

- (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components.
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I:

Part 20, Section 30.34 of Part 30; Section 40.41 of Part 40; Section 50.54 and 50.59 of Part 50; and Section 70.32 of Part 70. This renewed license is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect and is also subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 1850 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 194 is hereby incorporated into this license. Nine Mile Point Nuclear Station, LLC shall operate the facility in accordance with the Technical Specifications.

(3) Deleted

1.16 Dose Equivalent I-131

Dose Equivalent I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The dose conversion factors used for this calculation shall be the Committed Effective Dose Equivalent dose conversion factors listed in Table 2.1 of Federal Guidance Report No. 11, EPA, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," 1988.

1.17 Recently Irradiated Fuel

Recently irradiated fuel is fuel that has occupied part of a critical reactor core within the previous 24 hours.

1.18 (Deleted)

1.19 (Deleted)

1.20 (Deleted)

1.21 (Deleted)

LIMITING CONDITION FOR OPERATION

3.1.2 LIQUID POISON SYSTEM

Applicability:

Applies to the operating status of the liquid poison system.

Objective:

To assure the capability of the liquid poison system to function as an independent reactivity control mechanism and as a post-LOCA suppression pool pH control mechanism.

Specification:

- a. During power operating conditions, and whenever the reactor coolant system temperature is greater than 212°F except for reactor vessel hydrostatic or leakage testing with the reactor not critical, the liquid poison system shall be operable except as specified in 3.1.2.b.
- b. If a redundant component becomes inoperable, Specification 3.1.2.a shall be considered fulfilled, provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed.

SURVEILLANCE REQUIREMENT

4.1.2 LIQUID POISON SYSTEM

Applicability:

Applies to the periodic testing requirements for the liquid poison system.

Objective:

To specify the tests required to assure the capability of the liquid poison system for controlling core reactivity.

Specification:

The liquid poison system surveillance shall be performed as indicated below:

a. Overall System Test:

(1) At least once during each operating cycle -

Manually initiate the system from the control room. Demineralized water shall be pumped to the reactor vessel to verify minimum flow rates and demonstrate that valves and nozzles are not clogged.

LIMITING CONDITION FOR OPERATION

3.2.4 REACTOR COOLANT SPECIFIC ACTIVITY

Applicability:

Applies to the limits on reactor coolant specific activity.

Objective:

To assure that in the event of a reactor coolant system line break outside the drywell permissible doses are not exceeded.

Specification:

- a. During the power operating and hot shutdown conditions, the specific activity of the reactor coolant shall be limited to Dose Equivalent I-131 specific activity $\leq 0.2 \mu\text{Ci/gm}$.
- b. If reactor coolant specific activity is $> 0.2 \mu\text{Ci/gm}$ and $\leq 4.0 \mu\text{Ci/gm}$ Dose Equivalent I-131, determine the Dose Equivalent I-131 once per 4 hours and restore Dose Equivalent I-131 to within the limit of Specification 3.2.4.a within 48 hours.

SURVEILLANCE REQUIREMENT

4.2.4 REACTOR COOLANT SPECIFIC ACTIVITY

Applicability:

Applies to the periodic testing requirements of the reactor coolant specific activity.

Objective:

To assure that limits on coolant specific activity are not exceeded.

Specification:

- a. When the unit is in the power operating condition, verify that reactor coolant Dose Equivalent I-131 specific activity is $\leq 0.2 \mu\text{Ci/gm}$ once per 7 days.
- b. Verify that reactor coolant Dose Equivalent I-131 specific activity is $\leq 0.2 \mu\text{Ci/gm}$ within 24 hours prior to raising the reactor coolant temperature $> 215^\circ\text{F}$, with the reactor not critical, and with primary containment integrity not established.

LIMITING CONDITION FOR OPERATION

- c. If the required actions and completion times of Specification 3.2.4.b cannot be met, or if reactor coolant specific activity is $> 4.0 \mu\text{Ci/gm}$ Dose Equivalent I-131, place the reactor in the hot shutdown condition within 12 hours and in the cold shutdown condition within the following 24 hours.
- d. The steady state specific activity of the reactor coolant shall be limited to Dose Equivalent I-131 specific activity $\leq 0.2 \mu\text{Ci/gm}$ when the reactor coolant temperature is $> 215^\circ\text{F}$, the reactor is not critical, and primary containment has not been established.

SURVEILLANCE REQUIREMENT

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.3.3 <u>LEAKAGE RATE</u> <u>Applicability:</u> Applies to the allowable leakage rate of the primary containment system. <u>Objective:</u> To assure the capability of the containment in limiting radiation exposure to the public from exceeding values specified in 10 CFR 50.67 in the event of a loss-of-coolant accident accompanied by significant fuel cladding failure and hydrogen generation from a metal-water reaction. To assure that periodic surveillances of reactor containment penetrations and isolation valves are performed so that proper maintenance and repairs are made during the service life of the containment, and systems and components penetrating primary containment. <u>Specification:</u> Whenever the reactor coolant system temperature is above 215°F and primary containment integrity is required, the primary containment leakage rate shall be limited to:	4.3.3 <u>LEAKAGE RATE</u> <u>Applicability:</u> Applies to the primary containment system leakage rate. <u>Objective:</u> To verify that the leakage from the primary containment system is maintained within specified values. <u>Specification:</u> a. The primary containment leakage rates shall be demonstrated at test schedules and in conformance with the criteria specified in the 10 CFR 50 Appendix J Testing Program Plan as described in Specification 6.5.7. b. The provisions of Specification 4.0.2 are not applicable, and the surveillance interval extensions are in accordance with the 10 CFR 50 Appendix J Testing Program Plan.

3.4.0 REACTOR BUILDING

APPLICABILITY

Applies to the operating status of the reactor building (secondary containment).

OBJECTIVE

To assure the integrity of the reactor building.

SPECIFICATION

Reactor building integrity must be in effect for the following conditions:

- a. Power operating condition,
- b. When the reactor water temperature is above 215°F,
- c. Whenever recently irradiated fuel or an irradiated fuel cask is being handled in the Reactor Building, and
- d. During operations with a potential for draining the reactor vessel (OPDRVs).

LIMITING CONDITION FOR OPERATION

3.4.1 LEAKAGE RATE

Applicability:

Applies to the leakage rate of the secondary containment.

Objective:

To specify the requirements necessary to limit exfiltration of fission products released to the secondary containment as a result of an accident.

Specification:

At all times when secondary containment integrity is required, the reactor building leakage rate as determined by Specification 4.4.1 shall not exceed 1600 cfm. If this cannot be met after a routine surveillance check, then the actions listed below shall be taken:

- a. Suspend any of the following activities:
 1. Handling of recently irradiated fuel in the reactor building.
 2. Irradiated fuel cask operations in the reactor building.
 3. Operations with a potential for draining the reactor vessel (OPDRVs).
- b. Restore the reactor building leakage rates to within specified limits within 4 hours or initiate normal orderly shutdown and be in a cold shutdown condition within 10 hours.

SURVEILLANCE REQUIREMENT

4.4.1 LEAKAGE RATE

Applicability:

Applies to the periodic testing requirements of the secondary containment leakage rate.

Objective:

To assure the capability of the secondary containment to maintain leakage within allowable limits.

Specification:

Once during each operating cycle - isolate the reactor building and start emergency ventilation system fan to demonstrate negative pressure in the building relative to external static pressure. The fan flow rate shall be varied so that the building internal differential pressure is at least as negative as that on Figure 3.4.1 for the wind speed at which the test is conducted. The fan flow rate represents the reactor building leakage referenced to zero mph with building internal pressure at least 0.25 inch of water less than atmospheric pressure. The test shall be done at wind speeds less than 20 miles per hour.

LIMITING CONDITION FOR OPERATION

3.4.2 REACTOR BUILDING INTEGRITY - ISOLATION VALVES

Applicability:

Applies to the operational status of the reactor building isolation valves.

Objective:

To assure that fission products released to the secondary containment are discharged to the environment in a controlled manner using the emergency ventilation system.

Specification:

- a. The normal Ventilation System isolation valves shall be operable at all times when secondary containment integrity is required.
- b. If Specification 3.4.2.a is not met, then the actions listed below shall be taken:
 1. The reactor shall be in the cold shutdown condition within ten hours.
 2. Suspend any of the following activities:
 - a. Handling of recently irradiated fuel in the reactor building,
 - b. Irradiated fuel cask handling operations in the reactor building,
 - c. Operations with a potential for draining the reactor vessel (OPDRVs).

SURVEILLANCE REQUIREMENT

4.4.2 REACTOR BUILDING INTEGRITY - ISOLATION VALVES

Applicability:

Applies to the periodic testing requirements of the reactor building isolation valves.

Objective:

To assure the operability of the reactor building isolation valves.

Specification:

At least once per operating cycle, automatic initiation of valves shall be checked.

LIMITING CONDITION FOR OPERATION

3.4.3 ACCESS CONTROL

Applicability:

Applies to the access control to the reactor building.

Objective:

To specify the requirements necessary to assure the integrity of the secondary containment system.

Specification:

- a. At all times when secondary containment integrity is required, the following conditions will be met:
 1. Only one door in each of the double-doored access ways shall be opened at one time.
 2. Only one door or closeup of the railroad bay shall be opened at one time.
 3. The core spray and containment spray pump compartments' doors shall be closed at all times except during passage in order to consider the core spray system and the containment spray system operable.

SURVEILLANCE REQUIREMENT

4.4.3 ACCESS CONTROL

Applicability:

Applies to the periodic checking of the condition of portions of the reactor building.

Objective:

To assure that pump compartments are properly closed at all times and to assure the integrity of the secondary containment system by verifying that reactor building access doors are closed, as required by Specifications 3.4.3.a.1 and 3.4.3.a.2.

Specification:

- a. The core and containment spray pump compartments shall be checked once per week and after each entry.

LIMITING CONDITION FOR OPERATION

- b. If these conditions cannot be met, then the actions listed below shall be taken:
 - 1. If in the power operating condition, restore reactor building integrity within 4 hours or be in at least the hot shutdown condition within the next 12 hours and in the cold shutdown condition within the following 24 hours.

OR

If the reactor coolant system temperature is above 215°F, restore reactor building integrity within 4 hours or be in cold shutdown within the following 24 hours.

- 2. Suspend any of the following activities:
 - a. Handling of recently irradiated fuel in the reactor building,
 - b. Irradiated fuel cask handling operations in the reactor building,
 - c. Operations with a potential for draining the reactor vessel (OPDRVs).

SURVEILLANCE REQUIREMENT

- b. Verify at least once per 31 days that:
 - 1. At least one door in each access to the secondary containment is closed.
 - 2. At least one door or closeup of the railroad bay is closed.

LIMITING CONDITION FOR OPERATION

- c. The results of laboratory carbon sample analysis shall show $\geq 95\%$ radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.
- d. Fans shall be shown to operate within $\pm 10\%$ design flow.
- e. During reactor operation, including when the reactor coolant system temperature is above 215°F, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable.

During handling of recently irradiated fuel in the reactor building, handling of an irradiated fuel cask in the reactor building, and operations with a potential for draining the reactor vessel (OPDRVs), from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, recently irradiated fuel handling in the reactor building, irradiated fuel cask handling in the reactor building, or OPDRVs are permissible during the succeeding seven days unless such circuit is sooner made operable, provided that

SURVEILLANCE REQUIREMENT

- b. The tests and sample analysis of Specification 3.4.4b, c and d shall be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system.
- c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.
- d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.
- e. Each circuit shall be operated with the inlet heater on at least 10 hours every month.
- f. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at and in conformance with each test performed for compliance with Specification 4.4.4b and Specification 3.4.4b.

LIMITING CONDITION FOR OPERATION

during such seven days all active components of the other emergency ventilation circuit shall be operable. Recently irradiated fuel handling in the reactor building, irradiated fuel cask handling in the reactor building, or OPDRVs may continue beyond seven days provided the operable emergency ventilation circuit is in operation.

- f. If these conditions cannot be met, within 36 hours, the reactor shall be placed in a condition for which the emergency ventilation system is not required.

SURVEILLANCE REQUIREMENT

- g. At least once per operating cycle, not to exceed 24 months, automatic initiation of each branch of the emergency ventilation system shall be demonstrated.
- h. At least once per operating cycle, not to exceed 24 months, manual operability of the bypass valve for filter cooling shall be demonstrated.
- i. When one circuit of the emergency ventilation system becomes inoperable all active components in the other emergency ventilation circuit shall be verified to be operable within two hours and daily thereafter.

LIMITING CONDITION FOR OPERATION

3.4.5 CONTROL ROOM AIR TREATMENT SYSTEM

Applicability:

Applies to the operating status of the control room air treatment system.

Objective:

To assure the capability of the control room air treatment system to minimize the amount of radioactivity or other gases entering the control room in the event of an incident.

Specification:

- a. Except as specified in Specification 3.4.5e below, the control room air treatment system shall be operable for the following conditions:
 1. Power operating condition, and whenever the reactor coolant system temperature is greater than 212°F,
 2. Whenever recently irradiated fuel or an irradiated fuel cask is being handled in the reactor building, and
 3. During operations with a potential for draining the reactor vessel (OPDRVs).
- b. The results of the in-place cold DOP and halogenated hydrocarbon tests at design flows on HEPA filters and charcoal adsorber banks shall show $\geq 99\%$ DOP removal and $\geq 99\%$ halogenated hydrocarbon removal when tested in accordance with ANSI N.510-1980.

SURVEILLANCE REQUIREMENT

4.4.5 CONTROL ROOM AIR TREATMENT SYSTEM

Applicability:

Applies to the testing of the control room air treatment system.

Objective:

To assure the operability of the control room air treatment system.

Specification:

- a. At least once per operating cycle, or once every 24 months, whichever occurs first, the pressure drop across the combined HEPA filters and charcoal adsorber banks shall be demonstrated to be less than 1.5 inches of water at system design flow rate ($\pm 10\%$).
- b. The tests and sample analysis of Specification 3.4.5b, c and d shall be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system.

LIMITING CONDITION FOR OPERATION

- c. The results of laboratory carbon sample analysis shall show $\geq 95\%$ radioactive methyl iodine removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.
- d. Fans shall be shown to operate within $\pm 10\%$ design flow.
- e. From and after the date that the control room air treatment system is made or found to be inoperable for any reason, reactor operation, recently irradiated fuel handling, irradiated fuel cask handling, or OPDRVs are permissible only during the succeeding seven days unless the system is sooner made operable.
- f. If these conditions cannot be met, then the actions listed below shall be taken:
 - 1. If in the power operating condition, or if the reactor coolant system temperature is greater than 212°F, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within 36 hours.
 - 2. Suspend any of the following activities within 2 hours:
 - a. Handling of recently irradiated fuel in the reactor building,
 - b. Irradiated fuel cask handling operations in the reactor building,
 - c. Operations with a potential for draining the reactor vessel (OPDRVs).

SURVEILLANCE REQUIREMENT

- c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.
- d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal absorber bank or after any structural maintenance on the system housing.
- e. The system shall be operated at least 10 hours every month.
- f. At least once per operating cycle, not to exceed 24 months, automatic initiation of the control room air treatment system shall be demonstrated.
- g. At least once per operating cycle, not to exceed 24 months, the control room air treatment system shall be shown to maintain a positive pressure within the control room of greater than one sixteenth of an inch (water) relative to areas adjacent to the control room.

TABLE 3.6.2j

EMERGENCY VENTILATION INITIATION**Limiting Condition for Operation**

<u>Parameter</u>	<u>Minimum No. of Tripped or Operable Trip Systems</u>	<u>Minimum No. of Operable Instrument Channels per Operable Trip System</u>	<u>Set Point</u>	<u>Reactor Mode Switch Position in Which Function Must Be Operable</u>			
				<u>Shutdown</u>	<u>Refuel</u>	<u>Startup</u>	<u>Run</u>
(1) High Radiation Reactor Building Ventilation Duct	1	2(d)	$\leq 5\text{mr/hr}$	x	(a)	x	x
(2) High Radiation Refueling Platform	1	1	$\leq 1000\text{mr/hr}$	(a)	(a)	(a)	(a)

NOTES FOR TABLES 3.6.2j AND 4.6.2j

- (a) This function shall be operable whenever recently irradiated fuel or an irradiated fuel cask is being handled in the reactor building, and during operations with a potential for draining the reactor vessel (OPDRVs).
- (b) Once per shift whenever this function is required to be operable.
- (c) Immediately prior to when function is required and once per week thereafter until function is no longer required.
- (d) A channel may be placed in an inoperable status for up to 6 hours for required surveillances without placing the Trip System in the tripped condition provided at least one Operable Instrument Channel in the same Trip System is monitoring that parameter.

With the number of Operable channels one less than required by the Minimum Number of Operable Instrument Channels for the Operable Trip System, either

- 1) Place the inoperable channel(s) in the tripped condition within 24 hours.
- or
- 2) Take the ACTION required by Specification 3.6.2a for that Parameter.

TABLE 3.6.2I

CONTROL ROOM AIR TREATMENT SYSTEM INITIATION**Limiting Condition for Operation**

<u>Parameter</u>	<u>Minimum No. of Tripped or Operable Trip Systems</u>	<u>Minimum No. of Operable Instrument Channels per Operable Trip System</u>	<u>Set Point</u>	<u>Reactor Mode Switch Position in Which Function Must Be Operable</u>			
				<u>Shutdown</u>	<u>Refuel</u>	<u>Startup</u>	<u>Run</u>
(1) Low-Low Reactor Water Level	2	2	≥ 5 inches (Indicator Scale)	(c)		x	x
(2) High Steam Flow Main-Steam Line	2	2	≤ 105 psid			x	x
(3) High Temperature Main-Steam Line Tunnel	2	2	$\leq 200^{\circ}\text{F}$			x	x
(4) High Drywell Pressure	2	2	≤ 3.5 psig	(c)		(a)	(a)

NOTES FOR TABLES 3.6.2I AND 4.6.2I

- (a) May be bypassed when necessary for containment inerting.
- (b) Only the trip circuit will be calibrated and tested at the frequencies specified; the primary sensor will be calibrated and tested once per operating cycle.
- (c) May be bypassed in the cold shutdown condition.