ATTACHMENT I

INDIAN POINT 3 START-UP

SUMMARY REPORT

INDIAN POINT UNIT 3 CYCLE 9
ZERO POWER PHYSICS TESTING RESULTS

I. CRITICAL BORON CONCENTRATIONS (PPM)
DESIGN REVIEW CRITERIA(DRC) = -67, +50 PPM
ACCEPTANCE CRITERIA(AC) = WITHIN 1000 PCM (133 PPM)

	PREDICTED(P)	MEASURED(M)	(M-P)	PASS/FAIL DRC	AC
ARO	1648	1610.0	-38.0	P	P
D-IN	1519	1477.2	-41.8	P	P
DCBA-IN	1189	1165.9	-23.1	P	P

II. CONTROL BANK WORTHS (PCM)
DESIGN REVIEW CRITERIA = INDIVIDUAL BANK WORTHS WITHIN 15%
ACCEPTANCE CRITERIA = TOTAL WORTH IS AT LEAST 90% OF PREDICTED

BANK	PREDICTED(P)	MEASURED(M)	PCT. DIFF*	PASS/FAIL DRC	AC
D	955	971.5	+1.7	P	-
C	569	567.1	-0.3	P	-
B	682	678.8	-0.5	P	-
A	1212	1198.4	-1.1	P	-
TOTAL	3418	3415.8	-0.1	-	P

III. AVERAGE DIFFERENTIAL BORON WORTH (PCM/PPM)
DESIGN REVIEW CRITERIA = WITHIN 15%

PREDICTED(P)	MEASURED(M)	PCT. DIFF*	PASS/FAIL DRC
-7.50	-7.69	+2.5	P

IV. ISOTHERMAL TEMPERATURE COEFFICIENT (PCM/F)
DESIGN REVIEW CRITERIA = WITHIN 2 PCM/F

	PREDICTED(P)	MEASURED(M)	(M-P)	PASS/FAIL DRC
ARO	-2.58	-2.00	+0.58	P
D-IN	-3.79	-3.12	+0.67	P

V. INFERRED MODERATOR TEMPERATURE COEFFICIENT (PCM/F)**
ACCEPTANCE CRITERIA = MTC IS NEGATIVE OR WITHDRAWAL LIMITS IMPOSED

	PREDICTED(P)	MEASURED(M)	(M-P)	PASS/FAIL AC
ARO	-1.02	-0.44	+0.58	P
D-IN	-2.23	-1.56	+0.67	P

ARO: ALL RODS OUT
D-IN: CONTROL BANK D INSERTED
DCBA-IN: ALL CONTROL BANKS (D,C,B,A) INSERTED

* PERCENT DIFFERENCE = 100*(M-P)/P

** INFERRED MTC IS OBTAINED BY SUBTRACTING DOPPLER COEFFICIENT (-1.56 PCM/F) FROM THE ISOTHERMAL TEMPERATURE COEFFICIENT.

INDIAN POINT UNIT 3 CYCLE 9
POWER ASCENSION TESTING RESULTS

I. POWER DISTRIBUTION MEASUREMENTS

A) LOW POWER (26.4 %)

TILTS		LARGEST REACTION RATE INTEGRAL DEVIATION - 8.5%	
0.9940	0.9995	LIMITING FQ - 2.1887	FQ LIMIT - 4.5781
1.0072	0.9992	HIGHEST FDHN - 1.5172	FDHN LIMIT - 1.9045

B) INTERMEDIATE POWER (49.9 %)

TILTS		LARGEST REACTION RATE INTEGRAL DEVIATION - 7.6%	
0.9928	1.0043	LIMITING FQ - 2.0765	FQ LIMIT - 4.5410
1.0031	0.9998	HIGHEST FDHN - 1.5116	FDHN LIMIT - 1.7944

C) FULL POWER (99.8 %)

TILTS		LARGEST REACTION RATE INTEGRAL DEVIATION - 7.7%	
0.9949	1.0052	LIMITING FQ - 1.9752	FQ LIMIT - 2.3252
1.0027	0.9972	HIGHEST FDHN - 1.4771	FDHN LIMIT - 1.5610

II. REACTOR COOLANT SYSTEM FLOW MEASUREMENT

MEASURED FLOW - 398143.3 GPM MINIMUM REQUIRED FLOW - 332240 GPM

III. FULL POWER CRITICAL BORON (PPM)
DESIGN REVIEW CRITERIA(DRC) = WITHIN 50 PPM
ACCEPTANCE CRITERIA(AC) = WITHIN 1000 PCM (117 PPM)

BURNUP (EFPD)	PREDICTED(P)	MEASURED(M)	(M-P)	PASS/FAIL DRC	AC
8.4	1152.6	1055.0	-97.6*	F	P
35.9	1160.0	1105.0	-55.0**	F	P

*NON-EQUILIBRIUM SAMARIUM.

**EQUILIBRIUM SAMARIUM CONDITIONS.

DUE TO DIFFERENCES IN SAMARIUM MODELING, THE DEVIATION BETWEEN PREDICTED AND MEASURED CRITICAL BORON IS GREATER BEFORE SAMARIUM REACHES EQUILIBRIUM.