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refueling crane for this event must be equal to or greater than the maximum load to be assumed by the refueling crane during the refueling operation. A thorough visual inspection of the refueling crane shall be made after the dead-load test and prior to fuel handling.

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7. Radiation levels in the spent fuel storage area shall be monitored continuously whenever spent fuel movement is taking place in that area.

8. The equipment door, or a closure plate that restricts direct air flow from the containment, shall be properly installed. In addition, at least one isolation valve shall be operable or locked closed in each line penetrating the containment and which provides a direct path from containment atmosphere to the outside.

9. Radiation levels in containment shall be monitored continuously.

10. During alteration of the core (including fuel loading or transfer), a person holding a senior operator license or a senior operator license limited to fuel handling shall be present to directly supervise the activity and, during this time, this person shall not be assigned other duties.

11. The minimum water level above the top of the reactor pressure vessel flange shall be at least 23 feet (El. 92'0") whenever movement of spent fuel is taking place inside the containment.

12. If any of the conditions specified above cannot be met, suspend all operations under this specification (3.8.B). Suspension of operations shall not preclude completion of movement of the above components to a safe conserv: ''ve position.

C. The following conditions are applicable to the spent fuel pit any time it contains irradiated fuel:

1. The spent fuel cask shall not be moved over <u>any</u> region of the spent fuel pit until the cask handling system has been reviewed by the Nuclear Regulatory Commission and found to be acceptable. Furthermore, any load in excess of the nominal weight of a spent fuel storage rack and associated handling tool shall

fuel assembly at a time. The spent fuel transfer mechanism can accommodate only one fuel assembly at a time.

The 100 hour decay time following plant shutdown and the 23 feet of water above the top of the reactor vessel flanges are consistent with the assumptions used in the dose calculations for fuel-handling accidents both inside and outside of the containment. The analysis of the fuel handling accident inside and outside of the containment takes no credit for removal of radioactive iodine by charcoal filters.

The spent fuel storage pit water level requirement in Specification 3.8.C.2 provides approximately 24 feet of water above fuel assemblies stored in the spent fuel storage racks.

The fuel enrichment and burnup limits in Specification 3.8.D.1, the partial credit taken for Boraflex panels, and the boron requirements in Specification 3.8.D.3 assure the limits assumed in the spent fuel storage safety analysis will not be exceeded. The analysis (Ref. 2) takes credit for the amount of Boraflex predicted to be available through 2006.

The requirement that at least one RHR pump and heat exchanger be in operation ensures that sufficient cooling capacity is available to maintain reactor coolant temperature below 140°F, and sufficient coolant circulation is maintained through the reactor core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two RHR pumps and heat exchangers operable when there is less than 23 feet of water above the vessel flange ensures that a single failure will not result in a complete loss of residual heat removal capability. With the head removed and at least 23 feet of water above the flange, a large heat sink is available for core cooling, thus allowing adequate time to initiate actions to cool the core in the event of a single failure.

References

(1) FSAR Section 9.5.2
(2) Northeast Technology Corporation Report NET-173-01, "Criticality Analysis for Soluble Boron and Burnup Credit in the Con Edison Indian Point Unit No. 2 Spent Fuel Storage Racks."

4. At least once every Refueling Interval(#) by:

   a. verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches water gauge while operating the system at ambient conditions and at a flow rate of 2000 cfm ±10%.

   b. verifying that, on a Safety Injection Test Signal or a high radiation signal in the control room, the system automatically switches into a filtered intake mode of operation with flow through the HEPA filters and charcoal adsorber banks.

   c. verifying that the system maintains the control room at positive pressure relative to the adjacent areas during the pressurization mode of operation at a makeup flow rate of 2000 cfm±10%.

5. After each complete or partial replacement of an HEPA filter bank, by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 2000 cfm ±10%.

6. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 2000 cfm ±10%.

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G. POST-ACCIDENT CONTAINMENT VENTING SYSTEM

The post-accident containment venting system shall be demonstrated operable:

1. At least once every Refueling Interval(#), or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:

   a. verifying no flow blockage by passing flow through the filter system.

   b. verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate of 200 cfm ±10%.

   c. at Refueling Intervals (#), verifying, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration of less than 15.0 % when tested in accordance with ASTM D3803-1989 at a temperature of 30 °C [86 °F], a relative humidity of 95 %, and a face velocity of 0.203 m/sec [40 ft/min].

2. Within 31 days of completing 720 hours of charcoal adsorber operation, verify that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration of less than 15.0 % when tested in accordance with ASTM D3803-1989 at a temperature of 30 °C [86 °F], a relative humidity of 95 %, and a face velocity of 0.203 m/sec [40 ft/min].

The hydrogen recombiner system is an engineered safety feature which would function following a loss-of-coolant accident to control the hydrogen evolved in the containment. The passive autocatalytic recombiners (PARs) contain no control or support equipment which would require surveillance. No specific degradation mechanism has yet been identified for the catalysts plates in standby service. Periodic visual examination and cleaning if necessary is done to prevent significant gas blockage by dust or debris. Representative plates are periodically removed and their response to an approximately 1.5% hydrogen gas mixture is evaluated for evidence of unexpected degradation.

The biannual testing of the containment atmosphere sampling system will demonstrate the availability of this system.

The recirculation fluid pH control system is a passive safeguard with the baskets of trisodium phosphate located in the containment sump area. Periodic visual inspections are required (Refueling#) to verify the storage baskets are in place, have maintained their integrity, and filled with trisodium phosphate.

The control room air filtration system is designed to filter the control room atmosphere for intake air during control room isolation conditions. The control room air filtration system is designed to automatically start upon control room isolation. High-efficiency particulate absolute (HEPA) filters are installed upstream of the charcoal adsorbers to prevent clogging of these adsorbers. The charcoal adsorbers are installed to reduce the potential intake of radioiodine by control room personnel. The required in-place testing and the laboratory charcoal sample testing of the HEPA filters and charcoal adsorbers will provide assurance that Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10 CFR Part 50 continues to be met.

Thus, the allowable methyl iodide penetration, by system, is as follows:

TS Sec.	System Name	Filter Efficiency	UFSAR Reference	Allowable Methyl Iodide Penetration
4.5.E	Control Room Air Filtration System	90%	Sec. 14.3.6.5	5.0%
4.5.G	Post-Accident Containment Venting System	70%	Sec. 14.3.6.1.3	15.0%

References

(1) UFSAR Section 6.2
(2) UFSAR Section 6.4
(3) NRC Generic Letter 99-02, dated June 3, 1999
(4) UFSAR Section 14.2.1.1
(5) UFSAR Section 14.3.6.1.3
(6) UFSAR Section 14.3.6.5