

superseded by
page Table recs
50-255 w/Amend. 15

TABLE 11-3 - ACTIVITY IN COOLANT AND LIQUID WASTE

Isotope		Activity (uc/ml) in Waste Receiver Tanks						Activity (uc/ml) to Circulating Water Discharge									Limits 10 CFR 20 uc/ml	Maximum Fraction of 10 CFR 20 Limit in Circulating Water Discharge								
		Direct From Primary Coolant System			From Chemical & Volume Control Sys			No Radwaste Ion Exchanger			One Radwaste Ion Exchanger			Two Radwaste Ion Exchangers				No Hold Period			7-Day Hold Period			30-Day Hold Period		
		After			After			After			After			After				No Radwaste Ion Exchanger			One Radwaste Ion Exchanger			Two Radwaste Ion Exchangers		
		As Received	7-Day Hold	30-Day Hold	As Received	7-Day Hold	30-Day Hold	No Hold	7-Day Hold	30-Day Hold	No Hold	7-Day Hold	30-Day Hold	No Hold	7-Day Hold	30-Day Hold		No Radwaste Ion Exchanger	One Radwaste Ion Exchanger	Two Radwaste Ion Exchangers	No Radwaste Ion Exchanger	One Radwaste Ion Exchanger	Two Radwaste Ion Exchangers	No Radwaste Ion Exchanger	One Radwaste Ion Exchanger	Two Radwaste Ion Exchangers
Fission Products																										
Br-84	32m	4.66 x 10 ⁻²	*	*	4.66 x 10 ⁻³	*	*	1.26 x 10 ⁻³	*	*	1.26 x 10 ⁻⁴	*	*	1.26 x 10 ⁻⁵	*	*	-	-	-	-	-	-	-	-	-	-
Rb-88	18m	2.44	*	*	2.44 x 10 ⁻¹	*	*	6.61 x 10 ⁻¹	*	*	6.61 x 10 ⁻²	*	*	6.61 x 10 ⁻³	*	*	-	-	-	-	-	-	-	-	-	-
Rb-89	15m	6.10 x 10 ⁻²	*	*	6.10 x 10 ⁻³	*	*	1.65 x 10 ⁻²	*	*	1.65 x 10 ⁻³	*	*	1.65 x 10 ⁻⁴	*	*	-	-	-	-	-	-	-	-	-	-
Sr-89	54d	5.33 x 10 ⁻³	4.87 x 10 ⁻³	3.62 x 10 ⁻³	5.33 x 10 ⁻⁴	4.87 x 10 ⁻⁴	3.62 x 10 ⁻⁴	1.44 x 10 ⁻³	1.32 x 10 ⁻³	9.79 x 10 ⁻⁴	1.44 x 10 ⁻⁴	1.32 x 10 ⁻⁴	9.79 x 10 ⁻⁵	1.44 x 10 ⁻⁵	1.32 x 10 ⁻⁵	9.79 x 10 ⁻⁶	3 x 10 ⁻⁶	.0019	.0002	+	.0018	.0002	+	.0013	.0001	+
Sr-90	28y	1.50 x 10 ⁻⁴	1.50 x 10 ⁻⁴	1.50 x 10 ⁻⁴	1.50 x 10 ⁻⁵	1.50 x 10 ⁻⁵	1.50 x 10 ⁻⁵	4.07 x 10 ⁻⁵	4.07 x 10 ⁻⁵	4.07 x 10 ⁻⁵	4.07 x 10 ⁻⁶	4.07 x 10 ⁻⁶	4.07 x 10 ⁻⁶	4.07 x 10 ⁻⁷	4.07 x 10 ⁻⁷	4.07 x 10 ⁻⁷	3 x 10 ⁻⁷	.0005	+	+	.0005	+	+	.0005	+	+
Y-90	64h	5.77 x 10 ⁻⁴	9.35 x 10 ⁻⁵	2.42 x 10 ⁻⁷	5.77 x 10 ⁻⁴	9.35 x 10 ⁻⁵	2.42 x 10 ⁻⁷	5.77 x 10 ⁻⁴	9.35 x 10 ⁻⁵	2.42 x 10 ⁻⁷	5.77 x 10 ⁻⁴	9.35 x 10 ⁻⁵	2.42 x 10 ⁻⁷	5.77 x 10 ⁻⁴	9.35 x 10 ⁻⁵	2.42 x 10 ⁻⁷	2 x 10 ⁻⁵	.0001	.0001	.0001	+	+	+	+	+	+
Sr-91	9.7h	3.70 x 10 ⁻³	2.27 x 10 ⁻⁸	*	3.70 x 10 ⁻⁴	*	*	1.00 x 10 ⁻³	*	*	1.00 x 10 ⁻⁴	*	*	1.00 x 10 ⁻⁵	*	*	7 x 10 ⁻⁵	+	+	+	+	+	+	+	+	+
Y-91	58d	2.40 x 10 ⁻¹	2.21 x 10 ⁻¹	1.68 x 10 ⁻¹	2.40 x 10 ⁻¹	2.21 x 10 ⁻¹	1.68 x 10 ⁻¹	2.40 x 10 ⁻¹	2.21 x 10 ⁻¹	1.68 x 10 ⁻¹	2.40 x 10 ⁻¹	2.21 x 10 ⁻¹	1.68 x 10 ⁻¹	2.40 x 10 ⁻¹	2.21 x 10 ⁻¹	1.68 x 10 ⁻¹	3 x 10 ⁻⁵	.032	.032	.032	.029	.029	.029	.022	.022	.022
Mo-99	67h	2.26	3.98 x 10 ⁻¹	1.32 x 10 ⁻³	2.26	3.98 x 10 ⁻¹	1.32 x 10 ⁻³	2.26	3.98 x 10 ⁻¹	1.32 x 10 ⁻²	2.26	3.98 x 10 ⁻¹	1.32 x 10 ⁻²	2.26	3.98 x 10 ⁻¹	1.32 x 10 ⁻²	2 x 10 ⁻⁴	.045	.045	.045	.008	.008	.008	.0003	.0003	.0003
Te-129	33d	2.72 x 10 ⁻²	2.34 x 10 ⁻²	1.45 x 10 ⁻²	2.72 x 10 ⁻³	2.34 x 10 ⁻³	1.45 x 10 ⁻³	7.37 x 10 ⁻³	6.35 x 10 ⁻³	3.92 x 10 ⁻³	7.37 x 10 ⁻⁴	6.35 x 10 ⁻⁴	3.92 x 10 ⁻⁴	7.37 x 10 ⁻⁵	6.35 x 10 ⁻⁵	3.92 x 10 ⁻⁵	8 x 10 ⁻⁴	+	+	+	+	+	+	+	+	+
I-129	1.7 x 10 ⁷ y	5.66 x 10 ⁻⁸	5.66 x 10 ⁻⁸	5.66 x 10 ⁻⁸	*	*	*	1.53 x 10 ⁻⁸	1.53 x 10 ⁻⁸	1.53 x 10 ⁻⁸	*	*	*	*	*	*	6 x 10 ⁻⁸	+	+	+	+	+	+	+	+	+
I-131	8.0d	4.40	2.39	3.30 x 10 ⁻¹	4.40 x 10 ⁻¹	2.39 x 10 ⁻¹	3.30 x 10 ⁻²	8.36 x 10 ⁻¹	4.56 x 10 ⁻¹	6.27 x 10 ⁻²	8.36 x 10 ⁻²	4.56 x 10 ⁻²	6.27 x 10 ⁻³	8.36 x 10 ⁻³	4.56 x 10 ⁻³	6.27 x 10 ⁻⁴	3 x 10 ⁻⁷	11.10	1.11	0.111	6.08	.608	.0608	.83	.083	.0083
Te-132	77h	3.60 x 10 ⁻¹	7.92 x 10 ⁻²	6.60 x 10 ⁻⁴	3.60 x 10 ⁻²	7.92 x 10 ⁻³	6.60 x 10 ⁻⁵	9.76 x 10 ⁻²	2.15 x 10 ⁻²	1.48 x 10 ⁻⁴	9.76 x 10 ⁻³	2.15 x 10 ⁻³	1.48 x 10 ⁻⁵	9.76 x 10 ⁻⁴	2.15 x 10 ⁻⁴	1.48 x 10 ⁻⁶	3 x 10 ⁻⁵	.013	.0013	.0001	.0029	.0003	+	+	+	+
I-132	2.3h	1.13	8.10 x 10 ⁻²	5.74 x 10 ⁻⁴	1.13 x 10 ⁻¹	8.10 x 10 ⁻³	5.74 x 10 ⁻⁵	3.06 x 10 ⁻¹	2.19 x 10 ⁻²	1.55 x 10 ⁻⁵	3.06 x 10 ⁻²	2.19 x 10 ⁻³	1.55 x 10 ⁻⁶	3.02 x 10 ⁻³	2.19 x 10 ⁻³	1.55 x 10 ⁻⁷	8 x 10 ⁻⁶	.57	.057	.0057	.011	.0011	.0001	+	+	+
I-133	21h	6.38	2.49 x 10 ⁻²	*	6.38 x 10 ⁻¹	2.49 x 10 ⁻³	*	1.73	6.75 x 10 ⁻³	*	1.73 x 10 ⁻¹	6.75 x 10 ⁻⁴	*	1.73 x 10 ⁻²	6.75 x 10 ⁻⁵	*	1 x 10 ⁻⁶	25.50	2.55	.255	.0027	.0003	+	+	+	+
Cs-134	2.3y	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42 x 10 ⁻¹	1.42 x 10 ⁻¹	1.42 x 10 ⁻¹	1.42 x 10 ⁻²	1.42 x 10 ⁻²	1.42 x 10 ⁻²	9 x 10 ⁻⁶	.63	.063	.0063	.63	.063	.0063	.63	.063	.0063
Te-134	44m	2.63 x 10 ⁻²	*	*	2.63 x 10 ⁻³	*	*	7.13 x 10 ⁻³	*	*	7.13 x 10 ⁻⁴	*	*	7.13 x 10 ⁻⁵	*	*	-	-	-	-	-	-	-	-	-	-
I-134	52m	6.40 x 10 ⁻¹	*	*	6.40 x 10 ⁻²	*	*	1.73 x 10 ⁻¹	*	*	1.73 x 10 ⁻²	*	*	1.73 x 10 ⁻³	*	*	2 x 10 ⁻⁵	.035	.0035	.0004	+	+	+	+	+	+
I-135	6.7h	2.78	8.06 x 10 ⁻⁸	*	2.78 x 10 ⁻¹	*	*	7.53 x 10 ⁻¹	2.18 x 10 ⁻⁸	*	7.53 x 10 ⁻²	*	*	7.53 x 10 ⁻³	*	*	4 x 10 ⁻⁶	.75	.075	.0075	+	+	+	+	+	+
Cs-136	13d	1.50 x 10 ⁻¹	1.03 x 10 ⁻¹	3.03 x 10 ⁻²	1.50 x 10 ⁻¹	1.03 x 10 ⁻¹	3.03 x 10 ⁻²	1.50 x 10 ⁻¹	1.03 x 10 ⁻¹	3.03 x 10 ⁻²	1.50 x 10 ⁻²	1.03 x 10 ⁻²	3.03 x 10 ⁻³	1.50 x 10 ⁻³	1.03 x 10 ⁻³	3.03 x 10 ⁻⁴	9 x 10 ⁻⁵	.0067	.0007	+	.0046	.0005	+	.0013	.0001	+
Cs-137	30y	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	1.06 x 10 ⁻¹	1.06 x 10 ⁻¹	1.06 x 10 ⁻¹	2 x 10 ⁻⁵	2.12	.212	.0212	2.12	.212	.0212	2.12	.212	.0212
Cs-138	32m	6.90 x 10 ⁻¹	*	*	6.90 x 10 ⁻¹	*	*	6.90 x 10 ⁻¹	*	*	6.90 x 10 ⁻²	*	*	6.90 x 10 ⁻³	*	*	-	-	-	-	-	-	-	-	-	-
Ba-140	12.8d	6.78 x 10 ⁻³	4.64 x 10 ⁻³	1.34 x 10 ⁻³	6.78 x 10 ⁻⁴	4.64 x 10 ⁻⁴	1.34 x 10 ⁻⁴	1.84 x 10 ⁻³	1.26 x 10 ⁻³	3.63 x 10 ⁻⁴	1.84 x 10 ⁻⁴	1.26 x 10 ⁻⁴	3.63 x 10 ⁻⁵	1.84 x 10 ⁻⁵	1.26 x 10 ⁻⁵	3.63 x 10 ⁻⁶	3 x 10 ⁻⁵	.0003	+	+	+	+	+	+	+	+
La-140	40.2h	6.52 x 10 ⁻³	5.23 x 10 ⁻³	1.54 x 10 ⁻³	6.52 x 10 ⁻⁴	5.23 x 10 ⁻⁴	1.54 x 10 ⁻⁴	1.77 x 10 ⁻³	1.42 x 10 ⁻³	4.18 x 10 ⁻⁴	1.77 x 10 ⁻⁴	1.42 x 10 ⁻⁴	4.18 x 10 ⁻⁵	1.77 x 10 ⁻⁵	1.42 x 10 ⁻⁵	4.18 x 10 ⁻⁶	2 x 10 ⁻⁵	.0004	+	+	+	+	+	+	+	+
Corrosion Products																										
Cr-51	27d	2.40 x 10 ⁻³	2.00 x 10 ⁻³	1.10 x 10 ⁻³	2.40 x 10 ⁻⁴	2.00 x 10 ⁻⁴	1.10 x 10 ⁻⁴	6.50 x 10 ⁻⁴	5.40 x 10 ⁻⁴	3.00 x 10 ⁻⁴	6.50 x 10 ⁻⁵	5.40 x 10 ⁻⁵	3.00 x 10 ⁻⁵	6.50 x 10 ⁻⁶	5.40 x 10 ⁻⁶	3.00 x 10 ⁻⁶	2 x 10 ⁻³	+	+	+	+	+	+	+	+	+
Mn-54	300d	2.00 x 10 ⁻⁵	2.00 x 10 ⁻⁵	2.00 x 10 ⁻⁵	2.00 x 10 ⁻⁶	2.00 x 10 ⁻⁶	2.00 x 10 ⁻⁶	5.40 x 10 ⁻⁶	5.40 x 10 ⁻⁶	5.40 x 10 ⁻⁶	5.40 x 10 ⁻⁷	5.40 x 10 ⁻⁷	5.40 x 10 ⁻⁷	5.40 x 10 ⁻⁸	5.40 x 10 ⁻⁸	5.40 x 10 ⁻⁸	1 x 10 ⁻⁴	+	+	+	+	+	+	+	+	+
Mn-56	2.58h	2.30 x 10 ⁻²	*	*	2.30 x 10 ⁻³	*	*	6.20 x 10 ⁻³	*	*	6.20 x 10 ⁻⁴	*	*	6.20 x 10 ⁻⁵	*	*	1 x 10 ⁻⁴	.0003	+	+	+	+	+	+	+	+
Co-58	71d	7.90 x 10 ⁻³	7.40 x 10 ⁻³	5.90 x 10 ⁻³	7.90 x 10 ⁻⁴	7.40 x 10 ⁻⁴	5.90 x 10 ⁻⁴	2.10 x 10 ⁻³	2.00 x 10 ⁻³	1.60 x 10 ⁻³	2.10 x 10 ⁻⁴	2.00 x 10 ⁻⁴	1.60 x 10 ⁻⁴	2.10 x 10 ⁻⁵	2.00 x 10 ⁻⁵	1.60 x 10 ⁻⁵	9 x 10 ⁻⁵	+	+	+	+	+	+	+	+	+
Fe-59	45d	7.70 x 10 ⁻⁶	6.80 x 10 ⁻⁶	4.90 x 10 ⁻⁶	7.70 x 10 ⁻⁷	6.80 x 10 ⁻⁷	4.90 x 10 ⁻⁷	2.10 x 10 ⁻⁶	1.90 x 10 ⁻⁶	1.30 x 10 ⁻⁶	2.10 x 10 ⁻⁷	1.90 x 10 ⁻⁷	1.30 x 10 ⁻⁷	2.10 x 10 ⁻⁸	1.90 x 10 ⁻⁸	1.30 x 10 ⁻⁸	5 x 10 ⁻⁵	+	+	+	+	+	+	+	+	+
Co-60	5.2y	1.10 x 10 ⁻³	1.10 x 10 ⁻³	1.10 x 10 ⁻³	1.10 x 10 ⁻⁴	1.10 x 10 ⁻⁴	1.10 x 10 ⁻⁴	3.00 x 10 ⁻⁴	3.00 x 10 ⁻⁴	3.00 x 10 ⁻⁴	3.00 x 10 ⁻⁵	3.00 x 10 ⁻⁵	3.00 x 10 ⁻⁵	3.00 x 10 ⁻⁶	3.00 x 10 ⁻⁶	3.00 x 10 ⁻⁶	3 x 10 ⁻⁵	+	+	+	+	+	+	+	+	+
Zr-95	65d	1.90 x 10 ⁻⁵	1.80 x 10 ⁻⁵	1.40 x 10 ⁻⁵	1.90 x 10 ⁻⁶	1.80 x 10 ⁻⁶	1.40 x 10 ⁻⁶	5.10 x 10 ⁻⁶	4.70 x 10 ⁻⁶	3.70 x 10 ⁻⁶	5.10 x 10 ⁻⁷	4.70 x 10 ⁻⁷	3.70 x 10 ⁻⁷	5.10 x 10 ⁻⁸	4.70 x 10 ⁻⁸	3.70 x 10 ⁻⁸	6 x 10 ⁻⁵	+	+</							