BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of :

PENNSYLVANIA POWER & LIGHT COMPANY : Docket No. 50-387

PROPOSED AMENDMENT NO. 89

FACILITY OPERATING LICENSE NO. NPF-14

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT NO. 1

Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 89 to its Facility Operating License No. NPF-14 dated July 17, 1982.

This amendment contains a revision to the Susquehanna SES Unit 1 Technical Specifications.

PENNSYLVANIA POWER & LIGHT COMPANY
BY:

H. W. Keiser
Vice President-Nuclear Operations

Sworn to and subscribed before me
this 12th of December, 1986.

Jean A. Smolick
Notary Public

JEAN A. SMOLICK, Notary Public
Allentown, Lehigh County, Pa.
My Commission Expires May 14, 1988

TABLE 1

SUSQUEHANNA ECCS/MAPLHGR RESULTS

GE FUEL TYPE: 8CIB219-4GDZ-80M

SOURCE OF DATA	AVERAGE PLANAR EXPOSURE MWD/MT	MAPLHGR LIMIT (kw/ft)	PEAK CLAD TEMPERATURE (°F)	LOCAL OXIDATION FRACTION
FSAR	220	11.9	1789	.006
FSAR	1,102	12.0	1787	.006
FSAR	5,512	12.1	1794	.006
FSAR	11,023	12.1	1802	.006
FSAR	16,535	12.2	1823	.006
FSAR	22,046	12.1	1822	.006
FSAR	27,558	11.6	1774	.005
FSAR	33,069	11.2	1753	.005
NEW CALCULATION	40,675	9.2	1621	.003

TABLE 2

SUSQUEHANNA ECCS/MAPLHGR RESULTS

ENC FUEL TYPE: XN-1 AND XN-2

Average Bundle Exposure (MWD/MT)	MAPLHGR (kw/ft)	Peak Cladding Temperature+ (°F)	Local/ Oxidation Fraction
0	13.0	2074	.019
5,000	13.0	2093	.020
10,000	13.0	2116	.021
15,000	13.0	2136	.022
19,000	13.0	2147	.023
25,000	11.5	1977	.016
30,000	10.4	1846	.010
35,000	10.4	1852	.012

+Peak cladding temperatures shown above are for XN-1 fuel. The possible change in PCTs due to fuel design changes in XN-2 fuel was investigated at three exposures. A 22°F increase resulted at BOL, no change at 10 GWD/MT, and a 15°F increase resulted at 19 GWD/MT.

TABLE 3

SUSQUEHANNA UNIT 1 CYCLE 3 XCOBRA-T TRANSIENT ANALYSES RESULTS

As requested by PP&L* seven transients were analyzed by ENC for Susquehanna Unit 1 Cycle 3 (U1C3) using XCOBRA-T. The results of the analyses are presented in the following table:

Transient	Delta CPR GE 8x8	Delta CPR ENC 8x8
104/100 Generator Load Rejection Without Bypass (LRWB)	0.22	0.22
104/100 Generator Load Rejection Without Bypass and Without RPT	0.27	0.27
104/100 Feedwater Controller Failure (FWCF)	0.20	0.21
104/100 Feedwater Controller Failure Without Bypass (FWCF-NBP)	0.22	0.23
80/100 Feedwater Controller Failure	0.24	0.24
65/100 Feedwater Controller Failure	0.26	0.26
23/100 Feedwater Controller Failure	0.27	0.27

The XCOBRA-T model applied a 110% multiplier to the COTRANSA integral power input to account for COTRANSA code model uncertainties, per XN-NF-79-71(P), Supplement 3, Revision 2. This approach is identical to that used for the Susquehanna Unit 2 Cycle 2 analyses. The delta CPR's were then calculated using the XCOBRA-T methodology with the COTRANSA output providing the system analysis boundary conditions.

It should be noted that all these limits are bounded by the administrative MCPR limit that is being used for Cycle 3 which was based on the Load Rejection without bypass and no Recirculation Pump Trip.

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*PP&L Letter, D. E. Derr to H. G. Shaw, PLE-8512, of July 23, 1986.