

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL **B18729**

TO: G. LEAR	FROM: NIAGARA MOHAWK POWER CORP SYRACUSE, N.Y. G.K. RHODE	DATE OF DOCUMENT 6/30/77
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DESCRIPTION	ENCLOSURE
RESPONSE TO NRC'S 3/3/77 REQUEST FOR ADDITIONAL INFO RELATED TO FUEL LOADING SEQUENCE AND VERIFICATION TECHNIQUES PRIOR TO STARTUP. (2P & 1P)	
ACKNOWLEDGED	
DO NOT REMOVE	
PLANT NAME: NINE MILE PT #.1 SAB	

SAFETY	FOR ACTION/INFORMATION	ENVIRONMENTAL
ASSIGNED AD:		ASSIGNED AD: V. MOORE (LTR)
BRANCH CHIEF:	<i>Leav (5)</i>	BRANCH CHIEF:
PROJECT MANAGER:	<i>Nowicki</i>	PROJECT MANAGER:
LICENSING ASSISTANT:	<i>Parrish</i>	LICENSING ASSISTANT:
		B. HARLESS

INTERNAL DISTRIBUTION			
<input checked="" type="checkbox"/> REG FILES	SYSTEMS SAFETY	PLANT SYSTEMS	SITE SAFETY & ENVIRON ANALYSIS
<input checked="" type="checkbox"/> NRC PDR	HEINEMAN	TEDESCO	DENTON & MULLER
<input checked="" type="checkbox"/> T & E (2)	SCHROEDER	BENAROYA	CRITCHFIELD
<input checked="" type="checkbox"/> OELD		LAINAS	
<input checked="" type="checkbox"/> GOSSICK & STAFF	ENGINEERING	IPPOLITO	
<input checked="" type="checkbox"/> HANAUER	KNIGHT	F. ROSA	ENVIRO TECH. ERNST
<input checked="" type="checkbox"/> MTPG	BOSNAK		
<input checked="" type="checkbox"/> CASE	SIHWELL	OPERATING REACTORS	BALLARD
<input checked="" type="checkbox"/> BOYD	PAWLICKI	STELLO	YOUNGBLOOD
		EISENHUT	
<input checked="" type="checkbox"/> PROJECT MANAGEMENT	REACTOR SAFETY	SHAO	SITE TECH.
<input checked="" type="checkbox"/> SKOVHOLT	ROSS	BAER	
<input checked="" type="checkbox"/> P. COLLINS	NOVAK	BUTLER	GAMMILL (2)
<input checked="" type="checkbox"/> HOUSTON	ROSZTGCZY	GRIMES	
<input checked="" type="checkbox"/> MELTZ	CHECK		SITE ANALYSIS
<input checked="" type="checkbox"/> HELTEMES			VOLLMER
<input checked="" type="checkbox"/> SK	AT&I		BUNCH
	SALTZMAN		J. COLLINS
	RUTBERG		KREGER

EXTERNAL DISTRIBUTION	CONTROL NUMBER
<input checked="" type="checkbox"/> LPDR: <i>Kocher et al</i>	
<input checked="" type="checkbox"/> TIC	
<input checked="" type="checkbox"/> NAT LAB	
<input checked="" type="checkbox"/> REG IV (J. HANCHETT)	
<input checked="" type="checkbox"/> 16 CYS ACRS SENT CATEGORY B	
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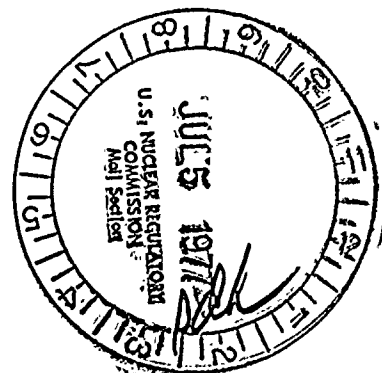
NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

300 ERIE BOULEVARD WEST
SYRACUSE, N.Y. 13202

GERALD K. RHODE
VICE PRESIDENT

June 30, 1977



Director of Nuclear Reactor Regulation
ATTN: Mr. George Lear, Chief
Branch #3
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Regulatory

File Cy

RE: Nine Mile Point Unit 1
Docket No. 50-220

Dear Mr. Lear:

In response 7 of our March 14, 1977 letter, it was stated that Niagara Mohawk would provide additional information related to fuel loading sequence and verification techniques prior to startup. This letter provides this additional information and completes our response to your original request dated March 3, 1977.

The fuel loading placement for Cycle 5 is identical to that provided in NEDO 21466. The fuel loading and shuffling sequence for Cycle 5 is generated by a computer code. Utilizing the end of Cycle 4 and beginning of Cycle 5 core configurations, the code generates the allowable loading sequence. A sample of the generated loading sequence is shown on Figure 1. To reduce the probability of misloading a fuel bundle, in most cases no more than one fuel assembly is removed from a quadrant at any one time.

Proper rotational orientation of fuel assemblies in the reactor core is readily checked by visual observation and assured by verification procedures during core loading. Five separate visual indications of proper fuel assembly rotational orientation exist:

- 1) The channel fastener assemblies, including the spring and guard used to maintain clearances between channels, are located at one corner of each fuel assembly adjacent to the center of the control rod.

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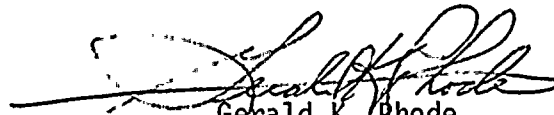
- 2) The identification boss on the fuel assembly handle points toward the adjacent control rod.
- 3) The channel spacing buttons are adjacent to the control rod passage area.
- 4) The assembly identification numbers which are located on the fuel assembly handles are all readable from the direction of the center of the cell.
- 5) There is cell-to-cell replication.

A Core Loading Verification Procedure is used to verify that the core is properly loaded and that the fuel loading plan agrees with the core loading. An underwater TV system is used to videotape the as loaded core and the tape is independently reviewed to assure proper loading. The videotape of the core verification process is filed in permanent records for retention.

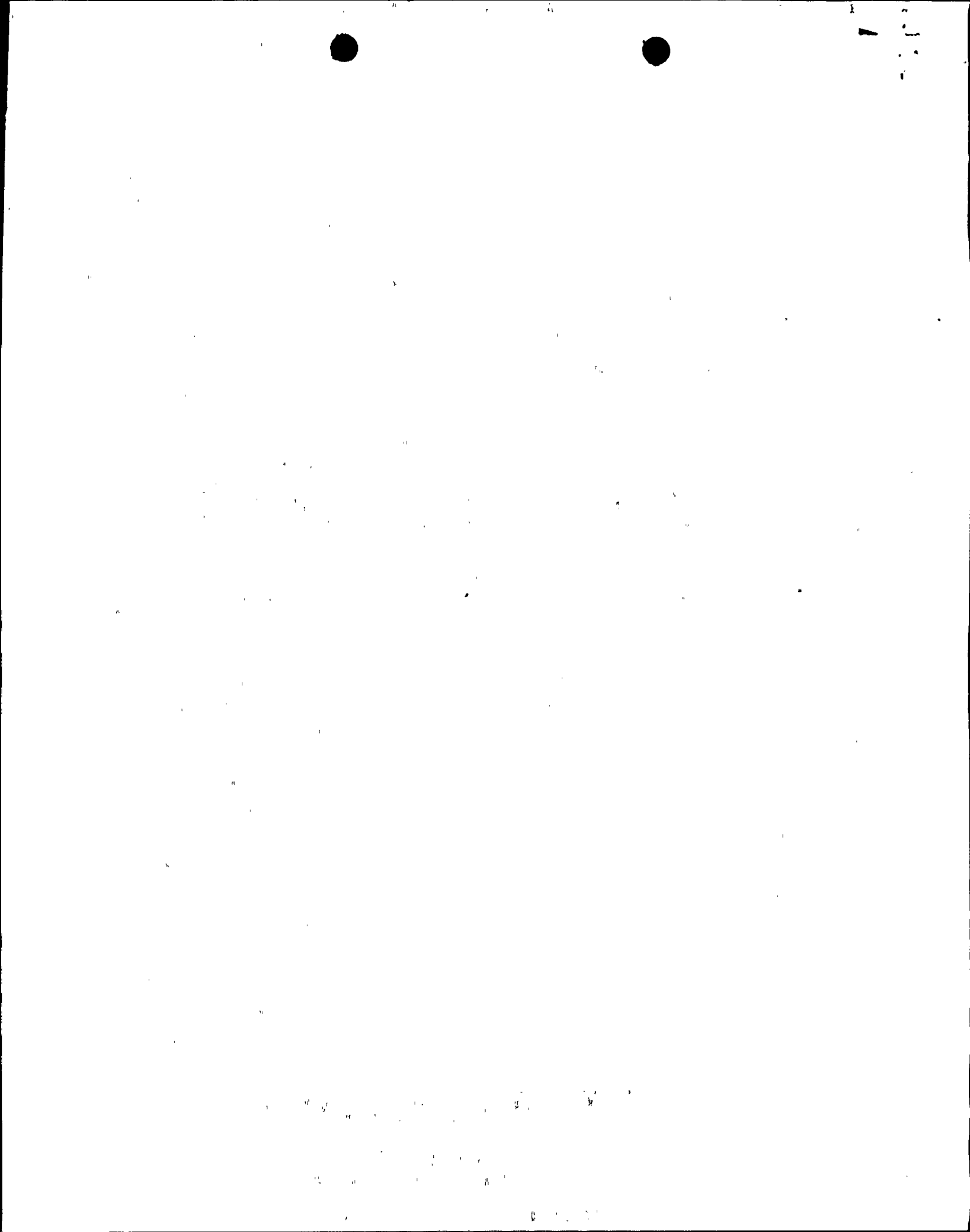
The use of the fuel shuffling code, visual observations, and verification procedures assures the proper placement and orientation of the fuel assemblies in the reactor core.

Sincerely,

NIAGARA MOHAWK POWER CORPORATION


Gerald K. Rhode
Vice President, Engineering

SWW:n1d



1 CORE RELOAD SCHEDULE DATE: 04/23/77
700_FUEL_MOVES

REC# SIZE

MOVE #	FUEL ID	FROM LOCATION	TO LOCATION	DATE	TIME	SIGNOFF	REC#	SIZE
1	NMA002	1550 CORE	0167 POOL OLD	.....	.....	.....	1	80
2	LJ2849	932 CORE	1550 CORE	.....	.....	.....	2	80
3	NMA049	3704 CORE	0188 POOL OLD	.....	.....	.....	3	80
4	LJ6102	04P7 POOL	932 CORE NEW	.....	.....	.....	4	80
5	LJ2886	4322 CORE	3704 CORE	.....	.....	.....	5	80
6	NH 270	1348 CORE	01K3 POOL OLD	.....	.....	.....	6	80
7	LJ6083	05P7 POOL	4322 CORE NEW	.....	.....	.....	7	80
8	LJ1809	2330 CORE	1348 CORE	.....	.....	.....	8	80
9	GEA021	3906 CORE	01L0 POOL OLD	.....	.....	.....	9	80
10	LJ5987	05T0 POOL	2330 CORE NEW	.....	.....	.....	10	80
11	LJ1864	2924 CORE	3906 CORE	.....	.....	.....	11	80
12	NMA039	1936 CORE	01M0 POOL OLD	.....	.....	.....	12	80
13	LJ6014	04R5 POOL	2924 CORE NEW	.....	.....	.....	13	80
14	NMC060	2546 CORE	1936 CORE	.....	.....	.....	14	80
15	NMD046	2532 CORE	2546 CORE	.....	.....	.....	15	80
16	LJ2864	332 CORE	2532 CORE	.....	.....	.....	16	80
17	LJ2822	2148 CORE	332 CORE	.....	.....	.....	17	80
18	NMA016	3318 CORE	03Q0 POOL OLD	.....	.....	.....	18	80
19	LJ6084	04P6 POOL	2148 CORE NEW	.....	.....	.....	19	80
20	NMC049	2708 CORE	3318 CORE	.....	.....	.....	20	80
21	NMD015	2722 CORE	2708 CORE	.....	.....	.....	21	80
22	LJ2877	4922 CORE	2722 CORE	.....	.....	.....	22	80
23	LJ2879	3106 CORE	4922 CORE	.....	.....	.....	23	80
24	NMC025	934 CORE	03Q1 POOL OLD	24	80
25	LJ6088	05S5 POOL	3106 CORE NEW	25	80
							56	80
							57	80

FIGURE 1

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