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Docket No. 50-220

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Niagara Mohawk Power Corporation
ATTN: Mr. Thomas J. Brosnan
300 Erie Boulevard West
Syracuse, New York 13202

Gentlemen:

In response to your application dated April 20, 1970, and amendments thereto, Amendment No. 2 to Provisional Operating License No. DPR-17 is enclosed. The amendment authorizes operation of your Nine Mile Point Nuclear Station at power levels up to 1850 megawatts (thermal) and incorporates changes to the Technical Specifications to provide for such operation.

A copy of a related notice that has been forwarded to the Office of the Federal Register for publication is also enclosed.

Sincerely,

Original signed by
Peter A. Morris

Peter A. Morris, Director
Division of Reactor Licensing

Enclosures:

- 1. Amendment No. 2 to License No. DPR-17 w/Change No. 4
- 2. Federal Register Notice

cc w/enclosures:

Arvin E. Upton, Esquire
LeBoeuf, Lamb, Leiby & McRae
1821 Jefferson Place, N. W.
Washington, D. C. 20036

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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Sincerely,

A handwritten signature in cursive script that reads "Peter A. Morris".

Peter A. Morris, Director
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NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

AMENDMENT TO PROVISIONAL OPERATING LICENSE

License No. DPR-17
Amendment No. 2

The Atomic Energy Commission ("the Commission") has found that:

- A. The application for amendment dated April 20, 1970, as supplemented by Amendments 1 through 5 thereto and letter dated November 23, 1970, complies with the requirements of the Atomic Energy Act of 1954, as amended ("the Act"), and the Commission's regulations set forth in 10 CFR Chapter I;
- B. There is reasonable assurance (i) that the facility can be operated at power levels up to 1850 megawatts (thermal) in accordance with the license, as amended, without endangering the health and safety of the public, and (ii) that such operation will be conducted in compliance with the regulations of the Commission, and
- C. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Accordingly, Provisional Operating License No. DPR-17 issued to Niagara Mohawk Power Corporation for operation of the Nine Mile Point Nuclear Station is hereby further amended to restate subparagraphs 3.A., 3.B., and 3.C. in their entirety to read as follows:

3.A. Maximum Power Level

Niagara Mohawk is authorized to operate the facility at steady-state power levels up to a maximum of 1850 megawatts (thermal).

3.B. Technical Specifications

The Technical Specifications contained in Appendix A to the license, as modified by Changes Nos. 1 through 3 and Change No. 4 appended hereto as Attachment A, are hereby incorporated in this license. Niagara Mohawk shall operate the facility

in accordance with these Technical Specifications. No changes shall be made in the Technical Specifications unless authorized by the Commission as provided in Section 50.59 of 10 CFR Part 50.

3.C. Reports

Niagara Mohawk shall make certain reports in accordance with the requirements of the Technical Specifications.

This amendment is effective as of the date of issuance.

FOR THE ATOMIC ENERGY COMMISSION



Peter A. Morris, Director
Division of Reactor Licensing

Attachment A - Change No. 4 to
the Technical Specifications

Date of Issuance: April 14, 1971

ATTACHMENT A TO AMENDMENT NO. 2

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-17

CHANGE NO. 4 TO TECHNICAL SPECIFICATIONS

Make the following changes within the specifications and sections on the indicated pages:

SECTION 1 - DEFINITIONS

Change Definition 1.13 on pages 4 and 5 in its entirety to read as follows:

"An abnormal occurrence is defined as:

- a. Violation of Limiting Safety System Settings.
- b. Violation of Limiting Conditions for Operation.
- c. Engineered safety system component malfunction or other component or system malfunctions which could, or threaten to, render the system incapable of performing its intended safety function.
- d. Abnormal degradation of one of the several boundaries which are designed to contain the radioactive materials resulting from the fission process.
- e. Uncontrolled or unanticipated changes in reactivity.
- f. Observed inadequacies in the implementation of either administrative or procedural controls, such that the inadequacy could have caused the existence or development

of an unsafe condition in connection with the operation of the reactor."

Change Definition 1.15 on page 5 to read:

"Rated flux is the neutron flux that corresponds to a steady-state power level of 1850 thermal megawatts. The use of the term 100 percent also refers to the 1850 thermal megawatt power level."

SECTION 2 - SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

Specification 2.1.1.b - page 6

Change "307 MWt" to "333 MWt" at the end of the statement.

Specification 2.1.1.c - page 6

Change "3.0 seconds" to "1.7 seconds" within the first sentence.

Specification 2.1.1 Bases - page 7

First paragraph, line 6:

Change "APED-3892" to "APED-5286" and change the corresponding reference at the bottom of the page to "J. M. Healzer, J. R. Hench, E. Janssen, S. Levy 'Design Basis for Critical Heat Flux Conditions in Boiling Water Reactors', APED-5286, September 1966".

Third paragraph, line 3 and next to last line:

Change "1000 psig" to "1030 psig".

Fourth paragraph, line 3 and 12:

Change "3.13" to "3.06".

Fourth paragraph, line 8:

Change the sentence, "It is possible ... not be permitted" to read:

"It is possible that during temporary control rod manipulation activities or at the end of core life when it might be desirable from a scheduling standpoint to delay a refueling outage, a peaking factor greater than 3.06 could result."

Specification 2.1.1 Bases - page 8

Fourth paragraph, line 13:

Change sentence to read:

"This is equivalent to a core power of 333 thermal megawatts or 18 percent of the full design rating (1850 thermal megawatts)."

Specification 2.1.1 Bases - page 9

First paragraph:

In line 3, change "3.25 seconds" to "1.85 seconds".

Delete the entire sentence that begins at line 6.

In line 13, change "3.0 seconds" to "1.7 seconds".

Specification Figure 2.1.1 - page 10

Replace "Figure 2.1.1" with the attached "Figure 2.1.1 Revised".

Specification 2.1.2 Bases - page 11

Change first paragraph of Bases in its entirety to read:

"The LS³ values were established on the basis of analysis starting at an operating power-flow characteristic curve as shown in revised Figure 2.1.1, ref. 9. Nominal LS³ values were used in the malfunction analysis. (6, 7, 9) As discussed in the First Supplement*, (p. III-29) instrumentation errors are accounted for in the CHF correlation and in the assessment of effects on steady-state MCHFR calculations. Deviations such as inherent instrument error, operator setting error, and drift of the set point are included in the conservatism of the calculations. For the transient analyses, conservatism in the effects on MCHFR are provided by the conservatisms incorporated in the controlling factors used in the analysis, such as void reactivity coefficient, control rod scram worth, scram delay time, power shapes, etc. Most transients analyzed have at least two independent scram functions available to terminate the specific transient. However, where multiple scram protection does not exist, additional backup is provided by procedures and interlocks or an inherent safe response."

Add reference 9 to the bottom of page 11 to read:

"(9) Technical Supplement to Petition to Increase Power Level, dated April 1970."

Change the first paragraph of Bases a. as follows:

In line 2, replace "Volume I (Figure IV-13)*" with "Figure 2.1.1 Revised (ref. 9)".

In line 7, insert the word "Revised" after "Figure 2.1.2".

In line 12, replace "(Appendix E*)" with "(refs. 6, 7, and 9)".

In line 15, Change "1050" to "1080".

In line 16, after the word "psig" add the following to the end of the sentence:

", the turbine stop valve closure scram set at ≤ 10 percent from full open, and the generator load rejection scram set on loss of oil pressure to the acceleration relay when power is greater than 45%."

Specification 2.1.2 Bases - page 12

Add the following paragraph immediately prior to Bases b. as a last paragraph of Bases a:

"The thermal hydraulic safety limit of Figure 2.1.1 Revised was based on a total peaking factor of 3.06, and an adjustment is required in the unusual event of higher peaking factors. Likewise, power indication at which scram occurs must be adjusted to assure MCHFRs above 1.0 for expected transients in this derated condition. This is provided by application of the formula on Figure 2.1.2 Revised."

In the first paragraph of Bases b., change the sentence beginning on line 10 to read:

"This provides 50 percent margin between the maximum power and the safety limit at 18 percent of rated power."

Specification 2.1.2.c - page 13

Change to read:

"The reactor high-pressure scram trip setting shall be \leq 1080 psig."

Specification 2.1.2 Bases c - page 13

Change first paragraph in its entirety to read:

"As demonstrated in Appendix E-1* and the Technical Supplement to Petition to Increase Power Level, the reactor high pressure scram is a backup to the neutron flux scram, turbine stop valve closure scram, generator load rejection scram, and main steam isolation-valve closure scram, for various reactor isolation incidents. However, rapid isolation at lower power levels generally results in high pressure scram preceding other scrams because the transients are slower and those trips associated with the turbine-generator are bypassed."

In line 1 and 3 of second paragraph, change "1050 psig" to "1080 psig".

Specification 2.1.2 Bases d - page 13

In line 5 of first paragraph, change "Appendix E-I.3.9*" to "Technical Supplement to Petition to Increase Power Level, dated April 1970".

Specification 2.1.2 Bases f - page 14

In line 3, change " ≤ 110 percent" to " ≤ 106 percent".

Specification 2.1.2 Bases g - h - page 14

Change the last sentence of the first paragraph at line 20 to read:

"With the scrams set at ≤ 10 percent valve closure, there is no increase in neutron flux and peak pressure in the vessel dome is limited to 1141 psig (Technical Supplement to Petition to Increase Power Level, dated April 1970)."

Specification 2.1.2 - page 15

Add Limiting Safety System Setting Sections i and j and the corresponding Bases i and j as follows:

Section i. "The generator load rejection scram shall be initiated by the signal for turbine control valve fast closure due to a loss of oil pressure to the acceleration relay any time the turbine first stage steam pressure is above a value corresponding to 833 thermal megawatts. i.e., 45 percent of 1850 thermal megawatts."

Section j. "The turbine stop valve closure scram setting shall be initiated ≤ 10 percent of valve closure (stem position) from full open whenever the turbine first stage steam pressure is above a value corresponding to 833 thermal megawatts, i.e., 45 percent of 1850 thermal megawatts."

Bases i. "The generator load rejection scram is provided to anticipate the rapid increase in pressure and neutron flux resulting from fast closure of the turbine control valves due to the worst case transient of a load rejection and subsequent failure of the bypass. In fact, analysis (Technical Supplement to Petition to Increase Power Level) shows that heat flux does not increase from its initial value at all because of the fast action of the load rejection scram; thus, there is no MCHFR decrease."

Bases j. "The turbine stop valve closure scram is provided for the same reasons as discussed in i above. With a scram setting of ≤ 10 percent valve closure, the resultant transients are nearly the same as for those described in i above; and, thus, adequate margin exists."

Specification Figure 2.1.1 - page 16

Replace "Figure 2.1.2" with attached "Figure 2.1.2 Revised".

Specification 2.2.1 Bases - page 17

In third paragraph, last line, change "1000 psig" to "1030 psig".

Specification 2.2.2 - page 18

Section 2.2.2.a - Change the number of safety valves at 1218 psig set point to four and the total number of valves to 16 as follows:

<u>Set Point (psig)</u>	<u>Number of Safety Valves</u>
1218	4
1227	3
1236	3
1245	3
1254	<u>3</u>
	16

Section 2.2.2.b - Change the trip setting from " ≤ 1050 psig" to " ≤ 1080 psig".

Bases a - Change first paragraph in its entirety to read:

"The range of set points for safety valve actuation is selected in accordance with code requirements. A safety valve capability study presented in the Technical Supplement to Petition to Increase Power Level using the stated LS³ valves has demonstrated the maximum pressures occurring at the bottom of the reactor vessel and the bottom of the recirculation piping are 1303 psig and 1315 psig, respectively, some 72 psig below the 1375 psig safety limit. This analysis has assumed the highly improbable event of reactor isolation occurring without scram, in spite of separate and redundant scram signals such that the power output reached 167 percent of rated (1850 thermal megawatts)."

Bases a, second paragraph - In line 11, change "15" to "16".

Bases b, both paragraphs - Change to read as follows:

"The reactor high pressure scram setting is relied upon to terminate rapid pressure transients if other scrams, which would normally occur first, fail to function. As demonstrated in

Appendix E-I of the FSAR and the Technical Supplement to Petition to Increase Power Level, Page II-12, the reactor high pressure scram is a backup to the neutron flux scram, generator load rejection scram, and main steam isolation-valve closure scram for various reactor isolation incidents. However, rapid isolation at lower power levels generally results in high pressure scram preceding other scrams because the transients are slower and those trips associated with the turbine-generator are bypassed."

"The operator will set the trip setting at 1080 psig or lower. However, the actual set point can be as much as 15.8 psi above the 1080 psig indicated set point due to the deviations discussed above."

SECTION 3 - LIMITING CONDITIONS FOR OPERATION; and

SECTION 4 - SURVEILLANCE REQUIREMENTS

Specification 4.1.1.c - page 24

Replace the specification c under Surveillance Requirement in its entirety with the following:

"c. Scram Insertion Times

- (1) After each major refueling outage and prior to power operation with reactor pressure above 800 psig, all operable control rods shall be scram time tested from the fully withdrawn position.

- (2) Following each reactor scram from rated pressure, the mean 90% insertion time shall be determined for eight selected rods. If the mean 90% insertion time of the selected control rod drives does not fall within the range of 2.4 to 3.1 seconds or the measured scram time of any one drive for 90% insertion does not fall within the range of 1.9 to 3.6 seconds, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is maintained.
- (3) Following any outage not initiated by a reactor scram, eight rods shall be scram tested with reactor pressure above 800 psig. The same criteria of 4.1.1.c.(2) shall apply."

Specification 3.1.1.c/4.1.1.c Bases c - page 24

Change the last sentence (beginning line 11) of the first paragraph to read:

"Analyses presented in Appendix E-I*, the Second Supplement, and the Technical Supplement to Petition to Increase Power Level were based on these times, and demonstrate the adequacy of the scram times chosen."

Specification 4.1.1.d - page 24

Add Surveillance Requirement d as follows:

"d. Control Rod Accumulators

Once a shift check the status of the accumulator pressure and level alarms in the control room."

Specification 3.1.1.f., 4.1.1.f. and Bases f - page 25

Replace Specification 3.1.1.f. under Limiting Condition for Operation in its entirety with the following:

"f. Reactivity Anomalies

The difference between an observed and predicted control rod inventory shall not exceed the equivalent of one percent in reactivity. If this limit is exceeded, the reactor shall be brought to the cold, shutdown condition by normal orderly shutdown procedure. Operation shall not be permitted until the cause has been evaluated and appropriate corrective action has been completed. The AEC shall be notified within 24 hours of this situation in accordance with Specification 6.7.1."

Add Specification 4.1.1.f. under Surveillance Requirement to read as follows:

"f. Reactivity Anomalies

The observed control rod inventory shall be compared with a normalized computed prediction of the control rod inventory during startup, following refueling or major core alteration. These comparisons will be used as base data for reactivity monitoring during subsequent power

operation throughout the fuel cycle. At specific power operating conditions, the actual control rod configuration will be compared with the expected configuration based upon appropriately corrected past data. This comparison will be made every equivalent full power month."

Under Bases, item f, following the third sentence of the paragraph (line 9 between words "... state." and "During ...") insert the following sentence:

"Equilibrium xenon, samarium and power distribution are considered in establishing the steady-state base condition to minimize any source of error."

Specification 3.1.2, 4.1.2 and Bases - page 26

Replace Specification 3.1.2.b under Limiting Condition for Operation in its entirety with the following:

"b. If a redundant component becomes inoperable, Specification 3.1.2.a. shall be considered fulfilled, provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed."

Change Specification 3.1.2.c. in line 3 from "Figure 3.1.2.a" to "Figure 3.1.2.a Revised".

Add a second and third paragraph to Specification 4.1.2.a.(1) under Surveillance Requirement as follows:

"Remove the squibs from the valves and verify that no deterioration has occurred by actual field firing of the removed squibs. In addition, field fire one squib from the batch of replacements.

Disassemble and inspect the squib-operated valves to verify that valve deterioration has not occurred."

Replace paragraphs two, three and four (on pages 26 and 27)

under Bases with the following paragraphs:

"The liquid poison system is designed to provide the capability to bring the reactor from full design rating (1850 thermal megawatts) to a cold, xenon free shutdown condition assuming none of the control rods can be inserted. To meet this objective, the system is designed to inject a quantity of boron which produces a concentration of at least 600 ppm of boron in the reactor core in less than 120 minutes. This concentration will bring the reactor from full design rating (1850 thermal megawatts) to greater than 3 percent delta k sub-critical ($0.97 k_{eff}$) considering the combined effects of the control rods, coolant voids, temperature change, fuel doppler, xenon, and samarium.

"In order to provide good mixing, the injection time has to be greater than 60 minutes. The maximum injection time of 120 minutes is necessary to override the rate of reactivity insertion due to cooldown of the reactor, including the

xenon decay, by a considerable margin.

"The liquid poison storage tank volume-concentration requirements of Figure 3.1.2.a Revised assure that the above requirements for boron solution insertion are met with one 30 gpm liquid poison pump. The point (2000 gallons, 20.4%) results in the required amount of solution being inserted into the reactor in not less than 60 minutes, and therefore, defines the maximum concentration-minimum value requirement. The point (3800 gallons, 10.7%) results in the required amount of solution being injected into the reactor in not more than 120 minutes and therefore defines the minimum concentration requirement. The boundary line joining these points is the locus of points from which the required amount of boron, with 25 percent margin to allow for any unexpected non-uniform mixing, will be inserted into the reactor in the allowable times. The maximum volume, 4080 gallons, is established by the tank capacity. The tank volume requirements include consideration for 197 gallons of solution which is contained below the point where the pump takes suction from the tank and therefore cannot be inserted into the reactor."

Specification Figure 3.1.2.a - page 28

Replace "Figure 3.1.2.a" with the attached "Figure 3.1.2.a Revised".

Specification 3.1.3, 4.1.3 and Bases - page 30

Replace Specification 3.1.3.b. under Limiting Condition for Operation in its entirety with the following:

"b. If one emergency cooling system becomes inoperable, Specification 3.1.3.a. shall be considered fulfilled, provided that the inoperable system is returned to an operable condition within 7 days and the additional surveillance required is performed."

In line 3 of third paragraph under Bases, change "1060 psig" to "1090 psig".

Specification 3.1.4, 4.1.4 and Bases - page 32

Replace Specification 3.1.4.b and c under Limiting Condition for Operation in their entirety with the following:

"b. If a redundant component of a core spray system becomes inoperable, that system shall be considered operable provided that the component is returned to an operable condition within 15 days and the additional surveillance required is performed."

"c. If a redundant component in each of the core spray systems becomes inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed."

Change the last sentence (beginning on line 4) of first paragraph under Bases to read as follows:

"For the worst line break, a loss-of-coolant accident, a core spray of at least 3400 gpm is required within 35 seconds to provide fuel stability sufficiently to assure effective core cooling."

Change item 3. under Bases (second paragraph on page 33)
to read as follows:

"3. The core spray delivery rate of 3400 gpm shall be available at the core spray nozzles inside the reactor vessel within 35 seconds."

Specification 3.1.5/4.1.5 Bases - page 34

Replace reference in second paragraph (line 10) "(Appendix E-1.3.6*)" with "(Section II.xv, Technical Supplement to Petition to Increase Power Level, dated April 1970)".

Specification 3.1.6 - page 36

Replace Specification 3.1.6.b. under Limiting Condition for Operation in its entirety with the following:

"b. If a redundant component becomes inoperable, the control rod drive pump coolant injection system shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed."

Specification 3.2.4, 4.2.4 and Bases - page 46

Change Specification 4.2.4.(1) under Surveillance Requirement to read as follows:

"(1) Samples shall be taken at least every 96 hours and analyzed for gross gamma activity."

Replace first paragraph under Bases in its entirety with the following:

"The primary coolant radioactivity concentration limit of 25 uCi total iodine per gram of water was calculated based on a steamline break accident which is isolated in 10.5 seconds. For this accident analysis, all the iodine in the mass of coolant released in this time period is assumed to be released to the atmosphere at the top of the turbine building (30 meters). By limiting the thyroid dose at the site boundary to a maximum of 30 Rem, the iodine concentration in the primary coolant is back-calculated assuming fumigation meteorology, Pasquill Type F at 1 m/sec. The iodine concentration in the primary coolant resulting from this analysis is 25 uCi/gm."

Specification Table 4.2.6 - pages 52, 53, 54

Delete the words "Main Steam" at item B.1 on page 52 under column heading Component.

Add new item B.4 on page 52 as follows:

<u>Component</u>	<u>Sample</u>	<u>Extent</u>	<u>Inspection Process See Note 1</u>	<u>Inspection Frequency See Note 2</u>
"4." "Main Steam Line"	"All accessible welds greater than 4" diameter"	"Entire circumference"	"UT"	"g"

Delete the words "Main Steam" at item E.1 on page 53 under column heading Component.

Add new item E.4 on page 53 as follows:

<u>Component</u>	<u>Sample</u>	<u>Extent</u>	<u>Inspection Process See Note 1</u>	<u>Inspection Frequency See Note 2</u>
"4." "Main Steam Line"	"All accessible circumferential welds greater than 4" diameter"	"Entire cir- cumference"	"UT"	"h"

Under Note 2:, on page 54, add items (g) and (h) as follows:

"g. Inspect on a frequency that will cover each accessible weld at least every seven years of operation."

"h. Inspect on a frequency that will cover each accessible weld at least every eight years of operation."

Specification 3.2.8, 4.2.8 and Bases - page 57

Change line 4 of Specification 3.2.8.a. under Limiting Condition for Operation to read: "... all sixteen of the safety ...".

Change line 2 of Specification 4.2.8.a. under Surveillance Requirement to read: "... of the sixteen safety valves shall ...".

Change line 4 of first paragraph under Bases to read "... of all 16 safety valves will limit reactor ...".

Specification 3.2.9/4.2.9 Bases - page 58

Change the last line of the second paragraph under Bases from "Appendix E (I.3.11)" to "Technical Supplement to Petition to Increase Power Level, Section II.xv".

Specification 3.3.3, 4.3.3 and Bases - pages 65, 66, 67

On page 65 in line 3 of third paragraph under Bases, change "2.0%/day" to "1.9%/day".

On page 66 under Surveillance Requirement, make the following changes:

Item b.(1), line 2, change "1.6" to "1.5".

Item b.(2), equation on line 3, change "1.6" to "1.5".

On page 66 under Bases, make the changes as follows:

Second paragraph, lines 1 and 2, change from "... as specified in 4.3.3.a is 1.6%/day ..." to "... as specified in 4.3.3.b is 1.5%/day ...".

Second paragraph, line 4, change "2.0%/day" to "1.9%/day".

Third paragraph, line 2, change "3.2%/day" to "3.0%/day".

Third paragraph, line 4, change "1.6%/day" to "1.5%/day".

On page 67 under Surveillance Requirement, add Specification 4.3.3.h. to read as follows:

"h. Inspection

The accessible interior surfaces of the drywell shall be visually inspected each operating cycle for evidence of deterioration."

Specification 3.3.4, 4.3.4 and Bases - page 68

Add Specification 4.3.4.c. under Surveillance Requirement to read as follows:

"c. At least once per operating cycle, each instrument-line flow check valve will be tested for operability."

Add a fifth paragraph under the Bases to read as follows:

"In addition to routine surveillance as outlined in First Addendum to Technical Supplement to Petition to Increase Power Level, each instrument-line flow check valve will be tested for operability. All instruments on a given line will be isolated at each instrument. The line will be purged by isolating the flow check valve, opening the bypass valves, and opening the drain valve to the equipment drain tank. When purging is sufficient to clear the line of non-condensibles and crud the flow-check valve will be cut into service and the bypass valve closed. The main valve will again be opened and the flow check valve allowed to close. The flow check valve will be reset by closing the drain valve and opening the bypass valve depressurizing part of the system. Instruments will be cut into service after closing of the bypass valve. Re-pressurizing of the individual instruments assures that flow check valves have reset to the open position."

Specification 3.3.6 - page 71

Replace Specification 3.3.6.b. under Limiting Condition for Operation in its entirety with the following:

"b. If a redundant component in each set or either set of valves becomes inoperable, Specification 3.3.6.a. shall be considered fulfilled, provided that the component or

set of valves is returned to an operable condition within 15 days and that the additional surveillance required is performed."

Specification 3.3.7 - page 73

Replace Specifications 3.3.7.b. and c. under Limiting Condition for Operation in its entirety with the following:

"b. If a redundant component of a containment spray system becomes inoperable, Specification 3.3.7.a. shall be considered fulfilled, provided that the component is returned to an operable condition within 15 days and that the additional surveillance required is performed."

"c. If a redundant component in each of the containment spray systems or their associated raw water systems become inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and that the additional surveillance required is performed."

Specification 3.4.4 and 4.4.4 - page 80

Replace Specification 3.4.4.b. under Limiting Condition for Operation in its entirety with the following:

"b. If one branch of the emergency ventilation system becomes inoperable, Specification 3.4.4.a. shall be considered fulfilled, provided that the branch is returned to an operable condition within 7 days and that the additional surveillance required is performed."

Change Specification 4.4.4.b.(1) and (2) under Surveillance Requirement to read as follows:

"(1) The removal efficiency of the particulate filters is not less than 99% for 0.3 micron mean particulate matter based on a hot dioctylphthalate (DOP) test."

"(2) The removal efficiency of the charcoal filters is not less than 99% based on a freon test."

Specification 3.6.1 - page 87

Change Section 3.6.1, Applicability, Objective and Specification 3.6.1.a.(1) and (2), inclusive, under Limiting Condition for Operation in its entirety to read as follows:

"3.6.1 Station Process Effluents

Applicability

Applies to the radioactive effluents from the station.

Objective

To assure that radioactive material is not released to the environment in an uncontrolled manner and to assure that any material released is kept as low as practical and, in any event, is within the limits of 10 CFR 20.

Specification

a. Stack Release

- (1) The maximum release rates of gross activity, except iodines and particulates with half

lives longer than eight days, shall be limited in accordance with the following equation:

$$Q \leq \frac{0.57}{\bar{E}} \text{ (Ci/sec)}$$

where Q is the stack release rate (Ci/sec) of gross activity and \bar{E} is the average gamma energy per disintegration (MeV/dis).

- (2) The maximum release rate of iodines and particulates with half lives longer than eight days shall be limited in accordance with the following equation:

$$Q \leq 1.5 \times 10^4 \text{ MPC}_i \text{ (Ci/sec)}$$

where Q is the stack release rate (Ci/sec) of iodines and particulates with half lives longer than eight days and MPC_i ($\mu\text{Ci}/\text{cm}^3$) is the maximum permissible concentration in air as defined in Column 1, Table II, of Appendix B and Note 1 thereto of 10 CFR 20."

Specification 4.6.1 - page 87

Change Specification 4.6.1.a.(1) and (2) under Surveillance Requirement in its entirety to read as follows:

"a. Stack Release

- (1) Station records of gross stack release rate of gaseous activity shall be maintained on an hourly basis by evaluation of the recorded data from the stack gas monitor to assure that the specified rates are not exceeded and to yield information concerning general integrity of the fuel cladding. Records of isotopic analyses shall also be maintained. Within one month after initial commercial service of the unit and within one month following refuelings, an isotopic analysis will be made of the gaseous activity release rate. From this sample, a ratio of long-lived and short-lived activity will be established. Samples of off-gas will be taken at least every 96 hours and gross ratio of long-lived and short-lived activity determined. When these samples indicate a change in the ratio of greater than 20% from the ratio established by the previous isotopic analysis, a new isotopic analysis shall be performed. A new isotopic analysis of off-gas will be performed at least quarterly. Gaseous release of tritium shall be calculated on a monthly basis from measured data."

(2) Station records of stack release of iodines and particulates with half lives greater than eight days shall be maintained on the basis of all filter cartridges counted. These cartridges shall be analyzed weekly when the iodine or particulate release rate is less than 10 percent of the maximum release rate given in Specification 3.6.1.a.(2), otherwise the cartridges shall be removed for analysis daily. When the gross release rate exceeds 1 percent of the maximum release rate given in Specification 3.6.1.a.(1) and the average daily gross activity release rate increases by 50 percent over the previous day, the cartridges shall be analyzed to determine the release rate increase for iodines and particulates."

Add Specification 4.6.1.a.(5) and (6) under Surveillance Requirement to read as follows:

"(5) At least once during each shift, a sensor check of the off-gas and stack gas monitors shall be made."

"(6) At least once during each operating cycle (prior to startup), verify automatic securing and isolation of the mechanical vacuum pump."

Specification 3.6.1/4.6.1 Bases - pages 87,88

Replace all paragraphs under item (1) of "Stack Release" Bases with the following:

"a. Stack Release

- (1) Detailed studies were conducted to establish a calculated rate for stack emission to the uncontrolled environment in accordance with the limits of 10 CFR 20 and are described in Appendix D of the FSAR. These calculations consider site meteorology, buoyancy characteristics, statistical tolerance for the environmental monitoring program, and isotopic content of the effluent as given in Table A-12 of the FSAR. Independent dose calculations for several locations offsite have been made by the AEC staff. The method utilized onsite meteorological data developed by the licensee and utilized diffusion assumptions appropriate to the site.

The method utilized by the AEC staff is described in Section 7-5.2.5 of "Meteorology and Atomic Energy - 1968", equation 7.63 being used. The results of these calculations were equivalent to those generated by the licensee provided the average gamma energy per disintegration for the assumed noble gas mixture with a

30-minute holdup is 0.7 MeV per disintegration.

Based on these calculations, a maximum release rate limit of gross activity, except for iodines and particulates with half lives longer than eight days, in the amount of $0.57/\bar{E}$ curies per second will not result in offsite annual doses in excess of the limits specified in 10 CFR 20. The \bar{E} determination need consider only the average gamma energy per disintegration since the controlling whole body dose is due to the cloud passage over the receptor and not cloud submersion in which the beta dose could be additive.

Field sampling and dose measurements in accordance with the environmental monitoring program will begin when the gross release rate of gaseous effluent approaches approximately 0.1 Ci/sec. The graded nature of the program and the location of sampling stations are described in Appendix D-4.1 of the FSAR. The sampling frequencies will be monthly during the appropriate seasons for each type of sample, provided that the effluent release rate is less than 1/3 of the maximum release rate limit. For higher release rates, the sampling frequency will be increased to weekly."

"(2) Detailed calculations of ground level air concentrations of iodines and particulates with half lives longer than eight days at several offsite locations have been made as described in Appendix D of the FSAR. These calculations consider site meteorology and buoyancy characteristics of the effluent. Based on these calculations, the release rate limit for these isotopes in the equation in Section 3.6.1.a.(2) is obtained. Use of this equation assures that releases will not result in offsite doses in excess of those specified in 10 CFR 20.

The assumptions used by the AEC staff for these calculations were: (1) onsite meteorological data for the most critical 22½ degree sector, (2) no building wake credit used, and (3) to consider possible reconcentration effects a reduction factor of 700 was applied to allow for the milk production and consumption mode of uptake. The reduction factor of 700 has been incorporated into the equation in Section 3.6.1.a.(2)."

On page 88 under Bases change the first paragraph designated as number "(2)" to number "(3)" and correspondingly "(3)" to "(4)".

Specification 3.6.1 - page 88

Replace Specification 3.6.1.b. under Limiting Condition for Operation in its entirety to read as follows:

"b. Liquid Effluent

- (1) The concentration of gross beta activity (above background) in the condenser cooling water discharge canal shall not exceed the limits stated below unless the discharge is controlled on a radionuclide basis in accordance with Appendix B, Table II, Column 2, of 10 CFR 20 and note 1 thereto:

Maximum Concentration (excluding tritium) -

1×10^{-7} $\mu\text{Ci/ml}$

- (2) Maximum tritium concentration

3×10^{-3} $\mu\text{c/ml}$

- (3) The radiation monitor on the discharge line from the waste disposal tanks to the discharge tunnel shall be operative or if not, two independent samples of each tank shall be taken and two Station personnel shall independently check valving prior to discharge of liquid effluents."

Specification 4.6.1 - Page 88

Replace Specification 4.6.1.b. under Surveillance Requirement in its entirety to read as follows:

"b. Liquid Effluent

- "(1) Station records shall be maintained of the radioactive concentration and volume before dilution of each batch of liquid effluent released and of the average dilution flow and length of time over which each discharge occurred.
- "(2) Each batch of radioactive liquid effluent shall be sampled and analyzed prior to release.
- "(3) The liquid effluent radiation monitor shall be calibrated quarterly, shall have an instrument channel test monthly, and a sensor check daily.
- "(4) Isotopic analysis of a representative batch of liquid waste shall be performed at least once per quarter. Each batch of liquid waste shall be counted for gross beta activity and when released on a radionuclide basis, the analysis shall also include a gross gamma count and gamma scan. If gamma energy peaks other than those determined by the previous isotopic analysis are found, a new isotopic analysis shall be performed and recorded. An isotopic analysis shall also be performed should there be significant changes in the gamma to beta ratio of the batch.
- "(5) Grab samples shall be collected monthly from the discharge canal and analyzed for gross beta activity.

- "(6) A sample of a representative waste batch shall be analyzed for tritium at least once per quarter.
- "(7) The performance and results of independent samples and valve checks shall be logged."

Specification 3.6.1/4.6.1 Bases - Pages 88, 89

Replace all paragraphs under items (1) and (2) of "Liquid Effluent" Bases with the following:

"b. Liquid Effluent

- "(1) Radioactive effluents released from the Station to unrestricted areas on the basis of gross beta analysis are based on the assumption that iodine 129 and radium are not present. Accordingly, Appendix B, Table II, Column 2 of 10 CFR 20 will permit a concentration up to 1×10^{-7} uCi/ml in the cooling water discharge canal.

If radioactive effluents are released to unrestricted areas on a radionuclide basis, the MPC shall be determined and controlled in the cooling water discharge canal in accordance with Appendix B, Table II, Column 2 of 10 CFR 20 and note 1 thereto.

The release of effluents on a radionuclide basis shall be based on an isotopic analysis of a typical waste batch. This analysis shall be performed at least quarterly and shall include specific radiochemical separations for ^{90}Sr and ^{131}I . Along with an isotopic analysis, a gross gamma and

a gross beta counting efficiency shall be determined for the particular isotopic mixture and a gamma/beta ratio established.

A required dilution factor for the isotopic mixture shall be determined using the following formula:

$$\text{Required D.F.} = \frac{C_1}{\text{MPC}_1} + \frac{C_2}{\text{MPC}_2} + \dots + \frac{C_n}{\text{MPC}_n}$$

Where: C_1 = concentration of Isotope 1, etc.

MPC_1 = MPC from Appendix B, Table II, Column 2,
10 CFR 20

This dilution factor can be expressed as a MPC for the isotopic mixture thus:

$$\text{Mixture MPC} = \frac{\text{gross concentration}}{\text{Required D.F.}}$$

This mixture MPC shall be used to determine the appropriate discharge rates for waste batches but can only be used for the particular mixture as determined above.

In order to verify that the mixture has not significantly changed, each batch shall be counted for gross beta, gross gamma and shall have a gamma scan performed. Significant changes ($\pm 50\%$) in the gamma/beta ratio or the appearance of new energy peaks in the gamma scan shall require a new isotopic analysis to be performed.

The minimum frequency of the isotopic analysis will be varied depending on the average discharge canal concentration. A minimum of one isotopic analysis per quarter will be per-

formed as long as the average concentration of the discharge canal is less than 1% of the previously calculated Mixture MPC. An average concentration of between 1% and 10% of Mixture MPC shall require an isotopic analysis at least monthly. For average concentrations greater than 10% of the Mixture MPC, each batch shall be isotopically analyzed. The average concentration shall be calculated daily and shall be a running average annual concentration.

An environmental monitoring program in the lake will be conducted as outlined in Appendix D-4.2 of the FSAR. Samples required under this graded program will be taken twice a year unless the average discharge canal concentration exceeds 1×10^{-7} in which case weekly analysis of the lake water will be performed. Semi-annual samples required under the graded program are to be taken at times when the biologic cycle indicates that the concentrations of radionuclides should be the highest.

- "(2) Procedures require sampling of each waste batch prior to release to the discharge canal. This procedure is backed up by the radiation monitors in the line from the waste disposal tanks to the discharge canal. The hi hi alarm point shall be set on these monitors such that they will warn of a higher than appropriate MPC in the discharge canal. In the event of the hi-hi alarm, the discharge shall cease until the cause is corrected. In the event the effluent

monitor is out of service, two independent samples of each waste batch shall be taken and two Station personnel will independently check valving prior to discharge of liquid waste batches."

Specification 3.6.1d and 4.6.1.d - Page 89

Add new Specification 3.6.1.d. under "Limiting Condition for Operation" to read as follows:

"d. General

It is expected that releases of radioactive material in effluents will be kept at small fractions of the limits specified in Section 20.106 of 10 CFR Part 20. At the same time, the licensee is permitted the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even under unusual operating conditions, which may temporarily result in releases higher than such small fractions, but still within the limits specified in Section 20.106 of 10 CFR Part 20. It is expected that in using this operational flexibility under unusual operating conditions the licensee will exert his best efforts to keep levels of radioactive material in effluents as low as practical."

Add new Specification 4.6.1.d. under "Surveillance Requirement"

to read as follows:

"d. General

Operating procedures shall be developed and used, and equipment

which has been installed to maintain control of radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences, shall be maintained and used to keep levels of radioactive material in effluents released to unrestricted areas as low as practical. The environmental monitoring program specified in Table 4.6.1 shall be conducted."

"A report shall be submitted to the Commission at the end of each six-month period of operation specifying total quantities of radioactive material released to unrestricted areas in liquid and gaseous effluents during the previous six months and such other information on releases as may be required to estimate exposures to the public resulting from effluent releases. If quantities of radioactive material released during the reporting period are unusual for normal reactor operations, including expected operation occurrences, the report shall cover this specifically. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate."

Add new Table 4.6.1 as follows:

TABLE 4.6.1

SAMPLE COLLECTION AND ANALYSIS

NINE MILE NUCLEAR POWER STATION - ENVIRONMENTAL MONITORING PROGRAM

A. Lake Program (Described in Appendix D-4 of the FSAR)

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Collection Frequency</u>	<u>Number of Locations</u>
1. Fish	GB and Sr-90	Spring and Fall	Two
2. Clams	GB, GSA, Sr-90	Spring and Fall	Two
3. Gammarus (Fresh Water Shrimp)	GB, GSA, Sr-90	Spring and Fall	Two
4. Lake Water	GB, GSA	Weekly	Downstream of Effluent Discharge

Coding: GB - gross beta
GSA - gamma spectral analysis

Notes on Graded Program:

- A. No environmental lake program for effluent discharged at less than 1×10^{-8} uCi/ml average concentration.
- B. Standard environmental lake program as shown for items 1 thru 3 for effluent discharged between 1×10^{-8} to 1×10^{-7} uCi/ml average concentration.
- C. Standard environmental lake program as shown for items 1 thru 4 for effluent discharged above 1×10^{-7} uCi/ml but less than MPC in accordance with Appendix B, Table II, Column 2, of 10 CFR 20 and note 1 thereto.
- D. An appropriate number of samples shall be taken at each location.

TABLE 4.6.1 (continued)

B. Land Program [Eleven sampling stations (5 onsite and 6 offsite) are employed as described in Appendix D-4 of FSAR.]

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Collection Frequency</u>	<u>Number of Stations</u>	<u>Location</u>
1. Air Particulates	GSA (monthly) GB - all (24 hrs decay)	Weekly	Eleven	5 onsite 6 offsite
2. Precipitation	GB & GSA	Monthly	Eleven	5 onsite 6 offsite
3. Film Badges or TLDS	Gross Gamma	Monthly	Eleven	5 onsite 6 offsite
4. Radiation Monitors	Gross Gamma	Continuous	Six	5 onsite 1 offsite
5. Farm Milk	Gross Beta, SR-90, I-131	Monthly	Adjacent Dairy Herds	Plant vicinity
6. Airborne Halogens	GSA	Weekly	Eleven	5 onsite 6 offsite

Coding: GSA - Gamma spectral analysis
 GB - gross beta
 GB & GSA - gross beta and gamma spectral analysis

Notes on Graded Program:

- A. No environmental land program for stack releases less than approximately 3 percent of maximum release rate.
- B. Standard environmental land program as shown for items 1 thru 5 for stack releases between approximately 3 to 10 percent of maximum release rate.
- C. Standard environmental land program as shown for items 1 thru 6 plus weekly for farm milk samples for stack releases between 10 to 30 percent of maximum release rate.
- D. Environmental land program upgraded to twice weekly onsite for item 1, weekly onsite for item 2, bi-monthly onsite for item 3 and weekly for item 5 for stack releases greater than approximately 30 percent of maximum release rate.
- E. After substantiating data is analyzed for any of the release rate levels, the environmental land program is degraded by one level, i.e., B. to A., C. to B. and D. to C.

Specification 3.6.2, 4.6.2 and Bases - pages 90, 92

Add Specification 4.6.2.c. under Surveillance Requirement to read as follows:

"c. At least daily during reactor power operation, the reactor neutron flux peaking factor shall be estimated and the flow-referenced APRM scram and rod block signals shall be adjusted, if necessary, as specified in Figure 2.1.2 Revised."

On page 92, add the paragraph which follows as the fifth paragraph of the Bases:

"The set points on the generator load rejection and turbine stop valve closure scram trips are set to anticipate and minimize the consequences of turbine trip with failure of the turbine bypass system as described in the bases for Specification 2.1.2. Since the severity of the transients is dependent on the reactor operating power level, bypassing of the scrams below the specified power level is permissible."

Change the last sentence under the Bases beginning on page 92 and ending in the first line of page 93 to read as follows:

"These errors are compensated for in the transient analyses by conservatism in the controlling parameter assumptions as discussed in the bases for Specification 2.1.2."

Tables 3.6.2a and 4.6.2a - Page 95

"3.6.2a - Limiting Condition for Operation, Parameter (2) High Reactor Pressure - Replace the set point of ' ≤ 1050 psig' with ' ≤ 1080 psig'."

Tables 3.6.2a and 4.6.2a - Page 96

"3.6.2a - Limiting Condition for Operation and 4.6.2a - Surveillance Requirement - Add Parameters 11 and 12 and notes (i) and (j) to Tables 3.6.2a and 4.6.2a", as shown below:

SEE PAGE 40a ATTACHED

Tables 3.6.2C and 4.6.2.C - Page 99

"3.6.2.C - Limiting Condition for Operation, Parameter (1) High-High Reactor Pressure - Replace the set point of ' ≤ 1060 psig' with ' ≤ 1090 psig'."

Tables 3.6.2.h and 4.6.2.h - Page 106

INSTRUMENTATION THAT INITIATES SCRAM

Parameter	3.6.2a - Limiting Condition for Operations				4.6.2a - Surveillance Requirement					
	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position In Which Function Must be Operable				Sensor Check	Instrument Channel Test	Instrument Channel Calibration
				Shutdown	Refuel	Startup	Run			
(11) Turbine Stop Valve Closure	2	4	≤10% valve closure				(i)	None	Once per 3 months	None
(12) Generator Load Rejection	2	2	(j)				(i)	None	Once per month	Once per 3 months

Additional Notes for Tables 3.6.2a and 4.6.2a

(i) May be bypassed when reactor power level is below 45%.

(j) Trip upon loss of oil pressure to the acceleration relay.

3.6.2.h - Limiting Condition for Operation, Parameter (1) a. Upscale-
Replace the set point of " ≤ 2.13 Ci/sec" with " ≤ 0.57 Ci/sec".

Specification 3.6.3 - pages 109, 110

Delete the words "or a written report shall be submitted to the Atomic Energy Commission" in each item listed below of Specification 3.6.3 under Limiting Condition for Operation as follows:

- b. Lines 5 and 6.
- c. Lines 5 and 6; again in lines 10 and 11.
- d. Lines 2, 3 and 4.
- h. Lines 2, 3 and 4.

On page 109 under Limiting Condition for Operation column, Specification 3.6.3.b in line 4, change the words from "within 24 hours" to "within 7 days".

SECTION 6 - ADMINISTRATIVE CONTROLS

Section 6.1 - Pages 118 through 124

Page 118 - Change the second paragraph from top of page to read as follows:

"In the absence of the Chairman, an acting Chairman who meets the education and experience qualifications will be designated."

Page 118 - Change the title "Executive Engineer" to "Chief Engineer" in line 1 of the third paragraph from the top of the page.

Page 118 - Under item (3)(b), change "Chief System Project Engineer - Chairman" to "Staff Engineer or Manager - Chairman".

Page 118 - Delete the word "management" from the last line on the page.

Page 119 - Second line from the top of page, change "Chief Nuclear Engineer" to "Staff Engineer - Nuclear".

Page 119 - Line 6 from top of page, change "Chief Mechanical Engineer" to "Staff Engineer - Mechanical or Electrical".

Page 119 - Line 8 from top of page, insert after the word "mechanical" the words "or electrical".

Page 119 - Line 10 from top of page, change "Group Head - Reactor Engineering" to "Staff Engineer - Environment".

Page 122 - Organization Chart top block, change "Executive Engineer" to "Chief Engineer".

Page 122 - Organization chart block titled Safety Review & Audit Board, Change titles as follows:

<u>From</u>	<u>To</u>
Chief System Project Engr. Chm.	Staff Engineer or Manager - Chm.
Chief Nuclear Engr.	Staff Engineer Nuclear
Chief Mechanical Engr.	} Staff Engineer - Mech. or Electrical
Group Head - Reactor Engr.	
Group Head - Environmental Engr.	Staff Engineer - Environment

Page 123 - Under column headed Safety Review & Audit Board, Change the title "Exec Engr." to "Chief Engr." as is appears in item 1, line 4; repeat item 1, line 4; item 2, line 6; and make the same change in the right-hand column heading.

Page 124 - Under column headed Safety Review & Audit Board, Change the title "Exec. Engr." to "Chief Engr." in line 3 of the last paragraph; and make the same change in the right-hand column heading.

Section 6.7 Reporting Requirements - pages 128-130

Replace Section 6.7 in its entirety with the following:

6.7 Reporting Requirements

In addition to reports required by applicable regulations, the following information shall also be provided:

6.7.1 Events requiring reports within 24 hours by telephone or telegraph to Region I Compliance Office followed

by a written report within 10 days to the Director, Division of Reactor Licensing, USAEC, Washington, D. C. 20545; with a copy to Region I Compliance Office. The written report, and to the extent possible the preliminary telephone or telegraph report, shall describe, analyze and evaluate safety implications, and outline the corrective actions and measures taken or planned to prevent recurrence of a., b. and c., below:

- a. Any significant variation of measured values of thermal, nuclear or hydraulic characteristics from a corresponding predicted value.
- b. Any abnormal occurrences as specified in the Definitions Section of these specifications.
- c. Incidents or conditions which resulted in a safety limit established in these Specifications being exceeded.

6.7.2 Events requiring reports within 30 days (in writing to the Director, Division of Reactor Licensing, USAEC, Washington, D. C. 20545; with a copy of Region I Compliance Office):

- a. Any change in transient or accident analyses, as described in the Final Safety Analysis Report, which involves an unreviewed safety question as defined in Section 50.59(c) of 10 CFR 50.
- b. Any changes in plant operating organization which involve positions for which minimum qualifications are specified in the Technical Specifications, or in personnel assigned to these positions.

6.7.3 Routine Operating Reports (in writing to the Director, Division of Reactor Licensing, Washington, D. C. 20545):

1. A routine operating report shall be prepared for each six-month period to January 1 and July 1 of each year. Such reports are to be submitted within 60 days after the end of each reporting period. The following information shall be provided (summarized on a monthly bases):

a. Nuclear

- (1) Number of hours the plant was operated.
- (2) Number of times the reactor was made critical.
- (3) Gross thermal power generated.
- (4) Operating histogram, showing the thermal power level of the reactor versus time for the report period.
- (5) Equivalent Full Power Hours.

b. Electrical

- (1) Gross power generated (in MWh).
- (2) Net power generated (in MWh).
- (3) Length of time generator was on line (in hours).

c. Shutdowns

- (1) Number of scrams and shutdowns.
- (2) Duration of down time (in hours).
- (3) Reasons for outage.

d. Maintenance (on systems or components designed to prevent or mitigate the consequences of nuclear accidents)

- (1) Nature of the maintenance; e.g., routine, emergency, preventive, or corrective.
- (2) The effect, if any, on the safe operation of the reactor.

- (3) The cause of any malfunction for which corrective maintenance was required.
- (4) The effects of any such malfunctions.
- (5) Corrective and preventive action taken to preclude recurrence of malfunctions.
- (6) Time required for completion.

e. Radioactive Liquid Waste

- (1) Total curie activity discharged.
- (2) Total volume (in gallons before dilution) of liquid waste discharged.
- (3) Total volume (in gallons) of dilution water used.
- (4) Average concentration (in $\mu\text{C}/\text{cc}$) at point of discharge.
- (5) Maximum concentration released for any day during the reporting period, including time and date.
- (6) Percentage of Technical Specification limit released.
- (7) Results of required isotopic analyses and estimated curies of each identified nuclide released.
- (8) Total curie activity of tritium discharged.

f. Gaseous Waste

- (1) Total curies activity discharged separated into noble gases, iodine, and particulates.
- (2) Maximum activity released for any day during the reporting period, including time and date.
- (3) Percentage of Technical Specification limit released and MPC value.
- (4) Results of required isotopic analyses and estimated total curies of each identified nuclide released.

g. Solid Radioactive Waste

- (1) Total volume (in cubic feet) of solid waste generated.
- (2) Gross curie activity involved.
- (3) Dates and disposition of the material if shipped off-site.

h. Environmental Monitoring

- (1) For each medium sampled during the six-month period, the following information shall be provided:
 - a. Number of sampling locations.
 - b. Total number of samples.
 - c. Number of locations at which levels are

found to be at least 10 percent above local backgrounds.

- d. Highest, lowest and the annual average concentrations or levels of radiation for the sampling point with the highest average and description of the location of that point with respect to the site.
- (2) If levels of radioactive material in environmental media indicate the likelihood of public intakes in excess of 3 percent of those that could result from continuous exposure to the concentration values listed in Appendix B, Table II, Part 20, estimates of the likely resultant exposure to individuals and to population groups and assumptions upon which estimates are based shall be provided. (These values are comparable to the top of Range I as defined in FRC Report No. 2.)
 - (3) If offsite environmental concentrations are observed which are greater than normal background fluctuations, correlation of these results with effluent releases shall be provided.

Section 6.8 Special Reports - Page 130 - 132

In the first line of Subsection 6.8.b, insert the words "as required in Section 6.7 above" between "report" and "shall".

Delete Subsection d. including items (1), (2), (3) and (4) on Page 131.

Reidentify Subsection "e" on Page 132 as Subsection "d".

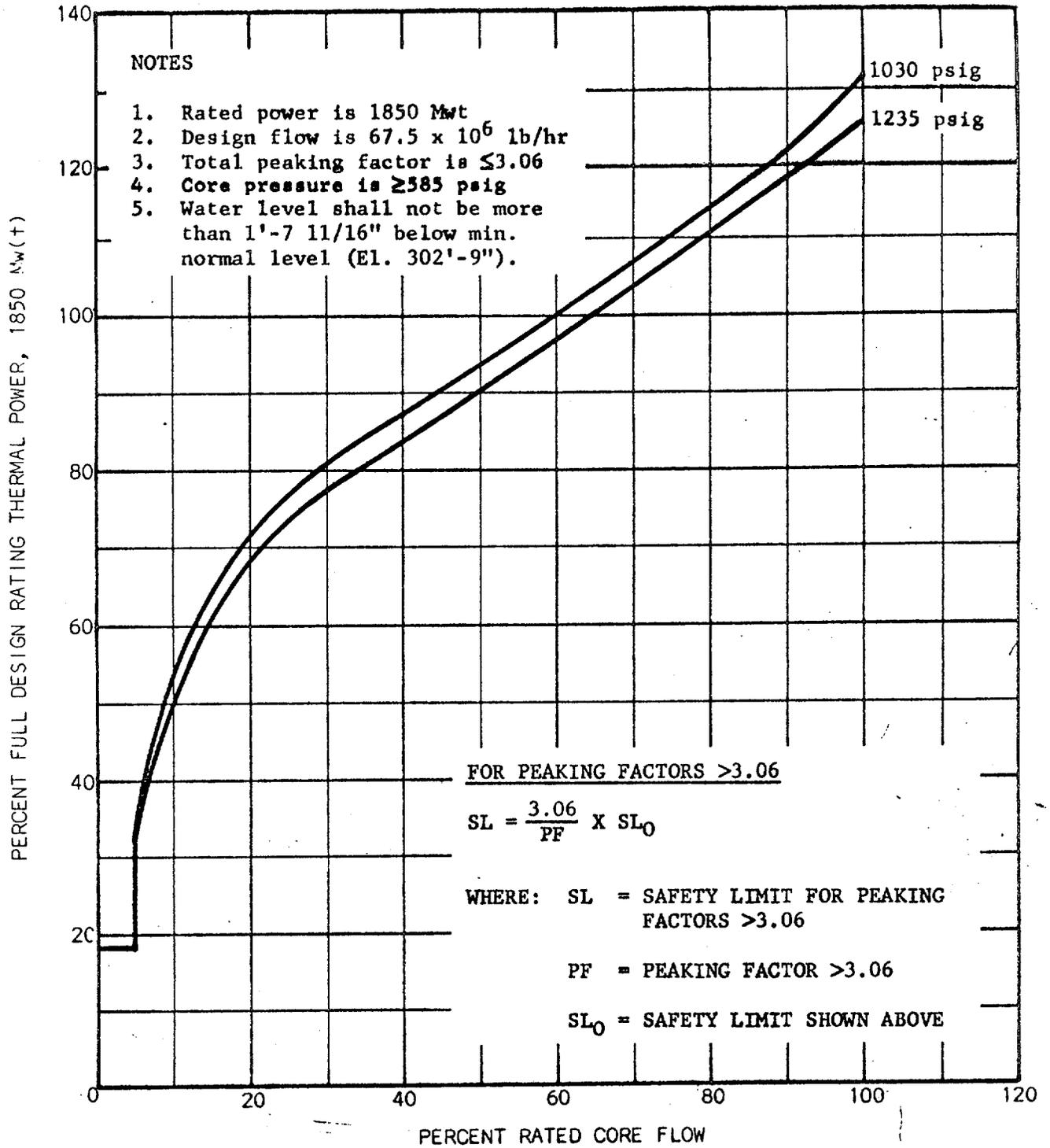


FIGURE 2.1.2 Revised

FLOW BIASED SCRAM AND APRM ROD BLOCK

FLOW BIASED SCRAM
AND APRM ROD BLOCK

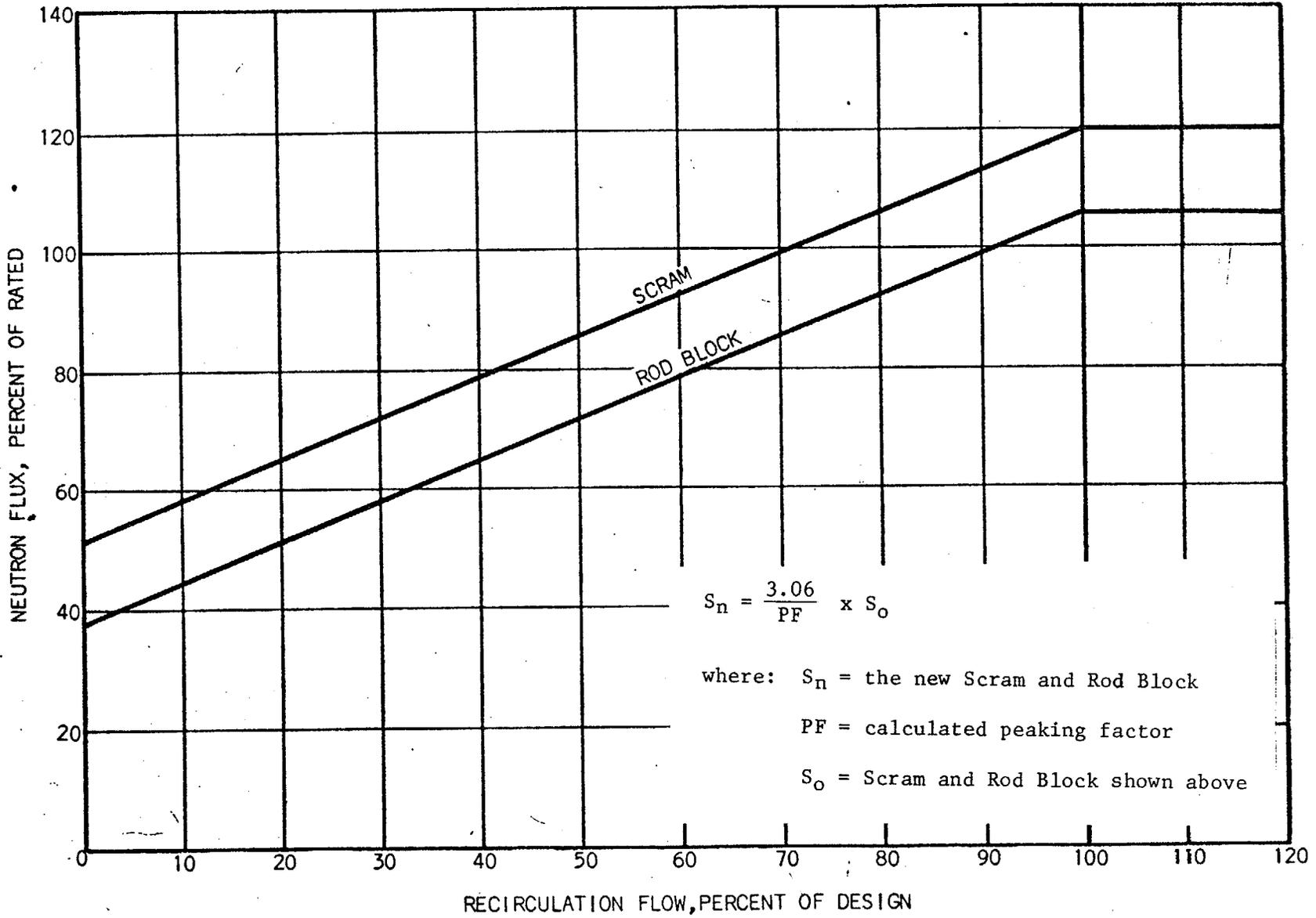
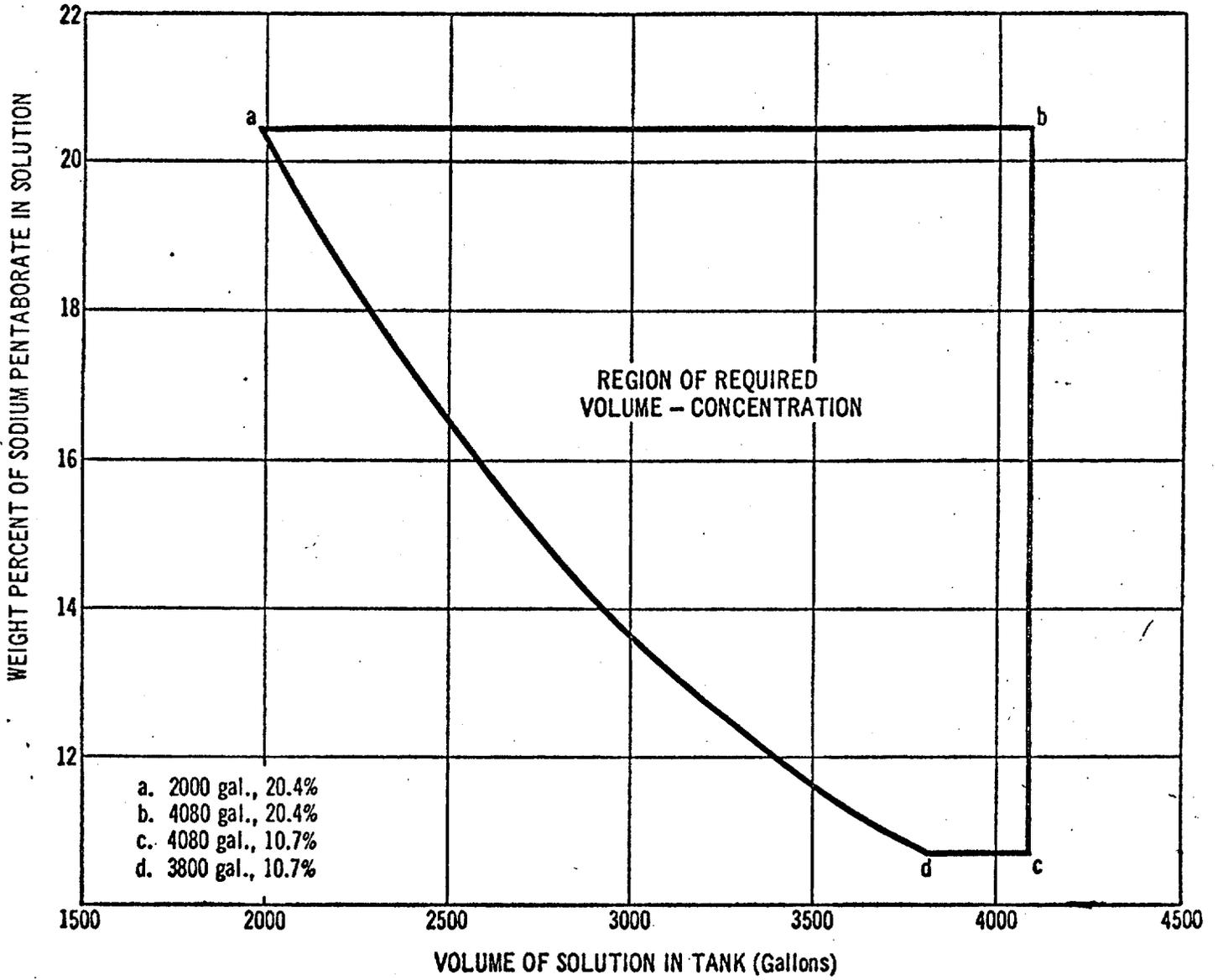


Figure 2.1.2 Revised



UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-220

NIAGARA MOHAWK POWER CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

No request for a hearing or petition to intervene having been filed following publication of the notice of proposed action in the Federal Register on March 10, 1971 (36 F. R. 4631), the Atomic Energy Commission ("the Commission") has issued Amendment No. 2 to Provisional Operating License No. DPR-17 to the Niagara Mohawk Power Corporation as proposed in that notice. The amendment authorizes the Corporation to operate its Nine Mile Point Nuclear Station located on the southeast corner of Lake Ontario in Oswego County, New York, at steady-state power levels up to a maximum of 1850 megawatts (thermal) in accordance with Niagara's application dated April 20, 1970, and amendments thereto.

The Commission has found that the application, as amended, for the amendment to the facility license complies with the requirements of Atomic Energy Act of 1954, as amended, and the Commission's regulations published in 10 CFR Chapter I, and that the amendment will not be inimical to the common defense and security or to the health and safety of the public.

A copy of the license amendment is available for inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C.

Copies of the license amendment may be obtained at the Public Document Room or upon request sent to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this 14th day of April 1971.

FOR THE ATOMIC ENERGY COMMISSION

Peter A. Morris
Peter A. Morris, Director
Division of Reactor Licensing