Georgia Power

NED-83-244

April 15, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
RESPONSE TO GENERIC LETTER 82-33, SCHEDULE FOR IMPLEMENTATION OF EMERGENCY RESPONSE CAPABILITY

Gentlemen:

Generic Letter 82-33 dated December 17, 1982 requested a proposed schedule for completing each of the basic requirements of NUREG-0737 Supplement 1. The enclosure to this letter provides a status report and completion schedule for those requirements. Georgia Power Company (GPC) has followed very closely the development of requirements for emergency response capability. In addition, GPC has been an active participant in industry activities including the Boiling Water Reactor Owners Group (BWROG) and the Nuclear Utility Task Action Committees (NUTACs) supported by the Institute of Nuclear Power Operations (INPO). We are confident that implementation of these requirements at Plant Hatch is responsive to NRC requirements and consistent with similar activities at other utilities.

Completion dates for Safety Parameter Display System (SPDS), Regulatory Guide 1.97 and the Emergency Response Facilities (ERFs) are based on current project schedules with a reasonable allowance for slippage. Schedules for the Emergency Operating Procedures (EOPs) and the Detailed Control Room Design Review (DCRDR) are less certain at present because less work has been completed in these areas. Schedule dates are based on typical experience and may require updates as the work progresses. The NRC project manager for Plant Hatch will be kept informed on the progress of work in these areas.

Consistent with the spirit of Generic Letter 82-33, we are prepared to negotiate a schedule which is acceptable to the NRC. Note however that we are already expending considerable resources to implement the requirements, and that an acceleration of this schedule would be disruptive to our outage planning, training load, and our budgetary process.

A003 LTR ENC
ADD: W. PAULSON 1 1

Georgia Power

The safe operation of Plant Hatch will not be jeopardized during the development and implementation of an integrated system to enhance the present emergency response capabilities at the plant. The provisions of NUREG-0737 Supplement 1 are intended to enhance those current capabilities and are not intended to provide sole safety function. The present emergency response capabilities at Plant Hatch are fully adequate during the implementation of these enhancement modifications.

Please contact this office if you have any questions or comments related to this response.

J. T. Beckham, Jr. states that he is Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and that to the best of his knowledge and belief the facts set forth in this letter are true.

GEORGIA POWER COMPANY

By: J. T. Beckham, Jr.

Sworn to and subscribed before me this 15th day of April, 1983.

Notary Public

Notary Public, Georgia, State at Large
My Commission Expires Aug. 20, 1985

PLS/mb

Enclosure

xc: H. C. Nix, Jr.
Senior Resident Inspector
J. P. O'Reilly, (NRC-Region II)

700775

GEORGIA POWER COMPANY

EDWIN I. HATCH NUCLEAR PLANT

UNITS 1 AND 2

DOCKET NO. 50-321 AND 50-366

RESPONSE TO GENERIC LETTER 82-33

SCHEDULE FOR IMPLEMENTATION OF EMERGENCY RESPONSE CAPABILITY

APRIL 15, 1983

Safety Parameter Display System (SPDS)

1. Current Status of SPDS Design: In May, 1981, GPC awarded contracts to Bechtel Power Corporation and the Georgia Tech Research Institute (GTRI) to develop an SPDS for Plant Hatch. Design criteria for the system were based primarily on NUREG-0696 and the BWR Owners Group SPDS Functional Specification published in April, 1981. Preliminary functional design criteria for the system were sent to the NRC in our response to Generic Letter 81-10 on May 29, 1981.

   The system hardware consists of three 19" colorgraphic CRTs interfaced with two Rolm MSE/14 minicomputers. Disc storage is used to retain the previous four hours of data with a once per second time resolution. Tape recording is available if required for long-term data storage. A screen copier is provided to copy any display frame requested by the system operator. The color monitors and all other hardware required for the SPDS function will have seismic qualification per IEEE 323-1974. Hardware design is 70% complete. Procurement is 95% complete.

   The software operating system is the Advanced Realtime System 1.12 supplied by the Rolm Corporation. Software instructions are programmed in Fortran V. Data is updated once per second; display frame changes are accomplished in three seconds. Preliminary software design is complete. Software implementation is 50% complete.

   The SPDS will provide 15 information display frames. Eight displays were designed by GTRI with assistance from the Plant Hatch Operations Department. The remaining seven are based on the BWR Owners Group Emergency Procedure Guidelines (EPGs) parameter plots designed by the BWR Owners Group and General Electric Company (GE). The display set will be enhanced and expanded as a result of GPC participation in a program with the Electric Power Research Institute, the Department of Energy and a group of BWR Owners. The purpose of the program is to develop displays and supporting software for better integration of the SPDS with the Emergency Operating Procedures (EOPs). A schedule for completion of this supplementary enhancement work is not available. However, we expect that the Hatch SPDS with the initial display set will meet all requirements of NUREG-0737, Supp. 1.

   Independent verification and validation (IV&V) of the SPDS hardware and software is being done by the European Research Institute of Ireland (an associate of GTRI) with assistance from Bechtel and the GPC engineering department.

2. Date for Submittal of Safety Analysis and SPDS Implementation Plan: GPC will review the Unit 1 and Unit 2 Technical Specifications, EOPs and other documents as appropriate and prepare a comprehensive safety analysis report which will include the bases for parameter selection. The report is expected to be submitted to the NRC in August, 1983. SPDS implementation plans are described in this report.

3. Date when SPDS will be operable and operators trained: The SPDS hardware is scheduled to be installed in the Plant Hatch simulator by June 1984. Operator familiarization and training will be conducted in preparation for SPDS installation in the control room in 1985. The SPDS is expected to be installed on both units by June, 1985, but some additional outage related work may be required in the 1986 outages. The scope of the SPDS project includes the installation of approximately 200,000 feet of new cable requiring in excess of 100,000 craft labor man hours. Therefore, due to the uncertainty associated with a project of this magnitude at this stage of completion, June, 1986 is proposed as the completion date for implementation of the SPDS including training.

4. Georgia Power Company does not desire a pre-implementation review of the Safety Parameter Display System (SPDS) by the NRC based on the following:

   a. Since the issuance of NUREG-0696 and the subsequent issuance of NUREG-0737, Georgia Power Company has followed very closely the development of requirements for the SPDS and believes that the system as designed currently will provide a comprehensive system that will aid the plant operators in rapidly and reliably determining the safety status of the plant.

   b. Georgia Power Company has retained the services of Bechtel Power Corporation, the original Architect/Engineer of the Hatch Nuclear Plant to assist in the design and incorporation of this system into the plant.

   c. Georgia Power Company has also retained the Georgia Tech Research Institute to provide the design and computer technology required for implementing an SPDS that will provide the information necessary for safe reactor operations under normal, transient, and accident conditions.

   d. Independent Validation and Verification Criteria have been developed and are being implemented in the design of SPDS by European Research Institute of Ireland.

5. Integrated schedule for SPDS with other initiatives: Recognizing the long lead times for equipment procurement and software development, the SPDS design was started prior to significant progress with EOPs and the Detailed Control Room Design Review (DCRDR). SPDS design will not impact EOP development because EOPs will be written to be effective even if the SPDS is unavailable. However, the SPDS has been designed to provide aids in the execution of emergency procedures. Information provided by the SPDS will be considered when the DCRDR assessment, implementation and reporting phases are performed. Parameters required for Regulatory Guide 1.97 implementation were considered during development of the signal list for the SPDS. A bar chart schedule for implementation of SPDS with EOPs, DCRDR, and Regulatory Guide 1.97 is included in this report.

Detailed Control Room Design Review (DCRDR)

1. Current Status: Georgia Power Company (GPC) is a participant in the BWR Owners Group (BWROG) Control Room Improvements Program. A part of the program is a control room survey intended to complete the planning and review phases of the DCRDR. The BWROG survey plan was sent to the NRC Human Factors Engineering Branch on August 25, 1981 and was the subject of meetings with the NRC on March 12, June 20, and August 26, 1982.

   A control room survey by a BWROG survey team was performed at Plant Hatch during the week of April 23, 1981. The survey consisted of four phases: (1) an analysis of plant Licensee Event Reports (LERs) and scram reports to identify possible design related operator errors, (2) interviews with approximately one-third of the plant operators, (3) comparison of control room panels with checklist standards derived from previous surveys and accepted human factors standards, and (4) task analysis and walkthroughs of selected emergency procedures. The survey team consisted of operations and engineering personnel from four utilities and consultants from General Electric Company and the Massachusetts Institute of Technology. A report on this survey will be included in a summary report to be sent to the NRC at the end of the control room improvements program.

   Independent of the control room survey program, an industrial design company remodeled the main control room in 1981. Overlays with improved labels and mimics were added to all control panels. Carpeting and ceiling and wall coverings were added or upgraded to improve esthetics and to bring lighting and ambient noise to acceptable levels. Further, an ongoing program to eliminate nuisance annunciators has corrected most of the problems with the annunciator system.

2. Date for submittal of a program plan: A supplement to the control room survey will be required after the Hatch EOPs are written and the SPDS is installed. There are no DCRDR activities planned for the near future because SPDS and EOPs are needed first. A program plan detailing activities to complete the DCRDR is scheduled to be submitted in October 1984.

3. Date for submittal of a summary report: The summary report is expected to be submitted in June, 1986

Regulatory Guide 1.97

Provisions of Regulatory Guide 1.97 were considered in the design of the Analog Trip Transmitter System (ATTS) scheduled to be installed at Plant Hatch by December 1984. Regulatory Guide 1.97 parameters were also considered during development of the signal list for the SPDS. In addition, Regulatory Guide 1.97 requirements will be considered for any systems which require upgrading as a result of the equipment qualification initiatives. A report will be prepared which will compare existing or planned Plant Hatch systems with Regulatory Guide 1.97, Revision 2. Detailed justifications and/or planned enhancements will be presented for deviations from the Regulatory Guide. The report is scheduled to be sent to the NRC in February, 1984.

Emergency Operating Procedures (EOPs)

1. Current Status: GPC has supported the development of generic emergency procedure guidelines (EPGs) by the BWR Owners Group. The EPGs (Rev. 2) were sent to the NRC by the owners group in June, 1982 with an errata sent in September, 1982. We received an NRC Safety Evaluation Report dated February 8, 1983 which stated that the EPGs were acceptable for implementation. The soon to be issued revision of the guidelines (Rev. 4) has incorporated the NRC comments and added guidelines for secondary containment control and reactivity control. If approved by the NRC, Rev. 4 will be the basis for symptom based EOPs at Plant Hatch. EOP implementation will be consistent with the requirements of NUREG-0737, Supplement 1.

2. Submittal date for technical guidelines: Rev. 2 of the EPGs was submitted by the BWR Owners Group in June, 1982.

3. Submittal date for procedures generation package: Hatch specific technical guidelines will be developed from the owners group generic guidelines. A Hatch specific writer's guide will be prepared for integration of the new procedures with existing EOPs and to ensure format consistency with existing procedures. A V&V program and a training plan will also be prepared. These documents are expected to be sent to the NRC in September, 1984.

4. Date for implementing EOPs: EOPs are scheduled to be written, validated, and a training program prepared by December, 1984. Operator training is scheduled to start in early 1985. EOPs are expected to be fully implemented by December, 1985.

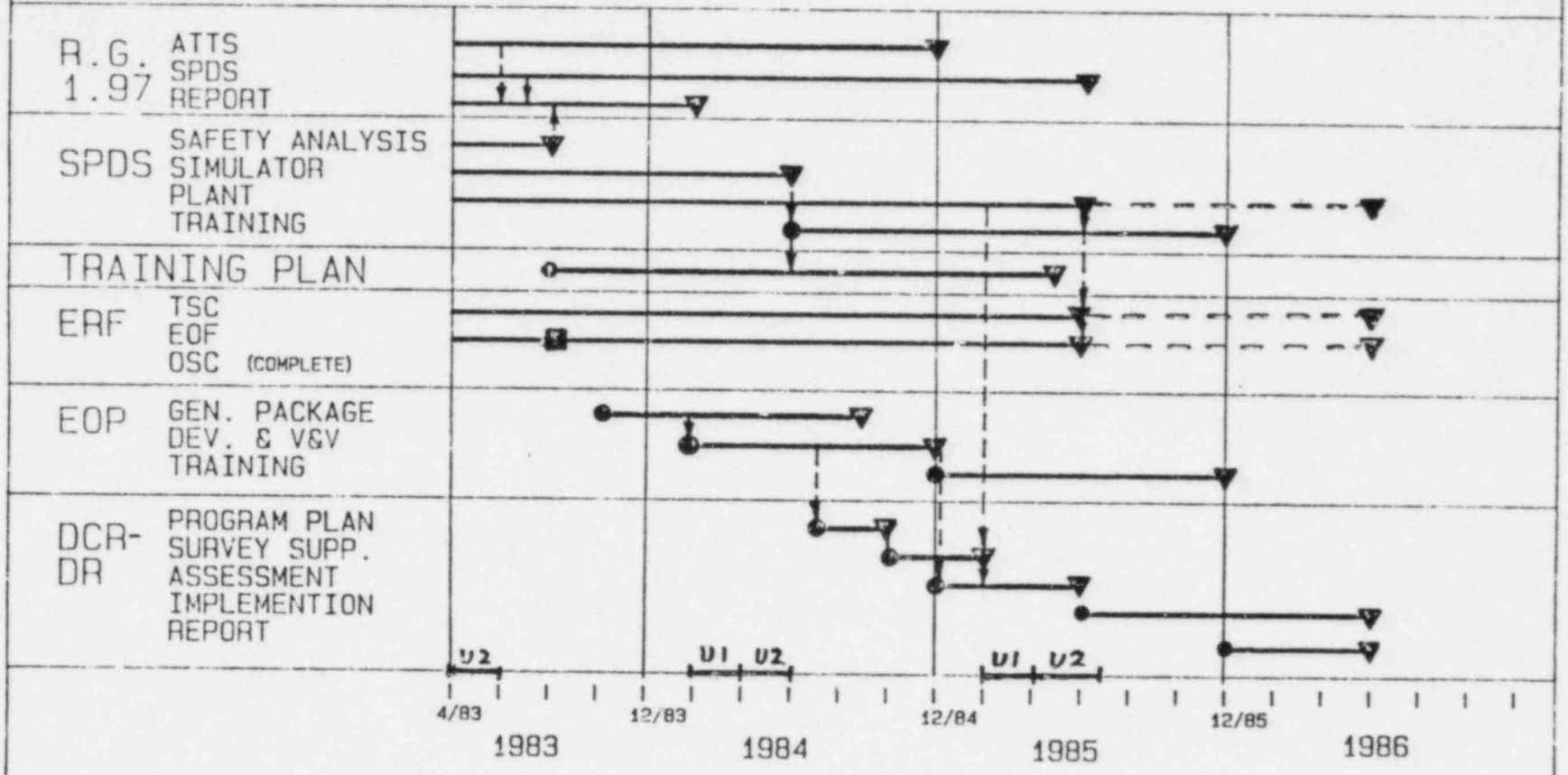
Emergency Response Facilities (ERFs)

The Technical Support Center (TSC), Emergency Operations Facility (EOF) and Operations Support Center (OSC) are complete except for the EOF ventilation system and the data system. The EOF ventilation system is operational, but system functional testing is not complete. The data system will be supported by the SPDS from the control room. The data system including meteorological data and available Regulatory Guide 1.97 information is expected to be operational by June, 1985. In the interim, meteorological data will be recorded on strip chart recorders in the control room and the EOF. This met data system, using data from a primary and back-up met tower is expected to be operational in June 1983. Plant data will be transmitted to the TSC and EOF by telephone until the data system is installed. Date for fully operational ERFs will coincide with the projected installation date of the SPDS which has been previously noted to be June, 1986.

Integrated Training Plan

A training plan for SPDS, EOPs, Regulatory Guide 1.97 and the ERFs will be developed as the SPDS is implemented in the simulator and the EOPs are written. A training plan meeting the requirements of NUREG-0737, Supplement 1 is scheduled to be completed by December, 1984.

EMERGENCY RESPONSE CAPABILITY
INTEGRATED SCHEDULE



■ EOF COMPLETE WITH MET DATA (NO SPDS)