ATTACHMENT 2

PROPOSED CHANGES TO DPR-19

RELATED TO GENERIC LETTER 83-36

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NOTE: These pages reflect the technical changes to Appendix A, DPR-19. Pagniation changes may still be necessary.

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3.2 LIMITING CONDITION FOR OPERATION (CONT'D)	4.2 SURVEILLANCE REQUIREMENTS (CONT'D)
in the fuel storage pool and during refueling or fuel movement operations.	treatment system initiation shall be performed at least each operating cycle.
2. One of the two refueling floor radiation monitors may be inoperable for 24 hours. If the inoperable monitor is not restored to service in this time, the reactor building ventilation system shall be isolated and the standby gas treatment operated until repairs are complete.	
3. The trip setting for the refueling floor radiation monitors shall be set at a less than or equal to 100mr/hr.	
4. Upon loss of both refueling floor radiation monitors while in use, the reactor building ventilation system shall be isolated and the standby gas treatment operated.	
E. Post Accident Instrumentation	E. Post Accident Instrumentation
The limiting conditions for operation for the instrumentation, which is read out in the control room, required for post accident monitoring are given in Table 3.2.6.	Post accident instrumentation shall be functionally tested and calibrated as indicated in Table 4.2.4.

Table 3.2.6
Post Accident Monitoring Instrumentation Requirements

Minimum Number of Operable Channels (1)	Parameter	Instrument Readout Location Unit 3	Number Provided	Instrument Range
1	Reactor Pressure	903-5	1 2	0-1500 psig 0-1200 psig
1	Reactor Water Level	903-3	2	-340 to +60 inches
1	Torus Water Temperature	903-4	2	0-200°F
2 (3)	Torus Water Level Indicator	903-3 903-3	1 1	-25 to +25 inches -7 to +3 inches (narrow range)
		903-2	2	0-30 ft (wide range)
	Torus Water Local Sight Glass		1	18 inch range (narrow range)
1 (4)	Torus Pressure	903-5	1	-2.45-5 psig
2	Drywell Pressure	903-5 903-3 903-3	1 1 2	0-5 psig 0-75 psig 0-250 psig
2	Drywell Temperature	903-21	6	0-600°F
2	Neutron Monitoring	903-5	4	$0.1-10^6$ CPS
1 (4)	Torus to Drywell Differential Pressure	903-3	2	0-3 psid
1	Drywell Radiation Monitor	903-55,56	2	1 to 10^8 R/hr
2/valve (2)	Main Steam RV Position, Acoustic Monitor	903-21	1 per valve	N/A
	Main Steam RV Position, Temperature Monitor	903-21	1 per valve	0-600°F
2/valve (2)	Main Steam SV Position, Acoustic Monitor	903-21	1 per valve	N/A
	Main Steam SV Position, Temperature Monitor	903-21	1 per valve	0-600°F
1 (5)	Drywell Hydrogen Concentration	903-55 903-56	2	0-10%

Notes: (See Next Page)

Table 3.2.6

Notes

1. From and after the date that a parameter is reduced to the minimum number of channels, continued operation is not permissible beyond thirty (30) days unless such instrumentation is sooner made operable. In the event that all indications of a parameter is disabled and such indication cannot be restored in six (6) hours, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition in twenty-four (24) hours. See notes 2, 3, 4 and 5 for exceptions to this requirement.

2. If the number of position indicators is reduced to one indication on one or more valves, continued operation is permissible; however, if the reactor is in a cold shutdown condition for longer than 12 hours, it may not be started up until all position indication is restored. In the event that all position indication is lost on one or more valves and such indication cannot be restored in thirty (30) days, an orderly shutdown shall be initiated, and the reactor shall be depressurized to less than 90 psig in twenty-four (24) hours.

3. From and after the date that this parameter is reduced to either one narrow-range indication or one wide-range indication, continued reactor operation is not permissible beyond thirty (30) days unless such instrument is sooner made operable. In the event that either all narrow-range indication or all wide-range indication is disabled, continued reactor operation is not permissible beyond seven (7) days unless such instruments are sooner made operable. In the event that all indication for this parameter is disabled, and such indication cannot be restored in six (6) hours, an orderly shutdown shall be intitiated and the reactor shall be in a cold shutdown condition in twenty-four (24) hours.

4. From and after the date that one of these parameters becomes inoperable, continued operation is not permissible beyond thirty (30) days unless such instrumentation is sooner made operable. In the event that all indication of these parameters is disabled and such indication cannot be restored in six (6) hours, an orderly shutdown shall be intitiated and the reactor shall be in cold shutdown in twenty-four (24) hours.

5. From and after the date that one of the drywell hydrogen monitors becomes inoperable, continued reactor operation is permissible.

   a. If both drywell hydrogen monitors are inoperable, continued reactor operation is permissible for up to 30 days provided that during this time the HRSS hydrogen monitoring capability for the drywell is operable.

   b. If all drywell hydrogen monitoring capability is lost, continued reactor operation is permissible for up to 7 days.

TABLE 4.2.1

MINIMUM TEST AND CALIBRATION FREQUENCY FOR CORE AND CONTAINMENT COOLING SYSTEMS INSTRUMENTATION, ROD BLOCKS, AND ISOLATIONS

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
ECCS INSTRUMENTATION			
1. Reactor Low-Low Water Level	(1)	Once/3 Months	Once/Day
2. Drywell High Pressure	(1)	Once/3 Months	None
3. Reactor Low Pressure	(1)	Once/3 Months	None
4. Containment Spray Interlock			
a. 2/3 Core Height	(1)	Once/3 Months	None
b. Containment High Pressure	(1)	Once/3 Months	None
5. Low Pressure Core Cooling Pump Discharge	(1)	Once/3 Months	None
6. Undervoltage Emergency Bus	Refueling Outage	Refueling Outage	Once/3 months
7. Sustained High Reactor Pressure	(1)	Once/3 Months	None
8. Degraded Voltage Emergency Bus	Refueling Outage (7)	Refueling Outage	Monthly
ROD BLOCKS			
1. APRM Downscale	(1) (3)	Once/3 Months	None
2. APRM Flow Variable	(1) (3)	Refueling Outage	None
3. APRM Upscale (Startup/Hot Standby)	(6) (3)	(6)	(6)
4. IRM Upscale	(6) (3)	Once/3 Months (6)	(6)
5. IRM Downscale	(6) (3)	Once/3 Months (6)	(6)
6. IRM Detector Not Fully Inserted in the core	(6)	N/A	None
7. RBM Upscale	(1) (3)	Once/3 Months	None
8. RBM Downscale	(1) (3)	Once/3 Months	None
9. SRM Upscale	(6) (3)	Once/3 Months (6)	(6)
10. SRM Detector Not in Startup Position	(6)	N/A	(6)
11. Scram Instrument Volume Level High	Once/3 Months (5)	None	None
MAIN STEAM LINE ISOLATION			
1. Steam Tunnel High Temperature	Refueling Outage	Refueling Outage	None
2. Steam Line High Flow	(1)	Once/3 Months	Once/Day
3. Steam Line Low Pressure	(1)	Once/3 Months	None
4. Steam Line High Radiation	(1) (3)	Once/3 Months (4)	Once/Day
ISOLATION CONDENSER ISOLATION			
1. Steam Line High Flow	(1)	Once/3 Months	None
2. Condensate Line High Flow	(1)	Once/3 Months	None
HPCI ISOLATION			
1. Steam Line High Flow	(1) (8)	Once/3 Months	None
2. Steam Line Area High Temperature	Refueling Outage	Refuel Outage	None
3. Low Reactor Pressure	(1)	Once/3 Months	None
REACTOR BUILDING VENT ISOLATION AND SBGTS INITIATON			
1. Ventilation Exhaust Duct Radiation Monitors	(1)	Once/3 Months	Once/Day
2. Refueling Floor Radiation Monitors	(1)	Once/3 Months	Once/Day
STEAM JET-AIR EJECTOR OFF GAS ISOLATION			
1. Radiation Monitors	(1) (3)	Once/3 Months (4)	Once/Day

Notes: (See next two pages)

Notes:
(See Next Two Pages)

TABLE 4.2.1 (Notes)

1. Initially once per month until exposure hours (M as defined on Figure 4.1.1) is 2.0×10^5; thereafter, according to Figure 4.1.1 with an interval not less than one month nor more than three months. The compilation of instrument failure rate data may include data obtained from other Boiling Water Reactors for which the same design instrument operates in an environment similar to that of Dresden Unit 3.

2. Functional tests, calibrations, and instrument checks are not required when these instruments are not required to be operable or are tripped.

3. This instrumentation is excepted from the functional test definition. The functional and calibration test will consist of injecting a simulated electrical signal into the measurement channel.

4. These instrument channels will be calibrated using simulated electrical signals once every three months. In addition, calibration including the sensors will be performed during each refueling outage.

5. The functional test of the Scram Discharge Volume Float switch shall include actuation of the switch using a water column.

6. Functional tests shall be performed each startup with a required frequency not to exceed once per week. Calibrations shall be performed during each startup or during controlled shutdowns with a required frequency not to exceed once per week. Instrument checks shall be performed at least once per day during those periods when the instruments are required to be operable.

7. Functional test shall include verification of the second level undervoltage (degraded voltage) timer bypass and shall verify operation of the degraded voltage 5-minute timer and inherent 7-second timer.

8. Verification of time delay setting between 3 and 9 seconds shall be performed during each refueling outage.

Table 4.2.4

Post Accident Monitoring Instrumentation Surveillance Requirements

Minimum Number of Operable Channels	Parameter	Instrument Readout Location Unit 3	Calibration	Instrument Check
1	Reactor Pressure	903-5	Once Every 6 Months	Once Per Day
1	Reactor Water Level	903-3	Once Every 6 Months	Once Per Day
1	Torus Water Temperature	903-4	Once Every 12 Months	Once Per Day
2	Torus Water Level Indicator (Narrow Range)	903-3	Once Every 6 Months	Once Per Day
	(Sight Glass)		N/A	None
	(Wide Range)	903-2	Once Every 12 Months	Once Per 31 Days
1	Torus Pressure	903-3,5	Once Every 3 Months	Once Per Day
1	Torus to Drywell Differential Pressure	903-3	Once Every 6 Months	Once Per Day
2	Drywell Pressure			
	(0-5 psig)	903-5	Once Every 3 Months	Once Per Day
	(0-75 psig)	903-3	Once Every 3 Months	Once Per 31 Days
	(0-250 psig)	903-3	Once Every Refuel	Once Per 31 Days
2	Drywell Temperature	903-21	Once Every Refuel	Once Per Day
2	Neutron Monitoring	903-5	Once Every 3 Months	Once Per Day
1	Drywell Radiation Monitor	903-55,56	Once Every (2) Refuel	Once Per 31 Days
2/Valve	Main Steam RV Position, Temperature Monitor	903-21	Once Every Refuel	Once Per 31 Days
	Main Steam RV Position, Acoustic Monitor		(1)	
2/Valve	Main Steam SV Position, Temperature Monitor	903-21	Once Every Refuel	Once Per 31 Days
	Main Steam SV Position, Acoustic Monitor		(1)	Once Per 31 Days
1	Drywell Hydrogen Concentration	903-55 903-56	Once Every 3 Months	Once Per 31 Days

Notes: (See Next Page)

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Table 4.2.4 (Notes)

Notes

1. Calibration of Acoustic Monitors shall consist of verifying the instrument threshold levels, and will be performed monthly.

   Functional tests will be conducted before startup at the end of each refueling outage or after maintenance is performed on a particular safety or relief valve.

2. Calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr; and a one-point calibration check of the detector below 10 R/hr with an installed or portable gamma source.

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

For effective emergency core cooling for small pipe breaks, the HPCI system must function since reactor pressure does not decrease rapidly enough to allow either core spray or LPCI to operate in time. The automatic pressure relief function is provided as a backup to the HPCI in the event the HPCI does not operate. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria are met (Ref. SAR Section 6.2.6.3). The specification preserves the effectiveness of the system during periods of maintenance, testing or calibration and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two radiation monitors are provided on the refueling floor which initiate isolation of the reactor building and operation of the standby gas treatment systems. The trip logic is one out of two. Trip settings of less than or equal to 100 mR/hr for the monitors on the refueling floor are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the reactor building via the normal ventilation stack but that all the activity is processed by the standby gas treatment system.

The instrumentation which is provided to monitor the post accident condition is listed in Table 3.2.6. The instrumentation listed and the limiting conditions for operation on these systems ensure adequate monitoring of the containment following a loss-of-coolant accident. Information from this instrumentation will provide the operator with a detailed knowledge of the conditions resulting from the accident. Based on this information he can make logical decisions regarding post accident recovery.

The specifications allow for post accident instrumentation to be out of service for a period of 30 days. This period is based on the fact that several diverse instruments are available for guiding the operator should an accident occur, on the low probability of an instrument being out of service and an accident occurring in the 30-day period, and on engineering judgement.

The radioactive liquid and gaseous effluent instrumentation is provided to monitor the release of radioactive materials in liquid and gaseous effluents during releases. The alarm setpoints for the instruments are provided to ensure that the alarms will occur prior to exceeding the limits of 10 CFR 20.

4.2 SURVEILLANCE REQUIREMENT BASES (Cont'd.)

A more usual case is that the testing is done independently. If both channels are bypassed and tested at the same time, the result is shown in Curve No. 3. Note that the minimum occurs at about 40,000 hours, much longer than for cases 1 and 2. Also, the minimum is not nearly as low as Case 2 which indicates that this method of testing does not take full advantage of the redundant channel. Bypassing both channels for simultaneous testing should be avoided.

The most likely case would be to stipulate that one channel be bypassed tested and restored. Then immediately following, the second channel will be bypassed, tested, and restored. This is shown by Curve No. 4. Note that there is no true minimum. The curve does have a definite knee and very little reduction in system unavailability is achieved by testing at a shorter interval than computed by the equation for a single channel.

The best test procedure of all those examined is to perfectly stagger the tests. That is, if the test interval is four months, test one or the other channel every two months. This is shown in Curve No. 5. The difference between Cases 4 and 5 is negligible. There may be other arguments, however, that more strongly support the perfectly staggered tests, including reductions in human error.

The conclusions to be drawn are these:

1. A 1 out of n system may be treated the same as a single channel in terms of choosing a test interval; and
2. More than one channel should not be bypassed for testing at any one time.

The radiation monitors in the ventilation duct and on the refueling floor which initiate building isolation and standby gas treatment operation are arranged in two 1 out of 2 logic systems. The bases given above for the rod blocks applies here also and were used to arrive at the functional testing frequency.

Based on experience at Dresden Unit 1 with instruments of similar design, a testing interval of once every three months has been found to be adequate.

The automatic pressure relief instrumentation can be considered to be a 1 out of 2 logic system and the discussion above applies also.

The instrumentation which is required for the post accident condition will be tested and calibrated at regularly scheduled intervals. The basis for the calibration and testing of this instrumentation is the same as was discussed above for Protective Instrumentation in Table 4.2.4.

3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
I. Control Room Emergency Filtration System	I. Control Room Emergency Filtration System
1. The control room emergency filtration system, including at least one booster fan shall be operable at all times when secondary containment integrity is required, except as specified in Sections 3.8.H.1.a. and b.	1. At least once per month, initiate 2000 cfm (plus or minus 10%) flow through the Control Room emergency filtration system for at least 10 hours with the heaters operable.
a. After the control room emergency filtration system is made or found to be operable for any reason, reactor operation and fuel handling are permissible only during the succeeding 14 days. Within 36 hours following the 14 days, the reactor shall be placed in a condition for which the control room emergency filtration system is not required in accordance with Specifications 3.7.C.1.a. through d.	
b. Specification 3.8.H.1.a. above does not apply during performance of post-maintenance testing, or during removal of the charcoal test canister.	
2. The normal control room ventilation system will isolate and the control room emergency filtration system will automatically initiate on high toxic gas concentration.	2. Surveillances for instrumentation which isolate the normal control room ventilation system and automatically initiate the control room emergency filtration system are as follows:

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3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
a. The toxic gas detection instrumentation shall consist of a methyl chloride and ammonia analyzer with each trip setpoint set at: (1) Methyl chloride concentration less than or equal to 25 ppm. (2) Ammonia concentration less than or equal to 25ppm. The provisions of Specification 3.0.A. are not applicable.	a. Instrument check shall be performed once a day. b. Instrument functional test shall be performed once a month. c. Instrument calibration shall be performed once ever 18 months.
3. Performance Requirement a. Periodic Requirements:	3. Performance Requirement Tests a. At least once per 720 hours of system operation; or once per operating cycle, but not to exceed 18 months, whichever occurs first; or following painting, fire, or chemical release in any ventilation zone communicating with the system while the system is operating that could contaminate the HEPA filter or charcoal adsorber; perform the following:

3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
(1) The results of the in-place DOP test at 2000 cfm (plus or minus 10%) on HEPA filter shall show less than or equal to 1% DOP penetration.	(1) In-place DOP test the HEPA filter bank to verify leak tight integrity.
(2) The results of in-place halogenated hydrocarbon tests at 2000 cfm (plus or minus 10%) on the charcoal bank shall show less than or equal to 1% penetration.	(2) In-place test the charcoal adsorber bank with halogen-hydrocarbon tracer to verify leak tight integrity.
(3) The results of laboratory carbon sample analysis shall show greater than or equal to 90% methyl iodide removal efficiency when tested at 130°C, 95% relative humidity.	(3) Remove one carbon test canister from the charcoal adsorber. Subject this sample to a laboratory analysis to verify methyl iodide removal efficiency.
b. The system shall be shown to operate.	b. At least once per operating cycle, but not to exceed 18 months, the following conditions shall be demonstrated:
	(1) Pressure drop across the combined filter is less than 6 inches of water at 2000 cfm (plus or minus 10%) flow rate.

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3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
	(2) Operability of the inlet heater at rated power.
	(3) Automatic initiation.
	(4) Manual isolation of the normal control room ventilation system.
4. Post Maintenance Requirements	4. Post Maintenance Testing
a. After any maintenance or testing that could affect the HEPA filter or HEPA filter mounting frame leak tight integrity, the results of the in-place DOP tests at 2000 cfm (plus or minus 10%) on HEPA filter shall show less than or equal to 1% DOP penetration in accordance with Specification 3.8.G.3.a.(1).	a. After any maintenance or testing that could affect the leak tight integrity of the HEPA filters, perform in-place DOP tests on the HEPA filter in accordance with Specification 4.8.G.3.a.(1).
b. After any maintenance or testing that could affect the charcoal adsorber leak tight integrity, the results of the in-place halogenated hydrocarbon tests at 2000 cfm (plus or minus 10%) on the charcoal adsorber bank shall show less than or equal to 1% penetration in accordance with Specification 3.8.G.3.a.(2).	b. After any maintenance or testing that could affect the leak tight integrity of the charcoal adsorber banks, perform halogenated hydrocarbon tests on the charcoal adsorber in accordance with Specification 4.8.G.3.a.(2).

3.8 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

F. Deleted

G. Miscellaneous Radioactive Materials Sources

The objective of this specification is to assure that leakage from by-product, source and special nuclear material sources does not exceed allowable limits. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39 (c) limits for plutonium,

H. N/A

I. The purpose of these specifications is to assure availability of the control room emergency air filtration system that has been installed in response to NUREG-0737, Item III. D.3.4. Operation of the system is described in the "Control Room Habitability Study" for Dresden Station which was submitted to the NRC (letter from E.D. Swartz to D.G. Eisenhut dated December 17, 1981). The setpoints for the ammonia and methyl chloride concentrations are based on early detection in the outside air supply at the odor threshold, so that the toxic chemical will not achieve toxicity limit concentrations in the control room.

4.8 SURVEILLANCE REQUIREMENT BASES

None

ATTACHMENT 3

PROPOSED CHANGES TO DPR-25

RELATED TO GENERIC LETTER 83-36

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B	3/4.8-41

NOTE: These pages reflect the technical changes to Appendix A, DPR-25. Pagniation changes may still be necessary.

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3.2 LIMITING CONDITION FOR OPERATION (CONT'D)	4.2 SURVEILLANCE REQUIREMENTS (CONT'D)
in the fuel storage pool and during refueling or fuel movement operations.	treatment system initiation shall be performed at least each operating cycle.
2. One of the two refueling floor radiation monitors may be inoperable for 24 hours. If the inoperable monitor is not restored to service in this time, the reactor building ventilation system shall be isolated and the standby gas treatment operated until repairs are complete.	
3. The trip setting for the refueling floor radiation monitors shall be set at a less than or equal to 100mr/hr.	
4. Upon loss of both refueling floor radiation monitors while in use, the reactor building ventilation system shall be isolated and the standby gas treatment operated.	
E. Post Accident Instrumentation	E. Post Accident Instrumentation
The limiting conditions for operation for the instrumentation, which is read out in the control room, required for post accident monitoring are given in Table 3.2.6.	Post accident instrumentation shall be functionally tested and calibrated as indicated in Table 4.2.4.

Table 3.2.6
Post Accident Monitoring Instrumentation Requirements

Minimum Number of Operable Channels (1)	Parameter	Instrument Readout Location Unit 2	Number Provided	Instrument Range
1	Reactor Pressure	902-5	1 2	0-1500 psig 0-1200 psig
1	Reactor Water Level	902-3	2	-340 to +60 inches
1	Torus Water Temperature	902-4	2	0-200°F
2 (3)	Torus Water Level Indicator	902-3 902-3 902-2	1 1 2	-25 to +25 inches -7 to +3 inches (narrow range) 0-30 ft (wide range)
	Torus Water Local Sight Glass		1	18 inch range (narrow range)
1 (4)	Torus Pressure	902-5	1	-2.45-5 psig
2	Drywell Pressure	902-5 902-3 902-3	1 1 2	0-5 psig 0-75 psig 0-250 psig
2	Drywell Temperature	902-21	6	0-600°F
2	Neutron Monitoring	902-5	4	$0.1-10^6$ CPS
1 (4)	Torus to Drywell Differential Pressure	902-3	2	0-3 psid
1	Drywell Radiation Monitor	902-55,56	2	1 to 10^8 R/hr
2/valve (2)	Main Steam RV Position, Acoustic Monitor	902-21	1 per valve	N/A
	Main Steam RV Position, Temperature Monitor	902-21	1 per valve	0-600°F
2/valve (2)	Main Steam SV Position, Acoustic Monitor	902-21	1 per valve	N/A
	Main Steam SV Position, Temperature Monitor	902-21	1 per valve	0-600°F
1 (5)	Drywell Hydrogen Concentration	902-55 902-56	2	0-10%

Notes: (See Next Page)

Table 3.2.6

Notes

1. From and after the date that a parameter is reduced to the minimum number of channels, continued operation is not permissible beyond thirty (30) days unless such instrumentation is sooner made operable. In the event that all indications of a parameter is disabled and such indication cannot be restored in six (6) hours, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition in twenty-four (24) hours. See notes 2, 3, 4 and 5 for exceptions to this requirement.

2. If the number of position indicators is reduced to one indication on one or more valves, continued operation is permissible; however, if the reactor is in a cold shutdown condition for longer than 12 hours, it may not be started up until all position indication is restored. In the event that all position indication is lost on one or more valves and such indication cannot be restored in thirty (30) days, an orderly shutdown shall be initiated, and the reactor shall be depressurized to less than 90 psig in twenty-four (24) hours.

3. From and after the date that this parameter is reduced to either one narrow-range indication or one wide-range indication, continued reactor operation is not permissible beyond thirty (30) days unless such instrument is sooner made operable. In the event that either all narrow-range indication or all wide-range indication is disabled, continued reactor operation is not permissible beyond seven (7) days unless such instruments are sooner made operable. In the event that all indication for this parameter is disabled, and such indication cannot be restored in six (6) hours, an orderly shutdown shall be intitiated and the reactor shall be in a cold shutdown condition in twenty-four (24) hours.

4. From and after the date that one of these parameters becomes inoperable, continued operation is not permissible beyond thirty (30) days unless such instrumentation is sooner made operable. In the event that all indication of these parameters is disabled and such indication cannot be restored in six (6) hours, an orderly shutdown shall be intitiated and the reactor shall be in cold shutdown in twenty-four (24) hours.

5. From and after the date that one of the drywell hydrogen monitors becomes inoperable, continued reactor operation is permissible.

   a. If both drywell hydrogen monitors are inoperable, continued reactor operation is permissible for up to 30 days provided that during this time the HRSS hydrogen monitoring capability for the drywell is operable.

   b. If all drywell hydrogen monitoring capability is lost, continued reactor operations is permissible for up to 7 days.

TABLE 4.2.1

MINIMUM TEST AND CALIBRATION FREQUENCY FOR CORE AND CONTAINMENT COOLING SYSTEMS INSTRUMENTATION, ROD BLOCKS, AND ISOLATIONS

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
ECCS INSTRUMENTATION			
1. Reactor Low-Low Water Level	(1)	Once/3 Months	Once/Day
2. Drywell High Pressure	(1)	Once/3 Months	None
3. Reactor Low Pressure	(1)	Once/3 Months	None
4. Containment Spray Interlock			
a. 2/3 Core Height	(1)	Once/3 Months	None
b. Containment High Pressure	(1)	Once/3 Months	None
5. Low Pressure Core Cooling Pump Discharge	(1)	Once/3 Months	None
6. Undervoltage Emergency Bus	Refueling Outage	Refueling Outage	Once/3 months
7. Sustained High Reactor Pressure	(1)	Once/3 Months	None
8. Degraded Voltage Emergency Bus	Refueling Outage (6)	Refueling Outage	Monthly
ROD BLOCKS			
1. APRM Downscale	(1) (3)	Once/3 Months	None
2. APRM Flow Variable	(1) (3)	Once/3 Months	None
3. APRM Upscale (Startup/Hot Standby)	(7) (3)	(7)	(7)
4. IRM Upscale	(7) (3)	Once/3 Months (7)	(7)
5. IRM Downscale	(7) (3)	Once/3 Months (7)	(7)
6. IRM Detector Not Fully Inserted in the core	(7)	N/A	None
7. RBM Upscale	(1) (3)	Once/3 Months	None
8. RBM Downscale	(1) (3)	Once/3 Months	None
9. SRM Upscale	(7) (3)	Once/3 Months (7)	(7)
10. SRM Detector Not in Startup Position	(7)	N/A	(7)
11. Scram Instrument Volume Level High	Once/3 Months (5)	None	None
MAIN STEAM LINE ISOLATION			
1. Steam Tunnel High Temperature	Refueling Outage	Refueling Outage	None
2. Steam Line High Flow	(1)	Once/3 Months	Once/Day
3. Steam Line Low Pressure	(1)	Once/3 Months	None
4. Steam Line High Radiation	(1) (3)	Once/3 Months (4)	Once/Day
ISOLATION CONDENSER ISOLATION			
1. Steam Line High Flow	(1)	Once/3 Months	None
2. Condensate Line High Flow	(1)	Once/3 Months	None
HPCI ISOLATION			
1. Steam Line High Flow	(1) (8)	Once/3 Months	None
2. Steam Line Area High Temperature	Refueling Outage	Refuel Outage	None
3. Low Reactor Pressure	(1)	Once/3 Months	None
REACTOR BUILDING VENT ISOLATION AND SBGTS INITIATON			
1. Ventilation Exhaust Duct Radiation Monitors	(1)	Once/3 Months	Once/Day
2. Refueling Floor Radiation Monitors	(1)	Once/3 Months	Once/Day
STEAM JET-AIR EJECTOR OFF GAS ISOLATION			
1. Radiation Monitors	(1) (3)	Once/3 Months (4)	Once/Day

Notes: (See next two pages)

TABLE 4.2.1 (Notes)

1. Initially once per month until exposure hours (M as defined on Figure 4.1.1) is 2.0×10^5; thereafter, according to Figure 4.1.1 with an interval not less than one month nor more than three months. The compilation of instrument failure rate data may include data obtained from other Boiling Water Reactors for which the same design instrument operates in an environment similar to that of Dresden Unit 2.

2. Functional tests, calibrations, and instrument checks are not required when these instruments are not required to be operable or are tripped.

3. This instrumentation is excepted from the functional test definition. The functional and calibration test will consist of injecting a simulated electrical signal into the measurement channel.

4. These instrument channels will be calibrated using simulated electrical signals once every three months. In addition, calibration including the sensors will be performed during each refueling outage.

5. The functional test of the Scram Discharge Volume Float switch shall include actuation of the switch using a water column.

6. Functional test shall include verification of the second level undervoltage (degraded voltage) timer bypass and shall verify operation of the degraded voltage 5-minute timer and inherent 7-second timer.

7. Functional tests shall be performed each startup with a required frequency not to exceed once per week. Calibrations shall be performed during each startup or during controlled shutdowns with a required frequency not to exceed once per week. Instrument checks shall be performed at least once per day during those periods when the instruments are required to be operable.

8. Verification of time delay setting between 3 and 9 seconds shall be performed during each refueling outage.

Table 4.2.4

Post Accident Monitoring Instrumentation Surveillance Requirements

Minimum Number of Operable Channels	Parameter	Instrument Readout Location Unit 2	Calibration	Instrument Check
1	Reactor Pressure	902-5	Once Every 6 Months	Once Per Day
1	Reactor Water Level	902-3	Once Every 6 Months	Once Per Day
1	Torus Water Temperature	902-4	Once Every 12 Months	Once Per Day
2	Torus Water Level Indicator (Narrow Range)	902-3	Once Every 6 Months	Once Per Day
	(Sight Glass)		N/A	None
	(Wide Range)	902-2	Once Every 12 Months	Once Per 31 Days
1	Torus Pressure	902-3,5	Once Every 3 Months	Once Per Day
1	Torus to Drywell Differential Pressure	902-3	Once Every 6 Months	Once Per Day
2	Drywell Pressure			
	(0-5 psig)	902-5	Once Every 3 Months	Once Per Day
	(0-75 psig)	902-3	Once Every 3 Months	Once Per 31 Days
	(0-250 psig)	902-3	Once Every Refuel	Once Per 31 Days
2	Drywell Temperature	902-21	Once Every Refuel	Once Per Day
2	Neutron Monitoring	902-5	Once Every 3 Months	Once Per Day
1	Drywell Radiation Monitor	902-55,56	Once Every (2) Refuel	Once Per 31 Days
2/Valve	Main Steam RV Position, Temperature Monitor	902-21	Once Every Refuel	Once Per 31 Days
	Main Steam RV Position, Acoustic Monitor		(1)	
2/Valve	Main Steam SV Position, Temperature Monitor	902-21	Once Every Refuel	Once Per 31 Days
	Main Steam SV Position, Acoustic Monitor		(1)	Once Per 31 Days
1	Drywell Hydrogen Concentration	902-55 902-56	Once Every 3 Months	Once Per 31 Days

Notes: (See Next Page)

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Table 4.2.4 (Notes)

Notes

1. Calibration of Acoustic Monitors shall consist of verifying the instrument threshold levels, and will be performed monthly.

   Functional tests will be conducted before startup at the end of each refueling outage or after maintenance is performed on a particular safety or relief valve.

2. Calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr; and a one-point calibration check of the detector below 10 R/hr with an installed or portable gamma source.

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

For effective emergency core cooling for small pipe breaks, the HPCI system must function since reactor pressure does not decrease rapidly enough to allow either core spray or LPCI to operate in time. The automatic pressure relief function is provided as a backup to the HPCI in the event the HPCI does not operate. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria are met (Ref. SAR Section 6.2.6.3). The specification preserves the effectiveness of the system during periods of maintenance, testing or calibration and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two radiation monitors are provided on the refueling floor which initiate isolation of the reactor building and operation of the standby gas treatment systems. The trip logic is one out of two. Trip settings of less than or equal to 100 mR/hr for the monitors on the refueling floor are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the reactor building via the normal ventilation stack but that all the activity is processed by the standby gas treatment system.

The instrumentation which is provided to monitor the post accident condition is listed in Table 3.2.6. The instrumentation listed and the limiting conditions for operation on these systems ensure adequate monitoring of the containment following a loss-of-coolant accident. Information from this instrumentation will provide the operator with a detailed knowledge of the conditions resulting from the accident. Based on this information he can make logical decisions regarding post accident recovery.

The specifications allow for post accident instrumentation to be out of service for a period of 30 days. This period is based on the fact that several diverse instruments are available for guiding the operator should an accident occur, on the low probability of an instrument being out of service and an accident occurring in the 30-day period, and on engineering judgement.

The radioactive liquid and gaseous effluent instrumentation is provided to monitor the release of radioactive materials in liquid and gaseous effluents during releases. The alarm setpoints for the instruments are provided to ensure that the alarms will occur prior to exceeding the limits of 10 CFR 20.

4.2 SURVEILLANCE REQUIREMENT BASES (Cont'd.)

A more usual case is that the testing is done independently. If both channels are bypassed and tested at the same time, the result is shown in Curve No. 3. Note that the minimum occurs at about 40,000 hours, much longer than for cases 1 and 2. Also, the minimum is not nearly as low as Case 2 which indicates that this method of testing does not take full advantage of the redundant channel. Bypassing both channels for simultaneous testing should be avoided.

The most likely case would be to stipulate that one channel be bypassed, tested and restored. Then immediately following, the second channel be bypassed, tested and restored. This is shown by Curve No. 4. Note that there is no true minimum. The curve does have a definite knee and very little reduction in system unavailability is achieved by testing at a shorter interval than computed by the equation for a single channel.

The best test procedure of all those examined is to perfectly stagger the tests. That is, if the test interval is four months, test one or the other channel every two months. This is shown in Curve No. 5. The difference between Cases 4 and 5 is negligible. There may be other arguments, however, that more strongly support the perfectly staggered tests, including reductions in human error.

The conclusions to be drawn are these:

1. A 1 out of n system may be treated the same as a single channel in terms of choosing a test interval; and
2. More than one channel should not be bypassed for testing at any one time.

The radiation monitors in the ventilation duct and on the refueling floor which initiate building isolation and standby gas treatment operation are arranged in two 1 out of 2 logic systems. The bases given above for the rod blocks applies here also and were used to arrive at the functional testing frequency.

Based on experience at Dresden Unit 1 with instruments of similar design, a testing interval of once every three months has been found to be adequate.

The automatic pressure relief instrumentation can be considered to be a 1 out of 2 logic system and the discussion above applies also.

The instrumentation which is required for the post accident condition will be tested and calibrated at regularly scheduled intervals. The basis for the calibration and testing of this instrumentation is the same as was discussed above for Protective Instrumentation in Table 4.2.4.

3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
I. Control Room Emergency Filtration System	I. Control Room Emergency Filtration System
1. The control room emergency filtration system, including at least one booster fan shall be operable at all times when secondary containment integrity is required, except as specified in Sections 3.8.H.1.a. and b.	1. At least once per month, initiate 2000 cfm (plus or minus 10%) flow through the Control room emergency filtration system for at least 10 hours with the heaters operable.
a. After the control room emergency filtration system is made or found to be operable for any reason, reactor operation and fuel handling are permissible only during the succeeding 14 days. Within 36 hours following the 14 days, the reactor shall be placed in a condition for which the control room emergency filtration system is not required in accordance with Specifications 3.7.C.1.a. through d.	
b. Specification 3.8.H.1.a. above does not apply during performance of post-maintenance testing, or during removal of the charcoal test canister.	
2. The normal control room ventilation system will isolate and the control room emergency filtration system will automatically initiate on high toxic gas concentration.	2. Surveillances for instrumentation which isolate the normal control room ventilation system and automatically initiate the control room emergency filtration system are as follows:

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3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
a. The toxic gas detection instrumentation shall consist of a methyl chloride and ammonia analyzer with each trip setpoint set at: (1) Methyl chloride concentration less than or equal to 25ppm. (2) Ammonia concentration less than or equal to 25ppm. The provisions of Specification 3.0.A. are not applicable.	a. Instrument check shall be performed once a day. b. Instrument functional test shall be performed once a month. c. Instrument calibration shall be performed once ever 18 months.
3. Performance Requirement a. Periodic Requirements:	3. Performance Requirement Tests a. At least once per 720 hours of system operation; or once per operating cycle, but not to exceed 18 months, whichever occurs first; or following painting, fire, or chemical release in any ventilation zone communicating with the system while the system is operating that could contaminate the HEPA filter or charcoal adsorber; perform the following:

3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)
(1) The results of the in-place DOP test at 2000 cfm (plus or minus 10%) on HEPA filter shall show less than or equal to 1% DOP penetration.	(1) In-place DOP test the HEPA filter bank to verify leak tight integrity.
(2) The results of in-place halogenated hydrocarbon tests at 2000 cfm (plus or minus 10%) on the charcoal bank shall show less than or equal to 1% penetration.	(2) In-place test the charcoal adsorber bank with halogen-hydrocarbon tracer to verify leak tight integrity.
(3) The results of laboratory carbon sample analysis shall show greater than or equal to 90% methyl iodide removal efficiency when tested at 130°C, 95% relative humity.	(3) Remove one carbon test canister from the charcoal adsorber. Subject this sample to a laboratory analysis to verify methyl iodide removal efficiency.
b. The system shall be shown to operate.	b. At least once per operating cycle, but not to exceed 18 months, the following conditions shall be demonstrated:
	(1) Pressure drop across the combined filter is less than 6 inches of water at 2000 cfm (plus or minus 10%) flow rate.

3.8 LIMITING CONDITION FOR OPERATION (Cont'd.)

4.8 SURVEILLANCE REQUIREMENTS (Cont'd.)

(2) Operability of the inlet heater at rated power.

(3) Automatic initiation.

(4) Manual isolation of the normal control room ventilation system.

4. Post Maintenance Requirements

a. After any maintenance or testing that could affect the HEPA filter or HEPA filter mounting frame leak tight integrity, the results of the in-place DOP tests at 2000 cfm (plus or minus 10%) on HEPA filter shall show less than or equal to 1% DOP penetration in accordance with Specification 3.8.G.3.a.(1).

b. After any maintenance or testing that could affect the charcoal adsorber leak tight intergrity, the results of the in-place halogenated hydrocarbon tests at 2000 cfm (plus or minus 10%) on the charcoal adsorber bank shall show less than or equal less than or equal to 1% penetration in accordance with Specification 3.8.G.3.a.(2).

4. Post Maintenance Testing

a. After any maintenance or testing that could affect the leak tight integrity of the HEPA filters, perform in-place DOP tests on the HEPA filter in accordance with Specification 4.8.G.3.a.(1).

b. After any maintenance or testing that could affect the leak tight integrity of the charcoal adsorber banks, perform halogenated hydrocarbon tests on the charcoal adsorber in accordance with Specification 4.8.G.3.a.(2).

3.8 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

F. Deleted

G. Miscellaneous Radioactive Materials Sources

The objective of this specification is to assure that leakage from by-product, source and special nuclear material sources does not exceed allowable limits. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39 (c) limits for plutonium,

H. N/A

I. The purpose of these specifications is to assure availability of the control room emergency air filtration system that has been installed in response to NUREG-0737, Item III.D.3.4. Operation of the system is described in the "Control Room Habitability Study" for Dresden Station which was submitted to the NRC (letter from E.D. Swartz to D.G. Eisenhut dated December 17, 1981). The setpoints for the ammonia and methyl chloride concentrations are based on early detection in the outside air supply at the odor threshold, so that the toxic chemical will not achieve toxicity limit concentrations in the control room.

4.8 SURVEILLANCE REQUIREMENT BASES

None

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ATTACHMENT 4

SIGNIFICANT HAZARDS CONSIDERATION

Basis For Proposed No Significant Hazards Consideration Determination

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870). The examples of actions involving no significant hazards consideration include: "(ii) A change that consitutes an additional limitation restriction, or control not presently included in the technical specifications; for example, a more stringent surveillance requirement". The changes proposed in the application for amendment are encompassed by this example in that the proposed change would add Limiting Conditions for Operation and surveillance requirements on the new instrumentation installed in response to Generic Letter 83-36 and is thus similar to the example above.

Therefore, since the application for amendment involves a proposed change that is similar to an example for which no significant hazards consideration exists, Commonwealth Edison has made a proposed determination that the application involves no significant hazards consideration.

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