NRC FORM 658
(9-1999)

U.S. NUCLEAR REGULATORY COMMISSION

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Do not include proprietary materials.

DATE OF MEETING
05/03/2001

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s)	**050-460**
Plant/Facility Name	**WNP-1**
TAC Number(s) (if available)	
Reference Meeting Notice	**April 24, 2001**
Purpose of Meeting (copy from meeting notice)	**Energy Northwest commissioned a study to determine feasibility of completing the construction of WNP-1. Meeting to discuss regulatory issues**

NAME OF PERSON WHO ISSUED MEETING NOTICE	TITLE
Joe Sebrosky	**Project Manager**

OFFICE
NRR

DIVISION
Future Licensing Organization

BRANCH

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Docket File/Central File
PUBLIC

DF01

Meeting With Energy Northwest to Discuss
Feasibility Study for Completing Construction of WNP-1
May 3, 2001

Attendance List

Name	Organization	Telephone Number
Joe Sebrosky	NRR/FLO	(301) 415-1132
PAUL INSERRA	ENERGY NORTHWEST	(509) 377-4147
Rod Webring	Energy Northwest	(509) 377-4279
David Repka	Winston & Strawn / Energy Northwest	202/371/5726
JERRY WILSON	NRR/FLO	301 · 415 · 3145
Eileen McKenna	NRR/DRIP/RGEB	301 415 - 2189
TOM Foley	NRR / DISP	301 415 - 1036
Ann Hodgdon	OGC	301 415 - 1587
Marsha Gambechi	NRR/FLO	301 - 415 - 1193
Richard Bickers	McGraw-Hill	202-383-2166
Charles Tally	Framatome - ANP	804 - 832 - 2883
JAMES FAY	BECHTEL	301-228-7271
GEOFFREY QUINN	BECHTEL	301-228-6352
CAL REID	BECHTEL	(301) 228-6533
Charles Willbanks	SCIENTECH LIS	301 258 - 1865
ROBERT E. SWEENEY	IBEX ENGINEERING SERVICES	703-525-7503
HERB FONTECILLA	DOMINION	703 838 2314
ROGER HUSTON	Licensing Support Services	703-671-9738
BROOKE POOLE	Winston + Strawn / Energy Northwest	202-371-5824
Charles Brinkman	Westinghouse	301-881-7040
RON SIMARD	NEI	(202) 739-8128
Linda Perrell	Washington Group International	(301) 961-4894
Tony Pietrangelo	NEI	202 739 8081
SCOTT MORRIS	NRC - OEDO	(301) 415 1730
BARRY ZALCMAN	NRC - RGEB	301 415 2419
William B. Jones	NRC - Region IV	(By phone)
Diane Curran	Harmon, Curran, Spielberg & Eisenberg on behalf of Northwest Environmental Advocates	

Meeting With Energy Northwest to Discuss
Feasibility Study for Completing Construction
of WNP-1
May 3, 2001

Agenda

Topic	Presenter	Time
I. Overview of Feasibility Study	Energy Northwest	9:00-9:30 am
II Overview of the Future Licensing Organization	NRR	9:30-9:50 am
III. Discussion Topics	ALL	9:50- 11:00 am

a) Construction Permit Extension
b) NRC Resources
c) NRC Review Issues
   - Material Condition/Preservation
   - Design Issues
   - Status of SERs
d) Application of Risk Insights
   - Quality Assurance
   - Large Break Loss of Coolant Accident
   - Preservation
e) Hearing Process

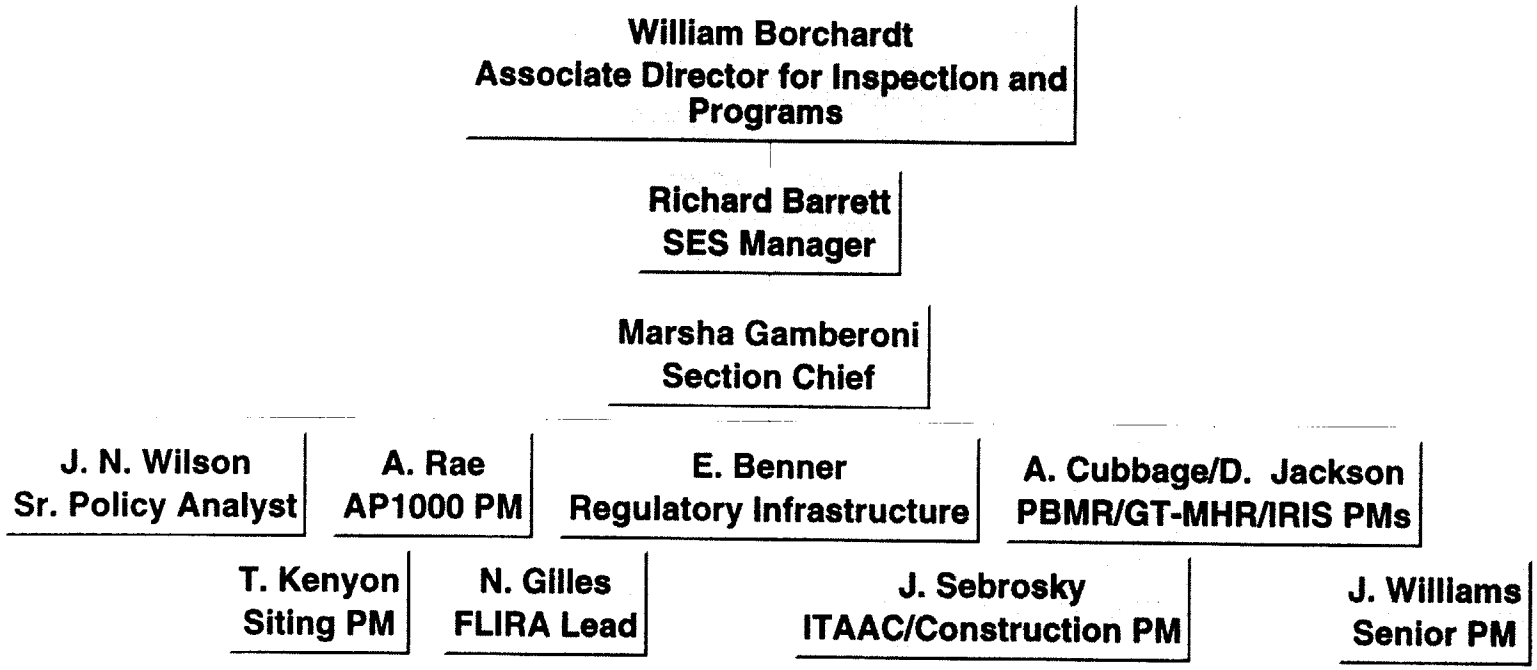
OVERVIEW OF FUTURE LICENSING ORGANIZATION AND WNP-1 NRC PROJECT MANAGEMENT

Joe Sebrosky, NRR
May 3, 2001

OVERVIEW OF FUTURE REACTOR ISSUES

	Process Issues	Technology Issues
Staff Readiness	FLIRA	
Licensing	Regulatory Infrastructure Reactivation of CP (WNP-1) Reactivation of Construction Insp. Prog. Resolution of 'Programmatic' Inspections Tests Analyses and Acceptance Criteria (ITAAC)	Pre-Application Reviews PBMR GT-MHR IRIS AP1000
Siting	Siting Review	
Stakeholder Interaction	Communication Plan Public Workshops	ACRS Workshop Public Meetings

FUTURE LICENSING ORGANIZATION



FUTURE LICENSING AND INSPECTION READINESS ASSESSMENT (FLIRA)

- Evaluate Full Range of Licensing Scenarios
- Assess Readiness to Review Applications & Perform Inspections
  - Staff Capabilities
  - Schedule and Resources (Including Necessary Support)
  - External Support
  - Using SECY 89-104, "Assessment of Future Licensing Capabilities" as Guidance
- Recommendations:
  - Staffing
  - Training
  - Research
  - Contractor Support

ITAAC/CONSTRUCTION

- Construction Inspection Program Re-activation
  - Develop Guidance for Inspection of Critical Attributes
  - Include Inspections for Plant Components & Modules at Fabrication Site
  - Initiate Development of Training for Inspection Staff
- Resolution of "Programmatic" ITAAC
- WNP-1 Project Management
  - Placed under Construction ITAAC project management
  - Reactivated Plant Licensing Scenario discussed in SECY 89-104

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

November 4, 1987

TO ALL HOLDERS OF CONSTRUCTION PERMITS FOR A NUCLEAR POWER PLANT

SUBJECT: POLICY STATEMENT ON DEFERRED PLANTS (GENERIC LETTER 87-15)

The purpose of this letter is to provide you with a copy of a Policy Statement on Deferred Plants. The Policy Statement has been developed in order to provide you with the Commission's position regarding the quality assurance requirements, particularly the maintenance, preservation and documentation requirements for deferred plants, and to state how new regulatory staff positions will be applied to deferred plants that are reactivated.

The Policy Statement does not include any new regulatory requirements. The NRC staff has applied the regulations and guides, listed in the Statement, to the deferral and reactivation of previously deferred plants. The Statement has been prepared to combine the regulatory requirements applicable to deferral and reactivation in order to provide a focus for this activity and a level of stability and predictability to the regulatory process in this area.

Any questions regarding this statement should be directed to Theodore S. Michaels, U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Washington, D.C. 20555, (301) 492-8251

Frank J. Miraglia, Jr.
Associate Director for Projects
Office of Nuclear Reactor Regulation

Enclosure:
Policy Statement on
Deferred Plants

8711100431

Rules and Regulations

Federal Register
Vol. 52, No. 198
Wednesday, October 14, 1987

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.
The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

Commission Policy Statement on Deferred Plants

AGENCY: Nuclear Regulatory Commission.

ACTION: Final policy statement.

SUMMARY: This statement presents the policy of the Nuclear Regulatory Commission (NRC) with regard to the procedures that apply to nuclear power plants while in a deferred status and when they are being reactivated. The regulations and guidance applicable to deferred and terminated plants; maintenance, preservation, and documentation requirements; and the applicability of new regulatory requirements and other general administrative considerations are addressed.

EFFECTIVE DATE: November 13, 1987.

FOR FURTHER INFORMATION CONTACT: Theodore S. Michaels, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone (301) 492-8251.

SUPPLEMENTARY INFORMATION:

I. Background

On March 16, 1987, the Commission published a proposed policy statement on deferred plants in the **Federal Register** for a 30-day comment period (52 FR 8075). Five commenters offered a total of nine comments on the proposed policy statement. The Commission has modified the policy statement in section III of this notice in reponse to comment B(1) in section II below. In addition, some minor editorial changes were made.

II. Response to Public Comments on the Proposed Policy Statement

A. KMC, Inc.

Summary of Comment. KMC, Inc. and the Utility Safety Classification Group recommended that the term "safety-related" be substituted for the term "important to safety" in sections III.B.2.a and III.B.2.b because there is not yet a clear definition of the latter term.

Commission Response. The Commission rejects this suggestion. The term "safety-related" is a subset of the term " important to safety." Safety-related is more precisely defined at this time because licensees provide a list of structures, systems, and components that come within its scope. However, there is sufficient Commission guidance regarding the term "important to safety" to warrant its use without causing confusion. For example, the Commission has indicated that while there is not "a predefined class of equipment at every plant whose functions have been determined by rule to be 'important to safety,' * * * whether any piece of equipment has a function 'important to safety' is to be determined on the basis of a particularized showing of clearly identified safety concerns * * *, and the requirements of * * * GDC 1 must be tailored to the identified safety concerns." *Long Island Lighting Company* (Shoreham Nuclear Power Station, Unit 1), CLI-84-9, 19 NRC 1323, 1325 (1984); *see also Shoreham*, ALAB-788, 20 NRC 1102, 1115-1119 (1984).

In the context of this policy statement, it is expected that a utility, planning to maintain its reactivation option or transfer of ownership to others, will identify any structures, systems, and components (SSC) which are important to safety and establish appropriate maintenance, preservation, and documentation (MPD) for these SSC. If a utility determines, based on an analysis of cost-effectiveness, to develop MPD only for safety-related SSC, it must recognize the possibility that SSC for which adequate MPD were not developed may have to be replaced if and when reactivation or transfer of ownership takes place.

The NRC does not want to limit its application of MPD requirements to safety-related SSC because that could allow other SSC, which are important to safety, to be placed into service without proper MPD.

B. Washington Public Power Supply System (WPPSS)

Summary of Comments. WPPSS submitted the following three comments:

(1) The commenter recommended that the requirement in section III.A.6.e (incorrectly referred to by the commenter as 6.c) be amended. This item requires that a listing of any new applicable regulatory requirements that are made effective during the deferral period be submitted with a description of the licensee's proposed plans for compliance with these requirements. The commenter suggests that this presumes a sufficient level of engineering activity during the deferral period to develop such plans. Since this might not be the case, the commenter asks that the requirement be changed to permit a commitment to submit this information at a specific later date.

Commission Response. This change has been made. However, it should be noted that this information should be submitted at the time of reactivation notification, or as soon thereafter as possible, since the lack of this information could impact the review schedule.

(2) The commenter recommended that the requirement in section III.A.6 to notify the NRC at least 120 days before construction resumes be changed to "at least 120 days before construction is expected to resume or as soon as possible after a reactivation decision has been reached." This would permit some construction activities to get under way earlier.

Commission Response. The 120-day advance notification is the minimum period required to evaluate the licensee's submittal to determine the acceptability of reactivation. Any request by the licensee to resume selected non-safety-related activities sooner than 120 days will be considered at the time of the request.

(3) This comment refers to section III.A.6.i, which requires an amendment to the Final Safety Analysis Report (FSAR), as applicable and necessary, discussing the bases for all substantive site and design changes made since the last amendment. The commenter states that, in its specific case, such an amendment would not be available at the time of initial notification. The commenter believes that since no substantive site and design changes will

be made during deferral, an FSAR amendment would not be needed at that time.

Commission Response. The amendment is required only if there are substantive changes. If there are none, no amendment is necessary. Therefore, the commenter's concern is satisfied by the text in the proposed policy statement.

C. The State of Washington Energy Facility Site Evaluation Council

Summary of Comments. The following three comments were made:

(1) The commenter suggested that the policy clearly state, early on, that it applies only to facilities deferred or terminated during construction.

Commission Response. The intent of the policy statement is made clear throughout the document. Deferral and termination refer to construction, not operation. No further clarification is needed.

(2) The commenter expressed concern that the definition of a terminated plant might cause confusion because it requires a valid construction permit, whereas the only authorized activity is site restoration.

Commission Response. The reference to a valid construction permit in the definition for a terminated plant is not a requirement; it merely identifies the status of a plant that fits the definition. A plant is considered to be in terminated status only from the time the licensee has announced that construction has been permanently stopped until the construction permit is formally withdrawn by the NRC. The licensee of a deferred plant, on the other hand, retains the construction permit because construction has only been deferred, not terminated.

(3) The commenter suggested that the Commission might wish to address circumstances of abandonment and cessation of operation, which the commenter had recently adopted in its rules.

Commission Response. These areas go beyond the intended scope and purpose of the subject policy statement. These matters are being addressed in the Commission's decommissioning rulemaking.

D. Marvin Lewis

Summary of Comment. The commenter suggested that deferral of cancellation often provides a cover for inadequate quality or other very dangerous conditions and that the NRC must handle resumption of construction "sternly" and with "extreme prejudice," requiring that all the latest safety requirements be met.

Commission Response. The proposed policy statement stresses clearly and repeatedly that deferral, termination, and reactivation will be subject to all applicable current regulations, standards, policies, and guidance. No further clarification is needed.

E. Atomic Industrial Forum

Summary of Comment. The commenter supported the proposed policy statement and did not suggest changes to its text.

Commission Response. None required.

III. Policy Statement

This policy guidance outlines (1) the NRC's regulatory provisions for deferring and preserving a deferred nuclear power plant until such time as it may be reactivated and (2) the applicability of new regulatory staff positions to a deferred plant when it is reactivated. Moreover, because of the possibility that the plant and/or its equipment may be sold to another utility, some general guidance with regard to terminated plants is presented.

The following definitions apply to this policy guidance:

"Deferred plant" means a nuclear power plant at which the licensee has ceased construction or reduced activity to a maintenance level, maintains the construction permit (CP) in effect, and has not announced termination of the plant.

"Terminated plant" means a nuclear power plant at which the licensee has announced that construction has been permanently stopped, but which still has a valid CP.

A. Deferred Plant

The following areas should be addressed by the licensee and the NRC when a plant is deferred:

1. Notification of Plant Deferral

The licensee should inform the Director of Nuclear Reactor Regulation (NRR) when a plant is to be deferred within 30 days of the decision to defer. Information to be made available should include the reason for deferral, the expected plant reactivation date (if known), whether a CP extension request will be submitted, and the plans for fulfilling the requirements of the CP, including the maintenance, preservation, and documentation requirements as outlined in Section III.A.3 of this policy statement.

2. Extension of Construction Permit

The licensee must ensure that its CP does not expire. Title 10 of the *Code of Federal Regulations*, § 2.109 (10 CFR 2.109), "Effect of Timely Renewal Application," provides that if a request for renewal of a license is made 30 days before the expiration date, the license will not be deemed to have expired until the application has been finally processed. Extension of the completion date for a CP will be considered in accordance with 10 CFR 50.55(b).

3. Maintenance, Preservation, and Documentation of Equipment

The NRC requirements for verification of construction status, retention and protection of records, and maintenance and preservation of equipment and materials are applied through: 10 CFR 50.54(a), "Conditions of Licenses," and 10 CFR 50.55(f), "Conditions of Construction Permits," which require that a quality assurance program be implemented; 10 CFR Part 50, Appendix B, which requires that all activities performed to establish, maintain, and verify the quality of plant construction be addressed in the licensee's quality assurance program; 10 CFR Part 50, Appendices A and B, which require that certain quality records be retained for the life of the plant; 10 CFR 50.55(e), which requires reporting of deficiencies in design, construction, quality assurance, etc.; 10 CFR 50.71, which applies to the maintenance of records; and 10 CFR Part 21, which applies to reporting of defects and noncompliance. Those NRC regulatory guides that endorse the ANSI N45.2 series of standards, "Quality Assurance Requirements for Nuclear Power Plants," also are applicable and include Regulatory Guides 1.28, 1.37, 1.38, 1.58, 1.88, and 1.116.[1] Of particular importance is the guidance on packaging, shipping, receiving, storing, and handling of equipment as well as on collecting, storing, and maintaining quality control documentation. The maintenance, preservation, and documentation requirements outlined above apply to plants under construction.

The licensee may choose to modify existing commitments during extended construction delays by developing a quality assurance plan that is commensurate with the expected activities and expected (or potential) length of delay. The licensee should discuss with the NRC the expected construction delay period and the quality assurance program to be

[1] These regulatory guides are available for inspection at the Commission's Public Document Room, 1717 H St. NW., Washington DC. Copies of these regulatory guides may be purchased by calling (202) 275-2060 or by writing to the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington DC 20013-7082.

implemented during the deferral. The program should include a description of the planned activities; organizational responsibilities and procedural controls that apply to the verification of construction status, maintenance, and preservation of equipment and materials; and retention and protection of quality assurance records. The program will be reviewed and approved by the NRC in accordance with 10 CFR 50.54(a)(3), 10 CFR Part 50, Appendix B, and inspection procedures, as appropriate.

Implementation of the program will be examined periodically to determine licensee compliance with commitments and overall program effectiveness.

4. Conduct of Review During Deferral

When a plant is deferred, the staff will normally bring all ongoing post-CP and operating license (OL) reviews and associated documentation to an appropriate termination point. Normally, new reviews will not be initiated. If the review has progressed sufficiently, a safety evaluation report (SER) will be issued, which assembles and discusses the status of the completed work and lists all outstanding open items. Subject to availability of resources, the staff might perform specific technical reviews or complete SER supplements.

5. Applicability of New Regulatory Requirements During Deferral

Deferred plants of custom or standard design will be considered in the same manner as plants still under construction with respect to applicability of new regulations, guidance, and policies. Proposed plant-specific backfits of new regulatory staff positions promulgated while a plant is deferred will be considered in accordance with the Commission backfit criteria. Other modifications to previously accepted staff positions will be implemented either through rulemaking or generic issue resolution, which themselves are subject to the backfit rule. Regulations that have integral update provisions built into them will be applied to deferred plants, as they are to other plants under construction, without the use of the backfit rule.

Provisions in other policy statements that are applicable to plants under construction also will have to be implemented. Any resulting backfit recommendations will have to be supported in accordance with 10 CFR 50.109. Appeals procedures applicable to plant-specific backfits would be applicable to deferred plants. Appeals filed by a licensee during plant deferral will be considered and processed by the NRC while a plant is in a deferred status.

6. Information to be Submitted by Licensee When Reactivating

The licensee should submit a letter to the Director of NRR at least 120 days before plant construction is expected to resume. The letter should include the following information, to the extent that the information has not been submitted to the staff during the deferral period:

a. The proposed date for resuming construction, a schedule for completion of the construction, and a schedule for submittal of an operating license application, including a final safety analysis report (FSAR), if one has not already been submitted.

b. The current status of the plant site and equipment.

c. A description of how any conditions established by the NRC during the deferral have been fulfilled.

d. A list of licensing issues that were outstanding at the time of the deferral and a description of the resolution or proposed resolution of these issues.

e. A listing of any new regulatory requirements applicable to the plant that have become effective since plant construction was deferred, together with a description of the licensee's proposed plans for compliance with these requirements or a commitment to submit such plans by a specified date.

f. A description of the management and organization responsible for construction of the plant.

g. A description of all substantive changes made to the plant design or site since the CP was issued (for those plants for which an OL application has not been submitted).

h. Identification of any additional required information that is not available at the time of reactivation and a commitment to submit this information at a specific later date.

i. As necessary, an amendment to the OL application (revised FSAR) and a discussion of the bases for all substantive site and design changes that have been made since the last FSAR revision was submitted (for those plants which were already under OL review at the time of deferral).

7. Staff Actions When Notified of Reactivation

The acceptability of structures, systems, and components important to safety (10 CFR Part 50, Appendix A, General Design Criterion 1) upon reactivation from deferred status will be determined by the NRC on the following basis:

a. Reviews of the approved preservation and maintenance program, as implemented, in order to determine whether or not any structures, systems, or components require special NRC attention during reactivation.

b. Verification that design changes, modifications, and required corrective actions have been implemented and documented in accordance with established quality control requirements.

c. The results of any licensee of NRC baseline inspections that indicate quality and performance requirements have not been significantly reduced below those originally specified in the FSAR. Structures, systems, and components that fail to meet the acceptability criteria or will not meet current NRC requirements will be dealt with on a case-by-case basis.

B. Terminated Plant

1. Plant Termination

A licensee should inform the Director of NRR when a plant is placed in a terminated status. In the event that withdrawal of a CP is sought, the permit holder should provide notice to the NRC staff sufficiently far in advance of the expiration of the CP to permit the staff to determine appropriate terms and conditions. If necessary, a brief extension of the CP may be ordered by the staff to accommodate these determinations. Until withdrawal of the CP is authorized, a permit holder must adhere to the Commission's regulations and the terms of the CP and should submit suitable plans for the termination of site activities, including redress, as provided for under 10 CFR 51.41, for staff approval. Moreover, if the plant has been completed to a point that it can function as a utilization facility, the licensee must take all necessary actions to ensure that the facility is no longer a facility for which an NRC license is required.

2. Measures that Should be Considered for Reactivation or Transfer of Ownership of Terminated Plants

The licensee of a terminated nuclear plant, if planning to maintain the option of plant reactivation or transfer of ownership to others—either totally or in part—should consider the following actions:

a. For the removal and transfer of ownership of plant components and systems important to safety, make necessary provisions to maintain, collect, and transfer to the new owner appropriate performance and material documentation attesting to the quality of the components and systems that will be

required of the new owner if intended for use in NRC-licensed facilities.

b. Develop and implement a preservation and maintenance program for structures, systems, and components important to safety, as well as documentation substantially in accordance with section III.A.3 of this policy statement. If these provisions are implemented throughout the period of termination, a terminated plant may be reactivated under the same provisions as a deferred plant.

These licensees also must assure that any necessary extensions of the CP are requested in a timely manner.

Dated at Washington, DC this 7th day of October 1987.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

[FR Doc. 87-23740 Filed 10-13-87; 8:45 am]

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NOTE: DOES NOT INCLUDE THE ENTIRE CONTENTS OF THE SECY

POLICY ISSUE

(NEGATIVE CONSENT)

April 3, 1989

SECY-89-104

For: The Commissioners

From: Victor Stello, Jr.
Executive Director for Operations

Subject: ASSESSMENT OF FUTURE LICENSING CAPABILITIES

Purpose: To request Commission review of the staff's assessment of the NRC readiness to process future applications for construction permits or operating licenses.

Discussion: In response to the memorandum from the Chairman dated August 18, 1988, a small group was established to assess the readiness of the NRC to process an application for a construction permit/operating license for a nuclear power plant that could be submitted in the future. The membership of the group and its charter was enclosed in the EDO's response to the Chairman dated September 21, 1988.

After the effort was begun, the Steering Group received an SRM (dated October 20, 1988) related to the denial of a Petition for Rulemaking on 10 CFR Part 100. In that SRM, it was noted that a comment would be inserted in the cover letter denying the petition and the Federal Register notice stating "...that this issue will be considered in the NRC 'readiness to license' study..."

The Steering Group examined this matter and concluded that issue was not mature enough for resolution at this time. The staff who will consider possible changes in Part 100 and implementing Regulatory Guides is currently focused on the review of and schedules for the evolutionary advanced light water reactors (ALWR) and the EPRI-ALWR Requirements Document. However, the staff will bring this issue to resolution before it would impact new plant proposals.

Recommendation: The staff intends to develop plans to implement the recommendations of the enclosed Steering Group report

Contact:
Dennis Crutchfield, NRR
49-21284

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unless otherwise instructed by the Commission. These resource and planning assumptions will be reflected in the next update of the Five Year Plan.

Victor Stello, Jr.
Executive Director
for Operations

Enclosure:
As stated

SECY NOTE: In the absence of instructions to the contrary, SECY will notify the staff on Tuesday, April 18, 1989, that the Commission, by negative consent, assents to the action proposed in this paper.

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REPORT ON NRC READINESS TO PROCESS FUTURE APPLICATIONS FOR CONSTRUCTION PERMITS OR OPERATING LICENSES

FEBRUARY 1989

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ACKNOWLEDGMENT

The Steering Group wishes to recognize the efforts of Dr. Charles Miller and his Working Group in the preparation of this report. They met routinely with the Steering Group to present the status of their work and they enthusiastically carried out their assignments. The detailed analyses, projections and findings of this report were prepared by them. The Steering Group's task was made much easier as a result of their efforts. The Working Group is composed of the following staff members:

Dr. Charles Miller, NRR, Chairman
Charles Bartlett, RES
Tim Collins, NRR
Dick Dudley, NRR
Geary Mizuno, OGC
Lenny Olshan, NRR
Ted Sullivan, NRR
Jim Wigginton, NRR

EXECUTIVE SUMMARY

This report assesses the readiness of the NRC to process possible future applications for construction permits and operating licenses for commercial nuclear power plants. The report provides year-by-year resource estimates for NRC review of several individual licensing scenarios believed to be representative of these future applications. For these chosen licensing scenarios, the report also discusses the licensing processes that should be used, the possible organizational structure that should be in place and regulatory guidance documents that should be updated. The report also provides a budgeting recommendations for the 1991-1995 budget cycle related to the review of future applications.

NRC RESOURCE PROJECTIONS FOR PROCESSING FUTURE LICENSING APPLICATIONS

By using historical data from the most recently licensed plants, a licensing base case was first developed. The base case data was then adjusted to estimate the resources currently needed for the several licensing scenarios chosen for analysis. These scenarios are (1) an application for construction and operation of a custom plant on a new site, (2) an application for reactivation and operation of a plant now in a deferred status but still having a valid construction permit, and (3) an application for a combined construction permit and conditional operating license which references both a pre-approved site and a certified standard plant design. The report provides tables with year-by-year estimates of resource projections required for the review of each of these licensing scenarios. The report also discusses the technical disciplines needed to process the license applications. Table ES-1 provides a summary of these NRC resource needs.

TABLE ES-1. NRC RESOURCE NEEDS FOR INDIVIDUAL NEW APPLICATION REVIEWS

Scenario	Total NRC Staff Resources Needed Per Application 1/
Custom plant	155 FTE
Reactivated plant with licensing review completed	70 FTE
Reactivated without licensing review completed	94 FTE
Standard plant	126 FTE 2/

1/ FTE estimates in this report do not include overhead factors.

2/ Does not include resources to certify the standard design (30 FTE's).

NRC RESOURCE PROJECTIONS FOR SATISFYING DOE NUCLEAR CAPACITY PROJECTIONS

In September 1988, the Department of Energy (DOE) made projections of future nuclear capacity in the United States. This report examines the combined NRC resources that would be needed to meet DOE's most recently published upper and lower reference case projections.

The DOE lower reference case is based on one additional plant of about 1200 MWe becoming operational in 2007. The DOE upper reference case assumes that three reactivated plants and eleven new plants will be operational by 2007. Tables showing the year-by-year NRC resources needed during the 1991-1995 budget cycle to process these applications are presented in the report for both DOE cases.

IMPACT OF FUTURE APPLICATIONS ON NRC FIVE YEAR PLAN

The report recommends that the NRC assume for budgeting purposes that at least one reactivated plant application will be received in 1991. A reactivated plant would involve the most immediate budget impact when compared to the other new application reviews. In addition, the report recommends that NRC resources should be budgeted in 1993 and 1994 for preparation of guidance documentation (most of which are site related matters) for other future applications expected to be received by the mid-1990s. NRC should also be prepared to request additional staffing in the mid-1990's as new plant application submittal dates become more definite. The NRR staff should periodically check with industry to see if any new applications are pending.

Table ES-2 presents the resources that would be needed to review a single reactivated plant application received in 1991, and to prepare guidance documentation for siting reviews of other future applications expected to be received in the 1994-1995 time frame. It should be noted that none of the resources identified in Table ES-2 are currently included in the 1991-1995 NRC budget.

TABLE ES-2. NRC FIVE YEAR RESOURCE NEEDS (FTE)[1/]

YEAR	1991	1992	1993	1994	1995
Reactivated Plant Application Review	12.7	15.0	23.5	27.5	14.4
Update Guidance	--	--	9.5	9.5	--

LICENSING PROCESS AND ORGANIZATIONAL STRUCTURE

The report examines the historical two-step licensing process and changes and additions to previous practice to carry out the review of future plant applications. The changes result from recent rule changes and pending Commission

[1/] FTE Values in this table do not include overhead factors.

decisions, such as the Severe Accident Policy Statement and the proposed fitness-for-duty rule (10 CFR Part 26). The report also discusses the use of proposed 10 CFR Part 52[1] and its three subparts: early site permits, standard design certifications and combined construction permit/conditional operating licenses for the reviews of future applications. The overall purpose of Part 52 is to improve reactor safety and streamline the licensing process by encouraging the use of standard reactor designs and by allowing the early resolution of site, environmental and reactor safety issues. The report concludes that while the historical two-step process remains a viable licensing vehicle for the future, the proposed Part 52 should also be promulgated and its use encouraged.

The report discusses the organizational structure that was successfully used by the NRC in the past for conducting license application reviews, and addresses modifications to the current NRR organization that should be implemented if more than two future license applications are received. The principal modification involves creating a new Project Directorate within NRR for the processing of future plant applications. However, if only one or two future plant applications are under NRC review, this organizational modification would not be needed since the review could be successfully conducted within an existing NRR Project Directorate. However, we recommend that the project manager for the future plant application should, under these circumstances, report directly to the Assistant Director in order to assure adequate visibility and priority for the future licensing project.

[1] The report discusses the proposed Part 52 as of January 1989.

CHAPTER I. INTRODUCTION

On August 18, 1988, the Chairman requested the Executive Director for Operations (EDO) to create a small working group to assess the readiness of the NRC to process possible future applications for construction permits/operating licenses for nuclear power plants (COMLZ 88-27). On September 21, 1988 in a memorandum from Victor Stello, Jr., Executive Director for Operations, to Chairman Zech, "Subject: Working Group to Assess Future Licensing Capability," the objectives of the assessment and the composition of the working group were detailed. This report provides the results of the assessment and the information needed to satisfy the EDO's objectives.

Chapter II of the report provides a discussion of the Part 50 historical licensing process that was successfully used by the NRC in the past to process applications, and necessary modifications to take into account changes to recent rules and Commission Policy. The chapter also discusses the new licensing process described in the proposed Part 52 to Title 10 of the Code of Federal Regulations.

The individual NRC resource projections for several licensing scenarios are presented in Chapter III. The scenarios that were analyzed were chosen because they are considered to be representative of the possible combinations of those new applications specified in the EDO's memorandum to the Chairman (Appendix A). These scenarios include construction and operation of a custom plant on a custom site, reactivation and operation of a plant with a valid construction permit that is in a deferred status, and a standard plant application for construction and operation complying with the proposed Part 52. The resource projections for these individual scenarios were developed by starting with the resources needed to process the most recently licensed plants and making adjustments as necessary.

Chapter IV discusses guidance documents, such as regulatory guides and standard review plans, that should be revised to assist in the processing of future applications, and estimates the resource requirements for updating these documents.

Chapter V discusses the NRC resources needed to perform the combination of plant reviews needed to meet the energy needs projected by the Department of Energy (DOE). The combined NRC resources needed to meet both the DOE upper and lower reference cases are presented.

Chapter VI presents the report recommendations that the NRC assume for budgeting purposes that at least one reactivated plant application will be received by 1991, and that site-related guidance documents applicable to other future applications should be available by 1995. The basis for these recommendations and their impact on the 1991-1995 NRC budget is also presented in Chapter VI.

Chapter VII discusses a past NRR organizational structure that was in place when many license applications were being successfully processed. This chapter also suggests minor changes to the current NRR organizational structure that would facilitate the review of future applications.

Conclusions and recommendations that address the objectives defined in the EDO's memorandum of September 21, 1988 are provided in Chapter VIII.

Three appendices are also included and provide supplementary information supporting that found in the main body of the report. Appendix A contains copies of the Chairman's request to perform the assessment and the EDO's September 21, 1988 response to the Chairman. Appendix B provides a detailed discussion of the historical process used to license nuclear power plants. Appendix C includes additional details on the resource projections, including technical expertise, needed to meet the licensing scenarios discussed in Chapter III.

CHAPTER II. HISTORICAL, CURRENT AND FUTURE LICENSING PROCESSES

A. Historical Licensing Process

Recognizing that readers of this report are likely to be familiar with the historical licensing process, only the highlights of this process are summarized below. Appendix B to this report contains a detailed description of this process and the timing of the various activities of the process.

The historical licensing process has been the 10 CFR Part 50 two step process which consists of a construction permit (CP) stage and an operating license (OL) stage. The basic review scope at each of the stages has been radiological safety, as determined by conformance to the regulations, environmental impact as required by the National Environmental Protection Act, and antitrust.

The reviews, inspections, and hearings at the CP and OL stages generally have followed a similar pattern. Because the plant designs have not been finalized until the OL stage and because significant construction is underway at that time, considerably more resources have been expended by the staff during the OL review stage than at the CP stage. However, the staff review of the site characteristics, environmental impact, and antitrust have been carried out mainly at the CP stage.

The Reactor Inspection Program prior to full power operation has consisted of four phases. The pre-CP phase covered the period from notification of intent to construct up to issuance of one or more Limited Work Authorizations (LWAs) and/or the CP. At this point the construction inspection phase (CIP) began. The CIP merged into the inspection of preoperational testing and operational readiness (PTOR). About six months prior to OL issuance, the startup testing phase (STP) inspection activities began.

The federal agencies with which the staff has had significant interaction during plant licensing are the Environmental Protection Agency and the Department of Interior for the environmental review, the U.S. Geological Survey for the geology/seismology safety review, the Federal Emergency Management Agency for the emergency planning review, the Department of Justice for the antitrust review, and the U.S. Army Corps of Engineers for hydrology review.

The factors that in the past have most significantly affected the staff resources expended for plant licensing have been: hearings with heavy intervention, resolution of siting problems, design and construction errors, resolution of allegations, and facility changes that have resulted from changes in or a better understanding of regulatory requirements. Many plants that the NRC has licensed have been relatively unaffected by these considerations. However, there has been a trend in the more recent cases toward increased resource expenditures attributable to one or more of these factors.

B. New Custom Plant Licensing Scenario

One licensing scenario examined by this study is an application for licensing of a custom plant design on a custom site. The overview of the historical licensing process discussed above and the more detailed description in Appendix B of this report would be largely unchanged for an application for

a new custom plant on a custom site. However, there are a number of recent and pending rule changes and Commission policy decisions which are expected to modify this and other potential new plant licensing scenarios. These rule changes and pending decisions and their resource implications are described in the following paragraphs.

Prior to 1982, review of the financial qualifications to operate and decommission a nuclear power plant was performed at the OL stage. The financial review was eliminated as a requirement at the OL stage by a rule change in September 1984. Applicants for operating licenses are no longer required to submit information on their financial qualifications to operate the facility. However, in June 1988, 10 CFR 50.33(k) and 50.75, Reporting and Recordkeeping for Decommissioning Planning, were added. These rules require applicants for operating licenses to submit detailed financial information to assure that the funds for decommissioning the facility will be provided. The net effect is that NRC staff resource requirements for financial reviews are expected to remain essentially the same as it was prior to 1982.

Two developments have a potential for greatly increasing the NRC workload involved with Federal reviews of emergency preparedness plans at nuclear power plants. First, on December 3, 1987, new emergency planning regulations [10 CFR 50.47(c)(1)] became effective, providing for NRC staff and Federal Emergency Management Agency (FEMA) review of utility prepared offsite emergency response plans where State or local governments decline to participate in emergency planning. Under the regulation, if the NRC determines that an applicants' inability to demonstrate compliance with emergency planning requirements results wholely or substantially from the nonparticipation of State and/or local governments, the NRC staff and FEMA will evaluate the utility prepared plans under the same 16 planning standards that are used to evaluate State and local utility plans, but will use the "realism" assumptions set forth in 10 CFR 50.47(c)(1).

Second, on November 18, 1988, the President issued Executive Order 12657 "Federal Emergency Management Agency Assistance in Emergency Preparedness Planning at Commercial Nuclear Power Plants." This Executive Order establishes a mechanism for Federal assistance to be provided to utilities in the preparation and implementation of offsite emergency plans where State or local governments decline or fail to prepare adequately. Upon certification by a utility that a "decline or fail" situation exists, the Federal government would help the utility prepare its offsite emergency plans. Further, upon a specific determination that there has been maximum feasible use of utility and State and local resources, the Federal government will make available to the utility Federal facilities, equipment and personnel as part of the offsite response organization. The NRC staff and FEMA would evaluate the adequacy of these potentially complicated utility prepared offsite emergency plans under NRC regulations in 10 CFR 50.47(c)(1) mentioned above.

The new NRC regulation has resulted in heavy demands upon the NRC staff and FEMA in the cases of the Seabrook and Shoreham nuclear power plants, which are the first to have utility prepared offsite emergency plans. In the future, there may be facilities that may request the use of the provisions of the Executive Order to obtain Federal assistance in offsite plan development or to gain the use of Federal facilities and resources in their offsite plans.

In September 1988, the Commission issued a new proposed 10 CFR Part 26 that, when promulgated, will require licensees authorized to operate nuclear power reactors to implement a fitness-for-duty program. The general objective of the proposed rule is to provide reasonable assurance that nuclear power plant personnel are not under the influence of any substance, legal or illegal, that in any way adversely affects their ability to perform their duties. The comment period for this proposed rule recently expired. A final rule is currently scheduled to be promulgated by mid FY-1989. Additional NRC staff resources for review and inspection in this area will be needed for future plant licensing.

The Commission's Severe Accident Policy Statement was issued in final form in August 1985 (50 FR 32138). This statement provided policy guidance on how to address severe accident issues for the licensing scenario discussed in this section, as well as the scenarios in Section II.C and II.D. In addition to the traditional review governed by the regulations, new custom plant applicants will be expected to (1) demonstrate compliance with the Three Mile Island requirements for new plants as reflected in 10 CFR 50.34(f), (2) demonstrate resolution of all applicable Unresolved Safety Issues (USIs) and Generic Safety Issues (GSIs), and (3) complete a PRA giving consideration to the severe accident vulnerabilities the PRA exposes along with the insights it may add to the assurance of no undue risk to public health and safety.

The Commission's Severe Accident Policy may lead to rulemaking, Regulatory Guide and standard review plan additions and changes, or other decisions regarding procedures and criteria. These actions are likely to be focused principally on operating reactors and standard plant licensing, since new custom plant applications and reactivated plant licensing applications are expected to be relatively few in number.

Accordingly, staff guidance for severe accident reviews for custom plant licensing is not likely to be formalized in the regulations but will be developed on a case by case basis and based upon the related approaches taken by the Commission for standard plant licensing. Since Severe Accident Policy for new custom plant licensing is not now codified in a rule, there is considerable uncertainty regarding the impact on NRC resources that this area could have in the hearing process. In addition to any potential impact on hearings, severe accident reviews by the staff will require additional NRC resources not previously expended in the historical CP/OL licensing process.

C. Reactivated Plant Licensing Scenario

The second licensing scenario examined by this study is the licensing of plants that hold a currently valid CP that are reactivated from deferred status. Currently there are 12 plants with valid construction permits. Five of these plants (Comanche Peak 1, Limerick 2, Vogtle 2, and Watts Bar 1 and 2) are currently under construction and actively proceeding toward an operating license and are not considered to be in a deferred status. Comanche Peak 2, although not formally in a deferred status, has had construction suspended. Construction of Unit 2 will likely resume later this year. All of these six plants have NRC resources budgeted for the completion of the licensing reviews. The remaining six plants are in a deferred status with no budget allocation,

and are candidates for reactivation. These plants are Bellefonte 1 and 2*, Grand Gulf 2, Perry 2, and WNP 1 and 3.

In accordance with the Commission Policy Statement on Deferred Plants published on October 14, 1987 (52 FR 38077), CP holders are expected to submit certain specific information when construction on a plant is deferred and when plant construction resumes. This information will be used by the staff to determine the status of the plant with respect to reactivated plant licensing. The acceptability of structures, systems, and components important to safety upon reactivation will be determined by the staff based upon the following: (1) the staff review of the implementation of the previously approved preservation and maintenance program, (2) the staff verification that design changes, modifications, and required corrective actions have been properly implemented, and (3) baseline inspections performed by the staff to verify that Final Safety Analysis Report (FSAR) quality and performance commitments have been met.

In addition to performing the above items specifically associated with reactivated plant licensing and completing the review, inspection, and hearings associated with historical plant licensing, certain recent rule changes and the Commission policy on severe accidents are expected to affect the reactivated plant licensing review. The major changes include the Fire Protection Rule, Hydrogen Rule, Equipment Qualification Rule and the Decommissioning Funding Rule.

With regard to severe accidents, licensing applicants for reactivated plants will be expected to perform an Independent Plant Examination (IPE), as outlined in Generic Letter 88-20, and address containment vulnerabilities. As with currently operating reactors this will serve as the mechanism for addressing severe accidents for this licensing scenario. Additional resource requirements and potential hearing process impacts concerning severe accident considerations will be similar to those discussed in Section II.B for new custom plant applications.

The descriptions provided in Section II.B on financial qualifications and fitness for duty are equally valid for the reactivated plant licensing scenario being treated in this section.

Of the six plants in a deferred status, three (Grand Gulf 2, Perry 2, and WNP 1) are located on sites with previously approved emergency plans (EP). EP reviews would have to be performed for the remaining three plants (WNP-3 and Bellefonte 1 and 2 sites).

D. Standard Plant on Pre-Approved Sites Licensing Scenario

The third licensing scenario examined by this study is an application for licensing of standard plants on pre-approved sites. A brief description of the proposed 10 CFR Part 52 process and a discussion of other differences between this scenario and the historical licensing process discussed in Section II.A are presented below.

*Although construction is suspended at Bellefonte 1 and 2, these units are not formally deferred. However, since the NRC Five Year Plan does not allocate any resources to Bellefonte beyond FY-1989, for the purposes of this report Bellefonte is considered to be a deferred plant.

The Licensing Process under Part 52

The proposed Part 52 has three subparts. These are: (a) Early Site Permits, (b) Standard Design Certifications, and (c) Combined Construction Permit/ Conditional Operating Licenses.

1. Early Site Permits

Under Part 52, applications for an early site permit would be required to include information on such things as the boundaries of the site; the number, type and thermal power level of the facilities for which the site may be used; the type of cooling systems to be utilized; the anticipated maximum levels of radiological and thermal effluents; existing and future population profiles; the location and description of nearby industrial, military, or transportation facilities and routes; emergency preparedness and a complete environmental report similar to that required for a traditional construction permit application. Applicants need not discuss the need for power, but are required to perform an evaluation of alternative sites. If the applicant wishes to perform activities equivalent to those permitted by an LWA-1 (see Appendix B), then a plan for site redress must also be included.

As part of the NRC review of an early site permit application, the NRC would be required to prepare an environmental impact statement (EIS), and make a finding with regard to site emergency preparedness planning. Part 52 provides for two options for satisfying early site emergency preparedness (EP) requirements. The first option requires the applicant to provide information sufficient "...to show that the area surrounding the site is amenable to emergency planning which would provide reasonable assurance that adequate protective measures could be taken in the event of a radiological emergency at the site; given the characteristics of the site and probable emergency planning zones surrounding the site...." After consultation with FEMA, the Commission makes a reasonable assurance finding. Under the second option, the applicant may either (a) propose emergency planning parameters for review and approval by the NRC and the Federal Emergency Management Agency. The parameters may include such matters as the exact size and shape of the emergency planning zones. Conformance with these parameters by the emergency plans submitted by an applicant for a combined license or an operating license will be sufficient to show the acceptability of the plans with respect to the emergency planning requirements reflected in the parameters. As part of the second option, the licensee may (b) propose complete emergency plans for review and approval by the NRC and the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

In addition, the application for site approval must be referred to the ACRS, and the ACRS must report "on those parts of the application which concern reactor safety."

An early site permit is deemed to be a partial construction permit; therefore, a mandatory public hearing must be held on the permit application. Publication of notice of the hearing, the procedures for intervention, and the conduct of the hearing would be the same as for a traditional

construction permit application. However, depending upon which EP option is selected, the hearing complexity may vary, along with support staff resources.

2. Design Certification

Under Part 52, an application for design certification must contain the information necessary to receive design approval under Appendix O to Part 50. In addition, the application must contain the non-site specific technical information that is required of applicants for construction permits and operating licenses, including compliance with applicable TMI requirements. Also required are proposed resolutions of medium and high priority USIs and GSIs, the submission of a PRA, and the proposed tests, analyses, inspections, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that a plant which references the design has been built and will be operated in accordance with the certification. For nuclear power plant designs with only evolutionary changes from current LWRs, the proposed Part 52 requires presentation and certification of essentially complete designs.

Review of the application involves an ACRS report on reactor safety issues and, as a minimum, an "informal hearing" before an Atomic Safety and Licensing Board. A formal hearing is also possible. Design certification would essentially constitute Commission pre-approval of the adequacy of the design for referencing in future applications.

3. Combined Construction Permit/Conditional Operating License

Subpart C of Part 52 authorizes the issuance of combined construction permits and conditional operating licenses (combined licenses).

Applications for a combined license must not only include the information required for a construction permit, (including anti-trust information), but must also include the Final Safety Analysis Report (FSAR). Applications referencing an early site permit must demonstrate that the design of the facility, as well as environmental issues not considered in any previous proceeding on the site or design, fall within the parameters specified in the early site permit. If an early site permit is not referenced, then the same information required for an early site permit must be included. If a design certification is referenced, the application must include those portions of the design specific to the site, as well as compliance with the interface requirements in proposed Section 52.47(d). In addition, emergency plans must be submitted, and if possible, certifications by applicable local and State government agencies that the plans are practicable and that they are committed to participating in developing and implementing the plans.

The review process for a combined license application would be similar in many respects to the review of a conventional construction permit. The safety review, however, would consider the final plant design rather than a preliminary design. ACRS review of the application is required. An antitrust review by the Attorney General is also required. An environmental review of the application and hearing are required, including preparation of an EIS. However, if the application references an early site permit,

the environmental review would focus only on the suitability of the site for the particular design and any other significant environmental issues not previously considered in either the permit or certification proceeding.

To provide assurance that the plant can be built and operated in accordance with requirements, proposed Part 52 would require that applicants to submit the proposed tests, analyses, inspections, and acceptance criteria as part of the application for a design certification. These proposed tests, analyses, inspections, and acceptance criteria will be reviewed and approved as part of the certification review.

Before the licensee may operate the facility, a pre-operational antitrust review must be performed to determine if there have been any significant changes in the licensee's activities or proposed activities since the grant of the combined license. If there are, a review by the Attorney General is required. The Attorney General may recommend that an antitrust hearing be held by the Commission. Apart from necessary antitrust hearings, an interested member of the public also has the opportunity to request a hearing on the basis that either (1) there has been a material nonconformance with the combined license, the licensee's written commitments, the 1954 Atomic Energy Act or the Commission's regulations which could adversely affect the safe operation of the facility; or (2) that some modification to the site or design is necessary to assure adequate public protection.

The approach inherent in the proposed Part 52 is based upon submission of complete information on the final design. As a result, the distribution of NRC resources for licensing reviews will be expended over a shorter time frame, and earlier than in the traditional two-step licensing process. Similarly, NRC regional resources for the inspection of the implementation of the proposed tests, inspections, analyses, and acceptance criteria will have to be expended earlier in the licensing process than required by the historical licensing approach.

In addition to the above procedural changes for standard plants under the proposed Part 52, there are other differences from the historical licensing reviews that are discussed below. Section II.B of this report on New Custom Plant Licensing contains discussions of the effect on new licensing of the Decommissioning Funding Rule, Emergency Planning and Fitness-For-Duty. The resource implications described in that section are equally applicable for this licensing scenario.

The Commission's Severe Accident Policy statement was issued in final form in August 1985. Through a series of interactions with the Commission and with industry, the staff has been developing specific proposals for implementing the severe accident policy. The staff is considering development of a rule and accompanying regulatory guides that would require: (1) identification of specific severe accident vulnerabilities that evolutionary designs must address (e.g., containment integrity, containment bypass, and core damage prevention), (2) performance of a PRA and consideration of the vulnerabilities it exposes, and (3) documentation of assumptions and incorporation into plant design, operation, and maintenance.

The staff resources for this licensing scenario will reflect the effort involved in reviewing the applicants' severe accident submittals.

E. Licensing Process for Future Applications

The existing 10 CFR Part 50 two-step licensing process should continue to be a viable licensing vehicle for future applications, at least for the near future. NRC Commissioners and staff, the public, and the utilities (along with supporting architect engineers and NSSS vendors) have a vast body of experience and knowledge of the existing Part 50 licensing process. All these participants are familiar with their respective roles in this process, and history shows this process to be a workable licensing vehicle.

Nevertheless, the proposed 10 CFR 52 (after appropriate public comment resolution) should also be promulgated and used for future applications. This proposed new rule is intended to achieve the early resolution of licensing issues, to reduce the complexity and uncertainty of the licensing process, and enhance the safety and reliability of nuclear power plants. Part 52's overall purpose is to improve reactor safety and streamline the licensing process by encouraging the use of standard reactor designs and by allowing the early resolution of site environmental and reactor safety issues. The public should be afforded an earlier entry into the licensing process as a result of design certification rulemaking process and subpart C's combined CP/OL hearings.

It is expected that most applications for future plants would use the Part 52 process, and they should be encouraged to do so. However, the use of Part 50 for some future applications should not be outlawed.

ENERGY NORTHWEST

WNP-1 Viability Study

Energy Northwest / NRC Meeting

Rockville, MD

May 3, 2001

ENERGY NORTHWEST

WNP-1 Viability Study

Study Overview

R.L. Webring
Vice President -
Operations Support/PIO

Paul Inserra
Licensing Manager

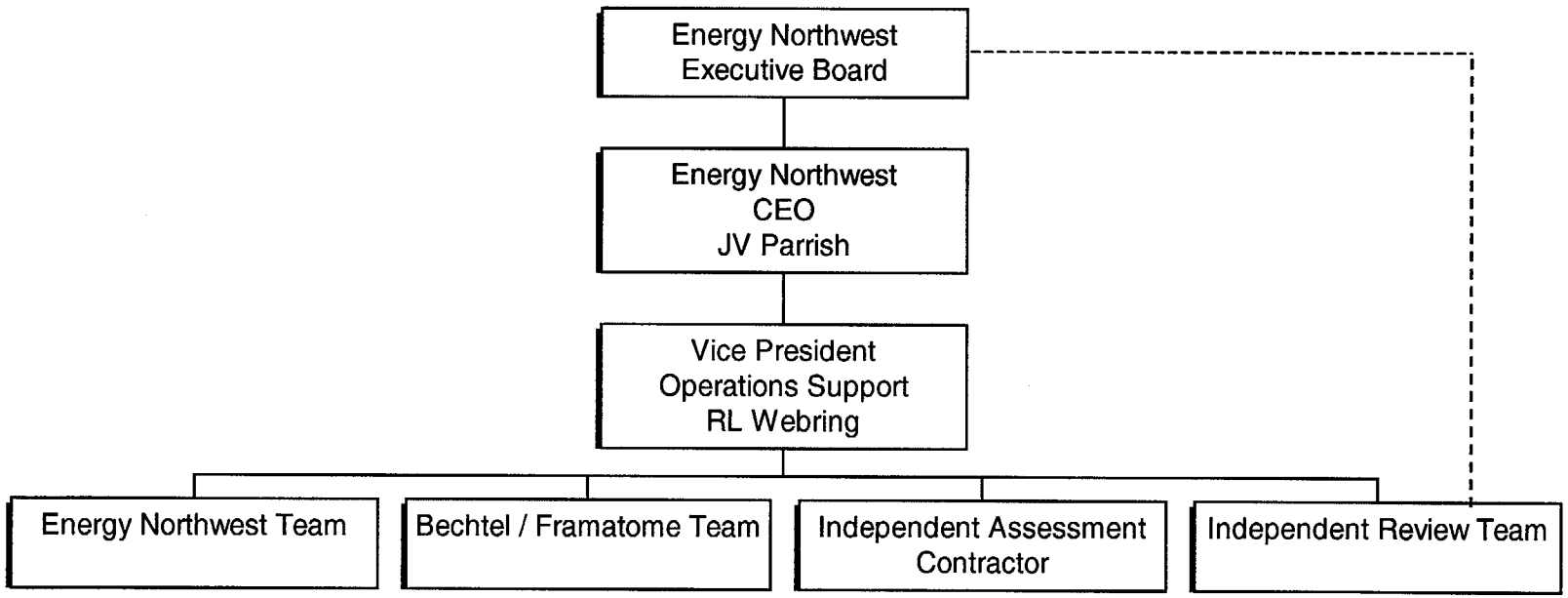
ENERGY NORTHWEST

WNP-1 Viability Study Scope Statement

The Executive Board directs the CEO of Energy Northwest to proceed with the viability study of WNP-1 and the award of the necessary contracts to move forward with such study. This study is expected to determine the cost and schedule along with the design constructability and physical consideration of the WNP-1 facility in order to determine if project completion is feasible and cost-effective.

ENERGY NORTHWEST

WNP-1 Viability Study Organization



ENERGY NORTHWEST

WNP-1 Viability Study
Report Components

	Responsibilities					
Report Components	**Energy Northwest Staff**	**Bechtel/ Framatome**	**Independent Assessment Contractor**	**Independent Review Team**	**VP Ops Support**	**CEO Executive Board**
Completion Cost & Schedule	Input	Prepare	Review/Comment	Review/Comment	Approval	Customer
Operating Cost Forecasts	Prepare		Review/Comment	Review/Comment	Approval	Customer
Financing Options/Estimates	Prepare		Review/Comment	Review/Comment	Approval	Customer
Market Forecast			Prepare	Review/Comment	Approval	Customer
Competing Alternatives		Prepare*	Prepare	Review/Comment	Approval	Customer
Conclusions/Recommendations	Prepare		Prepare	Prepare	Approval	??

* Comparisons with existing nuclear alternatives

ENERGY NORTHWEST

Completion Cost & Schedule Study: Overview

- Participants
  - Bechtel (lead organization)
  - Framatome ANP
  - Key individuals with significant WNP-1 experience
- Schedule
  - Final report by July 13, 2001

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Completion Cost & Schedule Study: Scope

- Update 1984 estimate at completion cost
- Update 1992 critical path study
- Assess existing design for constructability
- Review equipment status/condition
- Assess project changes since 1992
  - Regulatory issues
  - Equipment availability
  - Current potential technologies
- Provide a project completion approach
- Provide comparisons with existing nuclear alternatives

ENERGY NORTHWEST

Completion Cost & Schedule Study: Tools

- Design asset preservation program (DAPP)
- Site inspections
- Previous studies
- Design documentation
- Installation records
- Licensing documents
- Maintenance records
- Quality assurance records
- Experience/knowledge of key individuals

ENERGY NORTHWEST

Independent Assessment Contractor: Overview

- Participants
  - Under review
- Schedule
  - Final report by August 10, 2001

ENERGY NORTHWEST

Independent Assessment Contractor : Scope

- Review cost completion estimates
  - Construction costs and schedule - Bechtel
  - Owner's Costs - Energy Northwest
- Review annual operating costs
- Review financing alternatives
- Provide forecast of market prices and conditions
- Provide an analysis of project competitiveness
- Provide a project risk assessment
- Prepare opinions and conclusions regarding project feasibility

ENERGY NORTHWEST

Independent Review Team: Overview

- Participants
  - Under review
- Schedule
  - Final report by August 20, 2001

ENERGY NORTHWEST

Independent Review Team : Scope

- Review all cost, schedule, and financing estimates
- Review forecasts of market prices and conditions
- Review analysis of project competitiveness
- Prepare opinions and conclusions regarding project feasibility

ENERGY NORTHWEST

Preservation Status – Key Events

- 1975 WNP-1 Project Construction Begins
- 1982 Project Directed to Halt Construction
- 1983 Containment Completed and N-Stamped
- 1985 FSAR Docketed
- 1986 Long-term Preservation Program Approved
- 1987 Design effort halted at 85% complete
- 1988 Design Asset Preservation Program Completed
- 1994 Project "Officially Terminated"
- 1995 Preservation Program Optimization Begins
- 2001 Construction Permit Amendment Request Docketed

ENERGY NORTHWEST

Preservation Status

WNP-1 Material Condition Remains High for Hardware and Records

- Preservation activities controlled by QA Manual
- Dry climate conducive for long term lay-up
- Experience-Based Preservation Program Optimization

ENERGY NORTHWEST

WNP-1 Viability Study –Interface Needs

Establish Points of Contact within NRC

- Identify NRC Activities associated with Construction Resumption
- Discuss Regulatory (OL) Process
- Determine the appropriate process for public participation
- Explore Application of Risk Insights to Project Completion Activities