



INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
Table: 14.3.4-31
Page: 1 of 6

**Table 14.3.4-31
Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _I (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T / A
1H-3	1.312	0.021	1.895	1.338	12.570	1.130	0.463
1R-53	0.386	0.021	2.200	1.420	9.290	1.290	0.293
1A-46	0.419	0.021	7.080	1.125	5.780	6.690	0.211
2H-60	0.230	0.021	20.202	13.953	199.980	17.524	0.645
2R-32	0.969	0.021	14.211	1.082	3.488	14.071	1.000
2A-8	0.984	0.021	12.638	1.082	1.783	12.567	1.000
3H-6	0.412	0.021	2.008	0.759	1.081	0.590	0.721
3R-7	0.287	0.021	1.752	0.902	1.357	1.032	0.522
3A-11	0.403	0.021	2.026	0.759	1.081	0.617	0.738
4H-9	0.000	0.021	3.627	0.459	0.043	3.627	1.000
4R-38	0.996	0.021	0.122	0.467	0.842	0.094	1.000
4A-5	0.363	0.021	0.431	0.467	0.842	0.134	0.349
5H-10	0.000	0.021	3.539	1.349	1.305	3.539	1.000
5R-34	0.000	0.021	3.578	1.349	1.305	3.578	1.000
5A-6	0.144	0.021	1.727	0.904	1.498	1.376	1.000
6H-11	0.000	0.021	3.285	0.902	1.016	3.285	1.000
6R-35	0.499	0.021	2.661	0.902	1.016	2.361	1.000
6A-61	0.755	0.021	1.033	0.805	0.197	0.088	1.000
7H-61	0.000	0.021	2.879	0.819	0.2000	2.879	1.000
7R-36	0.411	0.021	0.942	0.681	0.314	0.702	0.231
7A-8	0.788	0.021	2.915	0.426	0.200	1.577	1.000
8H-3	0.489	0.021	8.814	0.759	1.081	3.803	0.606
8R-13	0.000	0.021	3.268	1.079	13.563	3.268	1.000
8A-37	0.000	0.021	3.304	1.079	13.563	3.304	1.000
9H-14	0.000	0.021	3.587	0.459	0.043	3.587	1.000
9R-38	0.996	0.021	0.122	0.467	0.823	0.094	1.000
9A-10	0.366	0.021	0.423	0.467	0.823	0.132	0.341
10H-15	0.000	0.021	3.500	1.349	1.305	3.500	1.000



INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
Table: 14.3.4-31
Page: 2 of 6

**Table 14.3.4-31
Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _i (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T / A
10R-11	0.144	0.021	1.727	0.904	1.466	1.376	1.000
11H-16	0.444	0.021	2.513	0.902	1.016	2.169	1.000
11R-62	0.789	0.021	1.056	0.671	0.164	0.049	1.000
12H-17	0.382	0.021	0.897	0.722	0.408	0.580	0.300
12R-3	0.287	0.021	1.752	0.902	1.357	1.032	0.522
12A-13	0.817	0.021	2.711	0.353	0.168	1.548	1.000
13H-18	0.000	0.021	3.232	1.079	13.563	3.232	1.000
13R-2	0.985	0.021	12.637	1.082	1.744	12.567	1.000
13A-3	0.479	0.021	8.983	0.759	1.081	3.984	0.620
14H-19	0.937	0.021	1.902	0.459	0.043	1.795	1.000
14R-38	0.996	0.021	0.122	0.467	0.823	0.094	1.000
14A-15	0.366	0.021	0.423	0.467	0.823	0.132	0.341
15H-19	0.001	0.021	5.057	1.349	1.305	5.150	1.000
15R-16	0.144	0.021	3.102	0.904	1.466	2.751	1.000
16H-39	0.971	0.021	0.506	1.901	4.232	0.070	0.320
16R-20	0.177	0.021	4.552	0.837	1.307	4.393	0.579
16A-17	0.361	0.021	3.748	0.647	0.515	3.648	0.351
17H-21	0.943	0.021	1.715	0.722	0.408	1.626	1.000
17R-39	0.698	0.021	0.591	2.150	4.943	0.109	0.785
17A-18	0.424	0.021	4.625	0.647	0.515	1.455	1.000
18H-21	0.097	0.021	4.634	1.079	13.563	4.530	0.909
18R-2	0.985	0.021	12.637	1.082	1.744	12.567	1.000
19H-22	0.262	0.021	4.919	1.271	1.348	4.304	1.000
19R-38	1.356	0.021	0.547	0.467	1.610	0.224	1.000
19A-20	0.144	0.021	3.160	0.904	2.866	2.775	1.000
20H-22	0.667	0.021	4.177	0.655	1.307	2.793	0.363
20R-40	0.934	0.021	0.557	1.901	4.232	0.116	0.166
20A-21	0.852	0.021	7.973	0.433	1.018	4.682	0.299



INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
Table: 14.3.4-31
Page: 3 of 6

**Table 14.3.4-31
Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _I (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T / A
21H-23	0.067	0.021	6.285	1.064	13.971	6.160	0.936
21R-40	1.042	0.021	0.484	1.599	3.677	0.073	0.021
21A-2	0.970	0.021	14.208	1.082	3.411	14.071	1.000
22H-24	0.281	0.021	6.008	1.017	2.562	5.613	0.711
22R-23	0.879	0.021	8.429	0.428	0.992	5.084	0.284
22A-38	1.401	0.021	1.727	0.467	1.647	0.503	1.000
23H-25	0.073	0.021	6.435	1.045	13.877	6.314	0.930
23R-41	1.033	0.021	0.969	1.810	4.330	0.151	0.025
23A-2	0.969	0.021	14.211	1.082	3.488	14.071	1.000
24H-26	0.281	0.021	6.008	1.017	2.562	5.613	0.711
24R-38	1.401	0.021	1.728	0.467	1.683	0.503	1.000
24A-25	0.905	0.021	8.247	0.404	0.966	5.018	0.271
25H-27	0.073	0.021	6.435	1.045	13.877	6.314	0.930
25R-42	1.044	0.021	0.850	1.392	3.330	0.112	0.019
25A-2	0.969	0.021	14.214	1.082	3.566	14.071	1.000
26H-28	0.253	0.021	5.843	1.012	2.656	5.413	0.737
26R-38	1.401	0.021	1.727	0.467	1.647	0.503	1.000
26A-27	0.879	0.021	8.429	0.428	0.992	5.084	0.284
27H-29	0.067	0.021	6.285	1.064	13.971	6.160	0.936
27R-43	1.030	0.021	1.115	2.150	4.943	0.175	0.028
27A-2	0.969	0.021	14.211	1.082	3.488	14.071	1.000
28H-30	0.260	0.021	4.969	1.271	1.348	4.369	1.000
28R-38	1.401	0.021	1.726	0.467	1.610	0.503	1.000
28A-29	0.852	0.021	8.350	0.433	1.018	4.746	0.299
29H-32	0.067	0.021	6.421	1.044	13.971	6.284	0.936
29R-43	1.029	0.021	1.115	2.150	4.943	0.175	0.029
29A-2	0.970	0.021	14.208	1.082	3.411	14.071	1.000
30H-33	0.937	0.021	1.945	0.459	0.043	1.835	1.000



INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
Table: 14.3.4-31
Page: 4 of 6

**Table 14.3.4-31
Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _i (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T / A
30R-38	1.355	0.021	0.548	0.467	1.647	0.224	1.000
30A-31	0.144	0.021	3.160	0.904	2.931	2.775	1.000
31H-35	0.214	0.021	4.778	0.832	1.213	4.701	0.538
31R-45	1.049	0.021	0.489	1.551	3.613	0.063	0.150
31A-28	0.667	0.021	4.192	0.655	1.307	2.805	0.363
32H-36	0.955	0.021	1.733	0.681	0.314	1.662	1.000
32R-31	0.879	0.021	8.070	0.428	0.992	5.027	0.284
32A-44	1.042	0.021	0.484	1.599	3.677	0.073	0.021
33H-4	0.000	0.021	3.667	0.459	0.043	3.667	1.000
33R-38	0.996	0.021	0.122	0.467	0.842	0.094	1.000
33A-34	0.363	0.021	0.431	0.467	0.842	0.134	0.349
34H-30	0.001	0.021	5.171	1.349	1.305	5.266	1.000
34R-35	0.144	0.021	3.102	0.904	1.498	2.751	1.000
35H-45	0.996	0.021	0.489	1.551	3.613	0.063	0.281
35R-36	0.373	0.021	4.946	0.635	0.483	4.700	0.322
36H-45	0.720	0.021	0.586	1.810	4.330	0.105	0.748
36R-37	0.462	0.021	4.435	0.635	0.483	1.495	1.000
37H-32	0.096	0.021	4.764	1.079	13.563	4.678	0.909
37R-2	0.984	0.021	12.638	1.082	1.783	12.567	1.000
38H-43	0.957	0.021	3.670	1.590	9.820	2.050	0.021
38R-42	0.957	0.021	3.670	1.590	9.820	2.050	0.021
38A-41	0.957	0.021	3.670	1.590	9.820	2.050	0.021
39H-20	1.033	0.021	0.506	1.901	4.232	0.070	0.166
39R-54	0.473	0.021	2.450	1.590	9.820	1.380	0.314
39A-21	1.029	0.021	0.591	2.150	4.943	0.109	0.029
40H-22	0.951	0.021	0.557	1.901	4.232	0.116	0.123
40R-55	0.473	0.021	2.450	1.590	9.820	1.380	0.314
40A-23	1.042	0.021	0.484	1.599	3.677	0.073	0.021



INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
Table: 14.3.4-31
Page: 5 of 6

**Table 14.3.4-31
Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _i (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T /A
41H-24	1.071	0.021	0.856	1.551	3.613	0.091	0.093
41R-25	1.033	0.021	1.025	1.810	4.330	0.153	0.024
41A-22	1.066	0.021	0.856	1.551	3.613	0.091	0.105
42H-26	0.982	0.021	0.922	1.551	3.613	0.147	0.105
42R-27	1.044	0.021	0.850	1.392	3.330	0.112	0.019
42A-24	0.987	0.021	0.922	1.551	3.613	0.147	0.093
43H-28	1.055	0.021	0.954	1.901	4.232	0.114	0.110
43R-52	1.407	0.021	4.500	1.095	5.938	4.500	0.0001
43A-26	1.050	0.021	0.954	1.901	4.232	0.114	0.123
44H-29	1.042	0.021	0.484	1.599	3.677	0.073	0.021
44R-31	0.930	0.021	0.557	1.901	4.232	0.116	0.176
44A-28	0.956	0.021	0.557	1.901	4.232	0.116	0.110
45H-50	0.422	0.021	6.120	1.060	5.490	5.590	0.202
45R-57	0.394	0.021	2.200	1.420	9.290	1.290	0.293
45A-32	1.033	0.021	0.586	1.810	4.330	0.105	0.025
46H-51	0.995	0.021	6.505	1.125	5.780	6.505	1.000
47H-51	0.995	0.021	2.250	1.095	5.938	2.250	1.000
47R-39	0.412	0.021	2.280	1.095	5.940	2.300	0.228
48H-51	0.995	0.021	2.250	1.095	5.938	2.250	1.000
48R-40	0.412	0.021	2.280	1.095	5.940	2.300	0.228
49H-44	0.412	0.021	2.280	1.095	5.940	2.300	0.228
49R-52	0.995	0.021	2.250	1.095	5.938	2.250	1.000
50H-51	0.995	0.021	5.560	1.058	5.493	5.560	1.000
51H-38	1.400	0.021	4.500	5.011	80.4	4.500	0.059
51R-52	0.280	0.021	33.500	1.000	570.000	0.000	0.648
51A-58	0.854	0.021	9.183	9.509	126.000	7.282	1.000
52H-42	1.417	0.021	5.860	1.058	5.493	5.860	0.0001
52R-38	1.400	0.021	4.500	5.011	80.4	4.500	0.059



INDIANA AND MICHIGAN POWER
 D. C. COOK NUCLEAR PLANT
 UPDATED FINAL SAFETY ANALYSIS REPORT

Revision: 22.1
 Table: 14.3.4-31
 Page: 6 of 6

**Table 14.3.4-31
 Reactor Cavity Model – TMD Flow Path Input**

Flow Path	K	f	L _I (ft)	D _H (ft)	A _T (ft ²)	L _{eq} (ft)	A _T / A
52A-41	1.417	0.021	5.860	1.058	5.493	5.860	0.0001
53H-38	0.958	0.021	2.236	2.400	9.710	2.086	1.000
54H-38	0.956	0.021	1.275	2.780	10.240	1.275	1.000
55H-38	0.956	0.021	1.275	2.780	10.240	1.275	1.000
56H-44	0.473	0.021	2.450	1.590	9.820	1.380	0.314
56R-38	0.956	0.021	1.275	2.780	10.240	1.275	1.000
57H-38	0.958	0.021	2.240	2.400	9.710	2.086	1.000
58H-60	0.374	0.021	9.918	9.509	126.000	7.675	0.321
59H-52	2.819	0.000	50.625	1.000	465.65	50.625	0.001
59R-51	2.819	0.000	50.625	1.000	465.65	50.625	0.001
60H-0	0.000	0.000	0.000	1.000	1.000	0.000	0.000
60R-0	0.000	0.000	0.000	1.000	1.000	0.000	0.000
60A-0	0.000	0.000	0.000	1.000	1.000	0.000	0.000
61H-3	0.307	0.021	1.623	0.902	1.240	0.903	0.478
61R-35	0.474	0.021	1.434	0.832	1.213	1.137	1.000
62H-3	0.307	0.021	1.623	0.902	1.240	0.903	0.478
62R-12	0.000	0.021	2.879	0.685	0.168	2.879	1.000
62A-16	0.438	0.021	1.329	0.902	1.240	1.056	1.000