBR and prohibits ALL outward group movement of CEAs.
- C. Initiated by the pulse counter CEA Position Indication System of the Plant Computer in response to OUT OF SEQUENCE condition and prohibits ALL outward movement of CEAs.
- D. Initiated by the Plant Protection System (PPS) in response to OUT OF SEQUENCE condition and prohibits ALL outward group movement of CEAs.

17.

While performing a reactor startup which of the following indicates the earliest time that you should anticipate criticality?

- A. When the shutdown banks are being withdrawn
- B. When the first regulating group is being withdrawn
- C. When the 1/M plot indicates criticality within the next 100"
- D. When inside the window of five to seven doublings

18.

A cooldown and depressurization is in progress. RCS pressure is currently at 1100 psia and seal pressures for RCP 1B are:

Vapor: 40 psia
Upper: 40 psia
Middle: 530 psia

Which RCP seal has failed?

- A. lower seal
- B. middle seal
- C. upper seal
- D. vapor seal

19.

Which of the following is the reason for preventing the start of the fourth Reactor Coolant Pump until RCS temperature is greater than 500°F?

- A. To prevent exceeding RCS heatup rate limits.
- B. To prevent excessive RCP starting currents.
- C. To limit Steam Generator tube stresses.
- D. To limit core uplift.

20.

Which of the following equipment receive an SIAS signal?

- A. CVC 101, letdown stop valve; CVC 103, letdown inside containment isolation valve; CVC 109, letdown outside containment isolation valve.
- B. CVC 169, VCT inlet valve; BAM 133, emergency boration valve; CVC 507, RWSP to charging pumps suction.
- C. BAM 143, direct boration valve; CVC 209, charging header isolation valve; CVC 401 RCP controlled bleedoff isolation valve.
- D. BAM 113A(B), BAMT A(B) gravity feed valves; CVC 103, letdown inside containment isolation valve; BAM 126 A(B), BAMT Pump A(B) recirculation isolation valve.

21.

If CVC 115, the CVCS letdown 650 psig relief valve, inadvertently lifts, which of the following indications is expected?

- A. Back pressure regulating valve closes down
- B. VCT level rises slowly
- C. Letdown Flow rises
- D. Letdown Heat exchanger temperature rises

22.

The plant is in Mode 3 with PLCS and Letdown in automatic. The NPO notes letdown flow rising. Which of the following is a possible cause?

- A. Loss of Instrument Air to Letdown backpressure regulating valve
- B. The selected PZR level control channel has failed high
- C. VCT level has dropped to less than 6%
- D. Steam line 1 Atmospheric Dump valve controller setpoint has failed low

23.

The following conditions exist:

- A feedline break has occurred inside containment.
- Containment pressure is 17.5 psia.
- Containment radiation is normal.
- PZR pressure is 1825 psia.
- RWSP level is 90%.
- SG pressures are (SG1) 925 psia, (SG2) 580 psia.
- SG levels are (SG1) 50% WR, (SG2) 20% WR.

All of the following actuation signals should have occurred with the exception of:

- A. SIAS
- B. MSIS
- C. EFAS 1
- D. CSAS

24.

After a reactor trip a secondary safety lifts and an uncontrolled cooldown commences. Automatic Safety Injection Actuation and Main Steam Isolation Signals fail to actuate and are initiated manually by the PNPO. All of the following occur except:

- A. The Containment Cooling system realigned
- B. Containment Isolation
- C. Letdown has isolated
- D. The Safeguards Pump Room coolers started

25.

If the Excore Nuclear Instrumentation (ENI) Safety Channel upper detector were to fail low at power, the associated (selected) startup channel would:

- A. not energize on a reactor trip
- B. energize high voltage
- C. not be effected
- D. energize its 10-6% bistable

26.

Which of the following describes an automatic function of the 1 E-4% bistable?

- A. bypasses High log power trip
- B. bypasses High S/G level trips
- C. enables High log power trip
- D. enables High S/G level trips

27.

Which of the following could be an indication of core uncover? (Assume instruments are accurate)

CET Temperature equal to:

- A. 550° F with RCS pressure equal to 1100 psia
- B. 570° F with RCS pressure equal to 1300 psia
- C. 590° F with RCS pressure equal to 1350 psia
- D. 610° F with RCS pressure equal to 1700 psia

28.

With Hot and Cold leg injection in progress, which of the following temperature indications should be used to monitor RCS temperature?

- A. Representative CET
- B. Hot leg Safety Channel
- C. Cold leg Safety Channel
- D. Subcooled Margin

29.

Which of the following best describes the configuration of the Containment Fan Coolers following an SIAS signal.

- A. Three fans start or shift to fast speed. The CCW outlet flow control valves will go to the two fan flow setpoint (1400 gpm).
- B. Three fans start or shift to slow speed. The CCW outlet flow control valves will go to the two fan flow setpoint (1400 gpm).
- C. All fans start or shift to fast speed. The CCW outlet flow control valves will go full open for maximum flow (2700 gpm).
- D. All fans start or shift to slow speed. The CCW outlet flow control valves will go full open for maximum flow (2700 gpm).

30.

Which of the following provide electrical power to the Containment Cooling Fans.

- A. MCC 317AS and MCC 317BS
- B. MCC 313AS and MCC 313BS
- C. 31AS and 31BS
- D. MCC 312AS and MCC 312BS

31.

Assuming all condensate pumps are running, and both Main Feedwater Pumps are running with HP Governor valves open, what, if any, would be the result if the B and C condensate pump were to trip? (ignore suction pressure trips)

- A. MFW pump 'A' would trip
- B. MFW pump 'B' would trip
- C. Both MFW pumps would trip
- D. Neither MFW pump would trip

32.

An EFAS 1 signal will be present for which of the following? (consider each answer separately)

- A. S/G 1@ 20% NR, S/G 2@ 26.5% NR, S/G 1 & 2 @ 600 psia
- B. S/G 1@ 30% NR, S/G 2@ 25% NR, S/G 1@ 700 psia, S/G 2@ 680 psia
- C. S/G 1@ 15% NR, S/G 2@ 20% NR, S/G 1@200 psia, S/G 2 @ 400 psia
- D. S/G 1@ 5% NR, S/G 2@ 10% NR, S/G 1@ 500 psia, S/G 2 @370 psia

33.

Given the following plant conditions:

S/G 1 820 psia (constant); WR level 57%

S/G 2 530 psia (dropping); WR level 54%

EFAS 1&2 MANUALLY initiated

SIAS CIAS & MSIS initiated.

All other EFW flow controls in automatic

Which of the following statements describes the status of the Emergency Feedwater system?

- A. S/G 1 EFW Flow Isolation valves can be closed.
- B. S/G 2 EFW Flow Isolation valves are closed due to the MSIS.
- C. S/G 1 EFW flow control valves will maintain 400 gpm until reaching level Y.
- D. S/G 2 EFW flow will continue until level reaches level X.

34.

All of the following are possible causes of automatic termination of WCT discharge to Circulating Water except:

- A. Loss of sample flow
- B. Loss of radiation monitor power supply
- C. High discharge conductivity
- D. Low Waste Condensate Tank Level

35.

Select the most correct reason for restoring FHB Normal Ventilation Supply and Exhaust Fans as soon as possible following high airborne activity in the FHB.

- A. High differential pressure prevents personnel from entering/exiting the FHB.
- B. Minimize changes in Spent Fuel Pool and Refueling Cavity level if Fuel Transfer Tube Gate Valve is open.
- C. Minimize evaporation of water in the Spent Fuel Pool.
- D. Restore ventilation to the Spent Fuel Pool Cooling Pumps.

36.

Which of the following occurs when one of the train A radiation monitors CROAI A North (0200.1) or CROAI A South (0200.5) for the control room air intake reaches its high radiation alarm setpoint?

- A. All air intake to the RAB is secured.
- B. Control room Toilet Exhaust Fan A starts.
- C. Control Room Normal Air Handling Unit A stops
- D. Control room Emergency Filtration Unit A starts.

37.

When cooling down the plant per OP-010-001, General Plant Operations, when are the Low Temperature Over pressure Protection Relief Valves (LTOP's) required to be aligned for service?

- A. Prior to closing the Safety Injection Tanks' Isolation Valves.
- B. Prior to entering Mode 4.
- C. Prior to placing both Letdown Flow Control Valves in service.
- D. Prior to reducing RCS temperature to 272 °F.

38.

Prior to plugging 10 percent of the U-tube area in each steam generator, the plant operated at 100% power with RCS Tave at 574°F and a steam pressure of 850 psia. To what value must Tave be changed in order to maintain the same Steam Generator pressure at 100% power? Assume RCS flow rate was unaffected by the tube plugging.

- A. 577.4°F
- B. 579.4°F
- C. 581.4°F
- D. 583.4°F

39.

The Reactor Coolant System Vents are required to be operable in Modes 1, 2, 3, and 4 to:

- A. Limit combustible mixtures.
- B. Prevent steam or non condensables from interfering with natural circulation.
- C. Equalize pressure between the Pressurizer and the Reactor Vessel head.
- D. Ensure that hot leg injection reaches the core.

40.

The motor overload relays for SI-602A & B (Safety Injection Sump outlets) are bypassed . . .

- A. On RAS to ensure the valves can be opened.
- B. On RAS to ensure the valves can be closed.
- C. On SIAS to ensure the valves can be opened.
- D. On SIAS to ensure the valves can be closed.

41.

Select the reason HPSI Cold Leg Injection Flow Control Valves go to a throttled position on an SIAS.

- A. To reduce the HPSI Pump starting current if RCS pressure is below shutoff head.
- B. To minimize back flow from the RCS in the event a HPSI Pump fails to start.
- C. To prevent HPSI Pump runout and balance flow to each of the cold legs.
- D. To limit HPSI flow such that RAS does not occur earlier than assumed in the safety analysis.

42.

The purpose of energizing the Pressurizer Backup Heaters when Pressurizer level rises above Programmed Level during an in-surge is:

- A. To raise Pressurizer pressure to saturation.
- B. To raise Pressurizer steam space temperature.
- C. To return Pressurizer pressure to setpoint.
- D. To return Pressurizer water temperature to saturated conditions.

43.

Following a single channel CPC trip, how can the operator quickly determine if the trip signal is due to an Auxiliary Trip?

- A. By obtaining the CPC Trip Buffer Report.
- B. By observing a Trip light without the associated Pretrip light.
- C. By obtaining the trip Sequence of Events Report (SOE).
- D. By observing that Diverse Reactor Trip has actuated.

44.

RAS initiation is delayed for at least 20 minutes after a large break LOCA occurs so that:

- A. The RCS will have completed blowdown.
- B. The LPSI pumps will have adequate NPSH.
- C. Core boiloff is less than the capacity of one HPSI train.
- D. Containment pressure will be reduced by half.

45.

You are withdrawing Reg Group 6 CEAs, IF one CEA in the group stops moving while the rest continue to withdraw, Which of the following will prevent any further group withdrawal when reached (assume Group 6 is at 130 inches when misalignment occurs)

- A. 4.95 inch misalignment detected by CPC target CEAs
- B. 4.95 inch misalignment detected by CEACs
- C. 5.5 inch misalignment detected by CPC target CEAs
- D. 5.5 inch misalignment detected by CEACs

46.

Select which system provides the heat sink for cooling the Safety Injection Sump POST-LOCA following a Recirculation Actuation Signal (RAS).

- A. Shutdown Cooling System
- B. High Pressure Safety Injection system
- C. Low Pressure Safety Injection system
- D. Containment Spray system

47.

Which of the following would occur as a DIRECT result of LO-LO spent fuel pool level (41.6 ft)?

- A. Spent Fuel Pool Cooling Pumps trip
- B. CMU to Spent Fuel Pool Makeup Valve opens
- C. SFHM Hoist Up movement is disabled
- D. Fuel Handling Building Isolation Actuation occurs

48.

A Cooldown to Mode 5 using the Steam Bypass Control System is in progress.

Plant conditions are as follows:

Steam Generator 1 & 2 pressures are 800 psia.

Reactor Coolant System temperature is 518°F.

Pressurizer pressure is 2100 psia and level is 33%.

RCPs 1A, 1B, and 2B are operating.

Charging Pumps A & B are operating with Letdown in automatic control.

Select the action which should be performed to prevent an inadvertent Engineered Safety Features Actuation Signal (ESFAS).

- A. Reset the Pressurizer low pressure trip setpoints.
- B. Raise Pressurizer level to 50%.
- C. Bypass the Pressurizer low pressure trips.
- D. Reset the Steam Generator low pressure trip setpoints.

49.

The reactor trips from 100% power. The control room operators verify that the reactor is tripped and immediately note that the turbine has not tripped and the generator breakers remain closed. If left unresolved this malfunction will cause:

- A. An uncontrolled cool down of the RCS, resulting in less shutdown margin.
- B. Main turbine blade heating, possibly resulting in damage to the main turbine rotor and shaft.
- C. A loss of condenser vacuum, resulting in the loss of condenser steam dump.
- D. An increase in RCS pressure, possibly resulting in the Pressurizer safety valves lifting.

50.

Complete the following statement.

An Emergency Diesel Generator is supplying its associated safety bus in the Emergency Mode and normal power is aligned to the 2 bus with the 2 to 3 bus tie breaker closed. When the operator takes the associated synchronizer switch to the BUS TIE position:

- A. the governor will be returned to the droop mode of operation.
- B. the governor swaps to the backup hydraulic isochronous mode.
- C. the Diesel swaps to the Test Mode of operation.
- D. the Bus Tie Breaker closes following a Synch Check.

51.

The output of Safety SUPS SA is considered to be uninterruptible because:

- A. Auctioneered AC power supplies are provided to the rectifier section.
- B. Inverter input is auctioneered between the rectifier output and a DC Safety Bus supply.
- C. An internal battery is auctioneered with the rectifier output.
- D. The Static Transfer Switch automatically transfers to AC alternate source.

52.

Which of the following describes 4.16KV breaker operation if DC control power is lost?

- A. Breakers will remain in their "as is" condition and operation would only be possible by local manual means.
- B. Automatic breaker trips would remain operational but remote operation of breakers would not be possible.
- C. Breakers would remain remotely operable but automatic trip functions would become inoperable.
- D. Breakers would trip open and operation would not be possible by local manual means.

53.

Which of the following is the correct expected response if an EDG is paralleled to the grid and the Governor and Voltage control hand switches are both taken to Raise/Increase?

- A. Kw increases and EDG speed increases.
- B. Reactive load increases and Kw increases.
- C. Indicated output voltage increases and Reactive load increases.
- D. EDG speed increases and Indicated output voltage increases.

54.

With an inoperable LWM radiation monitor all of the following are required to perform a discharge from the Waste Condensate Tanks except:

- A. Obtain and analyze independent samples from the Waste Condensate Tank.
- B. Perform an independent verification of discharge valve lineup.
- C. Perform an independent verification of release rate calculation.
- D. Perform an independent verification of proper Circ Water flow.

55.

Which of the following describes the locations sampled by the PAS system?

- A. Reactor coolant system cold leg #1, RAB penetration areas, and containment SIS sump.
- B. Containment Atmosphere, Reactor Coolant System hot leg #1, and containment SIS sump.
- C. Shutdown cooling train A, component cooling water system, and containment atmosphere.
- D. Reactor coolant system hot leg #2, SDC cooling train B and containment SIS sump.

56.

Choose the answer that best describes the normal alignment of the Diesel Fire Pump Suction.

- A. Diesel Fire Pump #1 takes suction from Fire Water Storage Tank A
- B. Diesel Fire Pump #1 takes suction from the Motor Driven Fire Pump discharge header.
- C. Diesel Fire Pump #1 takes suction from both Fire Water Storage Tanks.
- D. Diesel Fire Pump #1 takes suction from Fire Water Storage Tank B.

57.

The primary reason for initiation of hot and cold leg injection to the SDC train with a cavitating LPSI pump is to:

- A. Prevent Boron precipitation.
- B. Ensure all injection flow is not lost through cold leg openings.
- C. Prevent over pressurization of cold leg nozzle dams.
- D. Provide subcooled water to the suction of the cavitating LPSI pumps.

58.

Assuming a Pressurizer Safety Valve lifts, which of the following statements is most correct?

- A. The downstream Safety Relief temperature detector will indicate T_{sat} for the current Pressurizer pressure.
- B. Quench Tank temperature will equal T_{sat} for the current Pressurizer pressure.
- C. The downstream Safety Relief temperature detector will indicate T_{sat} for the current Quench Tank pressure.
- D. Quench Tank pressure will equal P_{sat} for the current Pressurizer vapor space temperature.

59.

CCW pumps B and AB are operating. Although CCW pump AB is replacing A the AB bus is powered from the B-side. The "CCW pump A Unavailable" alarm is locked in. Which of the following describes the status of the CCW system in the event of a concurrent loss of offsite power and SIAS?

- A. CCW pumps B & AB running
- B. CCW pumps A & B running
- C. Only CCW pump B running
- D. All CCW pumps running

60.

All of the following conditions will automatically start the Train B Auxiliary Component Cooling Water Pump except:

- A. Train B CCW Heat Exchanger outlet temperature 10 deg F above the setpoint of CCW Temperature Controller, CC-ITIC-7070B.
- B. Wet Cooling Tower basin temperature reaches 95 deg F.
- C. CCW Heat Exchanger outlet temperature reaches 100 deg F.
- D. a Safety Injection Actuation Signal occurs.

61.

Which of the following describes a condition that prevents the Refueling Machine (RFM) from entering the upender zone?

- A. RFM fuel hoist box is latched.
- B. RFM fuel hoist overload
- C. Spreader is fully retracted.
- D. Upender is completely horizontal.

62.

Steam Bypass Valve 6 is the only Steam Bypass valve that receives a quick open block for a:

- A. Reactor Power Cutback with a load rejection
- B. Reactor Power Cutback with a Feed pump trip
- C. Reactor trip with Tave equal to 550° F
- D. Reactor trip with Tave equal to 570° F

63.

Concerning the Station and Instrument Air Systems, Which of the following is true?

- A. The Instrument Air compressors cycle between 112 PSIG and 120 PSIG; the Instrument Air Dryer skids are auto bypassed at 95 PSIG.
- B. Backup air compressor starts at 105 PSIG; Station Air to Instrument Air backup opens when air dryers are bypassed.
- C. When air pressure reaches 125 PSIG in the Station Air (SA) receiver, the unloader valve opens causing pressure between the air compressor separator and the compressor to equalize.
- D. Station air provides a backup source for instrument air via an interface valve which opens to supply air to the dryer inlet downstream of IA Receiver.

64.

Which of the following occurs when Shield Building Ventilation shifts to the EXHAUST mode.

- A. The in-service Containment Atmosphere Release (CAR) Exhaust fans START.
- B. The in-service Containment Atmosphere Release (CAR) Exhaust fans STOP.
- C. The in-service Containment Atmosphere Release (CAR) Exhaust fans go to RECIRCULATION mode.
- D. The in-service Containment Atmosphere Release (CAR) Supply fans go to RECIRCULATION mode.

65.

Following a CEA or CEDMCS malfunction in which the CEA was misaligned greater than 19 inches, the off-normal procedure directs you to hold reactor power constant for _____ after CEA alignment for _____.

- A. 0.5 hours, xenon redistribution
- B. 1 hour, radial peaking
- C. 2 hours, clad relaxation
- D. 4 hours, isotopic iodine analysis

66.

A Loss of Offsite Power has occurred. Plant conditions are as follows:

The Reactor is in Mode 3

RCS pressure is 1900 psia and slowly rising

T_c is 550°F and constant

CET temperature is 598°F

S/G 1 & 2 levels are 55% WR and slowly rising

T_h is 585°F and slowly lowering

All of the following conditions meet the criteria for single phase natural circulation in accordance with OP-902-005, Loss of Offsite Power/Station Blackout Recovery Procedure with the exception of:

- A. T_c temperature trend
- B. T_h temperature trend
- C. Subcooled Margin
- D. T_h -CET differential temperature

67.

Which of the following conditions requires emergency boration per OP-901-103, "Emergency Boration"?

- A. Reg Group 6 CEA positioned just below the Pre-Power Dependent Insertion Limit.
- B. During refueling K_{eff} is equal to 0.95.
- C. Shutdown margin is 2.1% delta k/k with T_{avg} at 195 degrees F.
- D. A main steam line safety valve sticks full open and will NOT reclose with the reactor at 1% power.

68.

The plant is at normal operating temperature and pressure when the Component Cooling Water Surge Tank level starts increasing. Select which of the following components could be causing this level increase. (Assume normal equipment conditions)

- A. Spent fuel pool heat exchanger
- B. RCP seal cooler heat exchanger
- C. Waste Gas compressor
- D. Essential Chiller A

69.

Given the following plant conditions:

Pressurizer Level Control Channel Selector is positioned to Channel "Y".

Pressurizer low level Heater Cutout Channel Selector is positioned to BOTH.

All Pressurizer Heaters are on for Boron Equalization.

Which of the following describes the status of the Pressurizer Heaters if Pressurizer level Channel "X" fails low?

- A. All Pressurizer Heaters remain energized.
- B. All Pressurizer Heaters will de-energize.
- C. All Backup Heaters de-energize, all Proportional Heaters remain energized
- D. All Pressurizer Heaters de-energize except Train B powered Heaters.

70.

After a loss of feedwater event an EFW pump is placed in service with SG1 level at 22% NR and SG2 level at 20% NR. Why should feed flow be initiated slowly to the steam generators?

- A. To limit the possibility of feed ring damage when SG level is below the feed ring.
- B. To minimize the differential temperature across the tube bundle wrapper.
- C. To limit the RCS cool down resulting from restoration of feedwater from the CSP.
- D. To minimize the thermal shock to the SG tubes when feedwater is restored.

71.

Which of the following reflects the primary concern of the operators after a major steam line break upstream of the MSIV in which the affected SG blows dry.

- A. Ensure the RCS reheats back to normal operating temperature within Tech Spec heatup limits
- B. Maintain subcooling margin between 28° F and 200° F
- C. Energize all pressurizer heaters to re-establish saturated conditions in the pressurizer
- D. Re-establish all safety injection flow

72.

During a loss of condenser vacuum event, the following annunciators are received: FWPT A VACUUM LO and FWPT B VACUUM LO. Prior to these alarms what other alarms should have been received?

- A. VACUUM PUMP - TRIP/TROUBLE
- B. STM BYPASS SYSTEM CNDSR VACUUM FAIL
- C. TURBINE TRIP VACUUM LOST
- D. FWPT - TRIP VACUUM LO

73.

During a station blackout, the Loss of Off Site Power/Station Blackout Recovery Procedure (OP-902-005) directs the Operator to place the Containment Spray Pump control switches to OFF.

Which of the following describes the reason for this step?

- A. To prevent overloading the Emergency Diesel Generators when restored.
- B. To prevent initiating Containment Spray when electrical power is restored.
- C. To prevent starting the Containment Spray Pumps with no seal cooling after power is restored.
- D. To protect the Containment Spray Pumps from the effects of loss of DC control power if battery chargers cannot be restored.

74.

Which of the following Reactor Trip Breakers would indicate open on a loss of vital instrument bus SUPS MD?

- A. Breakers 1,2,3,4
- B. Breakers 5,6,7,8
- C. Breakers 1,2,5,6
- D. Breakers 3,4,7,8

75.

Immediately upon confirmation of a fire alarm the Nuclear Plant Operator is responsible for all of the following actions except:

- A. Making preliminary reportability verification
- B. Sounding the fire alarm and announcing the fire over plant page
- C. Obtaining pertinent information from the person confirming the alarm
- D. Ensure the SS/CRS is notified

76.

If a fire in the +35 Cable Spreading Room burns for 45 minutes before it is extinguished, which of the following will still be a reliable indication for RCS pressure?

- A. Safety Channel B Wide Range Pressurizer Pressure
- B. Safety Channel D Narrow Range Pressurizer Pressure
- C. Hot Leg 1 Pressure
- D. Pressurizer Pressure Controller

77.

Why is emergency boration required when the reactor is tripped from outside the control room following a Control Room Evacuation?

- A. The MSR temperature control valve logic cannot be reset from outside the control room.
- B. The Main Turbine will not trip when the reactor is tripped outside the control room.
- C. The operator is unable to verify CEA position following a trip from outside the control room.
- D. The Feedwater Control System will not shift to the RTO mode when the reactor is tripped from outside the control room

78.

During Irradiated fuel movement within containment, it is reported that the Equipment Hatch Door is held in place by three(3) bolts. Which of the following actions should be taken.

- A. Suspend Core Alterations or irradiated fuel movement in containment if LLRT test results are not satisfactory.
- B. Immediately suspend Core Alterations or irradiated fuel movement within containment.
- C. Within 1 hour restore the Equipment Door to operable status or suspend Core Alterations and irradiated fuel movement within containment.
- D. Within 6 hours restore the Equipment Door to Operable Status or suspend Core Alterations or irradiated fuel movement within containment.

79.

A heat addition to a fluid with a quality of 0% results in a temperature increase with no phase change. What was the condition of the fluid prior to the heat addition? (assume pressure of the fluid is held constant)

- A. Subcooled liquid
- B. Saturated liquid
- C. Wet vapor
- D. Saturated vapor

80.

All of the following items are sampled and analyzed by the W-3 Chemistry Department when OP-901-410, High Activity in Reactor Coolant System is implemented with the exception of:

- A. Cesium Concentration
- B. Dose Equivalent Iodine Concentration
- C. Dose Equivalent Iodine isotopic analysis
- D. Gross RCS activity

81.

Regulating Group 6 CEAs are being withdrawn from 120" in an attempt to maintain ASI constant. When the shim switch is released Regulating Group 6 continues to move outward. When the mode select switch is taken to "OFF" motion stops. What actions should be taken?

- A. Trip the reactor and go to OP-902-000
- B. If uncontrolled movement does not occur after the mode switch is removed from "OFF" borate CEAs to fully withdrawn position
- C. If continuous movement occurs after the mode select switch is removed from "OFF" then trip the reactor
- D. Declare group 6 inoperable and commence a plant downpower using part length rods for ASI control

82.

While at 80% power, a shutdown bank CEA drops into the core. In accordance with the Tech Spec COLR, a downpower must be completed within _____ minutes to a maximum power level of _____.

- A. 15, 60%
- B. 30, 70%
- C. 45, 60%
- D. 60, 70%

83.

Which of the following best describes the Diversified Reactor Trip system (DRTS), assuming DRTS enabled.

- A. Must push both DRTS push buttons together, at the same time, to manually actuate.
- B. Auto actuation requires 2/2 pressurizer safety grade pressures at 2340 psig.
- C. Can be manually initiated locally at the Reactor Trip Switchgear (+21 RAB)
- D. Could actuate with failure of one pressure transmitter high and pressing one manual pushbutton.

84.

All of the following allow termination of Safety Injection after a small break LOCA except?

- A. Subcooled margin 50° F
- B. Pzr Level 35% and dropping slowly
- C. RVLMS level 5 not voided
- D. SG level 62% WR

85.

Select the combination of Reactor Coolant System pressure and Low Pressure Safety Injection Train A flow that would be acceptable during the injection phase of a large LOCA.

- A. 175 psia 500 gpm
- B. 125 psia 2500 gpm
- C. 100 psia 2800 gpm
- D. 50 psia 3600 gpm

86.

Following a LOCA, Reactor Coolant Pumps were secured. Which of the following conditions would indicate a problem with natural circulation flow after flow had been established?

- A. Steam Generator pressures are rising
- B. PRESSURIZER level is 18% and slowly lowering
- C. RCS sub cooling is 30°F and constant
- D. RCS loop delta temperature is 50°F and lowering

87.

While operating at power, significant current oscillations (100 amps) are observed on 480V bus 3B31-S. Annunciator "CHARGING PUMP HEADER FLOW LOW" actuates and shortly thereafter, Charging Pump B trips on overcurrent. Which of the following actions should be taken?

- A. Start an alternate charging pump after verifying its suction path.
- B. Restart Charging Pump B after resetting the overcurrent trip.
- C. Secure letdown and initiate an investigation for the loss of Charging Pump B.
- D. Secure letdown, start an alternate charging pump, then restore letdown.

88.

Which of the following describes the reason for the requirement to have a Hot Leg vent path for a loss of shutdown cooling when SG nozzle dams are installed?

- A. To prevent steam formation in the Hot Leg from causing an erroneously high Reactor Vessel level indication.
- B. To prevent steam formation in the Reactor Vessel head from pressurizing the RCS, leading to core uncover.
- C. To prevent steam formation in the Hot Leg which will ultimately collapse, causing severe water hammer.
- D. To prevent the loss of RCS inventory caused by lifting a Low Temperature Overpressure Protection (LTOP) relief valve.

89.

The plant is shutdown and drained to mid-loop for replacing Reactor Cooling Pump seals. The time of shutdown was 8/31/96 0300. At 0300 on 9/10/96 LPSI Pump A is secured due to cavitation of the pump. LPSI Pump B is started and trips. Estimate the time to reach 200°F if initial RCS temperature was 100°F.

- A. 15 Minutes
- B. 20 Minutes
- C. 25 Minutes
- D. 30 Minutes

90.

OP-902-000, Step 1 Contingency Action directs the operator to open the feeder breakers to 480 VAC busses 3A32 and 3B32 for 5 seconds and then reclose them. The purpose of reclosing the feeder breakers is to:

- A. Restore power to the CEDMCS in order to verify that all CEAs have fully inserted.
- B. Re-energize the A32 and B32 busses before the under voltage relays strip the individual loads from the busses.
- C. Restore power to the Pressurizer proportional heaters only.
- D. Restore power to all the Pressurizer heaters.

91.

In order to prevent an inadvertent release of radioactive material through the Condenser Air Evacuation System (AE), wide range gas monitor samples the AE exhaust. Upon receipt of a high rad alarm, the AE System:

- A. Isolates all flow from the Main Condenser
- B. Initiates recirculation of the non-condensables from the separator unit to the condenser.
- C. Diverts the AE exhaust discharge to the Normal RAB HVAC exhaust filter units.
- D. Diverts the AE exhaust to the waste gas header.

92.

During a SGTR, the isolated SG level is maintained greater than 77% WR in order to:

- A. prevent spray through the rupture from depressurizing the SG
- B. reduce flow impingement on other tubes
- C. reduce the static head differential across the break
- D. condense the steam issuing from the break

93.

A Main Feedwater line break will depressurize the affected S/G and start an uncontrolled cooldown when:

- A. The reactor trips on low S/G level
- B. The main feedwater isolation valve is closed on the affect S/G
- C. The feedwater line water level drops below the break location
- D. The S/G level drops below 50% WR level

94.

An Emergency Feedwater Actuation Signal (EFAS) has been initiated due to low level in both Steam Generators. Steam Generator 1 & 2 levels are below Critical Level.

Select the level band that the Emergency Feedwater System will automatically maintain?

- A. 68 - 71% NR
- B. 68 - 71% WR
- C. 55 - 71% NR
- D. 55 - 71% WR

95.

A total loss of offsite power has occurred and both Emergency Diesel Generators have failed to start automatically or manually. Which of the following statements describes how long the operator has to shed specific DC Safety bus loads?

- A. Within 15 minutes
- B. Within 30 minutes
- C. Within 45 minutes
- D. Within 60 minutes

96.

All of the following are allowed by procedure except:

- A. Discharging one Boric Acid Condensate Tank while filling another.
- B. Discharging a Boric Acid Condensate Tank to the PWST.
- C. Recircing one Boric Acid Condensate Tank while discharging another.
- D. Recircing one Boric Acid Condensate Tank while filling another.

97.

After evaluation of the current activity readings how many of the following Containment Atmosphere Purge monitors high alarm setpoints should be set at 40 mr/hr?

| | |
|---------------|----------------|
| ARM-IRE-5024S | 1.17 E+2 mr/hr |
| ARM-IRE-5025S | 1.75 E+1 mr/hr |
| ARM-IRE-5026S | 2.25 E+1 mr/hr |
| ARM-IRE-5027S | 3.50 E0 mr/hr |

- A. 1
- B. 2
- C. 3
- D. 4

98.

Which of the following actions should be performed initially if the Thot input to the Reactor Regulating System (RRS) fails HIGH?

- A. Place Pzr level controller to MANUAL
- B. Swap position of the Thot selector switch behind CP-2
- C. Place Letdown Flow control valve to MANUAL
- D. Take backup heaters to OFF

99.

Which of the following fuel handling events is addressed in OP-901-405, Fuel Handling Incident?

- A. A spent fuel assembly is damaged while being withdrawn from the core.
- B. A new fuel assembly cask is found with the motion sensors tripped during fuel receipt inspection.
- C. The Reactor goes critical while a fuel assembly is being inserted into the core.
- D. A CEA is hanging from the upper guide structure during removal of the upper guide structure.

100.

A Reactor Trip is required when Instrument Air Pressure drops to:

- A. 60 PSIG
- B. 65 PSIG
- C. 70 PSIG
- D. 75 PSIG

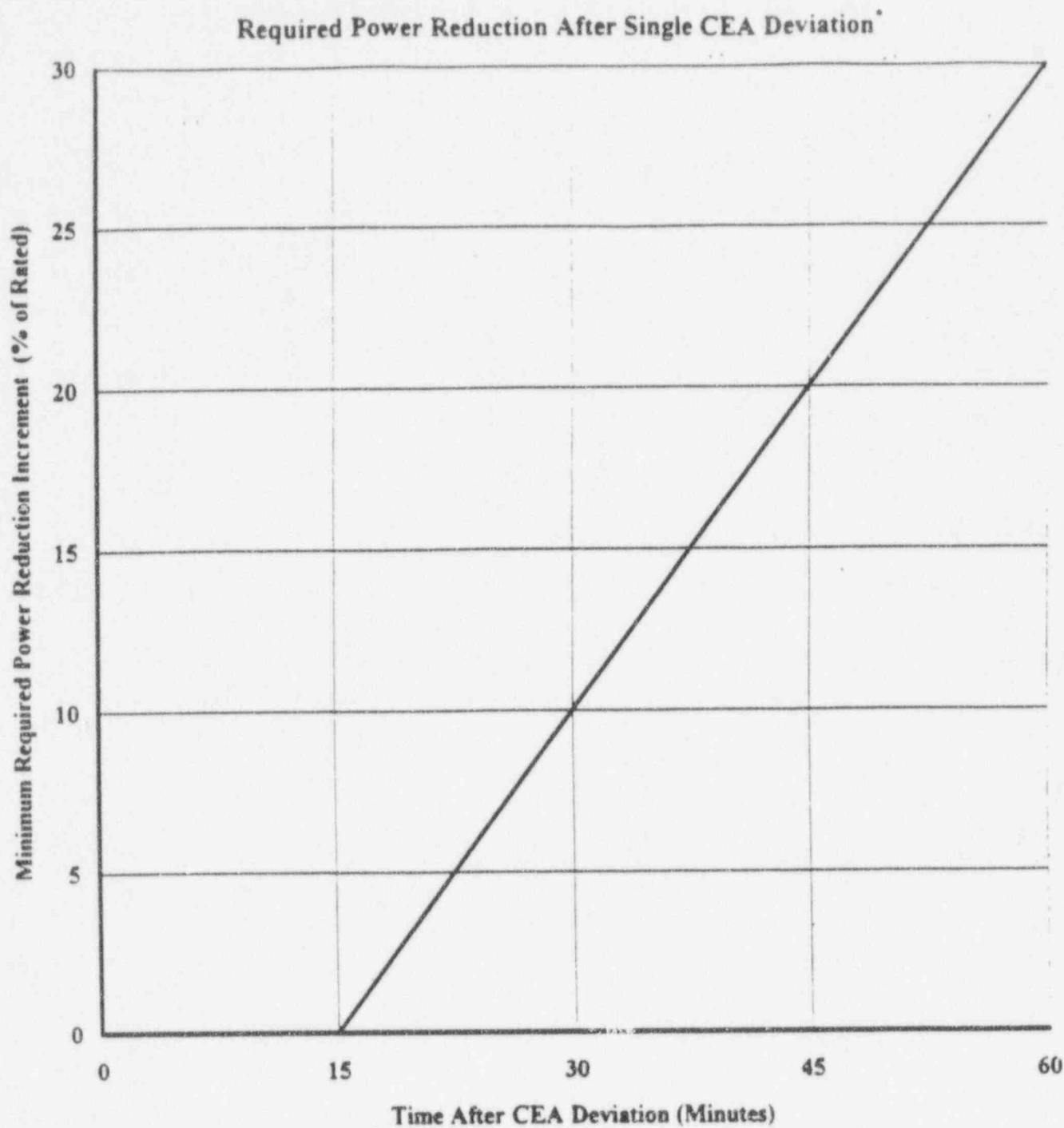
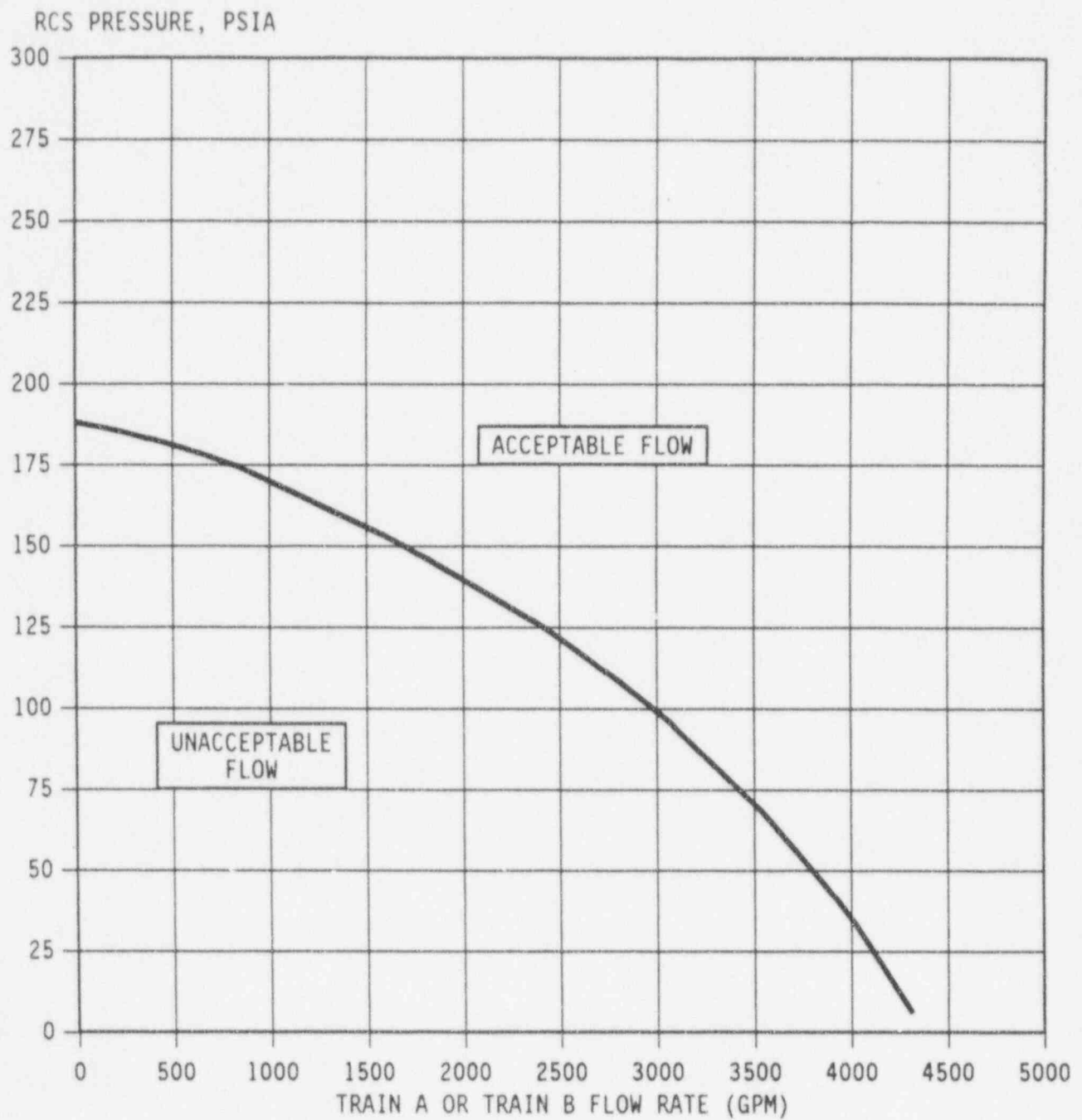


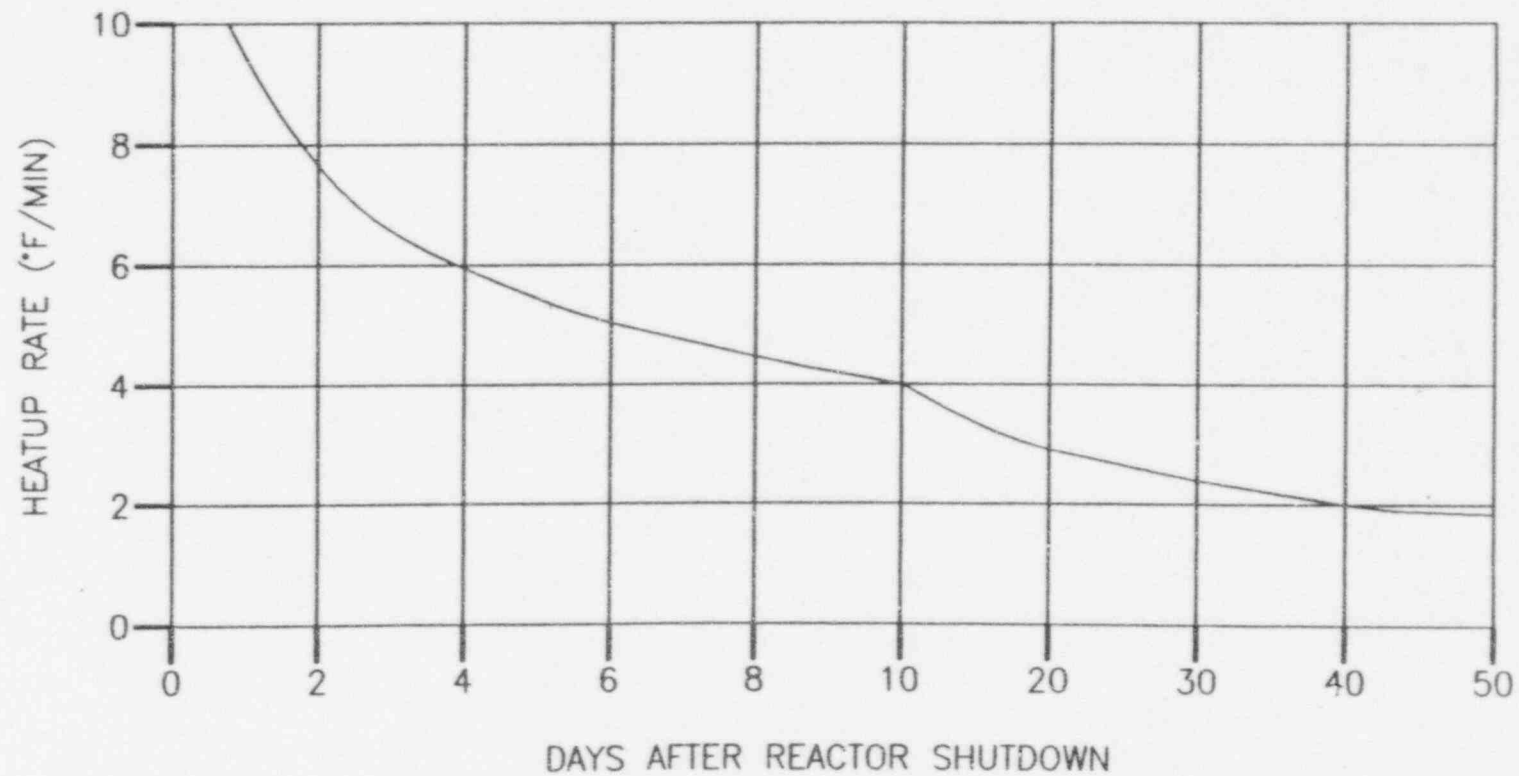
Figure 2

* When core power is reduced to 60% of rated power per this limit curve, further reduction is not required by this specification.

Attachment 6: MINIMUM LPSI FLOW VERSUS
PRESSURIZER PRESSURE



Attachment 2: Heatup Rate vs Time After Shutdown



Waterford 3 Examination Question Examination Bank

Examination Question Number 1

| | | | | | | |
|---------------------|---|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3160 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Proper method for verifying the position of a throttled valve | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/27/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/27/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPA | | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-100-009 | 13 | 00 | 12/6/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-1-29 | 3.4 | 3.3 | w-3-lp-ops-ppa00 | 02 | | |

QUESTION

Clearance tags are being removed from Control Room AHU cooling coil D. The outlet isolation valve CHW 599D is required to be positioned 4 2/3 turns open. As independent verifier how would you check this position?

- A. Visually observe the positioner throttling the valve to the correct position.
- B. Move the valve slightly in the closed direction and then return it to its original position.
- C. Inspect the last valve lineup sheet for verification signature and compare recorded valve position with the required position.
- D. Compare stem or indicator position with the remote indication position.

ANSWER

- A. Visually observe the positioner throttling the valve to the correct position.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 2

| | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|
| QUESTION ID: | 1620 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Actions to be performed when vents and drains must be left open unattended | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 11/19/94 |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/27/96 | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | GOP | CATEGORY: | Procedure | | |
| | PPA | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| UNT-005-003 | 14 | 1 | 9/22/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 2-2-13 | 3.6 | 3.8 | w-3-lp-ops-ppa00 | 02 | |

QUESTION

You have to drain the Demin Water Storage Tank via the normally closed bottom drain valve due to a maintenance requested outage. How will this drain valve be documented open and documented restored after the outage.

- A. Open the valve, check level in tank every 2 hours until drained, then reclose valve. Document draining and closing in the Watch Station Log.
- B. Lock the drain valve open. Unlock and close the drain valve after the outage. Document IAW OP-100-009, Control of Valves and Breakers.
- C. Open the drain valve. Reclose the drain valve after the outage. Document opening and closing the drain valve with a clearance using an asterisked item.
- D. Caution tag the drain valve open. Remove the caution tag and close the valve after the outage. Document manipulations with a deviation sheet.

ANSWER

- C. Open the drain valve. Reclose the drain valve after the outage. Document opening and closing the drain valve with a clearance using an asterisked item.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 3

| | | | | | | |
|---------------------|---------------------------------------|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 3206 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | New 10CFR20 dose calculation question | | | | | |
| AUTHOR: | RJC | | REVISION | 1 | REVISION DATE | 1/6/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | | | VERIFICATION DATE: | 1/6/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPA | CATEGORY: | PROCEDURE | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-3-1 | 2.6 | 3 | w-3-lp-ops-ppa00 | 2 | | |
| | | | W-3-LP-XWT-18 | 20 | | |

QUESTION

What is a Radiation Worker's Total Effective Dose Equivalent (TEDE) if he/she received the following doses during a calendar year?

| | |
|---|-----------|
| Deep Dose Equivalent (DDE): | 1.060 REM |
| Shallow Dose Equivalent (SDE): | 1.735 REM |
| Lens Dose Equivalent (LDE): | 1.514 REM |
| Committed Effective Dose Equivalent (CEDE): | 2.078 REM |

- A. 2.795 REM
- B. 3.138 REM
- C. 4.309 REM
- D. 5.327 REM

ANSWER

- B. 3.138 REM

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 4

| | | | | | |
|---------------------|------------------------------|---------|--------------------|-----------|----------------|
| QUESTION ID: | 457 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Dose rate/ shielding problem | | | | |
| AUTHOR: | whardin | | REVISION | 1 | REVISION DATE |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | 7/26/94 |
| REFERENCE VERIFIED: | whardin | | VERIFICATION DATE: | 7/26/94 | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| SPECIAL REFERENCES: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| PLANT SYSTEM: | RAD | | SIMULATOR SETUP | | |
| REFERENCE: | REVISION: | CHANGE: | CATEGORY: | PROCEDURE | |
| | | | DATE: | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 2-3-10 | 2.9 | 3.3 | W-3-LP-OPS-RAD02 | 03 | |

QUESTION

A valve reads 300 mr/hr behind 2 inches of lead. What will it read when the lead is removed?

- A. 600 MR/HR
- B. 6000 MR/HR
- C. 3000 MR/HR
- D. 30000 MR/HR

ANSWER

C

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 5

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 1342 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Returning safety related annunciators to service with a TAR installed | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/22/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/22/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPA | CATEGORY: | Procedure | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| 01-002-000 | 14 | 00 | 2/3/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-4-31 | 3.3 | 3.4 | w-3-lp-ops-ppa00 | 2 | | |
| 194001.A1.03 | | | | | | |

QUESTION

In accordance with OI 002-000, Annunciator and Alarm Status Control, what documentation must be completed in order to clear the Equipment Out of Service checklist for a safety related annunciator and return it to operable status when a Temporary Alteration is to remain installed?

- A. No action is required to clear the Equipment Out of Service checklist.
- B. The Temporary Alteration safety and engineering review must be completed with a satisfactory response.
- C. A Condition Report must be generated stating the acceptability of operation with the Temporary Alteration installed.
- D. An immediate work Condition Identification must be generated to ensure prompt repair of the condition causing the installation of the Temporary Alteration.

ANSWER

- B. The Temporary Alteration safety and engineering review must be completed with a satisfactory response.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 6

QUESTION ID: 97 - A STATUS: Approved LAST USED
DESCRIPTION: Working hour policy apply?
AUTHOR: tmccool REVISION 1 REVISION DATE 6/20/94
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: tmccool VERIFICATION DATE: 6/20/94
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: PPA CATEGORY: Procedure
REFERENCE: REVISION: CHANGE: DATE:
UNT-005-005 04 01 9/8/92
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
2-1-1 3.7 3.8 w-3-lp-ops-ppa00 2
194001A1.03

QUESTION

Which of the following best describes the condition in which the working hour policy (UNT-005-005) applies?

- A. a person working in training performing simulator operations
- B. a person working on a procedure revision for a quality related system
- C. a person working on a non-safety related system or component
- D. a person working on safety-related system or component

ANSWER

- D. a person working on safety-related system or component

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 7

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 3303 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | shift turnover, log book review if not on shift for 60 days | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 7/13/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | mjesse | | VERIFICATION DATE: | 12/29/95 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPA | CATEGORY: | Procedure | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-100-007 | 11 | 00 | 3/13/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-1-3 | 3 | 3.4 | w-3-lp-ops-ppa00 | 2 | | |
| 194001.A1.03 | | | | | | |

QUESTION

Which of the following best describes how far back in the Station Log an oncoming operator must review, prior to shift turnover, if that individual has not been on shift for 60 days?

- A. since the last shift watch that was stood
- B. three days
- C. one week
- D. two weeks

ANSWER

- D. two weeks

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 8

QUESTION ID: 3461 - A STATUS: Approved LAST USED
DESCRIPTION: Requirement for Startup Channels during refueling
AUTHOR: bmather REVISION 1 REVISION DATE 6/28/96
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 6/28/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: ENI CATEGORY: SYSTEM
TS
REFERENCE: REVISION: CHANGE: DATE:
TS 3.9.2
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
015GEN 11 W-3-LP-OPS-EN100 11
2-1-33 3.4 4

QUESTION

Fuel is being reloaded into the reactor vessel when the Shift Supervisor informs you that one startup channel neutron flux monitor has failed. Which of the following describes the required action?

- A. Fuel reload may continue provided backup boron samples are taken every 4 hours.
- B. Fuel reload may continue provided the inoperable channel is returned to operable status within 4 hours.
- C. Suspend core alterations until boron sampling has been initiated every twelve (12) hours for 36 hours.
- D. Suspend core alterations until the inoperable channel is returned to operable status.

ANSWER

- D. Suspend core alterations until the inoperable channel is returned to operable status.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 9

| | | | | | | |
|---------------------|--------------------------|-------------------|--------------------|----------------|---------------|----------|
| QUESTION ID: | 2922 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | secondary activity bases | | | | | |
| AUTHOR: | ANV | | REVISION | 0 | REVISION DATE | 12/29/92 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPO | CATEGORY: | | | | |
| | TS | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| TS BASES | | | | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-2-22 | 3.4 | 4.1 | W-3-LP-OPS-PPO20 | 5 | | |
| 000037GEN.04 | | | | | | |
| 039GEN.06 | | | | | | |

QUESTION

The limitation on secondary system specific activity ensures that the resultant off-site dose will be acceptable. This dose projection includes a _____ gpm primary to secondary leak on the affected S/G with a concurrent _____.

- A. 0.5, 1 micro curie primary activity
- B. 1.0, loss of offsite power
- C. 0.5, loss of offsite power
- D. 1.0, 1 micro curie primary activity

ANSWER

- B. 1.0, loss of offsite power

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 10

| | | | | | |
|---------------------|--|---------|--------------------|-----------|------------------------|
| QUESTION ID: | 1630 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Frequency for updating field control verifications | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE 11/19/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 11/19/94 | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | |
| PLANT SYSTEM: | GOP | | CATEGORY: | Procedure | |
| | PPA | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-100-001 | 11 | 00 | 7/24/96 | | |
| UNT-004-009 | 13 | 00 | 3/21/96 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | AL: | OBJECTIVE |
| 194001.A1.03 | | | w-3-lp-ops-ppa00 | | 02 |
| 2-1-21 | 3.1 | 3.2 | | | |

QUESTION

Reverification of a field controlled copy of a procedure is required to be performed every _____

- A. 1 day
- B. 7 days
- C. 14 days
- D. 30 days

ANSWER

- C. 14 days

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 11

| | | | | | | |
|---------------------|-------------------|-----|--------------------|--------------------|----------------|---------|
| QUESTION ID: | 4105 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Procedure Usage | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/25/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/25/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED REFERENCE: | | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | ppa | | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | | CHANGE: | DATE: | | |
| OP-100-001 | 11 | | 00 | 7/24/96 | | |
| NRC KA NUMBER: | RO | | SRO | TRAINING MATERIAL: | | |
| 2-1-20 | 4.3 | | 4.2 | w-3-lp-ops-ppa00 | | |
| | | | | OBJECTIVE | | |
| | | | | 02 | | |

QUESTION

All of the following tasks are allowed to be performed as an Informational Use procedure except:

- A. Inserting or Withdrawing CEAs
- B. Adding hydrogen to the VCT
- C. Processing Waste Tanks to Waste Condensate Tanks
- D. Shifting Instrument or Station Air Compressors

ANSWER

- A. Inserting or Withdrawing CEAs

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 12

| | | | | | | |
|---------------------|-----------------------------|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 4131 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Trip two leave two criteria | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 7/3/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 7/3/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPE | CATEGORY: | PROCEDURE | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-002 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-4-18 | 2.7 | 3.6 | W-3-LP-OPS-PPE02 | 04 | | |

QUESTION

Which of the following is the bases for tripping the RCPs with RCS pressure <1621 psia following a LOCA?

- A. To eliminate RCP heat input to the RCS
- B. To minimize core uncover due to phase separation
- C. To prevent damage to the RCP impeller
- D. To prevent damage to the RCP seals

ANSWER

- B. To minimize core uncover due to phase separation

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 13

| | | | | | | |
|---------------------|------------------------------------|---------|--------------------|-----------|---------------|---------|
| QUESTION ID: | 2840 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Use of hand held fire extinguisher | | | | | |
| AUTHOR: | abond | | REVISION | 1 | REVISION DATE | 8/12/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | abond | | VERIFICATION DATE: | 8/12/94 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED REFERENCE: | X | OPEN REFERENCE | | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | FPD | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 2-4-26 | 2.9 | 3.3 | W-3-LP-FPFB-FBL02 | 18 | | |

QUESTION

Which hand held fire extinguisher is available at Waterford-3 for use on flammable liquid fires?

- A. Pressurized water
- B. Pressurized Aqueous Foam
- C. Dry chemical
- D. Carbon Dioxide

ANSWER

- C. Dry chemical

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 14
QUESTION ID: 3203 -A **STATUS:** Approved **LAST USED**
DESCRIPTION: CEDMCS RSPT Functions
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/28/96
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/28/96
TYPE: Multiple Choice **TIME:** 2 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CED **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
NRC KA NUMBER: RO SRO **TRAINING MATERIAL:** **OBJECTIVE**
3.1-001-K4.03 3.5 3.8 W-3-LP-OPS-CED00 01

QUESTION

Which ONE of the following interlocks/permisives in CEDMCS is provided by the reed switch position transmitters (RSPT)?

- A. Lower Group Stop.
- B. Upper Electrical Limit.
- C. Upper Control Limit.
- D. Upper Group Stop.

ANSWER

- B. Upper Electrical Limit.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 15

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 1033 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Manual/Auto Sequential CEA movement program | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/28/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | CED | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-010-001 | 18 | 01 | 7/11/96 | | | |
| OP-004-004 | 07 | 00 | 12/13/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.1-001-K4.02 | 3.8 | 3.8 | W-3-LP-OPS-CED00 | 01 | | |
| | | | W-3-LP-OPS-PPN01 | 03 | | |

QUESTION

The Primary Operator is withdrawing CEA's in the Manual Sequential mode during a Reactor Startup. Regulating Group 5 has just started outward motion from 0.0 inches. At what Reg. Group 5 position should Reg. Group 6 start outward motion?

- A. 50 inches
- B. 75 inches
- C. 100 inches
- D. 125 inches

ANSWER

- C. 100 inches

COMMENTS

Waterford 3 Examination Question Examination Bank

| | | | |
|---|----------------------------|-----------------------------------|------------------------------|
| Examination Question Number 16 | | | |
| QUESTION ID: 3454 | - A | STATUS: Approved | LAST USED: |
| DESCRIPTION: Generation of a CWP | | | |
| AUTHOR: bmather | | REVISION 1 | REVISION DATE 6/28/96 |
| APPROVAL: thrown | | APPROVAL DATE: 7/5/96 | |
| REFERENCE VERIFIED: bmather | | VERIFICATION DATE: 6/28/96 | |
| TYPE: Multiple Choice | | TIME: 5 | POINTS: 1 |
| QUIZ ONLY: | CLOSED REFERENCE: X | OPEN REFERENCE: | X |
| SPECIAL REFERENCES: | | | |
| PLANT SYSTEM: CED | SIMULATOR SETUP | | |
| REFERENCE: REVISION: 07 | CHANGE: 00 | DATE: 6/21/95 | |
| OP-500-008: | | | |
| NRC KA NUMBER: RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| 3.1-001-K4.23 | 3.4 | 3.8 | |
| | | W-3-LP-OPS-CPC00 | 4 |
| | | W-3-LP-OPS-PPS00 | 5 |

QUESTION

WHICH ONE (1) of the following describes the generation of a CEDMCS CEA Withdrawal Prohibit (CWP)?

- A. Initiated by the pulse counter CEA Position Indication System in response to a 2/4 PRETRIP condition on DNBR and prohibits ALL outward movement of regulating CEAs.
- B. Initiated by the Plant Protection System (PPS) in response to a 2/4 PRETRIP condition on DNBR and prohibits ALL outward group movement of CEAs.
- C. Initiated by the pulse counter CEA Position Indication System of the Plant Computer in response to OUT OF SEQUENCE condition and prohibits ALL outward movement of CEAs.
- D. Initiated by the Plant Protection System (PPS) in response to OUT OF SEQUENCE condition and prohibits ALL outward group movement of CEAs.

ANSWER

- B. Initiated by the Plant Protection System (PPS) in response to a 2/4 PRETRIP condition on DNBR and prohibits ALL outward group movement of CEAs.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 17

| | | | | | | |
|---------------------|-----------------------------|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 4106 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Anticipation of Criticality | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/25/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/25/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | ppn | | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-010-001 | 18 | 01 | 7/11/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.1-001-K5.18 | 4.2 | 4.3 | W-3-LP-OPS-PPN01 | 03 | | |

QUESTION

While performing a reactor startup which of the following indicates the earliest time that you should anticipate criticality?

- A. When the shutdown banks are being withdrawn
- B. When the first regulating group is being withdrawn
- C. When the 1/M plot indicates criticality within the next 100"
- D. When inside the window of five to seven doublings

ANSWER

- A. When the shutdown banks are being withdrawn

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 18

| | | | | | | |
|---------------------|---|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 4114 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Identify failed RCP seals at reduced pressure | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/28/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | RCP | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-130 | 01 | 00 | 2/28/94 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.4-003-A2.01 | 3.5 | 3.9 | W-3-LP-OPS-RCP00 | 5 | | |

QUESTION

A cooldown and depressurization is in progress. RCS pressure is currently at 1100 psia and seal pressures for RCP 1B are:

Vapor: 40 psia
Upper: 40 psia
Middle: 530 psia

Which RCP seal has failed?

- A. lower seal
- B. middle seal
- C. upper seal
- D. vapor seal

ANSWER

C. upper seal

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 19

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 3456 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Reason for starting 4th RCP after 500 F. | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/28/96 |
| APPROVAL: | trown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | RCP | CATEGORY: | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-010-001 | 18 | 01 | 7/11/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 003GEN.01 | | | W-3-LP-OPS-PPN01 | 2 | | |
| 3.4-003-A1.07 | 3.4* | 3.4 | W-3-LP-OPS-RCP00 | 11 | | |

QUESTION

Which of the following is the reason for preventing the start of the fourth Reactor Coolant Pump until RCS temperature is greater than 500°F?

- A. To prevent exceeding RCS heatup rate limits.
- B. To prevent excessive RCP starting currents.
- C. To limit Steam Generator tube stresses.
- D. To limit core uplift.

ANSWER

- D. To limit core uplift.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 20

| | | | | | | |
|---------------------|----------------------|-------------------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 4115 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | CVCS actions on SIAS | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/28/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | CVC | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-002 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.2-004-A2.12 | 4.1 | 4.3 | W-3-LP-OPS-CVC00 | 4 | | |

QUESTION

Which of the following equipment receive an SIAS signal?

- A. CVC 101, letdown stop valve; CVC 103, letdown inside containment isolation valve; CVC 109, letdown outside containment isolation valve.
- B. CVC 169, VCT inlet valve; BAM 133, emergency boration valve; CVC 507, RWSP to charging pumps suction.
- C. BAM 143, direct boration valve; CVC 209, charging header isolation valve; CVC 401 RCP controlled bleedoff isolation valve.
- D. BAM 113A(B), BAMT A(B) gravity feed valves; CVC 103, letdown inside containment isolation valve; BAM 126 A(B), BAMT Pump A(B) recirculation isolation valve.

ANSWER

- D. BAM 113A(B), BAMT A(B) gravity feed valves; CVC 103, letdown inside containment isolation valve; BAM 126 A(B), BAMT Pump A(B) recirculation isolation valve.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 21

| | | | | | | |
|----------------------------|---|--------------------------|---------------------------|-----------------------|----------------------|---------|
| QUESTION ID: | 4116 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Indications of CVC 650 relief valve lifting | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/28/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | CVC | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.2-004-A4.05 | 3.6 | 3.1 | W-3-LP-OPS-CVC00 | 06 | | |

QUESTION

If CVC 115, the CVCS letdown 650 psig relief valve, inadvertently lifts, which of the following indications is expected?

- A. Back pressure regulating valve closes down
- B. VCT level rises slowly
- C. Letdown Flow rises
- D. Letdown Heat exchanger temperature rises

ANSWER

- A. Back pressure regulating valve closes down

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 22

| | | | | | |
|---------------------|---------------------------|---------|--------------------|-----------|---------------|
| QUESTION ID: | 4117 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Operation of CVC at power | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 6/28/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/28/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| SPECIAL REFERENCES: | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| PLANT SYSTEM: | CVC | | SIMULATOR SETUP | | |
| REFERENCE: | REVISION: | CHANGE: | CATEGORY: | SYSTEM | |
| | | | DATE: | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 3.2-004-K1.01 | 3.6 | 4 | W-3-LP-OPS-CVC00 | 03 | |

QUESTION

The plant is in Mode 3 with PLCS and Letdown in automatic. The NPO notes letdown flow rising. Which of the following is a possible cause?

- A. Loss of Instrument Air to Letdown backpressure regulating valve
- B. The selected PZR level control channel has failed high
- C. VCT level has dropped to less than 6%
- D. Steam line 1 Atmospheric Dump valve controller setpoint has failed low

ANSWER

- B. The selected PZR level control channel has failed high

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 23

| | | | | | | |
|---------------------|-------------------------------|---------|--------------------|----------|----------------|---------|
| QUESTION ID: | 4118 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Diagnosis of ESFAS actuations | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | PPS | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| TS 3.3.2 | | | | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | | OBJECTIVE | |
| 3.2-013-A4.03 | 4.5 | 4.7 | W-3-LP-OPS-PPS00 | | 01 | |

QUESTION

The following conditions exist:

- A feedline break has occurred inside containment.
- Containment pressure is 17.5 psia.
- Containment radiation is normal
- PZR pressure is 1825 psia.
- RWSP level is 90%.
- SG pressures are (SG1) 925 psia, (SG2) 580 psia.
- SG levels are (SG1) 50% WR, (SG2) 20% WR

All of the following actuation signals should have occurred with the exception of:

- A. SIAS
- B. MSIS
- C. EFAS 1
- D. CSAS

ANSWER

- D. CSAS

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 24

| | | | | | | |
|---------------------|---|-------------------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 4104 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Effect of manually initiating SIAS vs. Automatic initiation of SIAS | | | | | |
| AUTHOR: | avest | | REVISION | 0 | REVISION DATE | 6/25/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/25/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPS | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| 45700028 | 05 | | 12/16/91 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.2-013-A3.01 | 3.7* | 3.9 | W-3-LP-OPS-PPS00 | 3 | | |

QUESTION

After a reactor trip a secondary safety lifts and an uncontrolled cooldown commences. Automatic Safety Injection Actuation and Main Steam Isolation Signals fail to actuate and are initiated manually by the PNPO. All of the following occur except:

- A. The Containment Cooling system realigned
- B. Containment Isolation
- C. Letdown has isolated
- D. The Safeguards Pump Room coolers started

ANSWER

- B. Containment Isolation

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 25
QUESTION ID: 1385 - A STATUS: Approved LAST USED
DESCRIPTION: Failure of an Upper Detector
AUTHOR: TPM REVISION 0 REVISION DATE 4/15/91
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmathur VERIFICATION DATE: 6/29/96
TYPE: MULTIPLE CHOICE TIME: POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: ENI CATEGORY: SYSTEM
REFERENCE: REVISION: CHANGE: DATE:
OP-004-008 05 00 9/27/92
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
015000.K6.04 W-3-LP-OPS-ENI00 04
3.7-015-K4.01 3.1 3.3
015000.K4.01

QUESTION

If the Excore Nuclear Instrumentation (ENI) Safety Channel upper detector were to fail low at power, the associated (selected) startup channel would:

- A. not energize on a reactor trip
- B. energize high voltage
- C. not be effected
- D. energize its 10-6% bistable

ANSWER

- C. not be effected

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 26
QUESTION ID: 4119 - A STATUS: Approved LAST USED
DESCRIPTION: 1e-4% BISTABLE ACTIONS
AUTHOR: brnather REVISION 1 REVISION DATE 6/29/96
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: brnather VERIFICATION DATE: 6/29/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: ENI CATEGORY: SYSTEM
PPS
REFERENCE: REVISION: CHANGE: DATE:
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
3.7-015-K4.06 3.9 4.2 W-3-LP-OPS-EN100 05

QUESTION

Which of the following describes an automatic function of the 1 E-4% bistable?

- A. bypasses High log power trip
- B. bypasses High S/G level trips
- C. enables High log power trip
- D. enables High S/G level trips

ANSWER

- C. enables High log power trip

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 27
QUESTION ID: 4133 - A STATUS: Approved LAST USED
DESCRIPTION: Indications of Core Uncovery
AUTHOR: bmathar REVISION 1 REVISION DATE 7/5/96
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmathar VERIFICATION DATE: 7/5/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: mcd CATEGORY:
REFERENCE: REVISION: CHANGE: DATE:
OP-902-002 07 00 12/1/95
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
3.7-017-K5.03 3.7 4.1 W-3-LP-OPS-MCD03 02

QUESTION

Which of the following could be an indication of core uncover? (Assume instruments are accurate)

CET Temperature equal to:

- A. 550° F with RCS pressure equal to 1100 psia
- B. 570° F with RCS pressure equal to 1300 psia
- C. 590° F with RCS pressure equal to 1350 psia
- D. 610° F with RCS pressure equal to 1700 psia

ANSWER

- C. 590° F with RCS pressure equal to 1350 psia

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 28

| | | | | | |
|---------------------|----------------------------------|---------|--------------------|----------------|---------------|
| QUESTION ID: | 4137 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Use of CET's when SI in progress | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | 7/5/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 7/5/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| | CLOSED REFERENCE: | | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPE | | CATEGORY: | PROCEDURE | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| op-902-002 | 07 | 00 | 12/1/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 3.7-017-K1.02 | 3.3 | 3.5 | | | |

QUESTION

With Hot and Cold leg injection in progress, which of the following temperature indications should be used to monitor RCS temperature?

- A. Representative CET
- B. Hot leg Safety Channel
- C. Cold leg Safety Channel
- D. Subcooled Margin

ANSWER

- A. Representative CET

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 29
QUESTION ID: 2364 - A STATUS: Approved LAST USED
DESCRIPTION: CFCs POST SIAS
AUTHOR: TPM REVISION 0 REVISION DATE 11/7/91
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmathar VERIFICATION DATE: 6/29/96
TYPE: MULTIPLE CHOICE TIME: 2 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: CCS CATEGORY: SYSTEM
REFERENCE: REVISION: CHANGE: DATE:
OP-008-003 03 00 2/6/91
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
3.5-022-A3.01 4.1 4.3 W-3-LP-OPS-CCS00 02
022000.A3.01

QUESTION

Which of the following best describes the configuration of the Containment Fan Coolers following an SIAS signal.

- A. Three fans start or shift to fast speed. The CCW outlet flow control valves will go to the two fan flow setpoint (1400 gpm).
- B. Three fans start or shift to slow speed. The CCW outlet flow control valves will go to the two fan flow setpoint (1400 gpm).
- C. All fans start or shift to fast speed. The CCW outlet flow control valves will go full open for maximum flow (2700 gpm).
- D. All fans start or shift to slow speed. The CCW outlet flow control valves will go full open for maximum flow (2700 gpm).

ANSWER

- D. All fans start or shift to slow speed. The CCW outlet flow control valves will go full open for maximum flow (2700 gpm).

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 30
QUESTION ID: 2365 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Power Supplies to CFC's
AUTHOR: TPM **REVISION** 0 **REVISION DATE** 11/7/91
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: shymel **VERIFICATION DATE:** 7/24/95
TYPE: MULTIPLE CHOICE **TIME:** 1 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CCS **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
OP-008-003 05 00 2/6/91
NRC KA NUMBER: RO SRO **TRAINING MATERIAL:** **OBJECTIVE**
022000.K2.01 W-3-LP-OPS-CCS00 04
3.5-022-K2.01 3.0* 3.1

QUESTION

Which of the following provide electrical power to the Containment Cooling Fans.

- A. MCC 317AS and MCC 317BS
- B. MCC 313AS and MCC 313BS
- C. 31AS and 31BS
- D. MCC 312AS and MCC 312BS

ANSWER

- A. MCC 317AS and MCC 317BS

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 31

QUESTION ID: 1870 - A STATUS: Approved LAST USED
DESCRIPTION: Feedwater Pump Trips due to condensate pumps
AUTHOR: PJO REVISION 0 REVISION DATE 7/24/91
APPROVAL: thrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: avest VERIFICATION DATE: 3/8/95
TYPE: MULTIPLE CHOICE TIME: 3 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: CD CATEGORY: SYSTEM
FWP
FW
REFERENCE: REVISION: CHANGE: DATE:
OP-003-003 11 01 5/2/96
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
056010.K4.12 W-3-LP-OPS-FWP00 02
3.4-056-A2.04 2.6 2.8*

QUESTION

Assuming all condensate pumps are running, and both Main Feedwater Pumps are running with HP Governor valves open, what, if any, would be the result if the B and C condensate pump were to trip? (ignore suction pressure trips)

- A. MFW pump 'A' would trip
- B. MFW pump 'B' would trip
- C. Both MFW pumps would trip
- D. Neither MFW pump would trip

ANSWER

- B. MFW pump 'B' would trip

COMMENTS

Waterford 3 Examination Question Examination Bank

| | | | | |
|---------------------------------------|---|---------|--------------------|-----------|
| Examination Question Number 32 | | | | |
| QUESTION ID: | 2335 | - A | STATUS: | Approved |
| DESCRIPTION: | Determine EFAS status from given conditions | | | |
| AUTHOR: | whardin | | REVISION | 1 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 |
| REFERENCE VERIFIED: | whardin | | VERIFICATION DATE: | 2/10/95 |
| TYPE: | Multiple Choice | | TIME: | 2 |
| QUIZ ONLY: | | | POINTS: | 1 |
| SPECIAL REFERENCES: | | | OPEN REFERENCE | X |
| PLANT SYSTEM: | EFW | | CATEGORY: | SYSTEM |
| | PPS | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| 061000-K4.02 | | | W-3-LP-OPS-EFW00 | 05 |
| 3.4-061-K4.02 | 4.5 | 4.6 | W-3-LP-OPS-PPS00 | 01 |

QUESTION

An EFAS 1 signal will be present for which of the following? (consider each answer separately)

- A. S/G 1@ 20% NR, S/G 2@ 26.5% NR, S/G 1& 2 @ 600 psia
- B. S/G 1@ 30% NR, S/G 2@ 25% NR, S/G 1@ 700 psia, S/G 2@ 680 psia
- C. S/G 1@ 15% NR, S/G 2@ 20% NR, S/G 1@200 psia, S/G 2 @ 400 psia
- D. S/G 1@ 5% NR, S/G 2@ 10% NR, S/G 1@ 500 psia, S/G 2 @370 psia

ANSWER

- D. S/G 1@ 5% NR, S/G 2@ 10% NR, S/G 1@ 500 psia, S/G 2 @370 psia

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 35
QUESTION ID: 2680 - A STATUS: Approved LAST USED
DESCRIPTION: EFAS ANALYSIS QUESTION
AUTHOR: BL REVISION 0 REVISION DATE 3/19/92
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 6/29/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: EFW CATEGORY: SYSTEM
REFERENCE: REVISION: CHANGE: DATE:
OP-009-003 09 00 5/2/96
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
3.4-061-A3.03 3.9 3.9 W-3-LP-OPS-EFW00 06
061000.A1.01

QUESTION

Given the following plant conditions:

S/G 1 820 psia (constant); WR level 57%

S/G 2 530 psia (dropping); WR level 54%

EFAS 1&2 MANUALLY initiated

SIAS CIAS & MSIS initiated.

All other EFW flow controls in automatic

Which of the following statements describes the status of the Emergency Feedwater system?

- A. S/G 1 EFW Flow Isolation valves can be closed.
- B. S/G 2 EFW Flow Isolation valves are closed due to the MSIS.
- C. S/G 1 EFW flow control valves will maintain 400 gpm until reaching level Y.
- D. S/G 2 EFW flow will continue until level reaches level X.

ANSWER

- D. S/G 2 EFW flow will continue until level reaches level X.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 34

| | | | | | |
|---------------------|---------------------------------|---------|--------------------|-----------|----------------|
| QUESTION ID: | 4107 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Auto Isolation of WCT discharge | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 6/25/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/25/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | LWM | | CATEGORY: | SYSTEM | |
| | RMS | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 3.9-068-A4.04 | 3.8 | 3.7 | W-3-LP-OPS-RMS00 | 01 | |
| | | | W-3-LP-RO-LWM00 | 04, 05 | |

QUESTION

All of the following are possible causes of automatic termination of WCT discharge to Circulating Water except:

- A. Loss of sample flow
- B. Loss of radiation monitor power supply
- C. High discharge conductivity
- D. Low Waste Condensate Tank Level

ANSWER

- C. High discharge conductivity

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 35

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 2540 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Why restore FHB normal ventilation ASAP? | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 9/2/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 9/2/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | HVF | CATEGORY: | Procedural | | | |
| | PPO | | System | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-404 | 00 | 00 | 1/29/93 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.7-072-K3.02 | 3.1 | 3.5 | w-3-lp-ops-hvf00 | 4 | | |
| 072000.K1.01 | | | W-3-LP-OPS-PPO40 | 3 | | |

QUESTION

Select the most correct reason for restoring FHB Normal Ventilation Supply and Exhaust Fans as soon as possible following high airborne activity in the FHB.

- A. High differential pressure prevents personnel from entering/exiting the FHB.
- B. Minimize changes in Spent Fuel Pool and Refueling Cavity level if Fuel Transfer Tube Gate Valve is open.
- C. Minimize evaporation of water in the Spent Fuel Pool.
- D. Restore ventilation to the Spent Fuel Pool Cooling Pumps.

ANSWER

- D. Restore ventilation to the Spent Fuel Pool Cooling Pumps.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 36
QUESTION ID: 3504 - A STATUS: Approved LAST USED
DESCRIPTION: Actuation of CR emergency ventilation
AUTHOR: bmather REVISION 1 REVISION DATE 6/29/96
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 6/29/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: HVC CATEGORY: SYSTEM
PPO
REFERENCE: REVISION: CHANGE: DATE:
OP-901-401 00 00 4/2/93
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
000060.EK2.02 W-3-LP-OPS-HVC00 2
3.7-072-K2.04 3.3* 3.5*

QUESTION

Which of the following occurs when one of the train A radiation monitors CROAI A North (0200.1) or CROAI A South (0200.5) for the control room air intake reaches its high radiation alarm setpoint?

- A. All air intake to the RAB is secured.
- B. Control room Toilet Exhaust Fan A starts.
- C. Control Room Normal Air Handling Unit A stops
- D. Control room Emergency Filtration Unit A starts.

ANSWER

- D. Control room Emergency Filtration Unit A starts.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 37
QUESTION ID: 1036 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: T.S. temperature requirement for having LTOPs in service
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/29/96
APPROVAL: tbrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/29/96
TYPE: Multiple Choice **TIME:** 1 P 1
QUIZ ONLY: **CLOSED REFERENCE:** X **REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS **CATEGORY:** PROCEDURE
TS
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
 TS 3.4.8
 OP-010-001 18 01 7/11/96
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
 3.4-002-K4.10 4.2 4.4 W-3-LP-OPS-PPNC2 03
 W-3-LP-OPS-S100 06
 W-3-LP-OPS-S100 01

QUESTION

When cooling down the plant per OP-010-001, General Plant Operations, when are the Low Temperature Over pressure Protection Relief Valves (LTOP's) required to be aligned for service?

- A. Prior to closing the Safety Injection Tanks' Isolation Valves.
- B. Prior to entering Mode 4.
- C. Prior to placing both Letdown Flow Control Valves in service.
- D. Prior to reducing RCS temperature to 272°F.

ANSWER

- D. Prior to reducing RCS temperature to 272°F.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 38

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 1216 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Change necessary in Tavg to maintain SG pressure constant with 10% plugged tubes | | | | | |
| AUTHOR: | whardin | | REVISION | 1 | REVISION DATE | 8/2/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | whardin | | VERIFICATION DATE: | 8/2/94 | | |
| TYPE: | Multiple Choice | | TIME: | 3 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | RCS | CATEGORY: | Fundamentals | | | |
| | TYH | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.4-002-K5.01 | 3.1 | 3.4 | W-3-LP-OPS-TYH07 | 5 | | |

QUESTION

Prior to plugging 10 percent of the U-tube area in each steam generator, the plant operated at 100% power with RCS Tave at 574°F and a steam pressure of 850 psia. To what value must Tave be changed in order to maintain the same Steam Generator pressure at 100% power? Assume RCS flow rate was unaffected by the tube plugging.

- A. 577.4°F
- B. 579.4°F
- C. 581.4°F
- D. 583.4°F

ANSWER

- B. 579.4°F

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 39
QUESTION ID: 1276 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: RCS vents T.S. requirements
AUTHOR: WJV **REVISION** 0 **REVISION DATE** 4/5/91
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmather **VERIFICATION DATE:** 6/29/96
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
TS 3.4.10
NRC KA NUMBER: RO SRO **TRAINING MATERIAL:** OBJECTIVE
3.2-002-A2.03 4.1 4.3 W-3-LP-OPS-RCS00

QUESTION

The Reactor Coolant System Vents are required to be operable in Modes 1, 2, 3, and 4 to:

- A. Limit combustible mixtures.
- B. Prevent steam or non condensables from interfering with natural circulation.
- C. Equalize pressure between the Pressurizer and the Reactor Vessel head.
- D. Ensure that hot leg injection reaches the core.

ANSWER

- B. Prevent steam or non condensables from interfering with natural circulation.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 40

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 1532 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Signal that bypasses the motor overloads for SI-602A(B) and reason | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | CS | CATEGORY: | System | | | |
| | SI | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-009-008 | 12 | 00 | 2/7/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.3-006-K1.02 | 4.3 | 4.6 | W-3-LP-OPS-CS00 | 01 | | |
| | | | W-3-LP-OPS-SI00 | 04 | | |

QUESTION

The motor overload relays for SI-602A & B (Safety Injection Sump outlets) are bypassed . . .

- A. On RAS to ensure the valves can be opened.
- B. On RAS to ensure the valves can be closed.
- C. On SIAS to ensure the valves can be opened.
- D. On SIAS to ensure the valves can be closed.

ANSWER

- D. On SIAS to ensure the valves can be closed.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 41

| | | | | | | |
|---------------------|--|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 1563 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | reason HPSI FCVs are throttled on SIAS | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | SI | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.2-006-K4.09 | 3.8 | 4.2 | W-3-LP-OPS-SI00 | 04 | | |

QUESTION

Select the reason HPSI Cold Leg Injection Flow Control Valves go to a throttled position on an SIAS.

- A. To reduce the HPSI Pump starting current if RCS pressure is below shutoff head.
- B. To minimize back flow from the RCS in the event a HPSI Pump fails to start.
- C. To prevent HPSI Pump runout and balance flow to each of the cold legs.
- D. To limit HPSI flow such that RAS does not occur earlier than assumed in the safety analysis.

ANSWER

- C. To prevent HPSI Pump runout and balance flow to each of the cold legs.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 42

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 1398 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Pzr backup heater action on an insurge | | | | | |
| AUTHOR: | TPM | | REVISION | 0 | REVISION DATE | 4/15/91 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPC | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |

| | | | | |
|-----------|-----|-----|--------------------|-----------|
| A NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| -K1.08 | 3.2 | 3.5 | W-3-LP-OPS-PLC00 | 05 |

015. J.K6.02

QUESTION

The purpose of energizing the Pressurizer Backup Heaters when Pressurizer level rises above Programmed Level during an in-surge is:

- A. To raise Pressurizer pressure to saturation.
- B. To raise Pressurizer steam space temperature.
- C. To return Pressurizer pressure to setpoint.
- D. To return Pressurizer water temperature to saturated conditions.

ANSWER

- D. To return Pressurizer water temperature to saturated conditions.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 43

| | | | | | | |
|---------------------|---------------------------------------|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 1797 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Aux. trip, trip without pretrip light | | | | | |
| AUTHOR: | WAH | | REVISION | 3 | REVISION DATE | 1/6/94 |
| APPROVAL: | tthrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccc01 | | VERIFICATION DATE: | 9/21/94 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | CPC | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.7-012-K6.07 | 2.9* | 3.2 | W-3-LP-OPS-CPC01 | 4 | | |

QUESTION

Following a single channel CPC trip, how can the operator quickly determine if the trip signal is due to an Auxiliary Trip?

- A. By obtaining the CPC Trip Buffer Report.
- B. By observing a Trip light without the associated Pretrip light.
- C. By obtaining the trip Sequence of Events Report (SOE).
- D. By observing that Diverse Reactor Trip has actuated.

ANSWER

- B. By observing a Trip light without the associated Pretrip light.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 44

| | | | | | | |
|---------------------|--|-------------------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3139 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Reason for minimum time for RAS actuation after LOCA | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPS | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.3-006-K4.07 | 3.3 | 3.6 | W-3-LP-OPS-SI00 | 04 | | |

QUESTION

RAS initiation is delayed for at least 20 minutes after a large break LOCA occurs so that:

- A. The RCS will have completed blowdown.
- B. The LPSI pumps will have adequate NPSH.
- C. Core boiloff is less than the capacity of one HPSI train.
- D. Containment pressure will be reduced by half.

ANSWER

- C. Core boiloff is less than the capacity of one HPSI train.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 45

| | | | | | | |
|---------------------|---------------------------------|---------|--------------------|-----------|----------------|--------|
| QUESTION ID: | 3081 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | CWP for Target CEA's vs. CEAC's | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 8/5/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 8/5/94 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | X |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | CPC | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-004-006 | 10 | 00 | 4/13/94 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.1-014-A2.04 | 3.4 | 3.9 | W-3-LP-OPS-CPC01 | 4 | | |
| 3.1-001-K4.08 | 3.2* | 3.4 | | | | |

QUESTION

You are withdrawing Reg Group 6 CEAs, IF one CEA in the group stops moving while the rest continue to withdraw, Which of the following will prevent any further group withdrawal when reached (assume Group 6 is at 130 inches when misalignment occurs)

- A. 4.95 inch misalignment detected by CPC target CEAs
- B. 4.95 inch misalignment detected by CEACs
- C. 5.5 inch misalignment detected by CPC target CEAs
- D. 5.5 inch misalignment detected by CEACs

ANSWER

- D. 5.5 inch misalignment detected by CEACs

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 46

| | | | | | | |
|---------------------|------------------------------|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 2232 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | HEAT SINK POST-LOCA WITH RAS | | | | | |
| AUTHOR: | WAH | | REVISION | 0 | REVISION DATE | 9/5/91 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/90 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | CS | CATEGORY: | PROCEDURE | | | |
| | PPE | | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| CP-902-002 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.5-026-K4.04 | 3.7 | 4.1 | W-3-LP-OPS-CS00 | 4 | | |

QUESTION

Select which system provides the heat sink for cooling the Safety Injection Sump POST-LOCA following a Recirculation Actuation Signal (RAS).

- A. Shutdown Cooling System
- B. High Pressure Safety Injection system
- C. Low Pressure Safety Injection system
- D. Containment Spray system

ANSWER

- D. Containment Spray system

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 47

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 4127 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Actions that occur as a result of lo-lo level in the spent fuel pool | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | FS | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-002-006 | 12 | 00 | 8/1/94 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.8-033-A2.03 | 3.1 | 3.5 | W-3-LP-OPS-FS00 | 03 | | |

QUESTION

Which of the following would occur as a DIRECT result of LO-LO spent fuel pool level (41.6 ft)?

- A. Spent Fuel Pool Cooling Pumps trip
- B. CMU to Spent Fuel Pool Makeup Valve opens
- C. SFHM Hoist Up movement is disabled
- D. Fuel Handling Building Isolation Actuation occurs

ANSWER

1. Spent Fuel Pool Cooling Pumps trip

COMMENTS

Waterford 3 Examination Question Examination Bank

| | | | | |
|---------------------------------------|--|---------|--------------------|---------------------|
| Examination Question Number 48 | | | | |
| QUESTION ID: | 47 | -A | STATUS: | Approved |
| DESCRIPTION: | Conditions requiring resetting SG trip setpoints during RCS cooldown | | | |
| AUTHOR: | RJC | | REVISION | 1 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 |
| TYPE: | Multiple Choice | | TIME: | 5 |
| QUIZ ONLY: | | | POINTS: | 1 |
| SPECIAL REFERENCES: | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| PLANT SYSTEM: | PPN | | SIMULATOR SETUP | |
| | PPS | | CATEGORY: | PROCEDURE SYSTEM |
| REFERENCE: | REVISION: | CHANGE: | DATE: | |
| OP-010-001 | 18 | 01 | 7/11/96 | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| 3.4-035-K1.12 | 3.7 | 3.9 | W-3-LP-OPS-PPN02 | 03 |
| | | | W-3-LP-OPS-PPS00 | 00 |

QUESTION

A Cooldown to Mode 5 using the Steam Bypass Control System is in progress.

Plant conditions are as follows:

Steam Generator 1 & 2 pressures are 800 psia.

Reactor Coolant System temperature is 518°F.

Pressurizer pressure is 2100 psia and level is 33%.

RCPs 1A, 1B, and 2B are operating.

Charging Pumps A & B are operating with Letdown in automatic control.

Select the action which should be performed to prevent an inadvertent Engineered Safety Features Actuation Signal (ESFAS).

- A. Reset the Pressurizer low pressure trip setpoints.
- B. Raise Pressurizer level to 50%.
- C. Bypass the Pressurizer low pressure trips.
- D. Reset the Steam Generator low pressure trip setpoints.

ANSWER

- D. Reset the Steam Generator low pressure trip setpoints.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 49
QUESTION ID: 87 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Effect of not tripping the main turbine after a reactor trip
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/29/96
APPROVAL: tbrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/29/96
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
 OP-902-000 07 00 12/1/95
 TG-OP-902-000 07 00 2/13/96
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
 3.4-039-K5.08 3.6 3.6 W-3-LP-OPS-PPE01 11
 4.1-E7-EK3.01 4 4.6
 4.1-E7-EK1.03 3.7 4

QUESTION

The reactor trips from 100% power. The control room operators verify that the reactor is tripped and immediately note that the turbine has not tripped and the generator breakers remain closed. If left unresolved this malfunction will cause:

- A. An uncontrolled cool down of the RCS, resulting in less shutdown margin.
- B. Main turbine blade heating, possibly resulting in damage to the main turbine rotor and shaft.
- C. A loss of condenser vacuum, resulting in the loss of condenser steam dump.
- D. An increase in RCS pressure, possibly resulting in the Pressurizer safety valves lifting.

ANSWER

- A. An uncontrolled cool down of the RCS, resulting in less shutdown margin.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 50

| | | | | | | | |
|---------------------|---|-----|--------------------|----------|----------------|--------------------|-----------|
| QUESTION ID: | 1660 | - A | STATUS: | Approved | LAST USED | | |
| DESCRIPTION: | Repowering the safety bus, taking the synch. switch to bus tie places EDG in Droop but stays in Emergency | | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 8/15/94 | |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 8/15/94 | | | |
| TYPE: | Multiple Choice | | TIME: | 3 | POINTS: | 1 | |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | X | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | EDG | | CATEGORY: | SYSTEM | | | |
| REFERENCE: | OP-902-002 | 07 | REVISION: | 00 | CHANGE: | DATE: | |
| | | | | | | 12/1/95 | |
| NRC KA NUMBER: | 3.6-064-K4.03 | RO | SRO | 2.5 | 3 | TRAINING MATERIAL: | OBJECTIVE |
| | | | | | | W-3-LP-OPS-EDG00 | 01 |

QUESTION

Complete the following statement.

An Emergency Diesel Generator is supplying its associated safety bus in the Emergency Mode and normal power is aligned to the 2 bus with the 2 to 3 bus tie breaker closed. When the operator takes the associated synchronizer switch to the BUS TIE position:

- A. the governor will be returned to the droop mode of operation.
- B. the governor swaps to the backup hydraulic isochronous mode.
- C. the Diesel swaps to the Test Mode of operation.
- D. the Bus Tie Breaker closes following a Synch Check.

ANSWER

- A. the governor will be returned to the droop mode of operation.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 51

| | | | | | | |
|---------------------|---------------------------------|-------------------|--------------------|----------------|---------------|----------|
| QUESTION ID: | 2235 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | WHAT MAKES SUPS UNINTERRUPTIBLE | | | | | |
| AUTHOR: | WAH | | REVISION | 1 | REVISION DATE | 12/21/93 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | | | VERIFICATION DATE: | 12/21/93 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | ID | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.6-062-K4.10 | 3.1 | 3.5 | W-3-LP-OPS-ID00 | 4 | | |

QUESTION

The output of Safety SUPS SA is considered to be uninterruptible because:

- A. Auctioneered AC power supplies are provided to the rectifier section.
- B. Inverter input is auctioneered between the rectifier output and a DC Safety Bus supply.
- C. An internal battery is auctioneered with the rectifier output.
- D. The Static Transfer Switch automatically transfers to AC alternate source.

ANSWER

- B. Inverter input is auctioneered between the rectifier output and a DC Safety Bus supply.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 52

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 3410 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | 4.16 KV breaker operation on loss of DC power | | | | | |
| AUTHOR: | shymel | | REVISION | 1 | REVISION DATE | 11/5/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | shymel | | VERIFICATION DATE: | 11/5/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | ED | CATEGORY: | System | | | |
| | EPC | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.6-063-K3.02 | 3.5 | 3.7 | W-3-LP-OPS-EPC00 | 07 | | |

QUESTION

Which of the following describes 4.16KV breaker operation if DC control power is lost?

- A. Breakers will remain in their "as is" condition and operation would only be possible by local manual means.
- B. Automatic breaker trips would remain operational but remote operation of breakers would not be possible.
- C. Breakers would remain remotely operable but automatic trip functions would become inoperable.
- D. Breakers would trip open and operation would not be possible by local manual means.

ANSWER

- A. Breakers will remain in their "as is" condition and operation would only be possible by local manual means.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 53

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|----------|
| QUESTION ID: | 3140 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | EDG paralleled to grid and voltage and governor switches taken to increase | | | | | |
| AUTHOR: | BC | | REVISION | 0 | REVISION DATE | 11/11/93 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | | | VERIFICATION DATE: | 11/11/93 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | EDG | CATEGORY: | FUNDAMENTALS | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-009-002 | 15 | 00 | 5/29/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.6-064-A2.03 | 3.1 | 3.1 | W-3-LP-OPS-EDG00 | 1 | | |

QUESTION

Which of the following is the correct expected response if an EDG is paralleled to the grid and the Governor and Voltage control hand switches are both taken to Raise/Increase?

- A. Kw increases and EDG speed increases.
- B. Reactive load increases and Kw increases.
- C. Indicated output voltage increases and Reactive load increases.
- D. EDG speed increases and Indicated output voltage increases.

ANSWER

- B. Reactive load increases and Kw increases.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 54

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 2237 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Requirements for discharge with the LWM rad monitor OOS | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | LWM | CATEGORY: | PROCEDURE | | | |
| | PRM | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| HP-001-233 | 06 | 01 | 3/21/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.7-073-K3.01 | 3.6 | 4.2 | W-3-LP-RO-LWM00 | 06 | | |

QUESTION

With an inoperable LWM radiation monitor all of the following are required to perform a discharge from the Waste Condensate Tanks except:

- A. Obtain and analyze independent samples from the Waste Condensate Tank.
- B. Perform an independent verification of discharge valve lineup.
- C. Perform an independent verification of release rate calculation.
- D. Perform an independent verification of proper Circ Water flow.

ANSWER

- D. Perform an independent verification of proper Circ Water flow.

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 55

| | | | | | | |
|----------------------------|-------------------------------------|--------------------------|---------------------------|-----------------------|----------------------|---------|
| QUESTION ID: | 3519 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Locations sampled by the PAS System | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PAS | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.7-073-K1.01 | 3.6 | 3.9 | W-3-LP-OPS-PAS00 | 05 | | |

QUESTION

Which of the following describes the locations sampled by the PAS system?

- A. Reactor coolant system cold leg #1, RAB penetration areas, and containment SIS sump.
- B. Containment Atmosphere, Reactor Coolant System hot leg #1, and containment SIS sump.
- C. Shutdown cooling train A, component cooling water system, and containment atmosphere.
- D. Reactor coolant system hot leg #2, SDC cooling train B and containment SIS sump.

ANSWER

- B. Containment Atmosphere, Reactor Coolant System hot leg #1, and containment SIS sump.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 56

| | | | | | | |
|---------------------|------------------|-------------------|--------------------|----------------|---------------|----------|
| QUESTION ID: | 2280 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | DFP WATER SUPPLY | | | | | |
| AUTHOR: | BCM | | REVISION | 0 | REVISION DATE | 10/28/91 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | | | VERIFICATION DATE: | 10/28/91 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | FPD | CATEGORY: | SYSTEM | | | |
| | FPP | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-009-004 | 09 | 01 | 5/2/96 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.8-086-K4.01 | 3.1 | 3.7 | W-3-LP-OPS-FP00 | 01 | | |
| 3.8-086-A1.02 | 3.0* | 3.2* | | | | |

QUESTION

Choose the answer that best describes the normal alignment of the Diesel Fire Pump Suction.

- A. Diesel Fire Pump #1 takes suction from Fire Water Storage Tank A
- B. Diesel Fire Pump #1 takes suction from the Motor Driven Fire Pump discharge header.
- C. Diesel Fire Pump #1 takes suction from both Fire Water Storage Tanks.
- D. Diesel Fire Pump #1 takes suction from Fire Water Storage Tank B.

ANSWER

- C. Diesel Fire Pump #1 takes suction from both Fire Water Storage Tanks.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 57

| | | | | | |
|---------------------|---|---------|--------------------|-----------|----------------|
| QUESTION ID: | 2024 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Hot and Cold leg injection to cavitating LPSI | | | | |
| AUTHOR: | WJV | | REVISION | 0 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 7/16/91 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | |
| PLANT SYSTEM: | SDC | | CATEGORY: | PROCEDURE | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-901-131 | 00 | 00 | 3/23/93 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 000025.G12 | | | W-3-LP-OPS-REQ21 | 05 | |
| 3.4-005-K3.05 | 3.7* | 3.8* | | | |

QUESTION

The primary reason for initiation of hot and cold leg injection to the SDC train with a cavitating LPSI pump is to:

- A. Prevent Boron precipitation.
- B. Ensure all injection flow is not lost through cold leg openings.
- C. Prevent over pressurization of cold leg nozzle dams.
- D. Provide subcooled water to the suction of the cavitating LPSI pumps.

ANSWER

- D. Provide subcooled water to the suction of the cavitating LPSI pumps.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 58
QUESTION ID: 1310 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Temperature change across a PZR safety
AUTHOR: WJV **REVISION** 0 **REVISION DATE** 4/8/91
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmath **VERIFICATION DATE:** 6/29/96
TYPE: MULTIPLE CHOICE **TIME:** 5 **POINTS:** 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE X
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: RCS **CATEGORY:**
 TYH
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
NRC KA NUMBER: RO SRO **TRAINING MATERIAL:** **OBJECTIVE**
 007000.A4.10 W-3-LP-OPS-MCD01 03
 3.5-007-A4.10 3.6 3.8 W-3-LP-OPS-TYH04 21
 W-3-LP-OPS-RCS00 02

QUESTION

Assuming a Pressurizer Safety Valve lifts, which of the following statements is most correct?

- A. The downstream Safety Relief temperature detector will indicate T_{sat} for the current Pressurizer pressure.
- B. Quench Tank temperature will equal T_{sat} for the current Pressurizer pressure.
- C. The downstream Safety Relief temperature detector will indicate T_{sat} for the current Quench Tank pressure.
- D. Quench Tank pressure will equal P_{sat} for the current Pressurizer vapor space temperature.

ANSWER

- C. The downstream Safety Relief temperature detector will indicate T_{sat} for the current Quench Tank pressure.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 59

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 4120 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Response of CCW pump AB and system with SIAS and LOOP | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | CC | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.8-008-A3.08 | 3.6* | 3.7* | W-3-LP-OPS-CC00 | 02, 04 | | |

QUESTION

CCW pumps B and AB are operating. Although CCW pump AB is replacing A the AB bus is powered from the B-side. The "CCW pump A Unavailable" alarm is locked in. Which of the following describes the status of the CCW system in the event of a concurrent loss of offsite power and SIAS?

- A. CCW pumps B & AB running
- B. CCW pumps A & B running
- C. Only CCW pump B running
- D. All CCW pumps running

ANSWER

- C. Only CCW pump B running

COMMENTS

Waterford 3 Examination Question Examination Bank

| | | | |
|--|----------------------------|-----------------------------------|---|
| Examination Question Number 60 | | | |
| QUESTION ID: 3136 | - A | STATUS: Approved | LAST USED: |
| DESCRIPTION: ACCW pump starts | | | |
| AUTHOR: kkirkpa | | REVISION 2 | REVISION DATE 11/2/95 |
| APPROVAL: thrown | | APPROVAL DATE: 7/5/96 | |
| REFERENCE VERIFIED: kkirkpa | | VERIFICATION DATE: 11/2/95 | |
| TYPE: Multiple Choice | | TIME: 3 | POINTS: 1 |
| QUIZ ONLY: | CLOSED REFERENCE: X | OPEN REFERENCE: | X |
| SPECIAL REFERENCES: SIMULATOR SETUP | | | |
| PLANT SYSTEM: ACC | CATEGORY: | | |
| REFERENCE: OP-002-001 | REVISION: 10 | CHANGE: 02 | DATE: 6/18/96 |
| NRC KA NUMBER: 3.8-008-K4.01 | RO 3.1 | SRO 3.3 | TRAINING MATERIAL: W-3-LP-OPS-CC00 |
| | | | OBJECTIVE 5 |

QUESTION

All of the following conditions will automatically start the Train B Auxiliary Component Cooling Water Pump except:

- A. Train B CCW Heat Exchanger outlet temperature 10 deg F above the setpoint of CCW Temperature Controller, CC-ITIC-7070B.
- B. Wet Cooling Tower basin temperature reaches 95 deg F.
- C. CCW Heat Exchanger outlet temperature reaches 100 deg F.
- D. a Safety Injection Actuation Signal occurs.

ANSWER

- B. Wet Cooling Tower basin temperature reaches 95 deg F.

COMMENTS

NEW K/A # 008.K4.01

Waterford 3 Examination Question Examination Bank

Examination Question Number 61

| | | | | | | |
|---------------------|------------------------------|-------------------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3486 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Refueling machine interlocks | | | | | |
| AUTHOR: | MMARLER | | REVISION | 1 | REVISION DATE | 6/16/95 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | MMARLER | | VERIFICATION DATE: | 6/16/95 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | FHS | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| RF-005-002 | 03 | 00 | 9/18/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 3.8-034-A3.01 | 2.5* | 3.1 | W-3-LP-OPS-FHS00 | 4 | | |
| 034000.K4.02 | | | | | | |

QUESTION

Which of the following describes a condition that prevents the Refueling Machine (RFM) from entering the upender zone?

- A. RFM fuel hoist box is latched.
- B. RFM fuel hoist overload
- C. Spreader is fully retracted.
- D. Upender is completely horizontal.

ANSWER

- D. Upender is completely horizontal.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 62

| | | | | | | |
|---------------------|----------------------------|---------|--------------------|-----------|---------------|--------|
| QUESTION ID: | 1261 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Quick Open Block (RX Trip) | | | | | |
| AUTHOR: | WJV | | REVISION | 0 | REVISION DATE | 4/5/91 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 1/12/95 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED REFERENCE: | X | OPEN REFERENCE | | | X |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | SBC | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 041020.K4.17 | | | W-3-LP-OPS-SBC00 | 05 | | |
| 3.4-041-A4.08 | 3 | 3.1* | | | | |

QUESTION

Steam Bypass Valve 6 is the only Steam Bypass valve that receives a quick open block for a:

- A. Reactor Power Cutback with a load rejection
- B. Reactor Power Cutback with a Feed pump trip
- C. Reactor trip with Tave equal to 550° F
- D. Reactor trip with Tave equal to 570° F

ANSWER

- D. Reactor trip with Tave equal to 570° F

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 63
QUESTION ID: 1294 - A STATUS: Approved LAST USED
DESCRIPTION: IA SETPOINTS AND OPERATION
AUTHOR: JMO REVISION 0 REVISION DATE 8/16/91
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: VERIFICATION DATE: 8/16/91
TYPE: MULTIPLE CHOICE TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: IA CATEGORY: SYSTEM
REFERENCE: REVISION: CHANGE: DATE:
OP-003-016 07 00 11/20/95
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
078000.A3.01 W-3-LP-OPS-IA00 1
3.8-078-A3.01 3.1 3.2

QUESTION

Concerning the Station and Instrument Air Systems, Which of the following is true?

- A. The Instrument Air compressors cycle between 112 PSIG and 120 PSIG; the Instrument Air Dryer skids are auto bypassed at 95 PSIG.
- B. Backup air compressor starts at 105 PSIG; Station Air to Instrument Air backup opens when air dryers are bypassed.
- C. When air pressure reaches 125 PSIG in the Station Air (SA) receiver, the unloader valve opens causing pressure between the air compressor separator and the compressor to equalize.
- D. Station air provides a backup source for instrument air via an interface valve which opens to supply air to the dryer inlet downstream of IA Receiver.

ANSWER

- A. The Instrument Air compressors cycle between 112 PSIG and 120 PSIG; the Instrument Air Dryer skids are auto bypassed at 95 PSIG.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 64
QUESTION ID: 1795 - A STATUS: Approved LAST USED
DESCRIPTION: SBV EXHAUST MODE
AUTHOR: WAH REVISION 0 REVISION DATE 7/18/91
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmathur VERIFICATION DATE: 6/29/96
TYPE: MULTIPLE CHOICE TIME: 1 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: CAR CATEGORY: SYSTEM
SBV
HRA
REFERENCE: REVISION: CHANGE: DATE:
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
3.5-103-K1.03 3.1* 3.5* W-3-LP-OPS-SBV00 03

QUESTION

Which of the following occurs when Shield Building Ventilation shifts to the EXHAUST mode.

- A. The in-service Containment Atmosphere Release (CAR) Exhaust fans START.
- B. The in-service Containment Atmosphere Release (CAR) Exhaust fans STOP.
- C. The in-service Containment Atmosphere Release (CAR) Exhaust fans go to RECIRCULATION mode.
- D. The in-service Containment Atmosphere Release (CAR) Supply fans go to RECIRCULATION mode.

ANSWER

- B. The in-service Containment Atmosphere Release (CAR) Exhaust fans STOP.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 65

| | | | | | | |
|---------------------|--|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3290 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | following cea misalignment we wait for two hours for clad relaxation | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 6/30/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 6/30/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | PPO | | CATEGORY: | Procedure | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-102 | 01 | 01 | 9/22/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A5-AK3.05 | 3.4 | 4.2 | W-3-LP-OPS-PPO10 | 4 | | |

QUESTION

Following a CEA or CEDMCS malfunction in which the CEA was misaligned greater than 19 inches, the off-normal procedure directs you to hold reactor power constant for _____ after CEA alignment for _____.

- A. 0.5 hours, xenon redistribution
- B. 1 hour, radial peaking
- C. 2 hours, clad relaxation
- D. 4 hours, isotopic iodine analysis

ANSWER

- C. 2 hours, clad relaxation

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 66

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 4109 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Ability to determine if single phase natural circulation criteria is satisfied | | | | | |
| AUTHOR: | avest | | REVISION | 0 | REVISION DATE | 6/25/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 6/25/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPE | CATEGORY: | PROCEDURE | | | |
| | RCS | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-005 | 09 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A15/17-AA1 21 | 4.4 | 4.5 | W-3-LP-OPS-PPE05 | 01 | | |

QUESTION

A Loss of Offsite Power has occurred. Plant conditions are as follows:

| | |
|---|---|
| The Reactor is in Mode 3 | CET temperature is 598°F |
| RCS pressure is 1900 psia and slowly rising | S/G 1 & 2 levels are 55% WR and slowly rising |
| T _c is 550°F and constant | T _h is 585°F and slowly lowering |

All of the following conditions meet the criteria for single phase natural circulation in accordance with OP-902-005, Loss of Offsite Power/Station Blackout Recovery Procedure with the exception of:

- A. T_c temperature trend
- B. T_h temperature trend
- C. Subcooled Margin
- D. T_h-CET differential temperature

ANSWER

- D. T_h-CET differential temperature

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 67

| | | | | | | |
|----------------------------|---------------------------------------|--------------------------|---------------------------|-----------------------|----------------------|---------|
| QUESTION ID: | 3312 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Emergency boration entry requirements | | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE | 7/13/94 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 7/13/94 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPO | CATEGORY: | Procedure | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-103 | 00 | 01 | 9/22/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A24-AK3.01 | 4.1 | 4.4 | W-3-LP-OPS-PPO10 | 2 | | |

QUESTION

Which of the following conditions requires emergency boration per OP-901-103, "Emergency Boration"?

- A. Reg Group 6 CEA positioned just below the Pre-Power Dependent Insertion Limit.
- B. During refueling Keff is equal to 0.95.
- C. Shutdown margin is 2.1% delta k/k with Tav_g at 195 degrees F.
- D. A main steam line safety valve sticks full open and will NOT reclose with the reactor at 1% power.

ANSWER

- D. A main steam line safety valve sticks full open and will NOT reclose with the reactor at 1% power.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 68

| | | | | | | |
|---------------------|-------------------------------------|---------|--------------------|-----------|-----------------|---------|
| QUESTION ID: | 4121 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Causes of CCW surge tank level rise | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE: | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | CC | | CATEGORY: | SYSTEM | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-510 | 01 | 00 | 9/2/93 | | | |
| NRC KA NUMBER: | RO | SRG | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A26-AA2.01 | 2.9 | 3.5 | W-3-LP-OPS-CC00 | 01 | | |
| | | | W-3-LP-OPS-PPO50 | 04 | | |

QUESTION

The plant is at normal operating temperature and pressure when the Component Cooling Water Surge Tank level starts increasing. Select which of the following components could be causing this level increase. (Assume normal equipment conditions)

- A. Spent fuel pool heat exchanger
- B. RCP seal cooler heat exchanger
- C. Waste Gas compressor
- D. Essential Chiller A

ANSWER

- B. RCP seal cooler heat exchanger

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 69

| | | | | | | |
|---------------------|----------------------|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3190 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | PPCS channel failure | | | | | |
| AUTHOR: | RJC | | REVISION | 0 | REVISION DATE | 12/9/93 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 2 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PLC | | CATEGORY: | PROCEDURE | | |
| | PPO | | | SYSTEM | | |
| | PPC | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-120 | 01 | 00 | 10/21/93 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | | OBJECTIVE | |
| 4.2-A27-AA2.16 | 3.6 | 3.9 | W-3-LP-OPS-PPO10 | | 4 | |

QUESTION

Given the following plant conditions:

Pressurizer Level Control Channel Selector is positioned to Channel "Y".

Pressurizer low level Heater Cutout Channel Selector is positioned to BOTH.

All Pressurizer Heaters are on for Boron Equalization.

Which of the following describes the status of the Pressurizer Heaters if Pressurizer level Channel "X" fails low?

- A. All Pressurizer Heaters remain energized.
- B. All Pressurizer Heaters will de-energize.
- C. All Backup Heaters de-energize, all Proportional Heaters remain energized
- D. All Pressurizer Heaters de-energize except Train B powered Heaters.

ANSWER

- B. All Pressurizer Heaters will de-energize.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 70

| | | | | | |
|---------------------|---|-------------------|--------------------|----------------|-----------------------|
| QUESTION ID: | 4122 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Basis for slow EFW flow initiation to SGs | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE 6/29/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | EFW | CATEGORY: | PROCEDURE | | |
| | PPE | | | | |
| | FW | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-902-002 | 07 | 00 | 12/1/95 | | |
| OP-902-008 | 10 | 00 | 12/1/95 | | |
| OP-902-007 | 08 | 00 | 12/1/95 | | |
| OP-902-006 | 07 | 00 | 12/1/95 | | |
| OP-902-005 | 09 | 00 | 12/1/95 | | |
| OP-902-004 | 07 | 00 | 12/1/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A40-AK3.04 | 4.5 | 4.7 | W-3-LP-OPS-PPE06 | 05 | |

QUESTION

After a loss of feedwater event an EFW pump is placed in service with SG1 level at 22% NR and SG2 level at 20% NR. Why should feed flow be initiated slowly to the steam generators?

- A. To limit the possibility of feed ring damage when SG level is below the feed ring.
- B. To minimize the differential temperature across the tube bundle wrapper.
- C. To limit the RCS cool down resulting from restoration of feedwater from the CSP.
- D. To minimize the thermal shock to the SG tubes when feedwater is restored.

ANSWER

- A. To limit the possibility of feed ring damage when SG level is below the feed ring.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 71

| | | | | | |
|---------------------|---|---------|--------------------|-----------|----------------|
| QUESTION ID: | 4123 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Operator concern on MSLB with SG dryout | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | 6/29/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | |
| PLANT SYSTEM: | PPE | | CATEGORY: | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-902-004 | 07 | 00 | 12/1/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A40-AK1.01 | 4.1 | 4.4 | W-3-LP-OPS-PPE04 | 02 | |

QUESTION

Which of the following reflects the primary concern of the operators after a major steam line break upstream of the MSIV in which the affected SG blows dry.

- A. Ensure the RCS reheats back to normal operating temperature within Tech Spec heatup limits
- B. Maintain subcooling margin between 28° F and 200° F
- C. Energize all pressurizer heaters to re-establish saturated conditions in the pressurizer
- D. Re-establish all safety injection flow

ANSWER

- B. Maintain subcooling margin between 28° F and 200° F

COMMENTS

Waterford 3 Examination Question Examination Bank

| | | | | |
|---------------------------------------|------------------------|---------|--------------------|-----------|
| Examination Question Number 72 | | | | |
| QUESTION ID: | 2348 | - A | STATUS: | Approved |
| DESCRIPTION: | System alarm setpoints | | | |
| AUTHOR: | MJESSE | | REVISION | 1 |
| APPROVAL: | thrown | | REVISION DATE | 8/3/94 |
| REFERENCE VERIFIED: | MJESSE | | APPROVAL DATE: | 7/5/96 |
| TYPE: | MULTIPLE CHOICE | | VERIFICATION DATE: | 8/3/94 |
| QUIZ ONLY: | | | TIME: | 1 |
| SPECIAL REFERENCES: | | | POINTS: | 1 |
| PLANT SYSTEM: | AE | | CLOSED REFERENCE: | X |
| | | | OPEN REFERENCE | X |
| | | | SIMULATOR SETUP | |
| | | | CATEGORY: | |
| | | | Procedure | |
| | | | System | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | |
| OP-500-005 | 06 | 01 | 4/16/94 | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| 055000.A2.04 | | | W-3-LP-OPS-AE00 | 5 |
| 4.2-A51-AA2.02 | 3.9 | 4.1 | W-3-LP-OPS-PPO20 | 03 |

QUESTION

During a loss of condenser vacuum event, the following annunciators are received: FWPT A VACUUM LO and FWPT B VACUUM LO. Prior to these alarms what other alarms should have been received?

- A. VACUUM PUMP - TRIP/TROUBLE
- B. STM BYPASS SYSTEM CNDSR VACUUM FAIL
- C. TURBINE TRIP VACUUM LOST
- D. FWPT - TRIP VACUUM LO

ANSWER

- C. TURBINE TRIP VACUUM LOST

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 73

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|----------|
| QUESTION ID: | 2469 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Why place CS switch to off in 005 case II | | | | | |
| AUTHOR: | RWF | | REVISION | 2 | REVISION DATE | 12/21/93 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 11/18/94 | | |
| TYPE: | Multiple Choice | | TIME: | 3 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPE | CATEGORY: | PROCEDURE | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-005 | 09 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.1-E55-EK3.02 | 4.3 | 4.6 | W-3-LP-OPS-PPE05 | 4 | | |

QUESTION

During a station blackout, the Loss of Offsite Power/Station Blackout Recovery Procedure (OP-902-005) directs the Operator to place the Containment Spray Pump control switches to OFF.

Which of the following describes the reason for this step?

- A. To prevent overloading the Emergency Diesel Generators when restored.
- B. To prevent initiating Containment Spray when electrical power is restored.
- C. To prevent starting the Containment Spray Pumps with no seal cooling after power is restored.
- D. To protect the Containment Spray Pumps from the effects of loss of DC control power if battery chargers cannot be restored.

ANSWER

- B. To prevent initiating Containment Spray when electrical power is restored.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 74

| | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|
| QUESTION ID: | 3316 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | which trip breakers open on loss of sups SMD (RO NRC EXAM 1994) | | | | |
| AUTHOR: | tmccool | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 7/13/94 |
| REFERENCE VERIFIED: | tmccool | | VERIFICATION DATE: | 7/13/94 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | PPO | CATEGORY: | Procedure | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-901-312 | 00 | 00 | 4/30/93 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A57-AA2.19 | 4 | 4.3 | W-3-LP-OPS-CED00 | 03 | |
| | | | W-3-LP-OPS-PPO30 | 4 | |

QUESTION

Which of the following Reactor Trip Breakers would indicate open on a loss of vital instrument bus SUPS MD?

- A. Breakers 1,2,3,4
- B. Breakers 5,6,7,8
- C. Breakers 1,2,5,6
- D. Breakers 3,4,7,8

ANSWER

- D. Breakers 3,4,7,8

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 75
QUESTION ID: 4108 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Fire Declaration
AUTHOR: bmather **REVISION** 1 **REVISION DATE** 6/25/96
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmather **VERIFICATION DATE:** 6/25/96
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: FPD **CATEGORY:** SYSTEM
FPP
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
FP-001-020 10 00 2/22/96
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
4.2-A67-AK3.02 2.5 3.3 W-3-LP-OPS-FP00 10

QUESTION

Immediately upon confirmation of a fire alarm the Nuclear Plant Operator is responsible for all of the following actions except:

- A. Making preliminary reportability verification
- B. Sounding the fire alarm and announcing the fire over plant page
- C. Obtaining pertinent information from the person confirming the alarm
- D. Ensure the SS/CRS is notified

ANSWER

- A. Making preliminary reportability verification

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 76

| | | | | | | |
|---------------------|--|---------|--------------------|-----------|----------------|--------|
| QUESTION ID: | 83 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Evacuation of CR and Subsequent Plant Shutdown, reliable instrumentation | | | | | |
| AUTHOR: | shymel | | REVISION | 1 | REVISION DATE | 7/7/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | shymel | | VERIFICATION DATE: | 7/7/94 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | PPO | | CATEGORY: | Procedure | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-502 | 02 | 00 | 5/10/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A68-AA1.12 | 4.4 | 4.4 | W-3-LP-OPS-PPO51 | 17 | | |

QUESTION

If a fire in the +35 Cable Spreading Room burns for 45 minutes before it is extinguished, which of the following will still be a reliable indication for RCS pressure?

- A. Safety Channel B Wide Range Pressurizer Pressure
- B. Safety Channel D Narrow Range Pressurizer Pressure
- C. Hot Leg 1 Pressure
- D. Pressurizer Pressure Controller

ANSWER

- C. Hot Leg 1 Pressure

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 77

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 4124 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Emergency Boration during CR evacuation | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPO | | CATEGORY: | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-502 | 02 | 00 | 5/10/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A68-AK3.18 | 4.2 | 4.5 | W-3-LP-OPS-PPO51 | 08 | | |

QUESTION

Why is emergency boration required when the reactor is tripped from outside the control room following a Control Room Evacuation?

- A. The MSR temperature control valve logic cannot be reset from outside the control room.
- B. The Main Turbine will not trip when the reactor is tripped outside the control room.
- C. The operator is unable to verify CEA position following a trip from outside the control room.
- D. The Feedwater Control System will not shift to the RTO mode when the reactor is tripped from outside the control room

ANSWER

- C. The operator is unable to verify CEA position following a trip from outside the control room.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 78

| | | | | | |
|---------------------|--|---------|--------------------|----------------|---------------|
| QUESTION ID: | 2299 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Action to ensure containment integrity | | | | |
| AUTHOR: | bmather | | REVISION: | 1 | REVISION DATE |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | 6/29/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 1 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| | CLOSED REFERENCE: | X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | CB | | CATEGORY: | | |
| | TS | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| TS 3.9.4 | | | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A69-AA2.02 | 3.9 | 4.4 | W-3-LP-OPS-CB00 | 5, 6 | |

QUESTION

During Irradiated fuel movement within containment, it is reported that the Equipment Hatch Door is held in place by three(3) bolts. Which of the following actions should be taken.

- A. Suspend Core Alterations or irradiated fuel movement in containment if LLRT test results are not satisfactory.
- B. Immediately suspend Core Alterations or irradiated fuel movement within containment.
- C. Within 1 hour restore the Equipment Door to operable status or suspend Core Alterations and irradiated fuel movement within containment.
- D. Within 6 hours restore the Equipment Door to Operable Status or suspend Core Alterations or irradiated fuel movement within containment.

ANSWER

- B. Immediately suspend Core Alterations or irradiated fuel movement within containment.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 79

| | | | | | |
|---------------------|----------------------------------|---------|--------------------|-----------|----------------|
| QUESTION ID: | 4134 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Definition of a subcooled liquid | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 7/5/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 7/5/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| SPECIAL REFERENCES: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| PLANT SYSTEM: | TYH | | SIMULATOR SETUP | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.1-E74-EK1.08 | 2.8 | 3.1 | W-3-LP-OPS-TYH03 | 11 | |

QUESTION

A heat addition to a fluid with a quality of 0% results in a temperature increase with no phase change. What was the condition of the fluid prior to the heat addition? (assume pressure of the fluid is held constant)

- A. Subcooled liquid
- B. Saturated liquid
- C. Wet vapor
- D. Saturated vapor

ANSWER

- A. Subcooled liquid

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 80

QUESTION ID: 4125 - A STATUS: Approved LAST USED
DESCRIPTION: Chemistry dept. responsibilities for high RCS activity
AUTHOR: bmather REVISION 1 REVISION DATE 6/29/96
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 6/29/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: PPO CATEGORY: PROCEDURE
RCS
REFERENCE: REVISION: CHANGE: DATE:
OP-901-410 00 00 4/16/93
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
4.2-A76-AK3.06 3.2 3.8 W-3-LP-OPS-PP040 03

QUESTION

All of the following items are sampled and analyzed by the W-3 Chemistry Department when OP-901-410, High Activity in Reactor Coolant System is implemented with the exception of:

- A. Cesium Concentration
- B. Dose Equivalent Iodine Concentration
- C. Dose Equivalent Iodine isotopic analysis
- D. Gross RCS activity

ANSWER

- A. Cesium Concentration

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 81

| | | | | | |
|---------------------|-----------------------------------|---------|--------------------|-----------|----------------|
| QUESTION ID: | 4110 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Continuous Rod Withdrawal actions | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 6/25/96 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/25/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: |
| QUIZ ONLY: | | | | | 1 |
| SPECIAL REFERENCES: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| PLANT SYSTEM: | ced | | SIMULATOR SETUP | | |
| | | | CATEGORY: | PROCEDURE | |
| | | | | SYSTEM | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-901-102 | 01 | 01 | 9/22/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-AA1.01 | 3.5 | 3.2 | W-3-LP-OPS-PP010 | 03 | |

QUESTION

Regulating Group 6 CEAs are being withdrawn from 120" in an attempt to maintain ASI constant. When the shim switch is released Regulating Group 6 continues to move outward. When the mode select switch is taken to "OFF" motion stops. What actions should be taken?

- A. Trip the reactor and go to OP-902-000
- B. If uncontrolled movement does not occur after the mode switch is removed from "OFF" borate CEAs to fully withdrawn position
- C. If continuous movement occurs after the mode select switch is removed from "OFF" then trip the reactor
- D. Declare group 6 inoperable and commence a plant downpower using part length rods for ASI control

ANSWER

- C. If continuous movement occurs after the mode select switch is removed from off then trip the reactor

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 82

| | | | | | |
|---------------------|---|-------------------|--------------------|----------------|----------------------|
| QUESTION ID: | 4129 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Required time for downpower after a dropped CEA | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE 7/2/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 7/2/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | X | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | CED TS PPO | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| TS 3.1.3 | | | | | |
| OP-901-102 | 01 | 01 | 9/22/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A3-AK3.04 | 3.8* | 4.1* | W-3-LP-OPS-PPO10 | 05 | |

QUESTION

While at 80% power, a shutdown bank CEA drops into the core. In accordance with the Tech Spec COLR, a downpower must be completed within _____ minutes to a maximum power level of _____.

- A. 15, 60%
- B. 30, 70%
- C. 45, 60%
- D. 60, 70%

ANSWER

- C. 45, 60%

COMMENTS

Provide COLR Fig 2 "Required Power Reduction After Single CEA Deviation"

Waterford 3 Examination Question Examination Bank

Examination Question Number 83

| | | | | | | |
|---------------------|----------------------|------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 1789 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | DRTS Actuation Logic | | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE | 7/23/95 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 7/23/95 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 3 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED | REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | ATS | CATEGORY: | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.1-E7-EA2.04 | 4.4 | 4.6 | W-3-LP-OPS-ATS00 | 3 | | |
| 000007.EA2.02 | | | | | | |

QUESTION

Which of the following best describes the Diversified Reactor Trip system (DRTS), assuming DRTS enabled.

- A. Must push both DRTS push buttons together, at the same time, to manually actuate.
- B. Auto actuation requires 2/2 pressurizer safety grade pressures at 2340 psig.
- C. Can be manually initiated locally at the Reactor Trip Switchgear (+21 RAB)
- D. Could actuate with failure of one pressure transmitter high and pressing one manual pushbutton.

ANSWER

- D. Could actuate with failure of one pressure transmitter high and pressing one manual pushbutton.

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 84
QUESTION ID: 4135 **STATUS:** Approved **LAST USED**
DESCRIPTION: Safety Injection termination criteria
AUTHOR: bmather **REVISION** 1 **REVISION DATE** 7/5/96
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmather **VERIFICATION DATE:** 7/5/96
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
OP-902-002 07 00 12/1/95
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
4.1-E9-EK3.21 4.2 4.5 W-3-LP-OPS-PPE02 11

QUESTION

All of the following allow termination of Safety Injection after a small break LOCA except?

- A. Subcooled margin 50° F
- B. Pzr Level 35% and dropping slowly
- C. RVLMS level 5 not voided
- D. SG level 62% WR

ANSWER

- B. Pzr Level 35% and dropping slowly

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 85

| | | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 16 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | LPSI flow requirements following LB-LOCA | | | | | |
| AUTHOR: | RJC | | REVISION | 1 | REVISION DATE | 2/23/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPE | CATEGORY: | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-002 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 006000.K6.03 | | | W-3-LP-OPS-PPE02 | 23 | | |
| 4.1-E11-EK3.05 | 4.0* | 4.1 | | | | |

QUESTION

Select the combination of Reactor Coolant System pressure and Low Pressure Safety Injection Train A flow that would be acceptable during the injection phase of a large LOCA.

- A. 175 psia 500 gpm
- B. 125 psia 2500 gpm
- C. 100 psia 2800 gpm
- D. 50 psia 3600 gpm

ANSWER

- B. 125 psia 2500 gpm

COMMENTS

Provide attachment 6 of OP-902-ATT

Waterford 3 Examination Question Examination Bank

Examination Question Number 86

| | | | | | | |
|---------------------|--|---------|--------------------|-----------|---------------|--------|
| QUESTION ID: | 1988 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Diagnose problem with Natural circ flow following LOCA | | | | | |
| AUTHOR: | AV | | REVISION | 0 | REVISION DATE | 8/2/91 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 4 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED REFERENCE: | X | OPEN REFERENCE | | | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | PPE | | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-002 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 000009.EA2.37 | | | W-3-LP-OPS-PPE02 | 11 | | |
| 4.1-E11-EA2.09 | 4.2 | 4.3 | | | | |

QUESTION

Following a LOCA, Reactor Coolant Pumps were secured. Which of the following conditions would indicate a problem with natural circulation flow after flow had been established?

- A. Steam Generator pressures are rising
- B. PRESSURIZER level is 18% and slowly lowering
- C. RCS sub cooling is 30°F and constant
- D. RCS loop delta temperature is 50°F and lowering

ANSWER

- A. Steam Generator pressures are rising

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 87
QUESTION ID: 2911 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Actions for charging pump trips
AUTHOR: ANV **REVISION** 0 **REVISION DATE** 12/29/92
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmathr **VERIFICATION DATE:** 6/29/96
TYPE: MULTIPLE CHOICE **TIME:** 1 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC **CATEGORY:** PROCEDURE
PPO
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
OP-901-112 01 00 9/22/95
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
4.2-A22-AA2.02 3.2 3.7 W-3-LP-OPS-PP010 03
4.2-A22-AA1.02 3 2.9
4.2-A22-AK3.02 3.5 3.8

QUESTION

While operating at power, significant current oscillations (100 amps) are observed on 480V bus 3B31-S. Annunciator "CHARGING PUMP HEADER FLOW LOW" actuates and shortly thereafter, Charging Pump B trips on overcurrent. Which of the following actions should be taken?

- A. Start an alternate charging pump after verifying its suction path.
- B. Restart Charging Pump B after resetting the overcurrent trip.
- C. Secure letdown and initiate an investigation for the loss of Charging Pump B.
- D. Secure letdown, start an alternate charging pump, then restore letdown.

ANSWER

- A. Start an alternate charging pump after verifying its suction path.

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 88
QUESTION ID: 3199 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: RCS reduced inventory
AUTHOR: RJC **REVISION** 2 **REVISION DATE** 12/30/93
APPROVAL: tbrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmrather **VERIFICATION DATE:** 6/29/96
TYPE: Multiple Choice **TIME:** 2 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPO **CATEGORY:**
SDC
RCS
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
OP-001-003 16 01 7/23/96
OP-901-131 00 00 3/23/93
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
4.2-A25-AA1.02 3.8 3.9 W-3-LP-OPS-REQ22 01

QUESTION

Which of the following describes the reason for the requirement to have a Hot Leg vent path for a loss of shutdown cooling when SG nozzle dams are installed?

- A. To prevent steam formation in the Hot Leg from causing an erroneously high Reactor Vessel level indication.
- B. To prevent steam formation in the Reactor Vessel head from pressurizing the RCS, leading to core uncover.
- C. To prevent steam formation in the Hot Leg which will ultimately collapse, causing severe water hammer.
- D. To prevent the loss of RCS inventory caused by lifting a Low Temperature Overpressure Protection (LTOP) relief valve.

ANSWER

- B. To prevent steam formation in the Reactor Vessel head from pressurizing the RCS, leading to core uncover.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 89

| | | | | | | |
|---------------------|---|-------------------|--------------------|----------------|---------------|--------|
| QUESTION ID: | 4130 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Time to reach 200 degrees after SDC Malfunction | | | | | |
| AUTHOR: | avest | | REVISION | 1 | REVISION DATE | 7/2/96 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | avest | | VERIFICATION DATE: | 7/2/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | PPO | CATEGORY: | PROCEDURE | | | |
| | SDC | | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-131 | 00 | 00 | 3/23/93 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A25-AK1.01 | 3.9 | 4.3 | W-3-LP-OPS-REQ21 | 03 | | |

QUESTION

The plant is shutdown and drained to mid-loop for replacing Reactor Cooling Pump seals. The time of shutdown was 8/31/96 0300. At 0300 on 9/10/96 LPSI Pump A is secured due to cavitation of the pump. LPSI Pump B is started and trips. Estimate the time to reach 200°F if initial RCS temperature was 100°F.

- A. 15 Minutes
- B. 20 Minutes
- C. 25 Minutes
- D. 30 Minutes

ANSWER

C. 25 Minutes

COMMENTS

Provide attachment 2 from OP-901-131

Waterford 3 Examination Question Examination Bank

| | | | | |
|---------------------------------------|----------------------------|------------------|---------------------------|------------------------------|
| Examination Question Number 90 | | | | |
| QUESTION ID: | 1704 | - A | STATUS: Approved | LAST USED |
| DESCRIPTION: | Resetting 32 bus breakers | | | |
| AUTHOR: | RC | | REVISION 0 | REVISION DATE 7/15/91 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 |
| REFERENCE VERIFIED: | brmather | | VERIFICATION DATE: | 6/29/96 |
| TYPE: | MULTIPLE CHOICE | TIME: 1 | POINTS: | 1 |
| QUIZ ONLY: | CLOSED REFERENCE: X | | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | | | |
| PLANT SYSTEM: | CED | CATEGORY: | SYSTEM | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | |
| OP-902-000 | 07 | 00 | 12/1/95 | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE |
| 4.1-E29-EK3.12 | 4.4 | 4.7 | W-3-LP-OPS-PPE01 | 11 |

QUESTION

OP-902-000, Step 1 Contingency Action directs the operator to open the feeder breakers to 480 VAC busses 3A32 and 3B32 for 5 seconds and then reclose them. The purpose of reclosing the feeder breakers is to:

- A. Restore power to the CEDMCS in order to verify that all CEAs have fully inserted.
- B. Re-energize the A32 and B32 busses before the under voltage relays strip the individual loads from the busses.
- C. Restore power to the Pressurizer proportional heaters only.
- D. Restore power to all the Pressurizer heaters.

ANSWER

- D. Restore power to all the Pressurizer heaters.

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 91
QUESTION ID: 1279 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: PRM automatic actions
AUTHOR: MJESSE **REVISION** 1 **REVISION DATE** 8/3/94
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: MJESSE **VERIFICATION DATE:** 8/3/94
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: AE **CATEGORY:** System
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
OP-003-001 08 02 6/14/94
OP-901-202 01 00 4/24/95
NRC KA NUMBER: **RO** **SRO** **TRAINING MATERIAL:** **OBJECTIVE**
4.2-A37-AK3.05 3.7 4 W-3-LP-OPS-AE00 02
W-3-LP-OPS-RMS00 02

QUESTION

In order to prevent an inadvertent release of radioactive material through the Condenser Air Evacuation System (AE), wide range gas monitor samples the AE exhaust. Upon receipt of a high rad alarm, the AE System:

- A. Isolates all flow from the Main Condenser
- B. Initiates recirculation of the non-condensables from the separator unit to the condenser.
- C. Diverts the AE exhaust discharge to the Normal RAB HVAC exhaust filter units.
- D. Diverts the AE exhaust to the waste gas header.

ANSWER

- C. Diverts the AE exhaust discharge to the Normal RAB HVAC exhaust filter units.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 92
QUESTION ID: 1172 - A STATUS: Approved LAST USED
DESCRIPTION: Why greater than 77% level on SGTR events
AUTHOR: tmccool REVISION 1 REVISION DATE 11/18/94
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: tmccool VERIFICATION DATE: 11/18/94
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE X
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: PPE CATEGORY:
REFERENCE: REVISION: CHANGE: DATE:
OP-902-007 08 00 12/1/95
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
000038.EA1.44 W-3-LP-OPS-PPE07 03
4.1-E38-EK3.06 4.2 4.5

QUESTION

During a SGTR, the isolated SG level is maintained greater than 77% WR in order to:

- A. prevent spray through the rupture from depressurizing the SG
- B. reduce flow impingement on other tubes
- C. reduce the static head differential across the break
- D. condense the steam issuing from the break

ANSWER

- A. prevent spray through the rupture from depressurizing the SG

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 93
QUESTION ID: 4136 - A STATUS: Approved LAST USED
DESCRIPTION: Depressurization of the SG during a MFLB
AUTHOR: bmather REVISION 1 REVISION DATE 7/5/96
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 7/5/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: PPE CATEGORY: PROCEDURE
REFERENCE: REVISION: CHANGE: DATE:
G1 12-006 07 00 12/1/95
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
4.2-A54-AK1.01 4.1 4.3 W-3-LP-OPS-PPE06 5

QUESTION

A Main Feedwater line break will depressurize the affected S/G and start an uncontrolled cooldown when:

- A. The reactor trips on low S/G level
- B. The main feedwater isolation valve is closed on the affect S/G
- C. The feedwater line water level drops below the break location
- D. The S/G level drops below 50% WR level

ANSWER

- C. The feedwater line water level drops below the break location

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 94

| | | | | | | |
|---------------------|----------------------|-------------------|--------------------|----------------|---------------|---------|
| QUESTION ID: | 63 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | EFW control setpoint | | | | | |
| AUTHOR: | CAR | | REVISION | 2 | REVISION DATE | 2/25/94 |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 5/2/95 | | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | | X |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | EFW | CATEGORY: | SYSTEM | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-902-006 | 07 | 00 | 12/1/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 061000 A3.03 | | | W-3-LP-OPS-EFW00 | 06 | | |
| 4.2-A54-AA2.04 | 4.2 | 4.3 | | | | |
| 061GEN.04 | | | | | | |

QUESTION

An Emergency Feedwater Actuation Signal (EFAS) has been initiated due to low level in both Steam Generators. Steam Generator 1 & 2 levels are below Critical Level.

Select the level band that the Emergency Feedwater System will automatically maintain?

- A. 68 - 71% NR
- B. 68 - 71% WR
- C. 55 - 71% NR
- D. 55 - 71% WR

ANSWER

- B. 68 - 71% WR

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 95

| | | | | | |
|----------------------------|---|--------------------------|---------------------------|-----------------------|------------------------------|
| QUESTION ID: | 4126 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | Shed DC loads after a LOOP with failure of both EDGs to start | | | | |
| AUTHOR: | bmather | | REVISION | 1 | REVISION DATE 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | DC | CATEGORY: | PROCEDURE | | |
| | PPE | | | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-902-005 | 09 | 00 | 12/1/95 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A58-AA2 03 | 3.5 | 3.9 | W-3-LP-OPS-PPE05 | 01 | |

QUESTION

A total loss of offsite power has occurred and both Emergency Diesel Generators have failed to start automatically or manually. Which of the following statements describes how long the operator has to shed specific DC Safety bus loads?

- A. Within 15 minutes
- B. Within 30 minutes
- C. Within 45 minutes
- D. Within 60 minutes

ANSWER

- B. Within 30 minutes

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 96

| | | | | | |
|---------------------|--|---------|--------------------|-----------|----------------|
| QUESTION ID: | 2361 | - A | S. ATUS: | Approved | LAST USED |
| DESCRIPTION: | Procedural requirements for discharging a BACT | | | | |
| AUTHOR: | DM | | REVISION | 0 | REVISION DATE |
| APPROVAL: | thrown | | APPROVAL DATE: | 7/5/96 | 11/7/91 |
| REFERENCE VERIFIED: | beoble | | VERIFICATION DATE: | 7/31/95 | |
| TYPE: | MULTIPLE CHOICE | | TIME: | 1 | POINTS: |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | |
| PLANT SYSTEM: | BM | | CATEGORY: | PROCEDURE | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-007-001 | 13 | 01 | 8/1/96 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A59-AK3.01 | 3.5 | 3.9 | W-3-LP-OPS-BM00 | 07 | |

QUESTION

All of the following are allowed by procedure except:

- A. Discharging one Boric Acid Condensate Tank while filling another.
- B. Discharging a Boric Acid Condensate Tank to the PWST.
- C. Recircing one Boric Acid Condensate Tank while discharging another.
- D. Recircing one Boric Acid Condensate Tank while filling another.

ANSWER

- C. Recircing one Boric Acid Condensate Tank while discharging another.

COMMENTS

**Waterford 3 Examination Question
Examination Bank**

Examination Question Number 97

QUESTION ID: 4112 - A STATUS: Approved LAST USED
DESCRIPTION: Containment Purge Monitor Setpoints
AUTHOR: bmather REVISION 1 REVISION DATE 6/26/96
APPROVAL: tbrown APPROVAL DATE: 7/5/96
REFERENCE VERIFIED: bmather VERIFICATION DATE: 6/26/96
TYPE: Multiple Choice TIME: 5 POINTS: 1
QUIZ ONLY: CLOSED REFERENCE: X OPEN REFERENCE
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: arm CATEGORY: PROCEDURE
REFERENCE: REVISION: CHANGE: DATE:
OP-903-001 16 06 7/29/96
TS 3.3.3
NRC KA NUMBER: RO SRO TRAINING MATERIAL: OBJECTIVE
4.2-A61-AA2.03 3 3.3 W-3-LP-OPS-HVR00 07

QUESTION

After evaluation of the current activity readings how many of the following Containment Atmosphere Purge monitors high alarm setpoints should be set at 40 mr/hr?

| | |
|---------------|----------------|
| ARM-IRE-5024S | 1.17 E+2 mr/hr |
| ARM-IRE-5025S | 1.75 E+1 mr/hr |
| ARM-IRE-5026S | 2.25 E+1 mr/hr |
| ARM-IRE-5027S | 3.50 E0 mr/hr |

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER

- B. 2

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 98

| | | | | | | |
|---------------------|-----------------|---------|--------------------|-----------|----------------|---------|
| QUESTION ID: | 3453 | - A | STATUS: | Approved | LAST USED | |
| DESCRIPTION: | Thot fails high | | | | | |
| AUTHOR: | bma:ler | | REVISION | 1 | REVISION DATE | 6/29/96 |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | | |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | | |
| TYPE: | Multiple Choice | | TIME: | 5 | POINTS: | 1 |
| QUIZ ONLY: | | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | SIMULATOR SETUP | | | | | |
| PLANT SYSTEM: | RR | | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | | |
| OP-901-110 | 01 | 00 | 9/22/95 | | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | | |
| 4.2-A28-AK3.05 | 3.7 | 4.1 | W-3-LP-OPS-PPO10 | 03 | | |
| 015000.K1.06 | | | W-3-LP-OPS-RR00 | 5 | | |

QUESTION

Which of the following actions should be performed initially if the Thot input to the Reactor Regulating System (RRS) fails HIGH?

- A. Place Pzr level controller to MANUAL
- B. Swap position of the Thot selector switch behind CP-2
- C. Place Letdown Flow control valve to MANUAL
- D. Take backup heaters to OFF

ANSWER

- A. Place Pzr level controller to MANUAL

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 99

| | | | | | |
|---------------------|--|-------------------|--------------------|----------------|---------------|
| QUESTION ID: | 2630 | - A | STATUS: | Approved | LAST USED |
| DESCRIPTION: | events addressed by fuel handling incident | | | | |
| AUTHOR: | WAH | | REVISION | 0 | REVISION DATE |
| APPROVAL: | tbrown | | APPROVAL DATE: | 7/5/96 | 1/31/92 |
| REFERENCE VERIFIED: | bmather | | VERIFICATION DATE: | 6/29/96 | |
| TYPE: | Multiple Choice | | TIME: | 1 | POINTS: 1 |
| QUIZ ONLY: | | CLOSED REFERENCE: | X | OPEN REFERENCE | |
| SPECIAL REFERENCES: | | SIMULATOR SETUP | | | |
| PLANT SYSTEM: | PPO | CATEGORY: | PROCEDURE | | |
| REFERENCE: | REVISION: | CHANGE: | DATE: | | |
| OP-901-405 | 00 | 00 | 1/29/93 | | |
| NRC KA NUMBER: | RO | SRO | TRAINING MATERIAL: | OBJECTIVE | |
| 4.2-A36-AK3.03 | 3.7 | 4.1 | W-3-LP-OPS-PPO40 | 1 | |

QUESTION

Which of the following fuel handling events is addressed in OP-901-405, Fuel Handling Incident?

- A. A spent fuel assembly is damaged while being withdrawn from the core.
- B. A new fuel assembly cask is found with the motion sensors tripped during fuel receipt inspection.
- C. The Reactor goes critical while a fuel assembly is being inserted into the core.
- D. A CEA is hanging from the upper guide structure during removal of the upper guide structure.

ANSWER

- A. A spent fuel assembly is damaged while being withdrawn from the core.

COMMENTS

Waterford 3 Examination Question Examination Bank

Examination Question Number 100
QUESTION ID: 2475 - A **STATUS:** Approved **LAST USED**
DESCRIPTION: Reactor Trip setpoint for IA
AUTHOR: RWF **REVISION** 0 **REVISION DATE** 12/17/91
APPROVAL: thrown **APPROVAL DATE:** 7/5/96
REFERENCE VERIFIED: bmather **VERIFICATION DATE:** 6/29/96
TYPE: MULTIPLE CHOICE **TIME:** 1 **POINTS:** 1
QUIZ ONLY: CLOSED REFERENCE: X **OPEN REFERENCE**
SPECIAL REFERENCES: SIMULATOR SETUP
PLANT SYSTEM: IA **CATEGORY:** PROCEDURE
REFERENCE: REVISION: CHANGE: DATE:
OP-901-511 01 01 4/5/96
NRC KA NUMBER: RO SRO **TRAINING MATERIAL:** **OBJECTIVE**
4.2-A65-AA2.06 3.6* 4.2 W-3-LP-OPS-IA00 04
W-3-LP-OPS-PPO50 03

QUESTION

A Reactor Trip is required when Instrument Air Pressure drops to:

- A. 60 PSIG
- B. 65 PSIG
- C. 70 PSIG
- D. 75 PSIG

ANSWER

- B. 65 PSIG

COMMENTS
