
	<p style="text-align: center;">INDIANA AND MICHIGAN POWER D. C. COOK NUCLEAR PLANT UPDATED FINAL SAFETY ANALYSIS REPORT</p>	<p>Revised: 27.0 Table: 14.3.5-1 Page: 1 of 4</p>
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Parameters Used for the Offsite Radiological Consequence Analysis of a Loss of Coolant Accident


Parameter	Value
Core Power Level	3316 MWt (U1) 3480 MWt (U2)
Containment Volumes	
Upper Containment Sprayed	609,000 ft ³
Upper Containment Unsprayed	120,000 ft ³
Ice Condenser	103,000 ft ³
Lower Containment Sprayed	101,000 ft ³
Lower Containment Unsprayed	64,000 ft ³
Fan/Accumulator Rooms	47,000 ft ³
Dead-Ended	18,000 ft ³
Containment Ventilation Flow Rates ¹	
Fan/Acc Rooms to LC Unsprayed	14,530 cfm
LC Unsprayed to Fan/Acc Rooms	1,350 cfm
LC Unsprayed to Dead-Ended	90 cfm
Dead-Ended to Fan/Acc Rooms	90 cfm
LC Unsprayed to Ice Condenser	13,090 cfm
Fan/Acc Rooms to LC Sprayed	22,910 cfm
LC Sprayed to Ice Condenser	22,910 cfm
Ice Condenser to UC Sprayed	30,070 cfm
UC Sprayed to Fan/Acc Rooms	30,070 cfm

¹ Flow rates listed do not include the contribution from natural convection.

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Parameters Used for the Offsite Radiological Consequence Analysis of a Loss of Coolant Accident

Parameter	Value
Ice Condenser to UC Unsprayed	5,930 cfm
UC Unsprayed to Fan/Acc Rooms	5,930 cfm
Containment Ventilation Initiation	300 sec (U1) 3 min (U2)
Elemental Iodine Removal Coefficients	
Upper Containment Sprayed	10 hr ⁻¹
Lower Containment Sprayed	10 hr ⁻¹
Fan/Accumulator Rooms	10 hr ⁻¹
Particulate Iodine Removal Coefficients	
Upper Containment Sprayed	
Decontamination Factor ≤ 50	5.17 hr ⁻¹
Decontamination Factor > 50	0.517 hr ⁻¹
Lower Containment Sprayed	
Decontamination Factor ≤ 50	6.83 hr ⁻¹
Decontamination Factor > 50	0.683 hr ⁻¹
Fan/Accumulator Rooms	
Decontamination Factor ≤ 50	3.15 hr ⁻¹
Decontamination Factor > 50	0.315 hr ⁻¹
Spray Initiation	300 sec (U1) 3 min (U2)
Spray Interruption for Switchover to Recirculation Mode	31 min - 38 min

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Parameters Used for the Offsite Radiological Consequence Analysis of a Loss of Coolant Accident

Parameter	Value
Maximum Elemental Iodine Decontamination Factor	200
Duration of Elemental Iodine Removal Effectiveness	1.18 hr (U1) 0.9 hr (U2)
Duration of Particulate Iodine Removal Effectiveness	
Decontamination Factor of 50 Attained	1.200 hr (U1) 1.214 hr (U2)
Credit for Spray Terminated	24 hr
Containment Leak Rate	
0 - 24 hr	0.25 weight % per day
24 - 720 hr	0.125 weight % per day
Iodine Chemical Form in Containment Atmosphere	
Elemental	91%
Organic	4%
Particulate	5%
Containment Sump Volume	50,000 ft ³
Minimum Containment Sump pH	7.0
Effective Unfiltered ESF Leakage Outside Containment	0.2 gpm
ESF Leakage Iodine Flashing Fraction	0.1
Iodine Chemical Form in ESF Leakage	
Elemental	97%
Organic	3%

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Parameters Used for the Offsite Radiological Consequence Analysis of a Loss of Coolant Accident

Parameter	Value
Start of ESF Leakage Outside Containment	31 min
Containment Purge Flow Rate	23,100 cfm
Containment Purge Duration	30 sec
Iodine Chemical Form for Containment Purge Release	
Elemental	91%
Organic	4%
Particulate	5%
Release Locations	
Containment Leakage Release Path	Containment
ESF Leakage Release Path	Auxiliary Building
Containment Purge Release Path	Containment
Breathing Rates	
0 - 8 hr	3.5E-04 m ³ /sec
8 - 24 hr	1.8E-04 m ³ /sec
24 - 720 hr	2.3E-04 m ³ /sec