

November 21, 1994

Mr. B. Ralph Sylvia
Executive Vice President, Nuclear
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, New York 13093

Dear Mr. Sylvia:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING PROPOSED TECHNICAL SPECIFICATION CHANGE TO REVISE THE PRESSURE-TEMPERATURE LIMITS FOR NINE MILE POINT NUCLEAR STATION UNIT NO. 1 (NMP-1) (TAC NO. M90288)

By letter dated September 1, 1994, Niagara Mohawk Power Corporation (NMPC), proposed a license amendment to revise the pressure-temperature limits for the NMP-1 reactor vessel.

The NRC staff has begun its review of NMPC's September 1, 1994, submittal. However, we have determined that additional information, as identified in the enclosure, is required to complete our review of the submittal. As indicated in the attached request for additional information (RAI), additional information is required regarding the calculation of the proposed pressure-temperature limits for the NMP-1 reactor vessel. NMPC is requested to respond to this RAI within 30 days of receipt of this letter in order for us to complete our review in a timely manner.

This requirement affects one respondent and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,
/s/

Donald S. Brinkman, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

~~Docket-File~~
PUBLIC
PDI-1 Reading
SVarga
JZwolinski

MCase
CVogan
DBrinkman
AWilford

JStrosnider
OGC
ACRS (4)
CCowgill, RGN-I

DOCUMENT NAME: H:\NMP1\NM190288.LTR

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

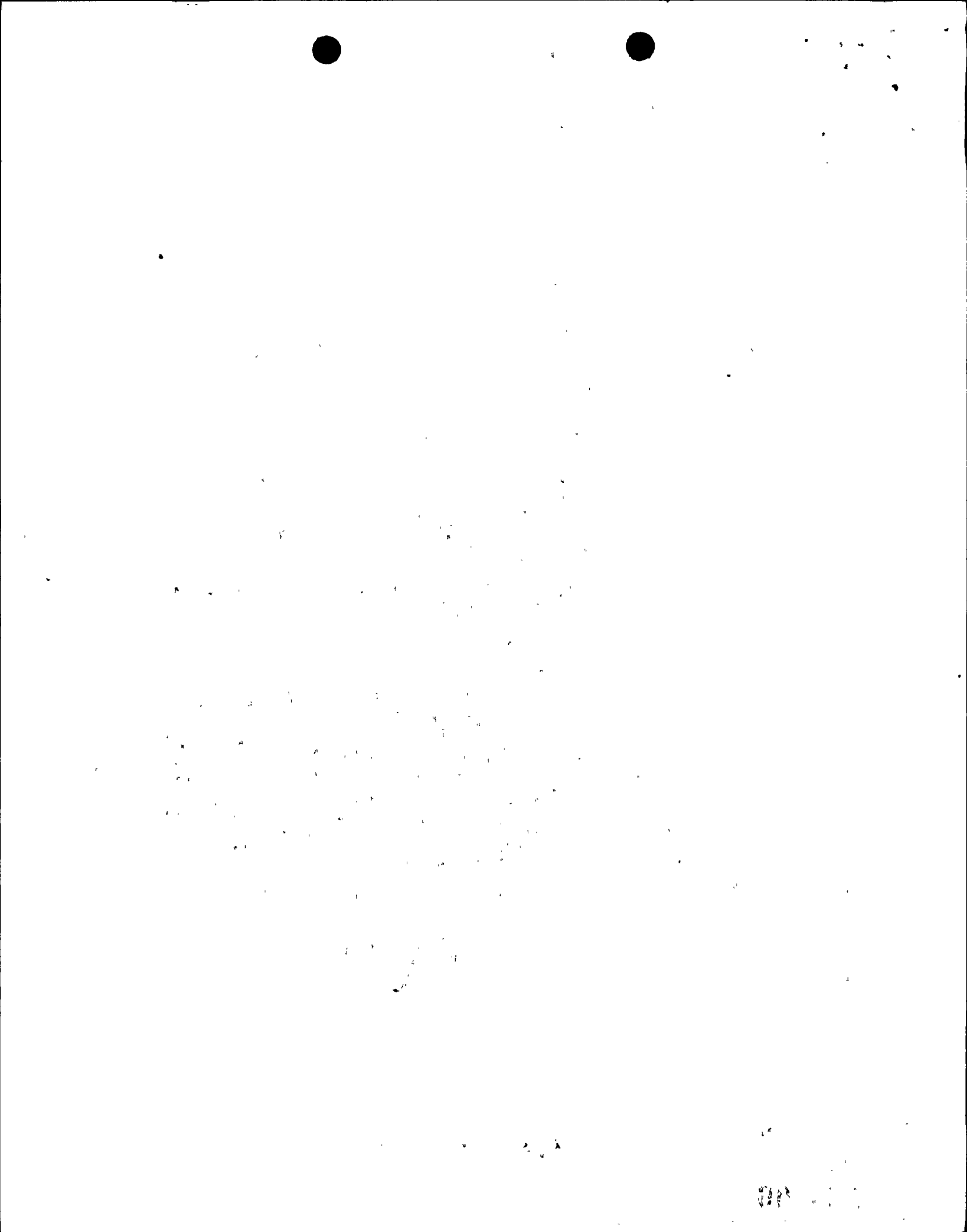
OFFICE	LA:PDI-1	E	PM:PDI-1	E	(A)D:PDI-1	~				
NAME	CVogan <i>CO</i>		DBrinkman:cn		MCase <i>N</i>					
DATE	11/21/94		11/21/94	<i>ADJ</i>	11/21/94					

9411280241 941121
PDR ADDCK 05000220
P PDR

OFFICIAL RECORD COPY

AA3

DF01



November 21, 1994

Mr. B. Ralph Sylvia
Executive Vice President, Nuclear
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, New York 13093

Dear Mr. Sylvia:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING PROPOSED TECHNICAL SPECIFICATION CHANGE TO REVISE THE PRESSURE-TEMPERATURE LIMITS FOR NINE MILE POINT NUCLEAR STATION UNIT NO. 1 (NMP-1) (TAC NO. M90288)

By letter dated September 1, 1994, Niagara Mohawk Power Corporation (NMPC), proposed a license amendment to revise the pressure-temperature limits for the NMP-1 reactor vessel.

The NRC staff has begun its review of NMPC's September 1, 1994, submittal. However, we have determined that additional information, as identified in the enclosure, is required to complete our review of the submittal. As indicated in the attached request for additional information (RAI), additional information is required regarding the calculation of the proposed pressure-temperature limits for the NMP-1 reactor vessel. NMPC is requested to respond to this RAI within 30 days of receipt of this letter in order for us to complete our review in a timely manner.

This requirement affects one respondent and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,
/s/

Donald S. Brinkman, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

Docket File	MCase	JStrosnider
PUBLIC	CVogan	OGC
PDI-1 Reading	DBrinkman	ACRS (4)
SVarga	AWilford	CCowgill, RGN-I
JZwolinski		

DOCUMENT NAME: H:\NMP1\NM190288.LTR

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	LA:PDI-1	<input checked="" type="checkbox"/>	PM:PDI-1	<input checked="" type="checkbox"/>	(A)D:PDI-1	<input checked="" type="checkbox"/>				
NAME	CVogan <i>CO</i>		DBrinkman:cn	<i>MS</i>	MCase <i>N</i>					
DATE	11/21/94		11/21/94		11/21/94					

OFFICIAL RECORD COPY



12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

B. Ralph Sylvia
Niagara Mohawk Power Corporation

Nine Mile Point Nuclear
Station Unit No. 1

cc:

Mark J. Wetterhahn, Esquire
Winston & Strawn
1400 L Street, NW
Washington, DC 20005-3502

Mr. Richard B. Abbott
Unit 1 Plant Manager
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, NY 13093

Supervisor
Town of Scriba
Route 8, Box 382
Oswego, NY 13126

Mr. David K. Greene
Manager Licensing
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, NY 13093

Mr. Louis F. Storz
Vice President - Nuclear Generation
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, NY 13093

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 126
Lycoming, NY 13093

Mr. Paul D. Eddy
State of New York
Department of Public Service
Power Division, System Operations
3 Empire State Plaza
Albany, NY 12223

Gary D. Wilson, Esquire
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, NY 13202

Mr. Martin J. McCormick, Jr.
Vice President
Nuclear Safety Assessment
and Support
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
P.O. Box 63
Lycoming, NY 13093

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Ms. Donna Ross
New York State Energy Office
2 Empire State Plaza
16th Floor
Albany, NY 12223



20

REQUEST FOR ADDITIONAL INFORMATION
REGARDING PROPOSED CHANGES TO THE REACTOR VESSEL PRESSURE-TEMPERATURE LIMITS
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION UNIT NO. 1
DOCKET NO. 50-220

1. Scope/Status of Review

The fracture toughness requirements for ferritic materials in the pressure-retaining components of the reactor coolant pressure boundary are specified for testing and operational conditions, including anticipated operational occurrences, in Section IV of Appendix G of 10 CFR Part 50. This appendix requires the acceptance and performance criteria of Appendix G of Section III of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Pressure-temperature calculation procedures are described in Appendix G of the ASME Code. Changes in the fracture-toughness properties of materials in the beltline region, resulting from neutron irradiation and the thermal environment, are monitored by a surveillance program in compliance to the requirements of Appendix H of 10 CFR Part 50. The effect of neutron fluence on the shift in the nil-ductility temperature of pressure vessel steel is predicted by Regulatory Guide 1.99 (RG 1.99), "Effect of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials." The licensee, Niagara Mohawk Power Corporation, has prepared an application for amendment to the operating license in order to revise TS 3.2.2, "Minimum Reactor Vessel Temperature for Pressurization."

2. Additional Information Required

Based on the review of the licensee's submittal, the NRC staff has concluded that the following information and/or clarification is required to complete the review of the amendment request:

- A. For the surveillance plate material, Criteria 1 of RG 1.99, Rev. 2 was not met because the limiting material (upper plate G-307-4) is not the surveillance material. Criteria 3 was not met because the method described in Regulatory Position 2.1 was not used to obtain the best-fit line of the plant specific data. Verify and provide the basis for determining that the surveillance data are credible.

Enclosure



6
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

- B. For equation (2-2) on Page 5 of the submittal (calculation of ΔRT_{ndt} for the beltline plate material);
- (1) Identify all raw data used to arrive at this equation,
- C. Figure 2-1 on Page 11 of the submittal compares the RG 1.99, Rev. 2 model with the plant specific ΔRT_{ndt} model. For each data point:
- (1) Provide the copper and nickel content,
 - (2) Identify the plant from which each data point was obtained, and
 - (3) Identify which data were not used in development of the curve.
- D. Provide the basis and data used to conclude that "... most BWRs operate at fluences below the fluence threshold for significant Cu precipitation." (Page 3 of submittal)
- E. Provide the basis for using a margin of 17 °F as opposed to 34 °F as specified in RG 1.99 in the calculation of the adjusted reference temperature for the beltline plates.
- F. Provide applicable information, with respect to questions 1-6 above, regarding the beltline welds.



11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100