Georgia Power Company
[illegible]
Post Office Box 1600
[illegible] Georgia 30830
Telephone [illegible] 724 [illegible]
404 [illegible] 9961

Vogtle Project

Georgia Power

May 11, 1988

Plant Vogtle - Units 1 & 2
Dual Unit Licenses
Log: NOT-01438
Security Code: NC

U. S. Nuclear Regulatory Commission
Operations Branch
Division of Reactor Safety
Region II - Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30323

Attention: Caudle A. Julian

Gentlemen:

Georgia Power Company is supplying the information in this letter and its attachments as requested by the NRC at the GPC - NRC Region II meeting of December 1987. As discussed at the meeting, Georgia Power Company will be applying for dual unit licenses for its operators licensed on unit 1 at the Vogtle Electric Generating Plant in the fall of 1988.

Attachment I contains an overview of the formal training program to support the application for dual unit licenses.

Attachment II contains the differences between VEGP units 1 and 2 which have been approved for inclusion in a differences training program for licensed operators.

Due to the limited number of differences and the minimal operational effect of the differences, Georgia Power Company will request a waiver of both the written and operational (simulator and plant walkthrough) examinations for those licensed operators who complete the training program.

If you have any questions regarding this letter or its attachments please contact Mr. Paul D. Rushton at (404) 826-3301.

Sincerely,

G. Bockhold, Jr.
General Manager

WMW:PDR:ksn
T16
Attachments

Description of VEGP Training Program for Conversion of Unit 1 Operator Licenses to Dual Unit Licenses

In accordance with dual unit licensing requirements of NUREG 1021 and 10 CFR 55, VEGP will develop and present a formal training and evaluation program for candidates seeking conversion of a Operator License for Vogtle Unit 1 to a license for Vogtle Units 1 and 2.

The program will include differences training per NUREG 1021 section ES 106 covering:

1. Facility Design and Systems Relevant to Control Room Personnel
2. Technical Specifications
3. Procedures, Primarily Abnormal and Emergency Operating Procedures
4. Control Room Design and Instrument Location
5. Operational Characteristics.

Each candidate will participate in a program of approximately 65 hours, which will include classroom and in-plant instruction distributed within the:

1. VEGP Licensed Operator Requalification Program

   12 Hours of classroom instruction covering appropriate portions of the five NUREG 1021 topics and the effects of common systems failure with the appropriate operator response.

2. Unit 2 On-shift Assignment Program

   a. 40 hours of Unit 2 control room training emphasizing the location and operation of Unit 2 controls, instruments, and systems.
   b. Completion of a plant walkthrough checklist covering Unit 2 and Common equipment locations.

The training will include a written 2 hour differences examination and a 1 hour in-plant walk-through examination covering appropriate portions of the five required topics for each candidate.

Approximately two-thirds of VEGP's 69 licensed operators will have completed this program by September 9, 1988 and all will have taken at least one annual requalification examination during the 1986-1988 requalification program cycle.

Members of this group who have passed the differences training program and have passed the applicable VEGP annual requalification examination will submit license applications, with the appropriate waiver, to convert their Unit 1 licenses to Unit 1 - Unit 2 licenses.

Facility Design and Systems Relevant to Control Room Personnel and Operational Characteristics

1. Boron Injection Tank (BIT) and The BIT Recirc System
   Reference: 1X4DB119
   2X4DB119
   Description of Change: The BIT and BIT recirc system were not installed on Unit 2 while Unit 1 has the components disabled in place. This is not an operating difference but physical difference. The unit 2 high head injection valves will use the same nomenclature (Bit Outlet Valves) as unit 1.

2. Waste Evaporator
   Reference: DCN-6164
   Description of Change: The Unit 2 Waste Evaporator installation will not be completed.

3. Waste Monitor Tank Capacity
   Reference: DCN-6164
   Description of Change: Unit 2 will have 2 additional 20,000 gallon tanks designated as common tanks.

4. NSCW Fan Vibration Reset Switches
   Reference: DCR 87-V1E0261
   2X3BD-K03A,B,C,D,E,F,G, and H
   2X3D-BA-D03F
   2X3D-AA-F39A
   Description of Change: Unit 2 will have a vibration trip time delay and reset switches for the NSCW Tower Fans in the control room. Unit 1 may have them installed later.

5. NSCW Aux Containment Cooler Isolation Valves
   Reference: 2X4DB135-1,135-2
   2X3D-BD-K04L and M
   Description of Change: Unit 2 valves are interlocked so that the outlet valves must be opened first. When opening the outlet valves they stroke for 3 seconds, wait for 60 seconds, and then finish stroking open. This allows the header to backfill.

6. NSCW High Point Vacuum Breakers
   Reference: 1X4DB134 and 1X4DB135
   2X4DB134 and 2X4DB135
   Description of Change: Unit 2 has added Vacuum breakers to the High points in the NSCW Systems. Unit 1 has no plans to incorporate the change.

7. Heater Drain Pumps
   Reference: 2X4DB163-3 and 163-4
   Description of Change: Valves 2-1310-X4-521 and 522 were added on unit 2 to allow warm up of the heater drain pumps prior to placing them in service to reduce thermal shock.

8. Diesel Generator System
Reference: 1X4DB170-1 and 2
2X4DB170-1 and 2
2X3D-BH-G02B
Description of Change: The Unit 2 DG fuel oil transfer pumps have a local/remote transfer switch to transfer control in case of a control room fire. The switch is located on the front of the breaker cubicle for the pump. This may have an impact on AOP 18038.

Reference: DCR-87V1E0206
2X5DT0029 and 30
Description of Change: The fuel oil storage tank low level alarm setpoint was raised from 54 +/- 3.6 inches to 56 +/- 3.6 inches to allow more time for operator action. Unit 1 will be changed in the future.

Reference: 2X4DB170-1 and 2
Description of Change: Unit 2 has a drain line installed on the day tank so that the day tank can be drained back to the fuel oil storage tank. The line has a lock closed isolation valve.

Reference: ODR T-2-87-0034 and MWO 2-88-01683
Description of Change: Unit 2 has added orifices in the air logic system to allow the low lube oil pressure trip to be active during an emergency start coincident with a normal shutdown. Unit 1 has not made this change.

Reference: ODR T-2-87-00447 and MWO 2-88-00080
Description of Change: On unit 2 the sync. mode select switches turn in the opposite direction. They have been revised to make-up in the manual and auto positions as shown on elementaries and instruction manual bill of materials. No design change documents have been issued to make this change in unit 1.

Reference: DR T-1-86-2118
Description of Change: The Unit 2 sequencers have a reset pushbutton to allow resetting of the sequencer if the sequencer fails to complete the required loading sequence. Unit 1 requires a circuit card to be pulled to complete this task. This Change may have an impact on the EOPs.

9. Auxiliary Building HVAC
Reference: YFCRB-6471, DCR-87V1E0177
2X3D-BG-D02C,F,L,P and S
2X5DN028-1
2X5DN050-1
2X4DB208-1
Description of Change: On a CVI signal the Unit 2 Auxiliary Building HVAC units will trip to comply with FSAR 9.4.3.2.2.3

10. CRDM Low Flow Alarm
Reference: DCR-87V1E0297
2X3D-BG-B02A
Description of Change: On unit 2 with less than 2 CRDM fans running a low flow alarm will annunciate on ALB52E08. Unit 1 has deferred this change.

11. Control Building Electrical Penetration Filter Units
Reference: 1X4DB209
2X4DB209
Description of Change: The unit 2 electrical penetration filter units have been deleted. The unit 1 filter units will remain in service.

12. Main Feed Pump Seal Injection
Reference: 2X4DB168-2
Description of Change: Unit 2 MFP seal injection filters have filter D/P indication that unit 1 doesn't.

13. RHR Mini-flow Orifices
Reference: Letter, Westinghouse to Bectel dated 12/10/85
FSD-SS-GAE-4028, GP 10232, SO GAE-280
Description of Change: Unit 2 RHR mini-flow orifices are sized smaller that the unit 1 orifices.

14. Aunnunciator Power Supplies
Reference: NOE-02268
Description of Change: Unit 2 uses a different type of annunciator inverter which incorporates an automatic transfer between the AC/DC power supplies. Both Unit 1 and Unit 2 power supplies will auto swap from the primary AC to the backup DC on a loss of primary power. Unit 2 power supplies will auto swap from the DC backup to primary AC when the primary power is available provided the source selector switch is in the AC position. On Unit 1, it is a manual operation to transfer from DC back to AC.

15. Condensate System
Reference: MFCRB-4046
2X4DB165-1
2X4DB168-1
Description of Change: Fill and vent of the unit 2 condensate system will be by use of the condensate demin backwash pump using the CSTs as a water source. The water will enter the condensate system through a 12" flush connection on the condensate pump discharge header. Unit one will use the condensate pumps and the condenser as a water source.

Technical Specifications
Anticipated Differences and/or Changes to be made to the Unit 1 Tech Specs when Common Tech Specs are issued

1. RTNDT Limits and Copper Content
   Reference: TS 3.4.9 page 3/4 4-30
   Figure 3.4-2 page 3/4 4-31

Description:	Unit 1 Values	Unit 2 Values
Actual Copper Content	.06 WT.%	.05 WT.%
Actual Initial RTNDT	30 F	40 F

   TS will be revised to reflect unit 2.

2. Spray Additive Flowrates
   Reference: TS 4.6.2.2d page 3/4 6-14

Description:	Unit 1 Values	Unit 2 Values
Train A Eductor Flowrate	120 +/- 30 GPM	Not Determined
Train B Eductor Flowrate	130 +/- 30 GPM	Not Determined

3. Piping Penetration Area Filtration System
   Reference: TS 3.7.7 and 4.7.7 page 3/4 7-17

Description:	Unit 1 Value	Unit 2 Value
Flow Rate Through HEPA Filter	15500 CFM	Not Determined

4. Area Temperature Monitoring
   Reference: TS 3.7.10 page 3/4 7-27
   Table 3.7-3 page 3/4 7-28
   Description: There will be new rooms associated with unit 2 added to table 3.7-3.

5. Spent Fuel Storage Pools Capacity
   Reference: TS 5.6.3 page 5-5
   Description: East Pool (Unit 1) 936 fuel assemblies
   West Pool (Unit 2) 2098 fuel assemblies
   Both numbers are proposed.

Procedures, Primarily Abnormal and Emergency Operating Procedures

Limited operational differences should exist in the EOPs and AOPs. These differences may include:

1. A reference in the remote shutdown AOP regarding the remote operation of the unit 2 DG fuel oil transfer pumps.

2. Reference in the EOPs to the sequencer reset pushbutton.

Control Room Design and Instrument Locations

Control Room Layout

The Unit 2 Main Control Board (QMCB) is a rotated image of the Unit 1 Main Control Board. On sections A, B, and C of the Main Control Board the left-right relationship for all the controls and displays is identical. This identical relationship for the A, B, and C section includes the board layout and labeling. The Control Room Design Review will note any differences this summer. None are planned or expected.

The one exception to identical layout on the Main Control Board is the D section. The D section was a backfit after the control room design was completed and floor space did not allow an identical arrangement. Section D contains the same equipment on both units (RVLIS, PSMS, and Main Steam Bypass Isolation Valves). Section D is on the left end of section A on unit 1 and to the right of section B on unit 2. This will require looking left on unit 1 and right on unit 2 to verify that the Main Steam Bypass Isolation Valves are shut on a Main Steam Isolation. There should be no impact on routine unit operation.

The rest of the Unit 2 Control Boards appear as if the Unit 1 Boards were moved west. Their appearance on unit 2 will be the same as on unit 1 if you are standing in front of them. The Electrical Auxiliary Board (QEAB) will appear somewhat different from the center of the control room. In unit 1 it is over the right shoulder and in unit 2 it will be over the left shoulder. This will require a slightly different scanning pattern during immediate operator action in the EOPs but should have no impact on unit operation. The high voltage section of the QEAB is different to reflect the differences in the switchyards but the Unit 2 inplant distribution systems will appear identical Unit 1. The common distribution system is on the Unit 1 QEAB.

The control boards will be different to the extent that most common equipment is located on unit one. The Process and Effluent Radiation Monitoring System Panel (PERMS) non-safety related communications console for unit 2 will be at the west end of the QEAB instead of the east end of the Relay Panel as it is on unit 1. See AX5D52-A02 (Attached) for the control room layout.

Control Room Wall

A security wall was erected through the center of the common control room to separate unit 1 from unit 2 when unit 1 security went into effect. Original plans were for this wall to be removed when unit 2 security went into effect. Current plans are to leave most of the wall to reduce cost, provide unit separation, and reduce inter-unit noise. The wall will be open on the Shift Supervisors station, near the south door, and behind the QPCP.

Plant Computers

The plant computer (PROTEUS and ERF) terminals will be in mirror image locations. The PROTEUS computer will be identical in function. The ERF computer will be identical except that the common radiation monitors and weather data will be displayed only on unit 1.

Planned Differences

Valve and Instrument Labeling Program

The valves and instruments located at the Vogtle Electric Generating Plant are labeled with unique labels that indicate unit number, system number, valve or instrument number, the name of the valve or instrument indicating its purpose, the train if appropriate, and any special notes about the component. Unit 1 has white rectangular (3" X 4") labels and unit 2 has round (4" diameter) blue labels.

Operations Procedure Binders

The unit specific procedure binders (system operating procedures, lineup procedures, operations surveillance procedures, etc.) are marked indicating which unit they belong to. Unit 1 procedures are marked with a large 1 and unit 2 procedures are marked with a large 2.