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RECIP.NAME RECIPIENT AFFILIATION
Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards current status,integration plan & proposed schedule for completing basic requirements in Generic Ltr 82-33,per Suppl 1 to NUREG-0737 re emergency response capability.Info supersedes previous submittals.Schedule may be changed.

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NOTES: Add W Paulson

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Northern States Power Company

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April 15, 1983

Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Supplement 1 to NUREG-0737 - Response to Generic Letter 82-33

The material furnished with this letter is submitted pursuant to 50.54(f) to provide a current status, an integration plan and proposed schedule for completing the basic requirements identified in the enclosure to your Generic Letter No. 82-33 dated December 17, 1982. Information in this submittal supersedes related information and commitments contained in prior submittals that may be in conflict.

The proposed schedule represents our best judgement of what can be accomplished within the limits of available resources applied to currently planned projects. Large commitments of finances, technical expertise, supervision, and manpower are currently being applied to major projects such as alternate shutdown system and other modifications required by Appendix R; completion of Mark I containment modifications; reactor recirculation system piping and vessel safe end replacement, main condenser retubing, replacement of both main turbine low pressure rotors; and other similar activities. Unforseen contingencies on these projects, as well as possible new projects arising from future plant inspections and performance monitoring or from future regulatory requirements, could impact the schedule by preempting our resources. Also, some elements in the schedule are dependent upon activities of vendors or other organizations which can not be predicted with certainty.

The proposed schedule information being furnished will be a major input to forthcoming periodic discussions with the NRC Project Manager. This will allow us to refine the schedule and update the technical information consistant with developments that will occur.

A003

ADD: W. Paulson

Post marked 4/19/83

David Musolf
Manager-Nuclear Support Services

DMM/js

cc: Regional Administrator-III, NRC
NRR Project Manager, NRC
NRC Resident Inspector
G Charnoff

Attachment

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

Docket No. 50-263

LETTER DATED APRIL 15, 1983
SUPPLEMENT 1 to NUREG-0737

Northern States Power Company, a Minnesota corporation, by this letter dated April 15, 1983 hereby submits information related to Supplement 1 to NUREG-0737 in response to a letter dated December 17, 1982 from Mr Darrel G Eisenhut, Director, Division of Licensing, USNRC (Generic Letter 82-33).

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By David Musolf
David Musolf
Manager - Nuclear Support Services

On this 15th day of April, 1983, before me a notary public in and for said County, personally appeared David Musolf, Manager - Nuclear Support Services, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof and that to the best of his knowledge, information and belief, the statements made in it are true and that it is not interposed for delay.

Betty J Dean

BETTY J. DEAN
NOTARY PUBLIC - MINNESOTA
RAMSEY COUNTY
My Commission Expires Dec 16 1987

Attachment 1

CURRENT STATUS

I. Safety Parameter Display System (SPDS)

To meet the intent of NUREG 0737, Supplement 1, a computer based system has been selected for the Monticello Nuclear Plant. This system will provide displays and information to the Control Room, Technical Support Center (TSC) and Emergency Operations Facility (EOF). While our progress was delayed pending the additional clarification of the requirements by the Commission, Northern States Power has actively supported the BWR Owners' Group effort to define realistic SPDS criteria and displays for the control room. The results of the Owners' Group effort will be used as guidance for the SPDS to be installed at Monticello.

One new computer has been installed which utilizes a data link to the plant process computer for data acquisition. Additional hardware and software has been procured and is currently being installed to allow this new computer to provide meteorlogical data and off-site dose assesment capabilities for the TSC and EOF. As a parallel effort, a bid specification to be used for vendor selection is being prepared for the SPDS function. This specification will cover the hardware/software required to expand data acquisition capabilities, to provide a SPDS for both the control room and the training simulator, and data storage/graphics capabilities for the emergency response facilities.

II. Detailed Control Room Design Review (DCRDR)

A human factors engineering survey of the Monticello control room was completed in March, 1981 by a multidisciplinary team assembled by the BWR Owners' Group. The methodology used to conduct this survey was the generic procedure developed by the General Electric Company in cooperation with the BWR Owners' Group Control Room Improvements Committee. The BWR Owners' Group has submitted this survey procedure to the NRC for review, comment and approval. NRC response is pending.

Items remaining are; complete the control room survey procedure incorporating NRC comments, finish a control room instrument inventory based on plant specific emergency procedures guidelines and complete a walk-through of the emergency operating procedures.

III. Emergency Operating Procedures (EOP's)

Northern States Power has supported the BWR Owners' Group development of generic emergency procedures guidelines. The BWR Owners Group issued the Emergency Procedures Guidelines, Revision 2 in June, 1982 as General Electric Topical Report NEDO 24934. Revision 2 of the EPG's was submitted to the NRC for review and approval on June 1, 1982. A Safety Evaluation accepting revision 2 of the EPG for implementation was issued by the NRC on February 21, 1983. Revision 3 of the EPG's was submitted to the NRC on October 4, 1982. NRC approval of Revision 3 is pending.

A bid specification is being written to select a vendor to prepare a procedures generation package and to draft plant specific emergency operating procedures. The licensed operator retraining program for 1983

includes a review of the basis of the Emergency Procedure Guidelines to begin to familiarize operations staff with EPG's.

IV. Emergency Response Facilities

The Technical Support Center (TSC) is complete according to Supplement 1, with two exceptions: the TSC does not have complete electronic data communications from the Control Room (CR) and the associated data collection, storage, analysis and display capabilities, nor does the TSC have the meteorological variables directly displayed as required. We plan to fully satisfy these requirements, and in the interim, have provided compensating measures. The plant operational parameters are communicated to the TSC via a voice channel and these data are posted on status boards for use by emergency personnel. Meteorological variables are available to the TSC but are located on a computer terminal in the Shift Supervisors' Office a short distance from the TSC. Within the year, these meteorological variables will be directly displayed in the TSC.

The Emergency Operations Facility (EOF) is located approximately one mile from the plant, and is a part of the simulator training building. The EOF meets all the requirements* of NUREG 0737, Supplement 1 with exception of collection, storage, analysis and display capabilities for Reg. Guide 1.97 variables. As with the TSC, these variables are communicated to the EOF and posted on status boards for use by EOF personnel. A new Dose Assessment System, complete with software utilizing meteorological data, will be available in the EOF (and TSC) by August 1983. Training and implementation procedures will be completed in 1983.

The interim operational capability of the TSC and EOF was confirmed during an exercise on February 23, 1983 and by positive findings of the Related Inspection Report.

The OCS is fully functional and no further refinement is required.

According to regulatory guidance, a backup EOF is suggested if the primary EOF is located within 10 miles of the plant. As part of the Corporate Emergency Response Plan, a Headquarters Emergency Center (HQEC) is provided for. This HQEC will be manned for those emergency classes that require manning of the EOF. Therefore, the HQEC is available and functional during those times that the EOF is activated. For those unlikely circumstances that could result in abandonment of the primary EOF, the HQEC would function as the backup EOF and would be able to assume the responsiblity and functioning of the primary EOF. Because the purpose of the HQEC is to provide a corporate focal point for monitoring of emergencies, the correct decision making authority would be available in the backup EOF at any time the primary EOF would need to be abandoned. The location of the HQEC is on the 4th floor of Midland Square Building located in downtown Minneapolis, Minnesota, approximately 45 road miles from Monticello and one-half the distance

*The required HEPA filtration system is expected to be operational by July 1, 1983.

between our Monticello and Prairie Island plants. Provisions have been made for security at the HQEC both during normal working hours and off-hours.

While this location exceeds the 10 to 20 miles suggested, it is felt that this additional distance is not a significant deviation. The backup EOF will be equipped with a remote terminal from the plant Dose Assessment System. This will allow the backup EOF to perform dose projection if it is necessary to assume the role of the primary EOF. Dedicated communications systems are available in the HQEC.

All required documents are available in the HQEC and significant plant diagrams are maintained in adjacent offices. For those cases where rapid tranportation may be necessary between the site area and the HQEC, arrangements have been made for the use of a helicopter.

V. Reg. Guide 1.97

Northern States Power supported the BWR Owners' Group evaluation of RG 1.97, Revision 2 which was completed in July, 1982. The results of this evaluation will be used as guidance in Monticello's response. We have not yet specifically addressed all RG 1.97 requirements, however a number of instrument changes have already been implemented in response to other TMI issues and the environmental qualification program.

Attachment 2

INTEGRATION PLAN

It is recognized that emergency response activites are interactive and that an iterative process is required to integrate these activities. For ideal efficiency each of the interactive elements should be available at the same time. However, due to economics, manpower resources, and vendor restrictions this is not possible. The integration plan for Monticello will enable effective integration yet allow the necessary flexibility in schedules for each activity. Figure 1 shows the basic elements and interfaces considered in development of the plan. Each emergency response activity will be developed using design guidance obtained from plant specific criteria, owners' group work, NRC criteria and other industry related guidelines. The requirements stemming from each activity will be input to an on-site interface and human factor review group (Shown as circled milestones on Figure 2.) The function of this group is to:

1) Identify and initiate necessary changes in each of the elements based on the interactive impact.

2) Provide human factors engineering input to proposed changes and modifications.

3) Identify simulator changes and training requirements to input to the training plan.

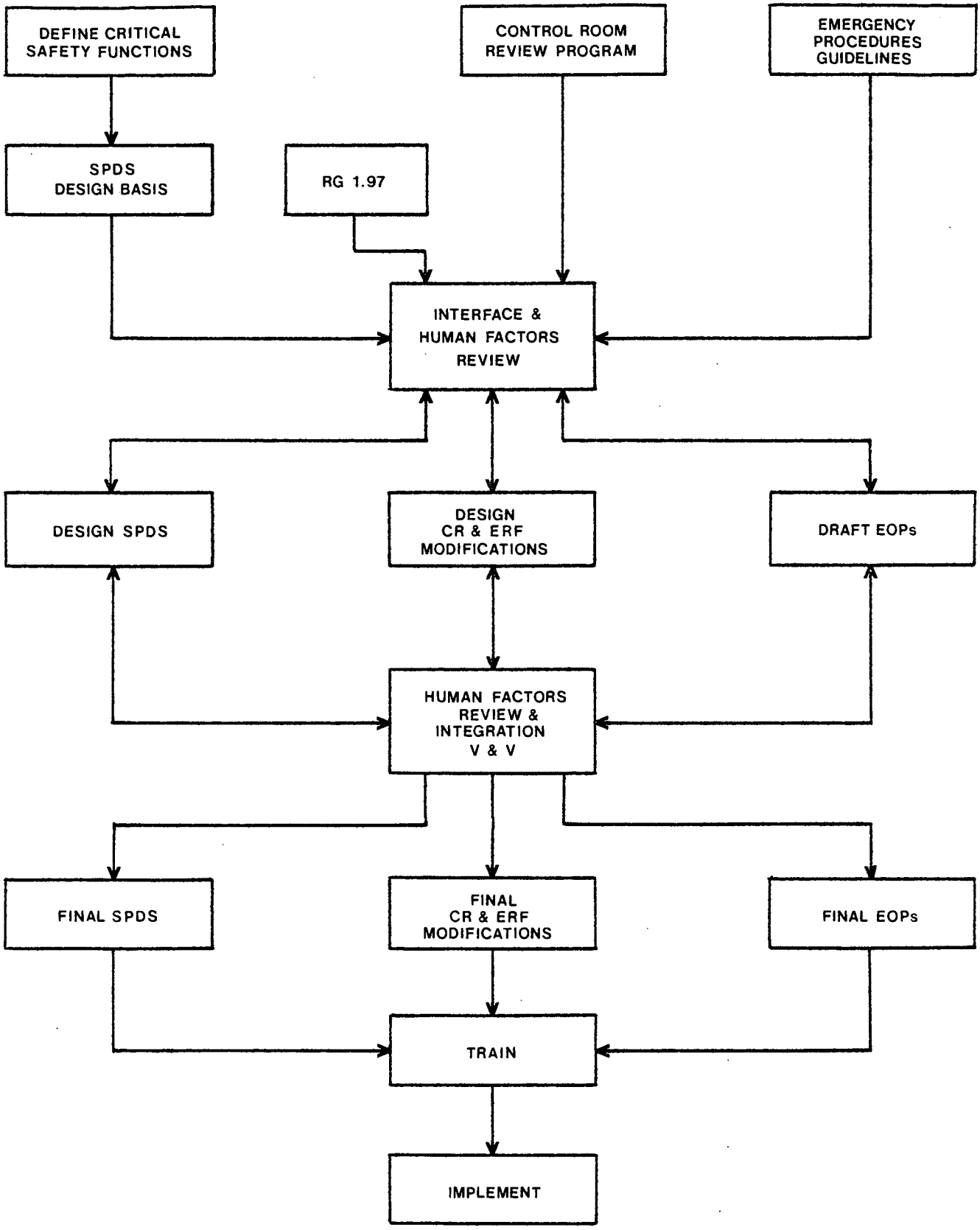
Based on the guidance from the interface and human factors review group, the necessary changes are designed. After the designs are completed, the review group will again perform a human factors review and an integration V & V evaluation to confirm acceptable design. Any deficiencies will be resolved through an iterative process such that a final design is the outcome of the review. The final designs will be implemented after the operators have been trained on the changes. It is important to note that the above process is designed to work for both major and minor changes. Also, parallel paths are only required if more than one element is affected prior to implementation. As an example, if an instrument is to be relocated in the control room for operator convenience, and this move does not affect the EOP's or SPDS, then the change would be implemented after design, V&V and training. However, if the same modification does impact the EOP's, then changes to the EOP's would follow in parallel with the modification effort.

Figure 2 shows a simplified bar graph of Monticello's phased implementation approach to the three major elements of NUREG 0737, Supplement 1. With the scheduled delivery of our training simulator and the approved status of the generic EPG's it is logical that the first element to be implemented will be our EOP's without SPDS. As a parallel effort, control room modifications to provide necessary instrumentation and controls required for the EOP's will be implemented as part of the control room design review effort. A summary report of the control room design review will be generated after the EOP walk-throughs.

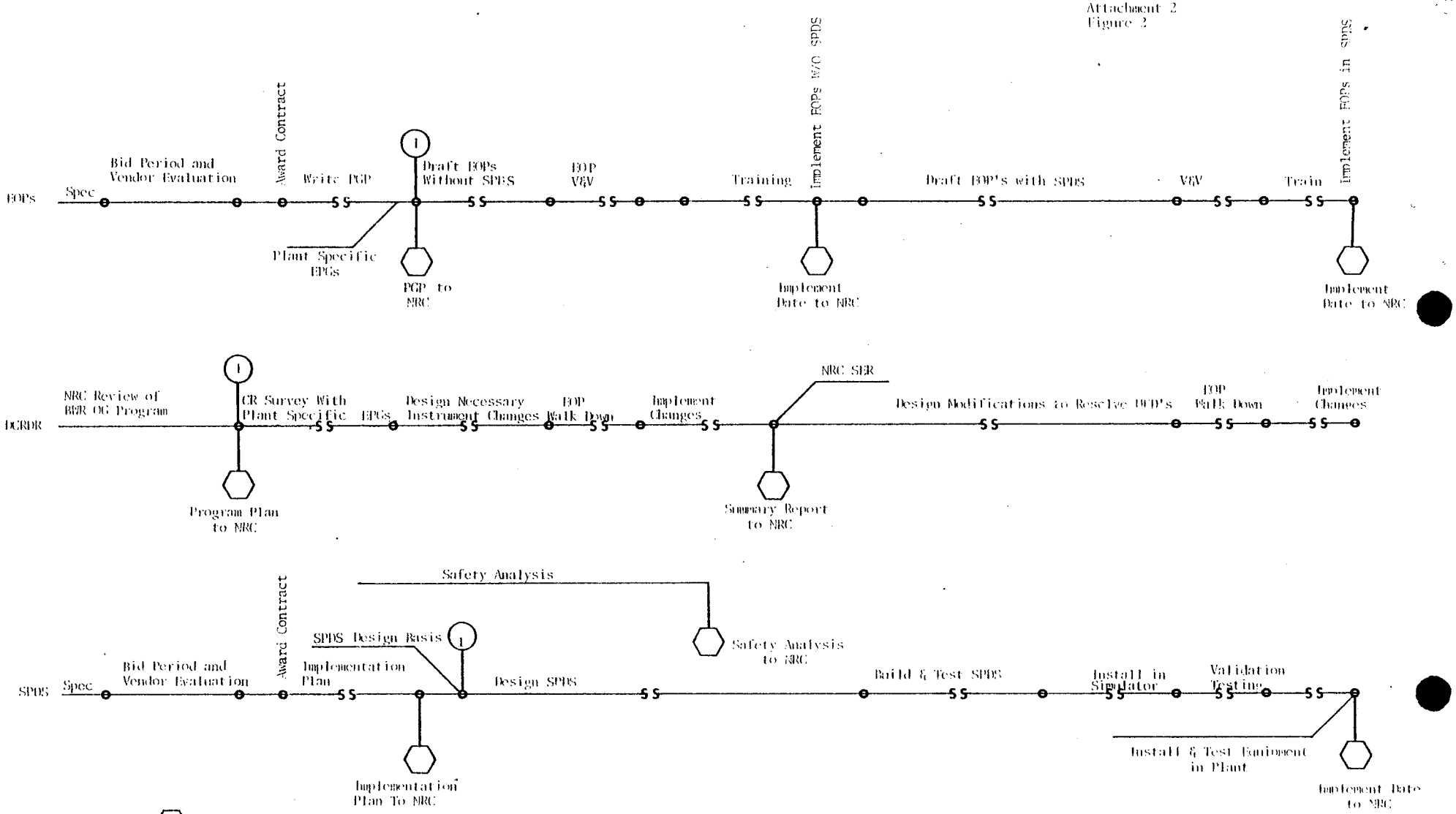
The schedule for the SPDS is the longest because of equipment delivery times and outage requirements to tie the equipment into the plant. A basic SPDS that indicates the safety status of the plant will be installed in our simulator

first for validation testing and operator training. Based on the SPDS design, revised EOP's will be drafted and a walk-through and verification/validation of the procedures will be completed in parallel with the SPDS validation testing.

ATTACHMENT 2
FIGURE 1



Attachment 2
Figure 2



Attachment 3

Schedule

The dates listed in this section represent our best judgement of what can be accomplished within the limits of our resources. We will compliment our resource capability by contracting vendor services where practical. Only after detailed negotiation with a vendor is it possible to establish a firm implementation goal. Installation of equipment, perhaps the most difficult to coordinate and schedule, is dependent on plant refueling outages. Refueling outages are difficult to accurately predict because of the effect on the fuel cycle length by unforeseen circumstances and overall power systems requirements. Plant outages also impact the schedule by limiting NSP resources to review vendor's work and operations personnel available for training. Finally, as shown in Figure 2 of Attachment 2, a change in schedule for one element will impact the others.

SPDS SCHEDULE	Target Date
Award Vendor Contract	December 1983
(1) SPDS Implementation Plan Submitted Pre-Implementation Review Desired	May 1984
SPDS Safety Analysis Submitted	December 1984
SPDS Implementation Date	1st refueling after 1985
DCRDR SCHEDULE	
(2) DCRDR Program Plan Submitted	October 1983
DCRDR Summary Report Submitted	July 1985
EOP SCHEDULE	
Generic Technical Guidelines	(submitted June and October 82)
Award Vendor Contract	December 1983
Procedures Generation Package Submitted	May 1984
Implementation of EOP's without SPDS	September 1985
Implementation of EOP's with SPDS	1st refueling after 1985
REG. GUIDE 1.97 SCHEDULE	
Reg. Guide 1.97 Report Submitted	December 1983
EMERGENCY RESONSE FACILITIES	
TSC/EOF Fully functional	1st refueling after 1985

(These facilities are now fully functional except as qualified under Paragraph IV Attachment 1)

NOTE: (1) Desired NRC review dates will be included as part of the implementation plan.

(2) Based on prompt NRC review of BWR Owners' Group survey plan.