

JUN 28 1979

Docket No. 50-338

Mr. W. L. Proffitt
Senior Vice President - Power
Operations
Virginia Electric and Power Company
P. O. Box 26666
Richmond, Virginia 23261

REGULATORY DOCKET FILE COPY

Dear Mr. Proffitt:

SUBJECT: ISSUANCE OF AMENDMENT NO. 12 TO FACILITY OPERATING LICENSE
NPF-4 - NORTH ANNA POWER STATION, UNIT NO. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 12 to Facility Operating License NPF-4 with Technical Specification page changes.

In your letter of June 13, 1978, you requested a change to Technical Specification 3/4.7.12 "Settlement of Class 1 Structures." Specifically, this change is related to the maximum allowable average service water pumphouse settlement.

In your letter of May 17, 1979, you proposed a revision to your original June 13, 1978 request and stated that the proposed specifications include the limits on settlement of the service water pump house which were established by the staff in its January 9, 1979 transmittal to the Atomic Safety and Licensing Appeal Board. You further stated that the revision also corrected typographical errors and incorrect settlement base dates.

This amendment revises Appendix A Technical Specifications 3/4.7.12 and 3/4.7.13 and Tables 3.7-5 and 3.7-6 concerning the maximum allowable settlement values of Class I Structures and allowable groundwater conditions.

The safety evaluation, dated January 9, 1979, and supplemented by our testimony to the Atomic Safety and Licensing Appeal Board, dated April 27, 1979 are enclosed.

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JUN 28 1979

It should be noted that as indicated in our testimony to the Atomic Safety and Licensing Appeal Board, dated April 27, 1979, the staff has concluded that the frequency of monitoring certain settlement points should be increased.

This matter has been discussed with your representatives and they have indicated that VEPCO would comply with our position.

We have determined that this amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the proposed amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 51.5(d)(4), that an environmental statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

This amendment does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action and that the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

A copy of the Federal Register Notice concerning issuance of Amendment No. 12 to Facility Operating License No. NPF-4 is also enclosed.

Sincerely,

Original Signed by
O. D. Parr

Olan D. Parr, Chief
Light Water Reactors Branch No.3
Division of Project Management

Enclosures:

- 1. Amendment No. 12 to Facility Operating License No. NPF-4 with Technical Specification page changes
- 2. Federal Register Notice
- 3. Testimony (Safety Evaluation) *see Hearing Rpts*

cc w/enclosures:

See next page	LWR #3: LPM	DSE	DSS	OELD	LWR #3 BC
OFFICE →	LA	AD	JK	SWANSON	ODParr
SURNAME →	Brook/LM	Wierick	Ten	Bosnak	Parr
DATE →	6/22/79	6/22/79	6/22/79	6/25/79	6/27/79

Mr. W. L. Proffitt

- 3 -

JUN 28 1979

cc: Mrs. James C. Arnold
P. O. Box 3951
Charlottesville, Virginia 22903

Mr. Anthony Gambaradella
Office of the Attorney General
11 South 12th Street - Room 308
Richmond, Virginia 23219

Richard M. Foster, Esq.
211 Stribling Avenue
Charlottesville, Virginia 22903

Michael W. Maupin, Esq.
Hunton, Williams, Gay & Gibson
P. O. Box 1535
Richmond, Virginia 23212

Mrs. June Allen
412 Owens Drive
Huntsville, Alabama 35801

Mr. James Torson
501 Leroy
Socorro, New Mexico 87801

Mrs. Margaret Dietrich
Route 2, Box 568
Gordonsville, Virginia 22942

William H. Rodgers, Jr., Esq.
Georgetown University Law Center
600 New Jersey Avenue, N.W.
Washington, D. C. 20001

Mr. Peter S. Hepp
Executive Vice President
Sun Shipping & Dry Dock Company
P. O. Box 540
Chester, Pennsylvania 19013

Mr. R. B. Briggs
Associate Director
110 Evans Lane
Oak Ridge, Tennessee 37830

John J. Runzer, Esq.
Pepper, Hamilton & Scheetz
123 South Broad Street
Philadelphia, Pennsylvania 19109

Clarence T. Kipps, Jr., Esq.
1700 Pennsylvania Avenue, N.W.
Washington, D. C. 20006

Carroll J. Savage, Esq.
1700 Pennsylvania Avenue, N. W.
Washington, D. C. 20006

Mr. James C. Dunstan
State Corporation Commission
Commonwealth of Virginia
Blandon Building
Richmond, Virginia 23209

Alan S. Rosenthal, Esq.
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Michael C. Farrar, Esq.
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. John H. Buck
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. W. L. Proffitt

- 4 -

JUN 28 1979

cc: Mr. Michael S. Kidd
U. S. Nuclear Regulatory Commission
P. O. Box 128
Spotsylvania, Virginia 22553

Dr. Paul W. Purdom
Department of Civil Engineering
Drexel University
Philadelphia, Pennsylvania 19104

Dr. Lawrence R. Quarles
Apartment No. 51
Kendal-at-Longwood
Kennett Square, Pennsylvania 19348

Mr. Irwin B. Kroot
Citizens Energy Forum
P. O. Box 138
McLean, Virginia 22101

James B. Dougherty, Esq.
Potomac Alliance
P. O. Box 9306
Washington, D.C. 20005

Mr. A. D. Johnson, Chairman
Board of Supervisors of
Louisa County
Trevillians, Virginia 23170

Mr. J. B. Jackson, Jr.
Commonwealth of Virginia
Council on the Environment
903 9th Street Office Building
Richmond, Virginia 23219

Mr. George Pence
U. S. Environmental Protection Agency
Region III Office
Curtis Building
6th & Walnut Streets
Philadelphia, Pennsylvania 19106

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
US EPA
Crystal Mall #2
Arlington, Virginia 20460

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 12
License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated June 13, 1978, and revised on May 17, 1979, complies with the standards and 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. The facility will operate in conformity with the license, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and revised pages 3/4 7-70, 3/4 7-71, 3/4 7-72, 3/4 7-73, 3/4 7-74, B 3/4 7-7, B 3/4 7-8 to Appendix A of the Technical Specifications.

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SURNAME >						
DATE >						

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 12, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license Amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY

Domenic B. Vassallo, Acting Director
Division of Project Management

Enclosure:
Appendix A Technical
Specification page changes

Date of Issuance: JUN 28 1979

*SEE PREVIOUS YELLOW FOR CONCURRENCES

[Signature]
A.A.D.:LWR
*DBrinkman
6/20/79

[Signature]
A.A.D.:LWR
SVarga
6/28/79

[Signature]
A.D./DPM
DVassallo
6/28/79

OFFICE	LWR #3:LA	LWR #3:LPM	DSE	DSS	OELD	LWR #3:BC
SURNAME	MRushbrook/LM	*ADromerick	*LHetter/ *RJackson	*KKiesse/ *RBosnar	*DSwanson	*ODParr
DATE	6/27/79	6/22/79	6/22/79	6/22/79	6/25/79	6/27/79

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 12, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license Amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Domenic B. Vassallo, Assistant Director
for Light Water Reactors
Division of Project Management

Enclosure:
Appendix A Technical
Specification page changes

Date of Issuance:

DOR *DB*
DBrinkman
6/22/79

A. D LWR
D. B. Vassallo
6/ 179

OFFICE ➤	LWR #3:LA	LWR #3:PM	DSE	DSS	OELD <i>DS</i>	LWR #3:BC
SURNAME ➤	<i>LM</i> MRushby	<i>AM</i> Momerick	<i>HR</i> Heiler RJackson	<i>RB</i> BKieser RBoshak	DSwanson	<i>OP</i> OParr
DATE ➤	6/27/79	6/27/79	6/27/79	6/22/79 <i>RSB</i>	6/25/79	6/27/79



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 12
License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated June 13, 1978, and revised on May 17, 1979, complies with the standards and 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. The facility will operate in conformity with the license, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and revised pages 3/4 7-70, 3/4 7-71, 3/4 7-72, 3/4 7-73, 3/4 7-74, B 3/4 7-7, B 3/4 7-8 to Appendix A of the Technical Specifications.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 12, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license Amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Acting Director
Division of Project Management

Enclosure:
Appendix A Technical
Specification page changes

Date of Issuance: JUN 28 1979

NORTH ANNA POWER STATION, UNIT NO. 1 -

AMENDMENT NO. 12 TO NPF-4

Distribution w/enclosure:

Docket File ~~✗~~

NRC PDR

Local PDR (2)

LWR #3 File

D. Swanson, OELD

S. Goldberg

OELD

R. Boyd

D. Ross

D. Vassallo

O. Parr

A. Dromerick

M. Rushbrook

F. Williams

IE (3)

Lana Cobb, I&E

N. Dube, MPA

M. Jinks (4)

W. Miller, ADM

R. DeYoung, DSE

B. Scharf (10)

E. Hughes

M. Duncan, DSE

P. Leech, DSE

E. Reeves, DOR

P. Wagner, DOR

D. Brinkman, DOR

C. Parrish, DOR

BCC: JBuchanan
TAbernathy
ARosenthal, ASLAB
JYore, ASLBP
ACRS (16)

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-338

VIRGINIA ELECTRIC AND POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 12 to Facility Operating License No. NPF-4, issued to Virginia Electric and Power Company, which revises pages to the Appendix A Technical Specifications for operation of the North Anna Power Station, Unit No. 1 (the facility) located in Louisa County, Virginia. The amendment is effective as of its date of issuance.

The amendment revises Appendix A Technical Specifications 3/4.7.12 and 3/4.7.13 and Tables 3.7-5 and 3.7-6 concerning the maximum allowable settlement values of Class I structures and allowable groundwater conditions of the pumphouse and service water reservoir.

The application for the amendment dated June 13, 1978, and revised on May 17, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, it has further been concluded that the amendment involves

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SURNAME →				
DATE →				

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and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) Virginia Electric and Power Company letters, dated June 13, 1978 and May 17, 1979; (2) Amendment No. 12 to License No. NPF-4 with Appendix A Technical Specification page changes, and (3) the Commission's related Safety Evaluation, dated January 9, 1979, and supplemented by testimony to the Atomic Safety and Licensing Appeal Board, dated April 27, 1979. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555 and at the Board of Supervisor's Office, Louisa County Courthouse, Louisa, Virginia 23093 and at the Alderman Library, Manuscripts Department, University of Virginia, Charlottesville, Virginia 22901. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this 28th day of June, 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
Olan D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management

SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE	LWR-3:LA	LWR-3:LPM	OELD <i>AV</i>	LWR-3:BC		
SURNAME	<i>M. Rushbrook</i>	ADromerick	<i>D. SWANSON</i>	<i>ODParr</i>		
DATE	<i>6/25/79</i>	<i>6/22/79</i>	<i>6/25/79</i>	<i>6/25/79</i>		

and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) Virginia Electric and Power Company letter, dated June 13, 1978; (2) Amendment No. 12 to License No. NPF-4 with Appendix A Technical Specification page changes, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555 and at the Board of Supervisor's Office, Louisa County Courthouse, Louisa, Virginia 23093 and at the Alderman Library, Manuscripts Department, University of Virginia, Charlottesville, Virginia 22901. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this _____ day of _____ 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Olan D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management

OFFICE >	LWR #3:LA	LWR #3:PM	OELD	LWR #3:BC		
SURNAME >	MRushbrookLM	ABromerick		ODParr		
DATE >	6/21/79	6/22/79	6/ /79	6/ /79		

ATTACHMENT TO LICENSE AMENDMENT NO. 12

FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages as indicated. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

3/4 7-70
3/4 7-71
3/4 7-72
3/4 7-73
3/4 7-74
B 3/4 7-7
B 3/4 7-8

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1. With a half-life greater than 30 days (excluding Hydrogen 3), and
2. In any form other than gas.

- b. Stored sources not in use - Each sealed source and fission detector shall be tested prior to use or transfer to another licensee unless tested within the previous six months. Sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed into use.
- c. Startup sources and fission detectors - Each sealed startup source and fission detector shall be tested prior to being subjected to core flux or installed in the core and following repair or maintenance to the source.

4.7.11.1.3 Reports - A Special Report shall be prepared and submitted to the Commission on an annual basis if sealed source or fission detector leakage tests reveal the presence of ≥ 0.005 microcuries of removable contamination.

PLANT SYSTEMS

3/4.7.12 SETTLEMENT OF CLASS 1 STRUCTURES

LIMITING CONDITION FOR OPERATION

3.7.12.1 The total settlement of each Class 1 structure or the differential settlement between Class 1 structures shall not exceed the allowable values of Table 3.7-5.

APPLICABILITY: ALL MODES

ACTION:

- a. With either the total settlement of any structure or the differential settlement of any structures exceeding 75 percent of the allowable settlement, conduct an engineering review of field conditions and evaluate the consequences of additional settlement. Submit a special report to the Commission pursuant to Specification 6.9.2 within 60 days, containing the results of the investigation, the evaluation of existing and possible continued settlement and the remedial action to be taken if any, including the date of the next survey.
- b. With the total settlement of any structure or the differential settlement of any two structures exceeding the allowable settlement value of Table 3.7-5, be in at least HOT STANDBY within 6 hours and COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.12.1 The total settlement of each Class 1 structure or the differential settlement between Class 1 structures listed in Table 3.7-5 shall be determined to the nearest 0.01 foot by measurement and calculation at least once per 6 months. Measurements on settlement points SM-7, 8, 9, 10, 15, 16, 17, 18, H-569, and H-584 shall be made at least once per 31 days for the time period following 5 years from the date of issuance of the Operating License.

TABLE 3.7-5

ALLOWABLE TOTAL SETTLEMENT OR DIFFERENTIAL SETTLEMENT FOR CLASS 1 STRUCTURES

<u>SETTLEMENT POINT</u>	<u>STRUCTURE</u>	<u>SETTLEMENT POINT</u>	<u>STRUCTURE/COMPONENT</u>	<u>ALLOWABLE TOTAL SETTLEMENT* (FEET)</u>	<u>ALLOWABLE DIFFERENTIAL SETTLEMENT* (FEET)</u>
130	Containment Unit 1	223	Fuel Building	N/A	0.12
130	Containment Unit 1	129	Auxiliary Building	N/A	0.12
143	Containment Unit 1	142	Unit 1 Safeguards Area	N/A	0.04
144	Containment Unit 1	145	Unit 1 Safeguards Area	N/A	0.04
149	Containment Unit 1	239	Unit 1 Main Steam Valve House	N/A	0.12
144	Containment Unit 1	243,199,132	Service Building	N/A	0.12
146	Safeguards Unit 1	239	Unit 1 Main Steam Valve House	N/A	0.07
128	Auxiliary Building	238	Unit 1 Main Steam Valve House	N/A	0.08
129	Auxiliary Building	239	Unit 1 Main Steam Valve House	N/A	0.08
129	Auxiliary Building	223	Fuel Building	N/A	0.05
123	Auxiliary Building	224	Fuel Building	N/A	0.05
122	Auxiliary Building	119	Service Building Tunnel	N/A	0.07
7 or 10	Service Water Pump House	15,16, 17, 18	North Side of Expansion Joint Service Water Piping at SWPH	N/A	0.22 from 7/77
243,132	Service Building (E-5, E-6)	238	Unit 1 Main Steam Valve House	N/A	0.04
117	**Service Building (E-14)	113	Unit 2 Main Steam Valve House	N/A	0.03 from 7/77
222	Auxiliary Feedwater Pump House - Unit 1	248	Pipe Tunnel	N/A	0.12

NORTH ANNA - UNIT 1

3/4 7-71

Amendment No. 12

TABLE 3.7-5

ALLOWABLE TOTAL SETTLEMENT OR DIFFERENTIAL SETTLEMENT FOR CLASS 1 STRUCTURES

<u>SETTLEMENT POINT</u>	<u>STRUCTURE</u>	<u>SETTLEMENT POINT</u>	<u>STRUCTURE/COMPONENT</u>	<u>ALLOWABLE TOTAL SETTLEMENT* (FEET)</u>	<u>ALLOWABLE DIFFERENTIAL SETTLEMENT* (FEET)</u>
15,16,17, 18	North Side of Expansion Joint Service Water Piping at SWPH			0.22 from 8/78	N/A
228	Decontamination Building	250	Pipe Tunnel	N/A	0.06
226	Fuel Building	251	Waste Gas Decay Tank Enclosure	N/A	0.06
8	Service Water Pump House	H-569,H-584	Pipe Hanger in Reservoir	N/A	0.17
114	Service Building (E-17)			0.09	N/A
141	Safeguards Area - Unit 1	253	Unit 1 - Casing Cooling Bldg.	N/A	0.12 from 2/79
158	***Turbine Building (B-9 1/2)			0.06	N/A
245, 246	Fuel Oil Pump House			0.03	N/A
206, 207, 208, 209	Boron Recovery Tank Dike			0.03	N/A
204	Circulating Water Intake Structure			0.15	N/A

*Unless otherwise indicated, allowable settlements are from baseline elevations established in May 1976 or reference elevations corrected to the May 1976 survey.

**Critical differential settlement is downward movement of Point 117 with respect to Point 113.

***Not Class 1 structure, but settlements affects Class 1 pipeline.

<u>SETTLEMENT POINT</u>	<u>STRUCTURE</u>	<u>SETTLEMENT POINT</u>	<u>STRUCTURE/COMPONENT</u>	<u>ALLOWABLE OUT-OF-PLANE DISTORTION</u>
7,8,9,10	Service Water Pumphouse	7,8,9,10	Service Water Pumphouse	0.06 feet - any settlement point

PLANT SYSTEMS

3/4.7.13 GROUNDWATER LEVEL-SERVICE WATER RESERVOIR

LIMITING CONDITION FOR OPERATION

3.7.13 The groundwater level of the service water reservoir shall not exceed the elevation at the locations listed in Table 3.7-6. The flow of groundwater from the drains beneath the pumphouse shall not exceed the values given in Table 3.7-6.

APPLICABILITY: ALL MODES

ACTION:

With the groundwater level of the service water reservoir or the groundwater flow rate exceeding any of the limits of Table 3.7-6, an engineering evaluation shall be performed by a Licensed Civil Engineer to determine the cause of the high ground water or flow rates and the influence on the stability of the service water reservoir and pumphouse. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days, containing the results of the evaluation and any corrective action determined to be necessary. In addition, at the end of the 5 year surveillance period, a summary report will be prepared and submitted to the Commission, within 90 days, illustrating the results of the groundwater monitoring program. Based on this report, a determination will be made as to the need for further measurements of groundwater conditions.

SURVEILLANCE REQUIREMENTS

4.7.13.1 The groundwater level of the service water reservoir shall be determined to be within the limits by piezometer readings from at least 7 of the locations shown on Table 3.7-6. Readings shall be taken at least once per 31 days for 5 years following the date of issuance of the Operating License. The groundwater flow rates shall be determined by measurements at the drain outlet gallery. Readings shall be taken at least once per 31 days from (the date of issuance of this revision). The need for further surveillance will be determined at the end of the 5-year period from the date of issuance of the Operating License. Monitoring information collected since the issuance of the Operating License regarding the groundwater levels and flow rates shall be retained for use in preparing the summary report required by Technical Specification 3.7.13.

4.7.13.2 Piezometer readings shall be taken from piezometers 10 thru 14, inclusive, at least once per 12 months for the time period following 5 years from the date of issuance of the Operating License. The need for further surveillance will be determined at the end of the 5 year period.

TABLE 3.7-6

ALLOWABLE GROUNDWATER LEVELS - SERVICE WATER RESERVOIR

<u>PIEZOMETER NO.</u>	<u>PIEZOMETER LOCATION</u>	<u>ALLOWABLE GROUNDWATER ELEVATION, Mean Sea Level (feet)</u>
10	SE, toe	277
11	SWPH, (Units 1 & 2) crest	280
12	SWPH, (Units 1 & 2) toe	285
13	SWPH, (Units 1 & 2) crest	280
14	SWPH, (Units 1 & 2) crest	280
15	SE, crest	280
16	SE, crest	280
17	SE, crest	280
18	SWPH (Units 3 & 4)	295

<u>DRAIN OUTLETS</u>	<u>LOCATION</u>	<u>ALLOWABLE DRAIN FLOW RATE (gallons per minute)</u>
1 through 6	Drainage Gallery	Flow rate for any month shall not exceed 3 times the average annual flow rate.

PLANT SYSTEMS

BASES

3/4.7.11 SEALED SOURCE CONTAMINATION

The limitations on sealed source removable contamination ensure that the total body or individual organ irradiation does not exceed allowable limits in the event of ingestion or inhalation of the source material. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. Leakage of sources excluded from the requirements of this specification represent less than one maximum permissible body burden for total body irradiation if the source material is inhaled or ingested.

3/4.7.12 SETTLEMENT OF CLASS 1 STRUCTURES

In order to assure that settlement does not exceed predicted and allowable settlement values, a program has been established to conduct a survey of a specified number of points at the site on a semi-annual basis. The first survey was conducted in May 1976 to establish base-line elevations for most of the points. Where applicable, the base-line elevations of points established subsequent to the May 1976 survey have been adjusted to the May 1976 survey by an evaluation of the settlement records of settlement points on the same structure or on nearby structures. Baseline elevations for some points were established on dates other than May 1976 as indicated in Table 3.7-5. Additional surveys will be performed semiannually.² The determination of the elevation of the points shall be by precise leveling with second order Class II accuracy as defined by the U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey, 1974. When any settlement point listed in Table 3.7-5 is inaccessible during a survey, comparison to allowable settlement shall be based on settlement of other points on the same structure or on nearby structures having similar foundation conditions. When any settlement point listed in Table 3.7-5 is dislocated or replaced, a documented review of the settlement records of points on the same structure and additionally points on nearby structures having similar foundation conditions shall provide a new reference elevation for the point that reflects the estimated settlement since the base-line survey. If the total settlement or differential settlement exceeds 75 percent of the allowable value, the frequency of surveillance shall be increased as dictated by the engineering review.

Allowable differential movement is controlled by pipe deflections permitted by fixation points in buildings. The items limiting differential settlement are as follows:

PLANT SYSTEMS

BASES

<u>Reference</u>	<u>Monitoring Points</u>	<u>Limiting Item</u>
Containment Unit 1	Fuel Building	Fuel Transfer Tube
Containment Unit 1	Auxiliary Building	3"-WGCB-14
Containment Unit 1	Unit 1 Safeguards Area	12"-SI-1
Containment Unit 1	Unit 1 Main Steam Valve House	6"-SI-16
Containment Unit 1	Service Building (E-3)	32"-SHP-2
Safeguards Area Unit 1	Unit 1 Main Steam Valve House	8"-Q5-3
Auxiliary Building	Unit 1 Main Steam Valve House	8"-WS-113
Auxiliary Building	Fuel Building	4"-RP-28
Auxiliary Building	Service Building Tunnel	24"-WS-102
Service Water Pump House	Service Water Piping @ SWPH	Expansion Joint
Service Water Pump House	Pipe Hanger in Reservoir	24" -WS-11-151-Q3
Service Water Pump House	Service Water Pump House	Mat
Service Bldg. (E-5,E-6)	Unit 1 Main Steam Valve House	24"-WS-26-151-Q3
Service Bldg. (E-14)	Unit 2 Main Steam Valve House	24"-WS-426-151-Q3
Auxiliary Feedwater Pump House - Unit 1	Pipe Tunnel	3"-WAPD-9-601-Q3
Decontamination Bldg.	Pipe Tunnel	3"-CC-90-151-Q3
Fuel Building	Waste Gas Decay Tk. Enclosure	4"-GW-30-154-Q3
Safeguards Area Unit 1	Unit 1 Casing Cooling Building	6"-RS-E15-153A-Q3

The items limiting total settlement of structures are as follows:

<u>Monitoring Points</u>	<u>Limiting Items</u>
Service Water Piping at SWPH	36"-WS-1-151-Q3
Service Building (E-17)	36"-WS-1-151-Q3
Turbine Building (B-9 1/2)	24"-WS-25-151-Q3
Fuel Oil Pump House	2 1/2"-FOF-151-S
Boron Recovery Tank Dike	NOTE (1)
Circulating Water Intake Structure	Service Water Piping expansion joint

Note (1) No settlement expected; settlement in excess of 0.03 ft. would indicate an abnormality.

(2) Measurements of certain points are required to be performed at least once per 31 days for the first five years of facility operation to provide additional settlement information.