# Unit 1 Design Power Capability Parameters Used in Non-LOCA Safety Analyses

| | (MUR Power Uprate)[1,2] | | (Reduced Temperature and Pressure)[1,2] | | (Rerating)[2] | | (Return to RCS NOP/NOT)[1] | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Case 1** | **Case 2** | **Case 3** | **Case 4** | **Case 5** | **Case 6** | **Case 7** | **Case 8** |
| NSSS Power, MWt | 3,327 | 3,327 | 3,262 | 3,262 | 3,425 | 3,425 | 3,327 | 3,327 |
| Core Power, MWt | 3,315 | 3,315 | 3,250 | 3,250 | 3,413 | 3,413 | 3,315 | 3,315 |
| RCS Flow, gpm/loop | 83,200 | 83,200 | 83,200 | 83,200 | 88,500 | 88,500 | 83,200 | 83,200 |
| Minimum Measured Flow, gpm/loop | 84775 | 84775 | 84775 | 84775 | 91600 | 91600 | 84,775 | 84,775 |
| RCS Temperatures, ºF | | | | | | | | |
| Core Outlet | 593.1 | 613.6 | 589.7 | 611.9 | 583.6 | 614.0 | 593.1 | 613.6 |
| Vessel Outlet | 588.2 | 609.1 | 586.8 | 609.1 | 580.7 | 611.2 | 588.2 | 609.1 |

[1] The non-LOCA analyses are based on a Thermal Design Flow (TDF) of 83,200 gpm / loop and a Minimum Measured Flow (MMF) of 84,775 gpm / loop. However, subsequent evaluations were performed to show that the following higher flows are also supported: 88,500 gpm / loop (TDF) and 90,725 gpm / loop (MMF).

[2] Cook Unit 1 is not licensed to operate at the rerated conditions specified by Cases 5 and 6 with 30% steam generator tube plugging (SGTP) levels. However, several events that were previously performed using these conditions were subsequently evaluated to support the 30% SGTP program. Hence, the rerated conditions are also specified in this table for completeness.

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|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Case 1** | **Case 2** | **Case 3** | **Case 4** | **Case 5** | **Case 6** | **Case 7** | **Case 8** |
| Core Average | 557.6 | 579.5 | 555.8 | 579.4 | 549.7 | 581.8 | 557.6 | 579.5 |
| Vessel Average | 553.7 | 575.4 | 553.0 | 576.3 | 547.0 | 578.7 | 553.7 | 575.4 |
| Vessel/Core Inlet | 519.2 | 471.7 | 519.2 | 543.5 | 513.3 | 546.2 | 519.2 | 541.7 |
| Steam Generator Outlet | 518.9 | 541.5 | 518.9 | 543.2 | 513.1 | 546.0 | 518.9 | 541.5 |
| Zero Load | 547.0 | 547.0 | 547.0 | 547.0 | 547.0 | 547.0 | 547.0 | 547.0 |
| RCS Pressure, psia | 2,250 or 2,100 | 2,250 or 2,100 | 2,250 or 2,100 | 2,250 or 2,100 | 2,250 or 2,100 | 2,250 or 2,100 | 2,250 | 2,250 |
| Steam Pressure, psia | 618 | 765 | 595 | 749 | 603 | 820 | 618 | 765 |
| Steam Flow ($10^6$ lb/hr total) | 14.44 | 14.50 | 14.12 | 14.17 | 14.98 | 15.07 | 14.44 | 14.50 |
| Feedwater Temp., ºF | 437.4 | 437.4 | 434.8 | 434.8 | 442 | 442 | 437.4 | 437.4 |
| SG Tube Plugging, % | 30 | 30 | 30 | 30 | 10 | 10 | 30 | 30 |