

NRC FORM 195 (2-76)		U.S. NUCLEAR REGULATORY COMMISSION		DOCKET NUMBER <b>50-220</b>	
NRC-DISTRIBUTION FOR PART 50 DOCKET MATERIAL <span style="float: right;">B18729</span>				FILE NUMBER	
TO: G. LEAR		FROM: NIAGARA MOHAWK POWER CORP SYRACUSE, N.Y. G.K. RHODE		DATE OF DOCUMENT 6/30/77	
				DATE RECEIVED 7/5/77	
<input checked="" type="checkbox"/> LETTER <input type="checkbox"/> ORIGINAL <input type="checkbox"/> COPY		<input type="checkbox"/> NOTORIZED <input checked="" type="checkbox"/> UNCLASSIFIED		NUMBER OF COPIES RECEIVED <div style="text-align: center; font-size: 1.5em;">1 SIGNED</div>	
DESCRIPTION RESPONSE TO NRC'S 3/3/77 REQUEST FOR ADDITIONAL INFO RELATED TO FUEL LOADING SEQUENCE AND VERIFICATION TECHNIQUES PRIOR TO STARTUP.  (2P & 1P)			ENCLOSURE		
<div style="text-align: center; font-size: 2em; transform: rotate(-5deg); opacity: 0.5;">ACKNOWLEDGED</div> <div style="text-align: center; font-size: 2em; transform: rotate(-5deg); opacity: 0.5;">DO NOT REMOVE</div> <div style="text-align: left;">           PLANT NAME: NINE MILE PT #.1            SAB         </div>					
SAFETY		FOR ACTION/INFORMATION		ENVIRONMENTAL	
ASSIGNED AD:		ASSIGNED AD:		V. MOORE (LTR)	
BRANCH CHIEF:		BRANCH CHIEF:			
PROJECT MANAGER:		PROJECT MANAGER:			
LICENSING ASSISTANT:		LICENSING ASSISTANT:			
		B. HARLESS			
INTERNAL DISTRIBUTION					
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GOSSICK & STAFF		ENGINEERING		IPPOLITO	
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MTPG		BOSNAK			
CASE		SIHWELL		OPERATING REACTORS	
BOYD		PAWLICKI		STELLO	
				EISENHUT	
PROJECT MANAGEMENT		REACTOR SAFETY		SHAO	
SKOVHOLT		ROSS		BAER	
P. COLLINS		NOVAK		BUTLER	
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EXTERNAL DISTRIBUTION				CONTROL NUMBER	
LPDR: <i>Richard</i>				<div style="border: 1px solid black; padding: 5px; display: inline-block;">             771870036           </div>	
TIC					
NAT LAB					
REG IV (J. HANCHETT)					
16 CYS ACRS SENT CATEGORY <i>B</i>					

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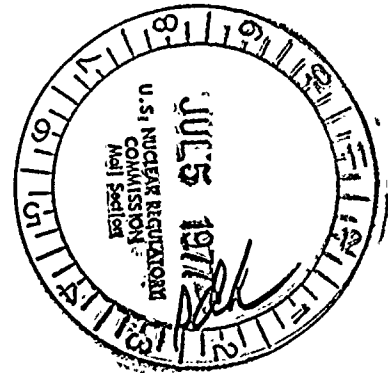
NIAGARA MOHAWK POWER CORPORATION

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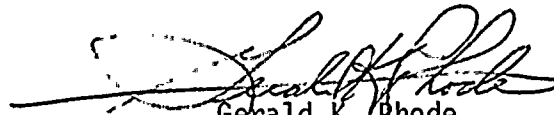
- 2) The identification boss on the fuel assembly handle points toward the adjacent control rod.
- 3) The channel spacing buttons are adjacent to the control rod passage area.
- 4) The assembly identification numbers which are located on the fuel assembly handles are all readable from the direction of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



1 CORE RELOAD SCHEDULE DATE: 04/23/77  
700\_FUEL\_MOVES

MOVE #	FUEL ID	FROM LOCATION	TO LOCATION	DATE	TIME	SIGNOFF
1	NMA002	1550 CORE	0167 POOL OLD	.....	.....	.....
2	LJ2849	932 CORE	1550 CORE	.....	.....	.....
3	NMA049	3704 CORE	0188 POOL OLD	.....	.....	.....
4	LJ6102	04P7 POOL	932 CORE NEW	.....	.....	.....
5	LJ2886	4322 CORE	3704 CORE	.....	.....	.....
6	NH 270	1348 CORE	01K3 POOL OLD	.....	.....	.....
7	LJ6083	05P7 POOL	4322 CORE NEW	.....	.....	.....
8	LJ1809	2330 CORE	1348 CORE	.....	.....	.....
9	GEA021	3906 CORE	0110 POOL OLD	.....	.....	.....
10	LJ5987	05T0 POOL	2330 CORE NEW	.....	.....	.....
11	LJ1864	2924 CORE	3906 CORE	.....	.....	.....
12	NMA039	1936 CORE	01M0 POOL OLD	.....	.....	.....
13	LJ6014	04R5 POOL	2924 CORE NEW	.....	.....	.....
14	NMC060	2546 CORE	1936 CORE	.....	.....	.....
15	NMD046	2532 CORE	2546 CORE	.....	.....	.....
16	LJ2864	332 CORE	2532 CORE	.....	.....	.....
17	LJ2822	2148 CORE	332 CORE	.....	.....	.....
18	NMA016	3318 CORE	03Q0 POOL OLD	.....	.....	.....
19	LJ6084	04P6 POOL	2148 CORE NEW	.....	.....	.....
20	NMC049	2708 CORE	3318 CORE	.....	.....	.....
21	NMD015	2722 CORE	2708 CORE	.....	.....	.....
22	LJ2877	4922 CORE	2722 CORE	.....	.....	.....
23	LJ2879	3106 CORE	4922 CORE	.....	.....	.....
24	NMC025	934 CORE	03Q1 POOL OLD	.....	.....	.....
25	LJ6088	05S5 POOL	3106 CORE NEW	.....	.....	.....

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