

ATTACHMENT

Technical Specification Change

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- 2.C.(6) The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Oyster Creek Nuclear Generating Station Physical Security Plan," with revisions submitted through July 6, 1988; "Oyster Creek Nuclear Generating Station Training and Qualification Plan," with revisions submitted through June 24, 1986; and Oyster Creek Nuclear Generating Station Safeguards Contingency Plan," with revisions submitted through June 24, 1986. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.
- 2.C.(7) Inspections by a method acceptable to the NRC of all accessible surfaces and welds of both core spray spargers and repair assemblies at intervals not to exceed 20 months will be performed so that meaningful comparisons of any indications with previous inspections can be made. Results of the inspections along with an evaluation of the safety significance of any new or progressing indications will be provided to the Commission's staff for review. Authorization will be obtained from the Commission's staff before the plant is restarted from the refueling outage. Should the staff determine that new cracks or further progression of existing cracks has occurred resulting in unacceptable degradation of safety margins, the sparger will be replaced prior to restart.
- 2.C.(8) The schedule given in the Attachments to the Commission's Order dated March 14, 1983, for the completion of NUREG-0737 Item III.D.3.4, Control Room Habitability, is changed to the completion of (1) the interim system upgrade measures in Attachment I of the licensee's letter dated June 4, 1985, by the restart from the Cycle 11 Refueling outage and (2) the final measures in Attachment II of the same letter by the restart from the Cycle 12 Refueling outage.

### 1.7 COLD SHUTDOWN

The reactor is at cold shutdown when the mode switch is in the shutdown mode position, there is fuel in the reactor vessel, all operable control rods are fully inserted, and (except during reactor vessel pressure testing), the reactor coolant system maintained at less than 212°F and vented.

### 1.8 PLACE IN SHUTDOWN CONDITION

Proceed with and maintain an uninterrupted normal plant shutdown operation until the shutdown condition is met.

### 1.9 PLACE IN COLD SHUTDOWN CONDITION

Proceed with and maintain an uninterrupted normal plant shutdown operation until the cold shutdown condition is met.

### 1.10 PLACE IN ISOLATED CONDITION

Proceed with and maintain an uninterrupted normal isolation of the reactor from the turbine condenser system including closure of the main steam isolation valves.

### 1.11 REFUEL MODE

The reactor is in the refuel mode when the reactor mode switch is in the refuel mode position and there is fuel in the reactor vessel. In this mode the refueling platform interlocks are in operation.

### 1.12 REFUELING OUTAGE

For the purpose of designating frequency of testing and surveillance, a refueling outage shall mean a regularly scheduled refueling outage. Following the first refueling outage, successive tests or surveillances shall be performed at least once per 24 months.

### 1.13 PRIMARY CONTAINMENT INTEGRITY

Primary containment integrity means that the drywell and adsorption chamber are closed and all of the following conditions are satisfied:

- A. All non-automatic primary containment isolation valves which are not required to be open for plant operation are closed.
- B. At least one door in the airlock is closed and sealed.
- C. All automatic containment isolation valves specified in Table 3.5.2 are operable or are secured in the closed position.
- D. All blind flanges and manways are closed.

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4.1-7

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Table 4.1.1 (cont'd)

<u>Instrument Channel</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks (Applies to Test and Calibration)</u>
17. IRM Blocks	N A	Prior to startup and shutdown	Prior to startup and shutdown	Upscale and downscale
18. Condenser Low Vacuum	N A	1/20	1/20	
19. Manual Scram Buttons	N A	N A	1/3 mo.	
20. High Temperature Main Steamline Tunnel	N A	1/20	Each refueling outage	Using heat source box
21. SRM	*	*	*	Using built-in calibration equipment
22. Isolation Condenser High Flow $\Delta P$ (Steam and Water)	N A	1/3 mo	1/3 mo	By application of test pressure
23. Turbine Trip Scram	N A		Every 3 months	
24. Generator Load Rejection Scram	N A	Every 3 months	Every 3 months	
25. Recirculation Loop Flow	N A	1/20	N A	By application of test pressure
26. Low Reactor Pressure Core Spray Valve Permissive	N A	Every 3 months	Every 3 months	By application of test pressure

Table 4.1.1 (cont'd)

<u>Instrument Channel</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks (Applies to Test and Calibration)</u>
27. Scram Discharge Volume (Rod Block)				
a) Water level high	N A	1/20	Every 3 months	By varying level in switch column
b) Scram trip bypass	N A	N A	Each refueling outage	
28. Loss of Power				
a) 4.16 KV Emergency Bus Undervoltage (Loss of voltage)	Daily	1/24 mos.	1/mo	
b) 4.16 KV Emergency Bus Undervoltage (Degraded Voltage)	Daily	1/24 mos.	1/mo	
29. Drywell High Radiation	NA	Each Re- fueling outage	Each Refuel- ing outage	

\* Calibrate prior to startup and normal shutdown and thereafter check 1/s and test 1/wk until no longer required.

Legend:

N/A = Not Applicable; 1/s = Once per shift; 1/d = Once per day; 1/3d = Once per three days; 1/wk = Once per week;  
1/3 mo = Once every 3 months; 1/24 mos. = Once every 24 months; 1/20 = Once per 20 months

The following notes are only for Item 15 of Table 4.1.1:

A channel may be taken out of service for the purpose of a check, calibration, test or maintenance without declaring the channel to be inoperable.

- a. The channel functional test shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
- 1) Instrument indicates measured levels above the alarm setpoint.
  - 2) Instrument indicates a downscale failure.
  - 3) Instrument controls not set in operate mode.
  - 4) Instrument electrical power loss.

TABLE 4.1.2

MINIMUM TEST FREQUENCIES FOR TRIP SYSTEMS

<u>Trip System</u>	<u>Minimum Test Frequency</u>
1) <u>Dual Channel (Scram)</u>	Same as for respective instrumentation in Table 4.1.1
2) <u>Rod Block</u>	Same as for respective instrumentation in Table 4.1.1
3) <u>Containment Spray,</u> each trip system, one at a time	1/3 mo. and each refueling outage
4) <u>Automatic Depressurization,</u> each trip system, one at a time	Each refueling outage
5) <u>MSIV Closure,</u> each closure logic circuit independently (1 valve at a time)	Each refueling outage
6) <u>Core Spray,</u> each trip system, one at a time	1/3 mo. and each refueling outage.
7) <u>Primary Containment Isolation,</u> each closure circuit independently (1 valve at a time)	Each refueling outage
8) <u>Refueling Interlocks</u>	Prior to each refueling operation
9) <u>Isolation Condenser Actuation and Isolation,</u> each trip circuit independently (1 valve at a time)	Each refueling outage
10) <u>Reactor Building Isolation and SGTS Initiation</u>	Same as for respective instrumentation in Table 4.1.1
11) <u>Condenser Vacuum Pump Isolation</u>	Prior to each startup
12) <u>Air Ejector Offgas Line Isolation</u>	Each refueling outage
13) <u>Containment Vent and Purge Isolation</u>	1/20 mo.

#### 4.2 REACTIVITY CONTROL

Applicability: Applies to the surveillance requirements for reactivity control.

Objective: To verify the capability for controlling reactivity.

Specification:

- A. Sufficient control rods shall be withdrawn following a refueling outage when core alterations were performed (interval not to exceed 20 months) to demonstrate with a margin of 0.25%  $\Delta k$  that the core can be made subcritical at any time in the subsequent fuel cycle with the strongest operable control rod fully withdrawn and all other operable rods fully inserted.
- B. The control rod drive housing support system shall be inspected after reassembly.
- C.
  1. After each major refueling outage (interval not to exceed 20 months) and prior to resuming power operation, all operable control rods shall be scram time tested from the fully withdrawn position with reactor pressure above 800 psig.
  2. Following each reactor scram from rated pressure, the mean 90% insertion time shall be determined for eight selected rods. If the mean 90% insertion time of the selected control rod drives does not fall within the range of 2.4 to 3.1 seconds or the measured scram time of any one drive for 90% insertion does not fall within the range of 1.9 to 3.6 seconds, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is maintained.
  3. Following any outage not initiated by a reactor scram, eight rods shall be scram tested with reactor pressure above 800 psig provided these have not been measured in six months. The same criteria of 4.2.C(2) shall apply.
- D. Each partially or fully withdrawn control rod shall be exercised at least once each week. This test shall be performed at least once per 24 hours in the event of power operation is continuing with two or more inoperable control rods or in the event power operation is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than two and if it has been demonstrated that control rod drive mechanism collet housing failure is not the cause of an immovable control rod.
- E. Surveillance of the standby liquid control system shall be as follows:
  1. Pump operability           Once/month
  2. Boron concentration       Once/month  
determination

4.4 EMERGENCY COOLING

Applicability: Applies to surveillance requirements for the emergency cooling systems.

Objective: To verify the operability of the emergency cooling systems.

Specification: Surveillance of the emergency cooling systems shall be performed as follows:

<u>Item</u>	<u>Frequency</u>
A. <u>Core Spray System</u>	
1. Pump Operability	Once/month. Also after major maintenance and prior to startup following a refueling outage.
2. Motor operated valve operability	Once/month
3. Automatic actuation test	Every three months
4. Pump compartment water-tight doors closed	Once/week and after each entry
5. Core spray header $\Delta$ P instrumentation	
check	Once/day
calibrate	Once/3 months
test	Once/3 months
B. <u>Automatic Depressurization</u>	
1. Valve operability	Following a refueling outage * (interval not to exceed 20 months)
2. Automatic actuation test	Every refueling outage
C. <u>Containment Cooling System</u>	
1. Pump Operability	Once/month. Also after major maintenance and prior to startup following a refueling outage.

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\*Valve operability shall be demonstrated at system operating pressure prior to exceeding 5 percent power.

4. Reactor Building to Suppression Chamber Vacuum Breakers

- a. The reactor building to suppression chamber vacuum breakers and associated instrumentation, including set point, shall be checked for proper operation every three months.
- b. During each refueling outage, each vacuum breaker shall be tested to determine that the force required to open the vacuum breaker from closed to fully open does not exceed the force specified in Specification 3.5.A.4.a. The air-operated vacuum breaker instrumentation shall be calibrated during each refueling outage.

5. Pressure Suppression Chamber - Drywell Vacuum Breakers

a. Periodic Operability Tests

Once each month and following any release of energy which would tend to increase pressure to the suppression chamber, each operable suppression chamber - drywell vacuum breaker shall be exercised. Operation of position switches, indicators and alarms shall be verified monthly by operation of each operable vacuum breaker.

b. Refueling Outage Tests

- (1) All suppression chamber - drywell vacuum breakers shall be tested to determine the force required to open each valve from fully closed to fully open.
- (2) The suppression chamber - drywell vacuum breaker position indication and alarm systems shall be calibrated and functionally tested.
- (3) At least four of the suppression chamber - drywell vacuum breakers shall be inspected. If deficiencies are found, all vacuum breakers shall be inspected and deficiencies corrected such that Specification 3.5.A.5.a can be met.
- (4) A drywell to suppression chamber leak rate test (interval not to exceed 20 months) shall demonstrate that with an initial differential pressure of not less than 1.0 psi, the differential pressure decay rate shall not exceed the equivalent of air flow through a 2-inch orifice.

K. Reactor Building

1. Secondary containment capability tests shall be conducted after isolating the reactor building and placing either Standby Gas Treatment System filter train in operation.
2. The tests shall be performed at least once per operating cycle (interval not to exceed 20 months) and shall demonstrate the capability to maintain a  $\frac{1}{4}$  inch of water vacuum under calm wind conditions with a Standby Gas Treatment System Filter train flow rate of not more than 4000 cfm.

#### 4.7 AUXILIARY ELECTRICAL POWER

Applicability: Applies to surveillance requirements of the auxiliary electrical supply.

Objective: To verify the availability of the auxiliary electrical supply.

Specification: A. Diesel Generator

1. Each diesel generator shall be started and loaded to not less than 20% rated power every two weeks.
2. The two diesel generators shall be automatically actuated and functionally tested during each refueling outage. This shall include testing of the diesel generator load sequence timers listed in Table 3.1.1.
3. Each diesel generator shall be given a thorough inspection at least once per 24 months during shutdown.
4. The diesel generators' fuel supply shall be checked following the above tests.
5. The diesel generators' starting batteries shall be tested and monitored the same as the station batteries, Specification 4.7.b.

B. Station Batteries

1. Weekly surveillance will be performed to verify the following:
  - a. The active metallic surface of the plates shall be fully covered with electrolyte in all batteries,
  - b. The designated pilot cell voltage is greater than or equal to 2.0 volts and
  - c. The overall battery voltage is greater than or equal to 120 volts (Diesel battery; 112 volts).
  - d. The pilot cell specific gravity, corrected to 77°F, is greater than or equal to 1.190.
2. Quarterly Surveillance will be performed to verify the following:
  - a. The active metallic surface of the plates shall be fully covered with electrolyte in all batteries.
  - b. The voltage of each connected cell is greater than or equal to 2.0 volts under float charge, and

- c. The specific gravity, for each cell, is greater than or equal to 1.190 when corrected to 77°F. The electrolyte temperature of every fifth cell (Diesel; every fourth cell) shall be recorded for surveillance review.
3. At least once each refueling outage, the following tests will be performed to verify battery capacity.
    - a. Battery capacity shall be demonstrated to be at least 80% of the manufacturers' rating when subjected to a battery capacity discharge test.
    - b. Battery low voltage annunciators are verified to pick up at 115 volts  $\pm$  1 volt and to reset at 125 volts  $\pm$  1 volt (Diesel; 112 volts  $\pm$  1 volt).

Basis: The biweekly tests of the diesel generators are primarily to check for failures and deterioration in the system since last use. The manufacturer has recommended the two week test interval, based on experience with many of their engines. One factor in determining this test interval (besides checking whether or not the engine starts and runs) is that the lubricating oil should be circulated through the engine approximately every two weeks. The diesels should be loaded to at least 20% of rated power until engine and generator temperatures have stabilized (about one hour). The minimum 20% load will prevent soot formation in the cylinders and injection nozzles. Operation up to an equilibrium temperature ensures that there is no over-heat problem. The tests also provide an engine and generator operating history to be compared with subsequent engine-generator test data to identify and correct any mechanical or electrical deficiency before it can result in a system failure.

The test during refueling outages is more comprehensive, including procedures that are most effectively conducted at that time. These include automatic actuation and functional capability tests, to verify that the generators can start and assume load in less than 20 seconds and testing of the diesel generator load sequence timers which provide protection from a possible diesel generator overload during LOCA conditions. Thorough inspections will detect any signs of wear long before failure.

The manufacturer's instructions for battery care and maintenance with regard to the floating charge, the equalizing charge, and the addition of water will be followed. In addition, written records will be maintained of the battery performance. Station batteries will deteriorate with time, but precipitous failure is unlikely. The station surveillance procedures follow the recommended maintenance and testing practices of IEEE STD 450 which have demonstrated, through experience, the ability to provide positive indications of cell deterioration tendencies long before such tendencies cause cell irregularity or improper cell performance.

4.8 ISOLATION CONDENSER

Applicability: Applies to periodic testing requirements for the isolation condenser system.

Objective: To verify the operability of the isolation condenser system.

Specification: A. Surveillance of each isolation condenser loop shall be as follows:

<u>Item</u>	<u>Frequency</u>
1. Operability of motor-operated isolation valves and condensate makeup valves.	Once/month
2. Automatic actuation and functional test.	Each refueling outage (interval not to exceed 20 months) or following major repair.
3. Shell side water volume check.	Once/day
4. Isolation valve (steam side)	
a. Visual inspection	Each refueling outage
b. External leakage check	Each primary system leak test
c. Area temperature check	Once/shift

Basis: Motor-operated valves on the isolation condenser steam and condensate lines and on the condensate makeup line that are normally on standby should be exercised periodically to make sure that they are free to operate. The valves will be stroked full length every time they are tested to verify proper functional performance. This frequency of testing is consistent with instrumentation tests discussed in Specification 4.1. Engineering judgment based on experience and availability analyses of the type presented in Appendix L of the FDSAR indicates that testing these components once a month provides assurance of availability of the system. Also, at this frequency of testing, wearout should not be a problem throughout the life of the plant.

The automatic actuation and functional test will demonstrate the automatic opening of the condensate return line valves and the automatic closing of the isolation valves on the vent lines to the main steam lines. Automatic closure of the isolation condenser steam and condensate lines on actuation of the condenser pipe break detectors will also be verified by the test. It is during a major maintenance or repair that a system's design intent may be violated accidentally. This makes the functional test necessary after every major repair operation.

By virtue of normal plant operation the operators daily observe the water level in the isolation condensers. In addition, isolation condenser shell side water level sensors provide control room annunciation of condenser high or low water level.

activities within the area and who will perform periodic radiation surveillance at the frequency in the RWP. The surveillance frequency will be established by the Director responsible for Radiological Controls.

6.13.2 Specification 6.13.1 shall also apply to each high radiation area in which the intensity of radiation is greater than 1,000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of operations and/or radiation protection supervision on duty.

#### 6.14 ENVIRONMENTAL QUALIFICATION

A. By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588 "Interim Staff Position of Environmental Qualification of Safety-Related Electrical Equipment," December 1979. Copies of these documents are attached to Order for Modification of License DPR-16 dated October 24, 1980.

B. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

#### 6.15 INTEGRITY OF SYSTEMS OUTSIDE CONTAINMENT

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

- 1) Provisions establishing preventative maintenance and periodic visual inspection requirements, and
- 2) System leak test requirements, to the extent permitted by system design and radiological conditions, for each system at a frequency not to exceed refueling cycle intervals. The systems subject to this testing are (1) Core Spray, (2) Containment Spray, (3) Reactor Water Cleanup (interval not to exceed 20 months), (4) Isolation Condenser, and (5) Shutdown Cooling.

#### 6.16 IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas\* under accident conditions. This program shall include the following:

- a. Training of personnel,

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\*Areas requiring personnel access for establishing hot shutdown condition.