

Tambling

June 16, 1986

MEMORANDUM FOR: Victor Stello, Jr., Executive Director for Operations
FROM: James G. Keppler, Regional Administrator, Region III
SUBJECT: PLANT SPECIFIC BACKFIT REGULATORY ANALYSIS - PALISADES

In accordance with NRC Manual Chapter 0514, NRC Programs for Management of Plant Specific Backfitting of Nuclear Power Plants, I am forwarding a copy of the regulatory analysis performed for the actions taken May 21, 1986 with regard to a May 19, 1986 reactor trip at Palisades and the subsequent equipment problems. On May 21, 1986 the Region directed Consumers Power Company in a Confirmatory Action Letter to shut down until equipment failures and problems were understood and corrected. This action is covered by the backfit rule in that it was a new staff position not previously imposed by regulation, license or licensee commitment.

The actions taken May 21, 1986 were imposed immediately without a formal regulatory analysis because of the potential risk to public health and safety and the reluctance of Consumers Power Company to take the action voluntarily. Both NRR and IE were consulted and concurred in the action. The attached regulatory analysis provides the bases for this action and is being sent to the licensee.

Any questions regarding this regulatory analysis may be directed to me or T. Tambling of my staff.

James G. Keppler
Regional Administrator

James G. Keppler
Regional Administrator

Enclosure: As stated

cc w/enclosure:
H. R. Denton, NRR
J. M. Taylor, IE
T. H. Cox, EDO

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B-13

EVALUATION OF NRC STAFF IMPOSED BACKFIT
NECESSARY TO ENSURE THAT THE
PALISADES NUCLEAR POWER FACILITY
POSES NO UNDUE RISK TO PUBLIC HEALTH AND SAFETY

BACKGROUND

On May 19, 1986, the Palisades nuclear reactor tripped from high pressure after a loss of turbine control power resulted in closure of the turbine governor valves. Although the plant responded normally, several components did not operate as expected. The turbine bypass valve did not automatically open; one atmospheric dump valve did not open; a letdown intermediate pressure control valve failed (causing the CVCS relief valve to lift); a rod bottom light did not light; a charging pump designated for emergency use only could not be started despite numerous attempts; and, a pressurizer spray valve failed to reseal.

As a result of the May 19 event, on May 21, 1986, Region III directed the Palisades facility to shut down pending completion of an investigation into the cause of the May 19 reactor trip and subsequent equipment failure and permission of the Regional Administrator to restart following a briefing on corrective actions taken or planned by the licensee. Further details are provided in the attached confirmatory action letter dated May 21, 1986. (Attachment 1)

Accordingly, pursuant to NRC Manual Chapter 0514, paragraph 042, this evaluation is necessary.

OBJECTIVES AND REASONS FOR THE BACKFIT

The objective of the backfit was to ensure that the causes and implications of the May 19 reactor trip, and the multiple equipment failures, including the burden these failures placed on the operators, were fully understood and corrected prior to the facility resuming power operation. Prior events at the facility, beginning in late 1984, due in part to inadequate maintenance, involved other problems with safety related equipment. This included five events related to leaking Safety Injection Tank (SIT) check valves, valve leakage problems on the HPCI injection line, SIT pressure control valves, a manual isolation valve and the three-way divert valve in the chemical and volume control system. On March 9, 1986 the licensee elected to shut down and repair the problems but had to shut down again 16 days after returning to power operation after exceeding the Technical Specification limit for unidentified primary coolant system leakage. Following the return to power operation on April 11, 1986, the licensee identified a packing failure on Condensate Pump "A." The pump was repacked twice prior to replacing it with an onsite spare. These events demonstrate a history of multiple equipment failures at the facility that are of concern to the NRC due to the potential for serious challenges to safety systems that they pose and due to the heavy reliance they place on continued above average operator response to maintain the plant in a safe operating condition. These concerns are supported by the final report of the NRC Region III Task Force Review of the Operational History (1983-1985) for Palisades, dated May 1, 1986, and the licensees SALP Category 3 ratings in the areas of maintenance, surveillance and quality program and administrative controls during the most recent SALP period ending October 31, 1985.

SAFETY SIGNIFICANCE AND APPROPRIATENESS OF ACTION TAKEN

Appendix A to 10 CFR 50 sets forth principal design criteria for nuclear power plants which establish the necessary design, construction, testing, and performance requirements for structures, systems, and components important to safety that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public. Included in these criteria are requirements to design systems which are capable of protecting the plant during anticipated operational occurrences with a single failure of an active system component. This single failure criterion is predicated on the assumption that the systems themselves are maintained in such a fashion so as to ensure a high degree of reliability. Shortcomings in maintenance of such systems compromise their reliability, thereby increasing the probability of multiple failures, a condition contrary to plant design bases.

As noted above, the Palisades facility has had a history of poor maintenance and numerous component failures. While it is recognized that not all of the recorded failures were with equipment important to safety, enough were to call into question the reliability of such equipment.

The question of reliability of equipment important to safety is by itself safety significant; however, in the case of the Palisades facility, this significance is elevated by virtue of the numerous failures of equipment not explicitly important to safety. There are two reasons for this. First, failures of such equipment can and have caused unwarranted safety system challenges, increasing the frequency and complexity of anticipated operational occurrences. The net effect of this is that the probability of an accident is increased. This represents a direct adverse impact to safety.

The second reason is that increasing the complexity of an event places an unwarranted burden on the plant operator by requiring that operator to respond to multiple equipment failures with the attendant distraction that represents. The net effect is to potentially compromise the ability of the operator to respond in a fully appropriate and timely fashion to an event. This also represents a direct adverse impact on safety.

Because of the uncertain status of equipment at the Palisades facility and the number of unwarranted recent safety system challenges, the only viable option to ensure that no undue risk to public health and safety existed was to require the licensee to shut down the plant and evaluate its equipment status.

BASIS FOR INVOKING THE EXCEPTION

In light of the multiple equipment failures that occurred on May 19, the licensee's demonstrated lack of conservatism regarding plant operations with deficient equipment and the licensee's SALP Category 3 ratings described above, the Region III staff determined that no alternative short of shutdown was feasible at the time because of the immediate need to ensure that this event and its implications were adequately understood and that adequate corrective action taken or planned.

Accordingly, I concluded that imposition of this backfit was necessary to ensure that the Palisades facility poses no undue risk to public health and safety.

Date June 13, 1986

James G. Keppler
James G. Keppler
Regional Administrator

Attachment: As stated

MAY 21 1986

Docket No. 50-255

Consumers Power Company
ATTN: Dr. F. W. Buckman
Vice President
Nuclear Operations
212 West Michigan Avenue
Jackson, MI 49201

Gentlemen:

This letter confirms the conversation on May 21, 1986 between you and E. G. Greider of this office. The conversation related to our concerns over multiple equipment failures at the Palisades facility, as demonstrated by the May 19 reactor trip event and associated equipment failures, the potential for serious challenges to safety systems that they pose, and the burden failures of this type place on your operator staff in order to maintain the plant in a safe operating condition. With regard to the matters discussed, we understand that you will complete the following actions:

1. You will immediately take the facility to the cold shutdown condition;
2. You will not restart the facility (i.e. place the facility in a condition higher than hot standby) until:
 - (a) a thorough investigation into the causes and implications of the May 19, 1986 reactor trip is completed;
 - (b) a thorough investigation of plant safety systems and balance of plant systems important to safety, with regard to operability and required maintenance, is completed;
 - (c) The Regional Administrator, or his designee, is briefed on the results of the investigations and the corrective actions taken or planned; and
 - (d) you obtain the approval of the Regional Administrator, or his designee.

86-5280120-2 pp.

MAY 21 1986

F. W. Buckman

- 2 -

Should your understanding differ from that stated above, please inform this office immediately.

Sincerely,

James G. Keppler
Regional Administrator,

cc w/enclosure:

Mr. Kenneth W. Berry, Director
Nuclear Licensing
J. F. Firlit, General Manager
DCS/RSB (RIDS)
Licensing Fee Management Branch
Resident Inspector, R111
Ronald Callen, Michigan
Public Service Commission
Nuclear Facilities and
Environmental Monitoring
Section

R111

Suermann/les

R111

Eucross

R111

Gulden and Greenman

R111

Greenman

R111

Norelius

R111

Dennis

R111

Keppler

5/5/86

Backfitting Workshop - 5/8/86
King of Prussia, Pa.

<u>Approximate Time</u>	<u>Subject</u>	<u>Session Objective</u>	<u>Speaker</u>
9:00 am	° Introduction		NRC Regional Administrator
9:20 am	° Utility perspective on Importance of Backfit Rule	Emphasize Importance for Utility Management	V. Boyer, 5/8/86 Phila. Elec. Co.
9:35 am	° The Backfit Rule - Content <ul style="list-style-type: none"> - Background - Definition of Backfits - Scope of Applicability of Backfit Controls - Exceptions - Analysis Required - Staff Responsibility - Means of Backfit Resolution - Information Requests 	A comprehensive description of the rule, covering each provision and the reasons for its inclusion	J. H. Snizek, NRC
10:15 am	Break		
10:30 am	° NRC Staff Implementation of Rule <ul style="list-style-type: none"> - NRC Internal Training Program - Features of Chapter 0514 - Identifying Backfits - Regulatory Analysis - Appeals Process 	A comprehensive description of the staff policy and procedures for plant-specific backfit management	T. H. Cox, NRC
12 N	Lunch		

B-11

5/5/86

Backfitting Workshop

<u>Approximate Time</u>	<u>Subject</u>	<u>Session Objective</u>	<u>Speakers</u>
1:00 pm	<ul style="list-style-type: none"> Industry Implementation of Rule - Industry Backfit Guideline - Backfit management programs: - Implications for interactions with rate setting authorities 	<p>Explain industry guideline document. Provide example procedures with which utilities could manage backfits. Discuss needed interactions with NRC. Discuss possibility of prudence reviews of backfit decisions. Emphasize need to identify and pursue any failure to implement the rule.</p>	<p>Gene Kutz, Duquesne Light Don Edwards, Yankee Atomic Nick Reynolds, BLC&R J. Tourtellotte, Consultant</p>
2:30 pm	Break		
2:45 pm	<ul style="list-style-type: none"> Panel Discussion of Questions - Discuss questions/answers from previous sessions - Discuss answers to questions from floor - Discuss questions introduced by panel chairman - Discuss differences identified between NRC and industry views 	<p>Fill any information voids from previous sessions, answer new questions, identify any areas of disagreement for resolution</p>	<p>All speakers J. H. Sniezek, Panel Chairman</p>
4:15 p.m.	<p>Adjourn - Industry comment - D. Edwards</p> <p>- NRC comment - J. Sniezek</p>		

NOTES

- Each session includes answers to questions as time permits. However, most questions will be answered during the panel discussion at 2:45 pm.
- Handouts (approximately 200 copies) will include: (a) copies of all transparencies, (b) the backfit rule, (c) the NRC Chapter 0514 and (d) industry guideline document.
- This meeting will be open to the public. It will also be transcribed.

PURPOSE OF SEMINAR

- DISCUSS THE PHILOSOPHY OF BACKFITTING
- REVIEW THE HIGHLIGHTS OF REVISED MC-0514
- DISCUSS THE BACKFITTING PROCESS
- DISCUSS EXAMPLES OF REGULATORY ACTIVITIES WHICH ARE AND ARE NOT BACKFITS
- REVIEW RECENT INITIATIVES AND FUTURE ACTIONS

BACKGROUND

- ° 50,109 ON BOOKS SINCE 1970
- ° PLANT SIZE RAPIDLY ADVANCED FROM 100 MWE TO 1,000 MWE
- ° TMI EVENTS
- ° NUREG-0839 (1981), "A SURVEY BY SENIOR NRC MANAGEMENT TO OBTAIN VIEWPOINTS ON THE SAFETY IMPACTS OF REGULATORY ACTIVITIES FROM REPRESENTATIVE UTILITIES OPERATING AND CONSTRUCTING NUCLEAR POWER PLANTS
- ° CRGR (1981)
- ° REGULATORY REFORM TASK FORCE (1981)
- ° ANPR PUBLISHED IN FR (1983)
- ° COMMISSION RECOGNIZED NEED TO ADDRESS PLANT-SPECIFIC BACKFITS DIRECTED PROCEDURES TO BE DEVELOPED.
- ° PUBLICATION OF DRAFT MC-0514 AND STAFF PROCEDURES IN FR (4/84)

BACKGROUND (CONTINUED)

- REVISED 50.109 PUBLISHED IN FR FOR COMMENT (11/84)
- CHAIRMAN PALLADINO MEMO TO EDO (12/84)
- REPORT ON BACKFITTING AND LICENSING PRACTICES (3/85)
- CRGR VISITS TO SITES

OBJECTIVES OF REVISED MC-0514

- ° CLARIFY THAT BACKFITTING IS A NECESSARY AND PROPER REGULATORY ACTIVITY.
- ° ESTABLISH EDO-LEVEL FRAMEWORK FOR THE BACKFITTING PROCESS.
- ° IMPROVE MANAGEMENT OVERSIGHT OF BACKFITTING PROCESS.
- ° EMPHASIZE THAT THE BACKFITTING PROCESS IN NO WAY RELIEVES THE LICENSEE OF ITS OBLIGATION TO COMPLY WITH NRC REQUIREMENTS.
- ° ARTICULATE THE BACKFITTING PROCESS TO NRC STAFF, INDUSTRY AND THE PUBLIC.
- ° ENHANCE PUBLIC HEALTH AND SAFETY.
- ° IMPROVE REGULATORY STABILITY AND PREDICTABILITY.
- ° PROMOTE NORMAL DIALOGUE BETWEEN REVIEWER/INSPECTOR AND LICENSEE.

MAJOR CHANGES TO PLANT-SPECIFIC BACKFITTING PROCESS

- APPLICABLE TO OPERATING PLANTS AND PLANTS UNDER CONSTRUCTION.
 - SIMPLIFIED THE REGULATORY ANALYSIS AND REQUIRED CONDUCT OF REGULATORY ANALYSIS PRIOR TO IMPOSING A BACKFIT.
 - REGULATORY ANALYSIS APPROVAL BY OFFICE DIRECTOR/REGIONAL ADMINISTRATOR.
- PROVIDE FOR AGENCY-WIDE RECORDKEEPING SYSTEM - REAL TIME ACCESS.
- APPEAL PROCESS IN REGION AND HEADQUARTERS.
- ~~FINAL REGULATORY APPROVAL AUTHORITY IN OFFICE WITH PROGRAMMATIC RESPONSIBILITY.~~
- MANAGEMENT ACCOUNTABILITY THROUGH SES CONTRACTS.

GENERAL TERMINOLOGY

BACKFIT - A STAFF POSITION THAT CAUSES A LICENSEE TO CHANGE DESIGN, CONSTRUCTION OR OPERATION OF A FACILITY FROM THAT CONSISTENT WITH ALREADY APPLICABLE STAFF POSITIONS, AFTER CERTAIN REGULATORY MILESTONES ARE COMPLETED (052).

APPLICABLE REGULATORY STAFF POSITION - A POSITION ALREADY SPECIFICALLY IMPOSED UPON OR COMMITTED TO BY A LICENSEE AT THE TIME OF IDENTIFICATION OF A PLANT-SPECIFIC BACKFIT (053).

GENERIC BACKFIT - APPLYING THE SAME NEW NRC STAFF POSITION ON MORE THAN ONE LICENSEE.

PLANT-SPECIFIC BACKFIT - APPLYING A NEW NRC STAFF POSITION ON A SINGLE LICENSEE

LICENSEE - CP HOLDER, OL HOLDER, PDA/FDA FOR STANDARDIZED PLANT.

BACKFIT

A STAFF POSITION THAT WOULD CAUSE A LICENSEE TO CHANGE THE DESIGN, CONSTRUCTION, OR OPERATION FROM THAT CONSISTENT WITH ALREADY APPLICABLE REGULATORY STAFF POSITIONS, TAKEN AFTER CERTAIN DESIGN, CONSTRUCTION OR OPERATION MILESTONES, INVOLVING VARIOUS NRC APPROVALS, HAVE PREVIOUSLY BEEN ACHIEVED.

APPLICABLE REGULATORY STAFF POSITIONS

- THOSE ALREADY IMPOSED UPON OR COMMITTED TO BY A LICENSEE
- THREE BASIC TYPES
 1. LEGAL REQUIREMENTS SUCH AS IN EXPLICIT REGULATIONS, ORDERS, PLANT LICENSES (AMENDMENTS, CONDITIONS, TECHNICAL SPECIFICATIONS). NOTE THAT SOME REGULATIONS HAVE UPDATE FEATURES BUILT IN; AS FOR EXAMPLE, 10 CFR 50.55A, CODES AND STANDARDS. SUCH UPDATE REQUIREMENTS ARE APPLICABLE AS DESCRIBED IN THE REGULATION.
 2. WRITTEN COMMITMENTS SUCH AS CONTAINED IN THE FSAR, LERs, AND DOCKETED CORRESPONDENCE, INCLUDING RESPONSES TO IE BULLETINS, RESPONSES TO GENERIC LETTERS, RESPONSES TO INSPECTION REPORTS, OR RESPONSES TO NOTICE OF VIOLATIONS, AND CONFIRMATORY ACTION LETTERS.

APPLICABLE REGULATORY STAFF POSITIONS (CONTINUED)

3. NRC STAFF POSITIONS THAT ARE DOCUMENTED, APPROVED, EXPLICIT INTERPRETATIONS OF THE MORE GENERAL REGULATIONS, AND ARE CONTAINED IN DOCUMENTS SUCH AS THE SRP, BRANCH TECHNICAL POSITIONS, REGULATORY GUIDES, GENERIC LETTERS AND IE BULLETINS. SUCH POSITIONS AS THESE ARE NOT CONSIDERED APPLICABLE STAFF POSITIONS TO THE EXTENT THAT STAFF HAS, IN A PREVIOUS LICENSING OR INSPECTION ACTION, TACITLY OR EXPLICITLY EXCEPTED THE LICENSEE FROM PART OF ALL OF THE POSITION.

TIME OF ISSUANCE

THOSE TIMES AFTER WHICH A STAFF POSITION WILL BE CONSIDERED A BACKFIT.

1. AFTER THE DATE OF ISSUANCE OF THE CONSTRUCTION PERMIT FOR THE FACILITY (FOR FACILITIES HAVING CONSTRUCTION PERMITS ISSUED AFTER MAY 1, 1985); OR
2. AFTER 6 MONTHS BEFORE THE DATE OF DOCKETING OF THE OL APPLICATION FOR THE FACILITY (FOR FACILITIES HAVING CONSTRUCTION PERMITS ISSUED BEFORE MAY 1, 1985); OR
3. AFTER THE DATE OF ISSUANCE OF THE OPERATING LICENSE FOR THE FACILITY (FOR FACILITIES HAVING AN OPERATING LICENSE ON MAY 1, 1985).

IDENTIFYING PLANT-SPECIFIC BACKFITS (041)

• STAFF

-- INTERNAL PROCESS

-- REGULATORY ANALYSIS

-- MANAGEMENT APPROVAL

• LICENSEE

-SEND TO OFFICE DIRECTOR/REGIONAL ADMINISTRATOR

-- NRC STAFF INTERNAL PROCESS

-- BACKFIT DETERMINATION

-- REPORT TO EDO

3 WEEKS

-- LICENSEE INFORMED

REGULATORY ANALYSIS (042)

- SUBSTANTIAL INCREASE IN PROTECTION OF PUBLIC HEALTH AND SAFETY.
- COST OF IMPLEMENTATION IS JUSTIFIED.
- OFFICE DIRECTOR/REGIONAL ADMINISTRATOR APPROVAL.
- NUREG/BR-0058, REV. 1, REGULATORY ANALYSIS GUIDELINES OF THE U.S. NUCLEAR REGULATORY COMMISSION
- NUREG/CR-3568, A HANDBOOK FOR VALUE-IMPACT ASSESSMENT
- NOT REQUIRED WHEN PROMPT IMPOSITION OF BACKFIT NECESSARY.

CONTENT OF REGULATORY ANALYSIS (042)

- BACKFIT DESCRIPTION AND HOW SAFETY IS SUBSTANTIALLY IMPROVED.
- WHY PROPOSAL CLASSIFIED AS PLANT-SPECIFIC BACKFIT
- COST-BENEFIT ANALYSIS
 - PUBLIC RISK IMPACT
 - RELATIONSHIP TO OTHER PROPOSED AND EXISTING POSITIONS.
 - IMPACT ON OCCUPATIONAL EXPOSURE
 - DOLLAR COST OF INITIAL AND CONTINUING IMPLEMENTATION.
 - RESOURCE COST TO NRC AND AVAILABILITY OF RESOURCES.
- QUALITATIVE FACTORS BEARING ON NEED FOR BACKFIT (OPERATIONAL TRENDS, MANAGEMENT EFFECTIVENESS, SALP, ETC.)
- IS BACKFIT INTERIM OR FINAL - JUSTIFICATION FOR INTERIM

CONTENT OF REGULATORY ANALYSIS (042) (CONTINUED)

- AFFIRMATION OF INTEROFFICE COORDINATION
- SCHEDULE FOR LICENSEE IMPLEMENTATION AND BASIS
- SCHEDULE FOR STAFF ACTIONS
- PRIORITIZATION IN LIGHT OF OTHER SAFETY RELATED ACTIVITIES.

APPEAL PROCESS (043)

- ONLY PLANT-SPECIFIC BACKFITS APPEALABLE UNDER MC 0514
- LICENSEE TO ADDRESS APPEALS TO OFFICE DIRECTOR/REGIONAL ADMINISTRATOR (COPY TO DIRECTOR, ROGR STAFF)
- WITHIN 3 WEEKS OFFICE DIRECTOR/REGIONAL ADMINISTRATOR REPORT TO EDO PLAN FOR RESOLUTION (PROMPTLY INFORM LICENSEE)
- FINAL DECISION ON APPEALS WILL BE MADE BY OFFICE DIRECTOR RESPONSIBLE FOR PROGRAM AREA UNLESS RESOLVED BY RA OR OTHER MANAGEMENT LEVEL
 - LICENSING RELATED - NRR EXCEPT FOR SAFEGUARDS (NMSS), QA (IE), EP (IE)
 - ENFORCEMENT RELATED - IE
 - INSPECTION RELATED - IE

APPEAL PROCESS (043) (CONTINUED)

- ° TWO APPEAL LEVELS (DIVISION DIRECTOR AND OFFICE DIRECTOR/
REGIONAL ADMINISTRATOR)
- ° APPEAL PROCESS SHOULD FOCUS ON WHETHER OR NOT SAFETY IMPROVED
SUBSTANTIALLY AT A REASONABLE COST AS DESCRIBED IN REGULATORY
ANALYSIS.

IMPLEMENTATION OF BACKFIT (044)

- ° BACKFIT POSITIONS SHOULD BE TRANSMITTED TO LICENSEE IN WRITING AND IDENTIFIED AS A BACKFIT.
- ° LICENSEE MAY EITHER APPEAL OR IMPLEMENT.
- ° SCHEDULE FOR IMPLEMENTATION SHOULD BE DEVELOPED IN CONSULTATION WITH LICENSEE.
- ° PROMPT IMPOSITION WITHOUT CONDUCT OF REGULATORY ANALYSIS MUST BE APPROVED BY PROGRAM OFFICE DIRECTOR AND EDO NOTIFIED.
- ° UNLESS PROMPT IMPOSITION NECESSARY, POSITIONS ARE NOT TO BE IMPOSED, PLANT OPERATIONS ARE NOT TO BE DISTURBED DURING REGULATORY ANALYSIS AND APPEAL PROCESSES.

RECORDKEEPING AND REPORTING (045)

- SYSTEM BEING DEVELOPED BY RM
- EACH OFFICE ADMINISTRATIVELY MANAGES THE SYSTEM
- PROVIDES FOR PROMPT RETRIEVAL/CURRENT STATUS
- SYSTEM CONTENT
 - PLANT ID
 - SUBSTANCE OF BACKFIT ISSUE
 - STAFF/LICENSEE IDENTIFIED
 - FOR EACH BACKFIT PROCESS ACTIVITY
 - RESPONSIBLE NRC PERSON
 - PLANNED SCHEDULE
 - ACCOMPLISHED SCHEDULE
 - REFERENCES
 - FINAL DISPOSITION

FUNDAMENTAL CONCEPTS IN DETERMINING
WHETHER A STAFF ACTION IS A BACKFIT

- IS THE POSITION A PREVIOUSLY APPLICABLE REGULATORY STAFF POSITION?
- TIMING OF THE POSITION RELATIVE TO REGULATORY MILESTONES.
- HAS THE LICENSEE REALLY VOLUNTEERED TO TAKE ACTION?
- ACTIONS PROPOSED BY LICENSEE RESULTING FROM NORMAL STAFF/LICENSEE DISCUSSIONS CONCERNING AN ISSUE ARE NOT BACKFITS.
- WOULD THE STAFF POSITION CAUSE THE LICENSEE TO CHANGE DESIGN, CONSTRUCTION OR OPERATION?
- IS THE STAFF ACTION DIRECTING, TELLING OR COERCING, OR MERELY SUGGESTING OR ASKING THE LICENSEE TO CONSIDER THE STAFF PROPOSED ACTION?
- IS THE LICENSEE IN NONCOMPLIANCE WITH AN NRC REQUIREMENT?
- IS THE LICENSEE MEETING WRITTEN COMMITMENTS TO THE NRC?

SPECIFIC APPLICATIONS

INSPECTION

- INSPECTION OF ANY ITEM/ACTIVITY IS NOT BY ITSELF A BACKFIT.
- IDENTIFICATION OF DEFICIENCIES AND DISCUSSIONS WITH LICENSEES REGARDING THE DEFICIENCIES ARE NOT BACKFITS.
- LICENSEE AGREEMENT TO TAKE ACTION IN RESPONSE TO INSPECTOR FINDINGS IS NOT A BACKFIT PROVIDED THE LICENSEE IS NOT FACED WITH AN ULTIMATUM.
- IF THE STAFF INDICATES A CERTAIN ACTION IS THE ONLY WAY FOR THE STAFF TO BE SATISFIED, THAT ACTION IS A BACKFIT.

SPECIFIC APPLICATIONS

INSPECTION (CONTINUED)

EXAMPLES

- LICENSEE COMMITS TO ANSI-N18.7 IN SAR
- IMPLEMENTING PROCEDURES DO NOT CONTAIN ALL N18.7
REQUIRED ELEMENTS
- TELLING LICENSEE HE MUST INCLUDE THEM IS NOT A BACKFIT.
- IMPLEMENTING PROCEDURES DO NOT CONTAIN CERTAIN N18.7
OPTIONAL ELEMENTS.
- TELLING LICENSEE HE MUST INCLUDE THEM IS A BACKFIT.
- DISCUSSION WITH THE LICENSEE REGARDING THE MERITS OF
INCLUDING THE OPTIONAL ITEMS IS NOT A BACKFIT.

ENFORCEMENT

- ENFORCEMENT OF NRC REQUIREMENTS IS NOT A BACKFIT.
- A NOV REQUESTING DESCRIPTION OF CORRECTIVE ACTION IS NOT A BACKFIT.
- LICENSEE COMMITMENTS IN RESPONSE TO NOV ARE NOT BACKFITS.
- DISCUSSIONS DURING ENFORCEMENT CONFERENCES AND RESPONSES TO REQUESTS FOR ADVICE ARE NOT BACKFITS.
- A STATEMENT TO A LICENSEE DIRECTING A SPECIFIC ACTION TO SATISFY THE STAFF IS A BACKFIT.

REANALYSIS OF ISSUES

- OCCASIONALLY THE NRC STAFF MAY CONCLUDE THAT A PREVIOUSLY NRC APPROVED LICENSEE PROGRAM DOES NOT SATISFY A REGULATION, LICENSE CONDITION OR COMMITMENT.
 - A SUBSEQUENT STAFF SPECIFIED CHANGE IS A BACKFIT,
 - A LICENSEE VOLUNTARY CHANGE IS NOT A BACKFIT,

EXAMPLE

- LICENSEE IN THE SAR COMMITS TO A CARDOX SYSTEM IN CABLE SPREADING ROOM.
- STAFF PUBLISHES AN SER ACCEPTING SYSTEM AND LICENSEE INSTALLS THE SYSTEM.
- STAFF SUBSEQUENTLY REEVALUATES ORIGINAL POSITION AND DECIDES WATER SUPPRESSION SYSTEM IS NEEDED.
- IF THE STAFF NOW REQUIRES A WATER SUPPRESSION SYSTEM IT IS A BACKFIT.

LICENSING - USE OF SRP

- SRP DELINEATES MANAGEMENT APPROVED SCOPE AND DEPTH OF REVIEW TO GIVE REASONABLE ASSURANCE THAT LICENSEE WILL SATISFY NRC REQUIREMENTS.
- APPLICATION OF A CURRENT SRP IN AN OL REVIEW IS NOT A BACKFIT IF THE SRP WAS EFFECTIVE 6 MONTHS PRIOR TO START OF THE OL REVIEW (6 MONTHS PRIOR TO DOCKETING OL APPLICATION).
- USING ACCEPTANCE CRITERIA MORE STRINGENT THAN OR IN ADDITION TO SRP CRITERIA IS A BACKFIT.
- STAFF DISCUSSIONS WITH LICENSEES REGARDING THE MERITS OF ACTIONS WHICH ARE BEYOND SRP CRITERIA ARE NOT BACKFITS UNLESS THE STAFF LEAVES THE LICENSEE NO OTHER REASONABLE ALTERNATIVE.
- APPLICATION OF SRP CRITERIA TO AN OPERATING PLANT GENERALLY IS CONSIDERED A BACKFIT UNLESS THE SRP WAS SPECIFICALLY APPROVED FOR OPERATING PLANT IMPLEMENTATION.

PLANT-SPECIFIC ORDERS

• AN ORDER ISSUED TO CAUSE A LICENSEE TO TAKE ACTIONS WHICH ARE NOT OTHERWISE APPLICABLE REGULATORY STAFF POSITIONS IS A BACKFIT.

• AN ORDER ISSUED TO CONFIRM A LICENSEE COMMITMENT IS NOT A BACKFIT.

SUMMARY

- BACKFITTING IS AN EXPECTED STAFF ACTIVITY.
- BACKFITTING IS TO BE CONDUCTED IN A CONTROLLED MANNER.
- BACKFITTING CONCEPTS ARE STRAIGHTFORWARD.
 - IS POSITION A PREVIOUSLY APPLICABLE STAFF POSITION?
 - STATUS OF LICENSEE IN REGULATORY PROCESS.
 - IS LICENSEE BEING COERCED?
 - IS COMPLIANCE/CONFORMANCE INVOLVED?
- BACKFIT PROCESS
 - IDENTIFY AND DETERMINE
 - REGULATORY ANALYSIS
 - MANAGEMENT APPROVAL

SUMMARY (CONTINUED)

-- TRANSMITTAL TO LICENSEE

-- IMPLEMENT OR APPEAL

-- FINAL DISPOSITION

EXAMPLE - BACKFIT IDENTIFICATION - 1

1. LICENSEE RECEIVED CERTAIN EQ APPROVAL ON ELECTRICAL EQUIPMENT IN 1982.
2. LICENSEE WAS OFFICIALLY NOTIFIED IN FEBRUARY 1985 THAT STAFF WANTED ADDITIONAL TEST OF THAT EQUIPMENT.
3. QUESTIONS:
 - CHANGED STAFF POSITION - YES
 - TIMING? AFTER LICENSING
 - PREVIOUSLY APPLICABLE POSITION - NO, IS NEW
 - LICENSEE WAS DIRECTED? - YES

CONCLUSION:

NEW POSITION WAS TAKEN BY STAFF PRIOR TO MAY 1, 1985 - DOES NOT QUALIFY FOR MC0514 CONSIDERATION.

EXAMPLE - BACKFIT IDENTIFICATION - 2

1. INSPECTION REPORT IN JUNE 1984 - EXPLICITLY APPROVED LICENSE PROCEDURE FOR DESIGN CHANGE CONTROL PROGRAM AND STATED THAT APPLICABLE STANDARDS WERE MET.
2. INSPECTION REPORT IN SEPTEMBER 1985 STATED NEW STAFF POSITION REGARDING ADEQUACY OF PROCEDURE - WANTED CERTAIN ADDITIONAL MATERIAL TO BE INCLUDED IN PROCEDURE.
3. QUESTIONS:
 - CHANGED STAFF POSITION - YES
 - TIMING - AFTER LICENSING
 - PREVIOUSLY APPLICABLE POSITION - NO, IS NEW
 - CHANGE IS TO BE IMPOSED - YES

CONCLUSION:

IS A BACKFIT.

EXAMPLE - BACKFIT IDENTIFICATION - 3

1. PLANT IS IN OL REVIEW, OL DOCKETED DECEMBER 1981.
2. NRC SAYS POSITIONS ON ACCUMULATOR TANK LEVEL AND PRESSURE IN R.G. 1.97, REV. 2, DECEMBER 1980 SHOULD BE MET (LEVEL OR PRESSURE INSTRUMENTATION MUST MEET 50.49). LICENSEE CLAIMS 50.109 BACKFIT.
3. QUESTIONS:
 - CHANGED STAFF POSITION - NO
 - TIMING - BEFORE OL DOCKETING
 - PREVIOUSLY APPLICABLE POSITION - YES
 - CHANGE IS TO BE IMPOSED - YES

CONCLUSION:

IS NOT A PROPOSED BACKFIT

INDUSTRY GUIDELINES

- PREPARED BY REPRESENTATIVES FROM:
 - ATOMIC INDUSTRIAL FORUM
 - EDISON ELECTRIC INSTITUTE
 - NUCLEAR UTILITY BACKFITTING AND REFORM GROUP

CONTENTS OF THE GUIDELINES

- GENERAL DISCUSSION OF THE FINAL RULE
- BACKFITTING CHECKLIST
- FLOW DIAGRAMS OF THE PROCESS AS DESCRIBED IN
THE NRC'S STAFF MANUAL CHAPTER 0514
- THREE APPENDICES

BAC

DISCUSSION OF THE FINAL RULE

- **APPLICABILITY**
- **CAUSE**
- **BACKFIT ANALYSIS**
- **THE STANDARD**
- **EXCEPTIONS**
- **APPEAL PROCESS**
- **IMPLEMENTATION**

BACK

BACKFIT CHECKLIST

- I. APPLICABILITY OF BACKFITTING RULE TO PLANT
SPECIFIC BACKFITS**
- II. BACKFITTING ANALYSIS**
- III. INFORMATION REQUESTS**

BACKFIT

BACKFIT CHECKLISTS

- CONSISTS OF A SERIES OF QUESTIONS

— *Example:*

WHAT STRUCTURE, SYSTEM, COMPONENT, DESIGN, DESIGN APPROVAL, PROCEDURE OR ORGANIZATION IS AFFECTED?

- NOTES ARE ALSO INCLUDED WITH THE QUESTIONS

— *Example:*

NOTE: BACKFITS ARE NOT LIMITED TO HARDWARE MODIFICATIONS. THEY INCLUDE CHANGES IN ORGANIZATION AND PROCEDURES.

BACKFITTING

FLOW DIAGRAMS

- IDENTIFYING PLANT-SPECIFIC BACKFITS
- APPEAL PROCESS
 - MODIFY OR WITHDRAW PROPOSED PLANT-SPECIFIC BACKFIT
 - REVERSE STAFF POSITION THAT IT IS NOT A BACKFIT
- IMPLEMENTATION OF THE BACKFIT

BACKFITTING EQ

APPENDICES

- THE FINAL BACKFIT RULE
- EXAMPLES OF BACKFIT SITUATIONS
- NRC'S STAFF MANUAL CHAPTER 0514

BACKFITTING EQUA

WHY HAVE A BACKFIT MANAGEMENT PROGRAM?

IDENTIFIES TRUE SAFETY CONCERN

PRUDENCY

CONTROL

TO IMPLEMENT THE RULE

BACKFITTING EQUALS

IDENTIFIES TRUE SAFETY CONCERN

- ASSURANCE THAT ANY PLANT CHANGE IS AN IMPROVEMENT TO SAFETY
- MECHANISM TO PREVENT CHANGES FROM CONFLICTING
- CONTROL EFFECTS OF COMPOUNDING CHANGE

BACKFITTING EQUALS D

PRUDENCY

- INCREASING "SECOND GUESSING" BY RATE COMMISSIONS
- MEANS TO DEMONSTRATE CORRECTNESS OF BACKFIT DECISION-DOCUMENTATION
- MUST SHOW WHICH MODS ARE RESULT OF REGULATORY ACTION

BACKFITTING EQUALS DI

CONTROL

- **MANAGEMENT CONTROL REQUIRES INFORMATION**
- **INFORMATION ALLOWS INFORMED ACTION**
- **SYSTEMATIC PROCESS TO GATHER AND ADDRESS INFORMATION REGARDING CHANGES UNDERWAY, COMMITTED TO, OR PLANNED**

BACKFITTING EQUALS DIS

TO IMPLEMENT THE RULE

- RULE MUST BE EXERCISED TO MAKE IT WORKABLE
- RETROGRESSION TO PREVIOUS STATE OF AFFAIRS
- NRC HAS A SYSTEM WITH "CENTRAL" CONTROL
 - STANDARD PROCEDURES
 - CONSISTENT INTERPRETATION

BACKFITTING EQUALS DISC

WHAT IS A BACKFIT MANAGEMENT PROGRAM?

- MANAGEMENT COMMITMENT**
- SYSTEMATIC PROCESS**
- COMPREHENSIVE**
- INDIVIDUAL**

BACKFITTING EQUALS DISCI

MANAGEMENT COMMITMENT

- SUPPORT AT ALL LEVELS
 - ACTIVE PARTICIPATION
 - FULL UNDERSTANDING BY ALL EMPLOYEES
 - STANDARD PROCEDURE
 - FAILURE AT ONE LEVEL WILL FAIL SYSTEM
- ALL MODIFICATIONS TREATED UNDER SAME SYSTEMATIC PROCESS
 - UNIFORM STANDARD OF ACCEPTANCE
 - INTERNAL CONSISTENCY BETWEEN GROUPS
 - SOUND POSITION FOR INTERACTION WITH NRC

BACKFITTING EQUALS DISCIP

SYSTEMATIC PROCESS

- IDENTIFICATION OF BACKFITS
 - KNOWLEDGE OF POSSIBLE SOURCES
 - KNOWLEDGE OF RELEVANT LICENSING BASIS PRIOR TO IMPOSITION OF A BACKFIT
- VALIDATION OF BACKFIT
 - ASSURANCE THAT SAFETY ISSUE IS CLEAR
 - ASSURANCE THAT COST/SCHEDULING IS MANAGED
 - ASSURANCE THAT BACKFIT PACKAGE IS COMPLETE
 - REVIEW OF STAFF ANALYSIS
 - IDENTIFICATION OF POSSIBLE DISAGREEMENTS
 - MANAGEMENT DECISION ON APPEAL

BACKFITTING EQUALS DISCIPLINE

SYSTEMATIC PROCESS (Continued)

- USE OF APPEAL PROCESS
 - DEVELOPMENT OF RESPONSES
 - PRESENTATION AND OUTCOME
 - RESOLUTION OF DIFFERENCES
 - MONITOR APPEAL PROGRESS
- INCORPORATION INTO WORK CONTROL

BACKFITTING EQUALS DISCIPLI

COMPREHENSIVE

- **COMPARISON BETWEEN UTILITIES**
 - **REVIEW INFORMATION FROM MANY SOURCES**
 - **NATURE OF SYSTEM IN USE**
 - **EVALUATION OF NRC TREATMENT OF SIMILAR ACTION BY OTHERS**
 - **DETERMINE OPPORTUNITIES FOR GENERIC ACTIONS**

BACKFITTING EQUALS DISCIPLIN

INDIVIDUAL

- **INTEGRATED INTO MANAGEMENT PROCESS**
 - **CONTROL OVER RESOURCES**
 - **INTERFACE WITH NRC**
 - **CONSTITUTES RATIONAL FOR DECISIONS**
- **IMPLEMENTED BY ORGANIZATION**
 - **TAKES PLACE ON SEVERAL LEVELS**
 - **DIVERSE NEEDS FOR INFORMATION**

BACKFITTING EQUALS DISCIPLINE

BACKFITTING

EQUALS

DISCIPLINE

NES

National
Environmental
Studies
Project

AIF/NESP-033

**Occupational Radiation
Exposure Implications of
NRC-Initiated Multi-Plant
Actions**

Atomic Industrial Forum, Inc.



**OCCUPATIONAL RADIATION EXPOSURE IMPLICATIONS
OF NRC-INITIATED MULTI-PLANT ACTIONS**

Prepared for the
National Environmental Studies Project
of the
Atomic Industrial Forum, Inc.

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March 1986

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PREFACE

The long-awaited NRC revised rule on backfitting was published in September of 1985. The *FEDERAL REGISTER* announcement, formally entitled "Revision of Backfitting Process for Power Reactors," advises that Section 109(c) of 10 CFR 50 now sets out nine factors to be used by the NRC staff in making a required systematic and documented analysis of the safety significance and appropriateness of the backfits they order. The fourth of these analysis factors is the "potential impact on radiological exposures of facility employees" (50 *FEDERAL REGISTER* 38103, September 20, 1985). It is clear from the text of the rule that the Commission expects occupational doses to be carefully weighed by NRC staff before backfits can be ordered in the future. With this requirement in mind, and because of industry concerns that backfits appear to have had clearly demonstrable impacts on worker doses, NESP undertook a study to determine more accurately the effect that regulatory activities have had on collective worker doses and to what extent regulatory decisionmaking has included this important negative consideration before imposing a requirement. In the past, industry representatives and others have speculated that "around ten percent" of the annual collective dose in the United States could be attributed to mandated backfit action. This report offers an historical "snapshot" which suggests that a more accurate figure is around forty percent, or about 100,000 person-rem, during the five-year period studied.

One may ask how such an historical perspective can benefit the nuclear industry in the near-term regulatory climate. As this report goes to press, the NRC staff is preparing an NRC Manual chapter on how they expect to implement the newly promulgated backfit rule. When this Manual chapter is made available, it will certainly be appropriate for industry groups and individual licensees to take a careful look at exactly *how* occupational radiation risks are going to be factored into future backfit orders. It is noteworthy that, during the data gathering phase of this NESP report, the investigators uncovered virtually no evidence that occupational doses were considered prior to the imposition of backfits. This void is mentioned briefly, and without prejudice, in the report text. However, to the reader, this deficiency, together with the magnitude of the dose involved, bear witness that anticipating risks to workers is essential to the effective evaluation of any backfit *by all parties*.

From the beginning, the Task Force recognized that ambiguities surrounding the definition of "backfit" could cause problems in selecting the activities to be sampled in the study. Regulators and industry have had and are still having difficulty agreeing on a meaning of that term which meets all needs. So, instead of using the term "backfits" to describe activities to be scrutinized, the Task Force adopted the term "Multi-Plant Actions" (MPA), which is employed by the NRC in NUREG-0748 (the "Orange Book"). This NUREG was used as the basis for compilation of generic backfits, and the report takes its name from the MPAs. Since plant-specific and other non-generic requirements were not included, the doses estimated in this study are probably lower than if such site-specific figures had been included.

An added feature of this report is a "catalog" which lists and describes every MPA from the period studied along with an identification of the document(s) that ordered the action. The Task Force believes this is the first compilation of this type ever arranged for easy access in one reference source. The NRC, despite having instituted these MPAs, has never published such a unified list.

Donald Edwards of Yankee Atomic Electric Company, who chaired the Task Force, is also chairman of AIF's Backfit Subcommittee and has been a leader in industry interactions with NRC during the lengthy rulemaking process. He extends appreciation to the Task Force listed inside the front cover for their time, effort, technical expertise, and overall cooperation in bringing this report to completion. Particular thanks are due to Les Smith of INPO for his attention to detail during the review of

drafts. The investigators extend thanks to: James Bates of Florida Power and Light Company, David Mueller of Vermont Yankee Atomic Electric Company, David Helton of Yankee Atomic Electric Company, David Parsons of Duke Power Company, Steve Hamilton of Carolina Power and Light Company, Stephen Hutson of Baltimore Gas and Electric Company, Donald Orrock of Northern States Power Company, Prince Patton of Alabama Power Company, and James Wilson of Portland General Electric Company for their assistance in providing the plant-specific information so crucial to this effort. Without their time in searching radiation work permits and other plant records, the data which form the statistical bases for the report's conclusions could not have been obtained. The Task Force proper included liaisons from the Radiological Assessment and Safety Program Evaluation Branches of the NRC staff. They offered assistance in technical areas, were willing to share public information from the files of their branches, and facilitated the gathering of data from the public files of other branches. John Hannon and Richard Hartfield of the NRC staff also assisted the investigators in locating and analyzing information within the NRC's files. It should be noted, however, that the NRC's assistance and liaison during the study is not to be construed as their necessarily endorsing the conclusions reached in the report.

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EXECUTIVE SUMMARY

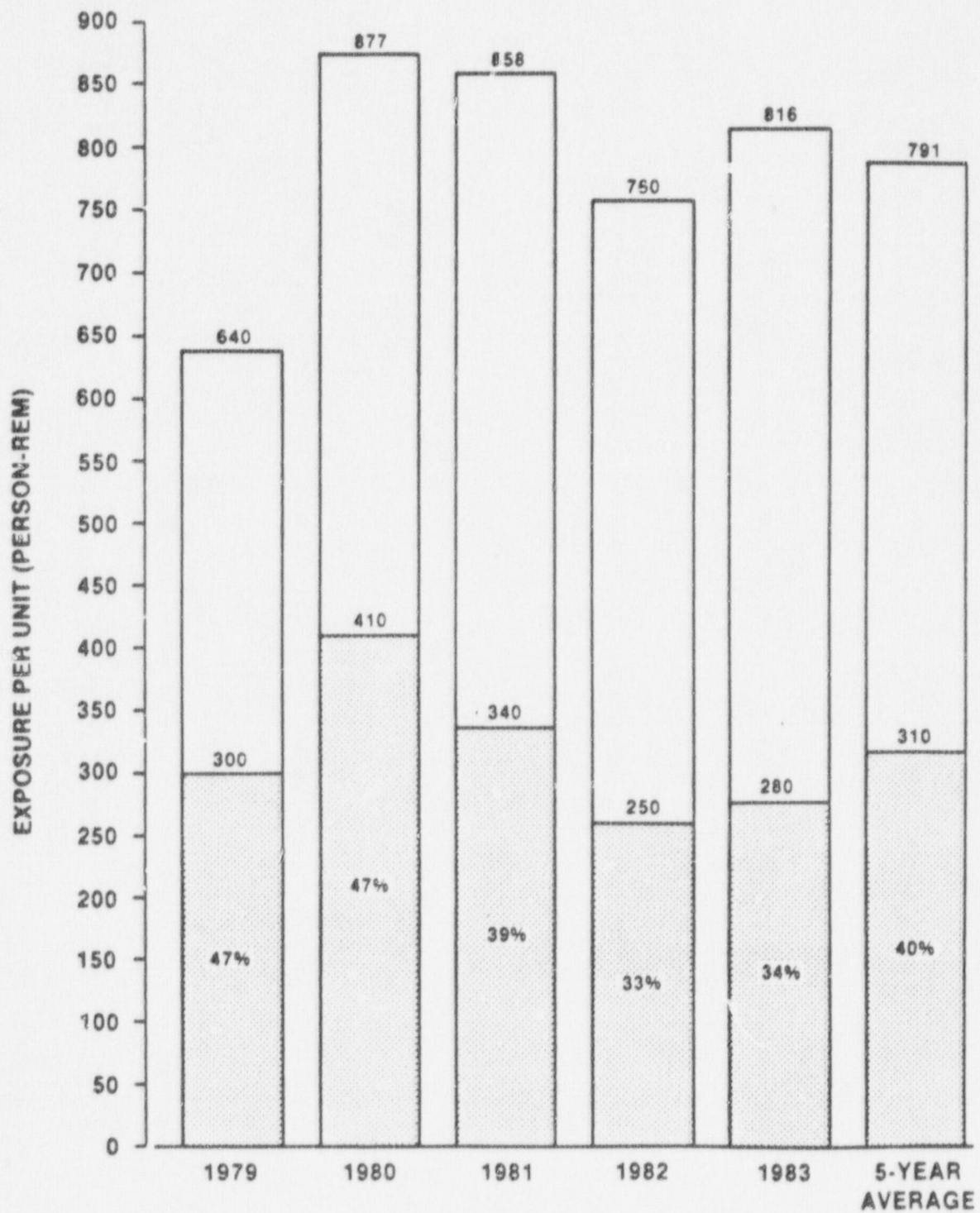
The purpose of this study is to estimate the collective occupational radiation exposure at U.S. nuclear power plants which is attributable to new Nuclear Regulatory Commission (NRC) requirements and changes in existing requirements, and to identify the specific regulatory requirements which contribute most significantly to this exposure. In order to obtain a statistically meaningful estimate and to observe trends, the study is based on five years of data, collected at 18 representative nuclear power stations, containing a total of 16 operating units. The time period 1979 through 1983 was selected because it encompasses the years during which most of the plant modifications resulting from the Three Mile Island (TMI) Action Plan were made. Also, the data needed to conduct the study are not widely available for years earlier than 1979.

To avoid arbitrariness or controversy in the definition of new and changed NRC requirements, a list published by the NRC itself in NUREG-0748, "Operating Reactors Licensing Actions Summary" (the so-called Orange Book), was adopted. The items on this list are designated by the NRC staff as "Multi-Plant Actions (MPAs)", a terminology which has been adopted for this study. This list of MPAs, which is prepared by the NRC Office of Nuclear Reactor Regulation, was augmented with the I&E Bulletins issued during the study period by the NRC Office of Inspection and Enforcement. Plant-specific requirements were ignored because of the difficulty in extrapolating exposures to the entire industry.

The list of MPAs was screened to identify those that could have resulted in occupational exposure during the study period. Items on the list that were not NRC-initiated were ignored. Next, representative plants were selected by dividing the operating reactors into classes and designating one or two plants in each class. On-site visits were made to the representative plants, where the list of MPAs was compared against the job descriptions on radiation work permits in order to determine the exposure attributable to each requirement. The percentage of exposure attributable to NRC-initiated MPAs was calculated for the representative plants and applied to the dose of record for all of the operating plants to obtain the total collective dose attributable to NRC-initiated requirements.

The results indicate that over the five-year period 1979 through 1983, 40 percent of the total occupational radiation exposure at light water reactors (LWRs) was attributable to NRC-initiated MPAs. Based on the doses of record for LWRs, this percentage represents approximately 99,000 person-rem of collective exposure. The exposures attributable to NRC-initiated MPAs at pressurized water reactors (PWRs) and boiling water reactors (BWRs) over the five-year period were roughly comparable: 38 percent (more than 47,000 person-rem) at PWRs and 42 percent (more than 51,000 person-rem) at BWRs.

ANNUAL VARIATIONS IN LWR EXPOSURES
SHOWING ESTIMATED EXPOSURES ATTRIBUTABLE TO NRC-INITIATED MPAs



NOTE: SHADED PORTIONS SHOW ESTIMATED EXPOSURES ATTRIBUTABLE TO NRC-INITIATED MULTI-PLANT ACTIONS; THE NUMBERS AT THE TOP OF EACH COLUMN ARE THE AVERAGE PER UNIT EXPOSURES FOR THE YEAR.

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EVALUATING POTENTIAL BACKFITS GUIDELINES FOR USE BY LICENSEES

Prepared by:

Atomic Industrial Forum
Edison Electric Institute
Nuclear Utility Backfitting and Reform Group

APRIL 1986

PREFACE

The NRC revised rule on backfitting was published in the Federal Register in September of 1985. The purpose of these guidelines is to assist individuals in the industry in understanding and obtaining full benefit of the new backfit decision making process. The guidelines include a general discussion of the final rule, a backfitting checklist and flow diagrams of the process. In addition, the final backfit rule, examples of backfit situations and the staff's Manual Chapter 0514 are included as appendices.

The guidelines were developed by a Working Group of representatives from the AIF Subcommittee on Backfit Requirements, the Edison Electric Institute and the Nuclear Utility Backfitting and Reform Group. The Working Group included Greg Alexander of Commonwealth Edison, Bart Cowan of Eckert, Seamans, Cherin & Mellott, Don Edwards of Yankee Atomic, Sandy Hartman and Nick Reynolds of Bishop, Liberman, Cook, Purcell and Reynolds, Eugene Kurtz of Duquesne Light Company, Louis Long of Southern Company Services, Suzanne Phelps of the Edison Electric Institute, Tom Tipton of the Atomic Industrial Forum, and Jim Tourtellotte, private consultant.

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INTRODUCTION

The Commission approved a revised backfit rule on August 1, 1985. It was published in the September 20, 1985 Federal Register as a major revision to the existing backfit rule, 10CFR50.109. It is applicable to procedural and organizational changes as well as hardware changes. It requires a formal analysis to justify any backfit and this must include a cost-benefit evaluation. It also provides a standard of "substantial increase in the overall protection of the public health and safety" which must be satisfied before a backfit may be imposed.

The NRC on March 3, 1986 issued the revised Manual Chapter 0514, "NRC Program for Management of Plant-Specific Backfitting of Nuclear Power Plants", hereinafter referred to as the Staff Manual Chapter. This chapter was reviewed by the Commission and establishes the requirements and guidance for NRC staff implementation of the revised backfit rule.

While the industry recognizes that backfits may be required based on new information or events that may potentially affect public health and safety, the revised backfit rule requires a more rational and systematic decision making process which will help assure that only those new or modified regulatory requirements which effectively enhance safety are required.

DISCUSSION OF THE FINAL RULE

The purpose of this section is to describe key elements of the revised backfit rule.

Applicability

The final backfit rule applies to all facilities being constructed and all operating facilities.

The backfit rule governs decisions which result in modifications of or addition to systems, structures, components or design of a facility, or to the modification of or addition to the procedures or organization required to design, construct or operate a facility. Finally, it is also applicable to the modification of or addition to the design approval or manufacturing license for a facility. This provision requires the staff to address the backfit rule when proposing changes to an existing design approval or manufacturing license.

Cause

The backfitting rule applies to facility modifications resulting from a new or amended provision in the Commission rules. It is also applicable to modification of a design approval or manufacturing license for a facility. Therefore, the backfit rule requires the staff to perform the necessary analysis prior to imposing a generic change (two or more plants) through rulemaking. However, a plant-specific analysis is not required in rulemaking. When a generic backfit is applicable to a facility of a given type or vintage, the licensee can request an exemption from the regulation due to plant specific design.

A proposed change may be as a result of the imposition of an applicable staff interpretation of the Commission rules that is either new or different from a previously applicable staff position. For example, a change in staff position after an acceptance in an SER of a particular interpretation is a backfit.

The Staff Manual Chapter on page 21 defines the term "applicable staff position as those, "already specifically imposed upon or committed to by a licensee at the time of the identification of a plant-specific backfit". Several different types and sources of applicable staff positions are identified including legal requirements (i.e., regulations, orders, plant licenses (amendments, conditions, technical specifications)), written commitments (i.e., PSAR, LERs, docketed correspondence) and NRC staff positions that are "documented, approved, explicit interpretations of the more general regulations...and to which a licensee or an applicant has previously committed to or relied upon."

Backfit Analysis

The backfit rule requires the staff to perform and document an analysis which demonstrates the need for the backfit. This analysis must be performed *before* requiring the change to the facility. This analysis is not required by the NRC for backfits imposed prior to October 21, 1985. However, the Staff Manual Chapter requires the preparation of the analysis for backfits imposed after May 1, 1985. As described in the Staff Manual Chapter, the supporting analysis is communicated with the backfit to the licensee.

The staff must consider a minimum set of nine factors listed in 50.109c in their assessment. In addition, the staff must consider how the backfit should be prioritized and scheduled in light of other regulatory activities ongoing at the facility. All analyses required by the rule must be approved by the EDO or his designee. As noted in the regulations, no licensing actions are to be withheld during the pendency of the analysis.

The Standard

The final rule requires that the staff satisfy a specific standard before a backfit is required. The analysis performed must demonstrate that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit. A key word in the standard is "overall". Although a proposed backfit may increase the reliability of a specific component or system, it may represent a minor increase in the overall protection of the public. The standard requires evaluation of the proposed change as it affects the total facility.

The second part of the standard provides that the backfit may be imposed only if the direct and indirect costs of implementation for that facility are justified in view of the increased protection. Direct costs may include the hardware, design, engineering, procurement, plant downtime and installation of the backfit. Indirect costs may include additional maintenance, surveillance and occupational exposure.

Both parts of the two part standard must be met before requiring the backfit. The backfit must represent a substantial increase in the overall public protection and must represent a favorable cost-benefit balance.

Exceptions

The standard and related analysis set forth in the backfit rule are inapplicable when:

- A modification is necessary to bring the facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee; or
 - An immediately effective regulatory action is necessary to ensure that the facility poses no undue risk to the public health and safety.
- In lieu of a backfit analysis and compliance with

the standard, the staff must complete a documented evaluation. The evaluation must include a statement of the objective of and reasons for the modification and the basis for invoking the exception before it can be invoked. As a safeguard against unwarranted use of this exception, the evaluation is required after the fact to document the safety significance and appropriateness of the action taken. This after the fact evaluation is intended to assure that all backfits, even those imposed on an immediately effective basis, are subject to careful scrutiny.

Requests for Information

Except for information requested by the NRC to verify the licensee's compliance with the current licensing basis for the plant, the staff must provide for EDO approval of the need for each information request prior to making an information request under 10CFR50.54(f) or Appendix O. This is to ensure that the burden to be imposed on the respondent is justified in view of the potential safety significance of the issue to be addressed in the requested information. This justification must be approved by the Executive Director for Operations (EDO) or his or her designee prior to issuance of the request.

Appeal Process

The Staff Manual Chapter describes two types of appeal processes that apply to two different situations (see pages 15 and 16 of this Staff Manual Chapter). They are (1) appeals of a position by the staff that a specific backfit should be imposed, or (2) appeals of a decision by the staff that the change being imposed is not a backfit as defined in 10CFR 50.09 and therefore the backfit process does not apply. The licensee may appeal to the Executive Director for Operations (EDO) in either case.

For a staff position that a specific backfit should be imposed, the licensee can appeal the staff's position to the Office Director or Regional Administrator whose staff proposed the backfit. A copy of the appeal is to be sent to the EDO. The Office Director or Regional Administrator reports the plan for resolving the issue to the EDO within three weeks of receiving the appeal. If the appeal can not be resolved at a lower management level, the issue may be appealed directly to the EDO. The EDO will promptly resolve the appeal and state the reasons for his final determination.

If the staff has taken the position that the change is not a backfit, the licensee may appeal to the Director of the program office from which the staff position has originated. A copy of the appeal should be sent to the EDO. The EDO may review and modify a decision either at his own initiative or at the request of the licensee. Again, if the appeal can not be resolved at a lower management level or the EDO does not modify the position on his own initiative, the licensee may appeal directly to the EDO. If after these appeals the NRC decides that the issue is not a backfit, these matters should be addressed within the normal licensing or inspection appeal process.

Implementation

The Staff Manual Chapter addresses implementation of the backfit. Having received the backfit, the licensee can either appeal or implement the change. If the licensee appeals and a final determination is made rejecting the appeal, the licensee may elect to implement the change or receive an order from the appropriate Office Director. Further appeal from this point must conform to the appeal process described in 10CFR Part 2, Subpart B.

BACKFITTING CHECKLIST

The following checklist may be a useful tool for determining whether the NRC has satisfied the backfitting rule when it imposes plant-specific facility modifications or modification to a design approval or manufacturing license. Part I addresses the applicability of the rule. It identifies questions that licensees should address to determine whether a particular action by the staff falls within the scope of the rule. Part II addresses whether the staff performed an adequate backfitting analysis, as required by the rule. Part III addresses information requests. It focuses on whether the information request was properly developed and subjected to management controls prior to its issuance.

I. Applicability of Backfitting Rule to Plant-Specific Backfit

A. Nature of Staff Request/Directive:

1. Has the NRC requested or directed that a licensee modify a facility structure, system, component, design, design approval, procedure or organization?

2. What structure, system, component, design, design approval, procedure or organization is affected?

Note: Backfits are not limited to hardware modifications. They include changes in organization and procedures.

Backfits are changes imposed by NRC. They are not facility modifications undertaken voluntarily by a licensee.

3. How is the request/directive transmitted?
4. What is the effective date of the requested change?
5. Has the backfit actually been imposed prior to October 21, 1985? Imposed is interpreted as formal licensee commitment or an NRC order.

Backfits requested or directed by the Staff prior to May 1, 1985 are not subject to the Staff Manual chapter on Backfitting. The backfitting rule became effective on October 21, 1985. Backfits imposed before that date are not subject to the new rule. It is possible that the staff may decide for the sake of simplicity to follow the Manual chapter when resolving all backfit challenges. However, it should also be noted that earlier backfits are at least subject to the "old" rule, 10CFR 50.109.

B. Change of Applicable Staff Positions:

1. In requesting the modification, did the staff change a position previously applicable to the plant, the design approval or manufacturing license?
2. What was the previous staff position?
3. How was the previous position transmitted?
4. What was the effective date of the previous staff position?
5. How does the current staff position differ from the previous staff position?

Note: The basis for issuing the permit, license or approval (PSAR, FSAR

etc.) of the plant and the resulting structures, systems, components, procedures and organizations are the baseline from which a backfit is measured.

C. Regulatory Basis:

1. What is the regulatory basis relied upon by the staff in requesting the change?
2. Is the regulatory basis generic or plant-specific?
3. If generic, has the document been reviewed and a recommendation for approval been made by the CRGR? (Review CRGR minutes)
4. Did that recommendation, if it exists, contemplate applicability of the document to a facility, or design approval of your type, class and vintage?

Note: Generic backfits imposed after creation of the CRGR are to be reviewed by the CRGR. If the staff represented to the CRGR during its review that the new requirement would be applied to facilities of your type, class and vintage, and the CRGR recommends doing so, then in most cases the backfit may be imposed at your facility without further backfitting analysis. Note, however, that CRGR recommendations regarding generic guidelines such as SRP's do not sanction the imposition of a backfit because the SRP is not a requirement.

D. Backfit Imposed to Achieve Compliance:

1. Does the staff take the position that the requested modification is necessary to bring the plant into compliance with existing NRC requirements?
2. Can the staff demonstrate that the requirement at issue was in existence at the time that the new rule became effective?
3. Did the staff identify specifically the requirement it claims is not satisfied? (October 21, 1985)

4. Is it really a requirement or only a guidance? Documents which provide guidance are such staff documents as Reg Guides, SRPs, BTPs, I&E Notices and Bulletins.

5. Did the staff complete a documented evaluation that identifies the objective of the backfit and its basis for concluding that the backfit was necessary to satisfy existing requirements?

Note: Backfits imposed to achieve compliance with existing applicable requirements are not subject to the normal backfitting process established in the rule. For OL's the "existing applicable requirements" are those which were in effect at the time the OL was granted or those imposed prior to October 21, 1985. For NTOL's, these requirements are the ones in existence six months prior to docketing the OL application date or those imposed prior to October 21, 1985. For design approval holders, "existing applicable requirements" are those which were in effect at the time of issuance of the design approval under Appendix M, N or O of this part.

E. Immediately Effective Regulatory Action Resulting in a Backfit:

1. Did the staff request the facility modification to ensure that the facility poses no undue risk to the public health and safety?
2. After the backfit was imposed, did the staff complete a documented evaluation that identifies the objective of the backfit and sets forth its basis for concluding that the backfit was necessary to ensure that no undue risk to the public health and safety is posed?

Note: Backfits which must be made immediately effective to restore a facility to an acceptable level of safety are not subject to the normal backfitting process established in the rule. However, an

"after-the-fact" analysis is required

II. Backfitting Analysis

A. First Element of the Backfitting Standard:

1. Has the staff demonstrated that the proposed backfit will result in a *substantial* additional increase in the *overall protection* of the public health and safety or the common defense and security?
2. Is the substantial additional increase large, important or significant?
3. Does the increased protection flow from overall plant operation or from the improved functioning of an individual system, structure, component or organization?

Note: The first element of the backfitting standard involves two findings: (1) a *substantial additional* increase and (2) the *overall protection* of public health and safety. This question should be considered in connection with the Question C.

B. Second Element of the Backfitting Standard:

1. Are the direct and indirect costs of implementing the backfit justified in view of this increased protection?

Note: The backfitting rule requires the preparation of a formal generic cost benefit analysis for generic issues. It also requires a cost-benefit analysis for plant specific issues. The ultimate decision regarding imposition of a backfit should not be based solely on a cost-benefit analysis. Rather, it may rest on best engineering judgment given all of the available information. This question should be considered in connection with Question C. In all cases, the NRC is required to document its basis for imposing the backfit.

C. Accuracy and Adequacy of Backfitting Analysis:

1. Has the staff considered accurately and adequately the applicable factors identified in the rule?
2. Will the backfit achieve its stated objectives?
3. Did the staff identify all major licensee activities triggered by the backfit?
4. Is the off-site risk reduction reasonable?
5. Are all employee radiation exposure impacts identified correctly?
6. Are all direct and indirect costs of implementation identified correctly?
7. Has the increase in plant complexity as a result of the backfit been adequately addressed? (eg. effect on other systems)
8. Is the NRC resource burden estimate reasonable?
9. If the backfit is interim, is there a valid justification for its imposition?
10. Is the priority of the backfit assigned by the staff reasonable given other ongoing regulatory activities at the facility?

Note: These are the factors specifically identified in the rule that the staff is to consider if applicable when performing a backfitting analysis. Their consideration will usually be at the heart of the analysis.

D. Other Relevant and Material Factors:

1. Are there other relevant and material factors that the staff should consider prior to imposing the backfit?
2. What are these factors?
3. Why do these additional considerations make a backfit unnecessary?

Note: The staff is not limited to considering only those factors specifically identified in the rule. To the contrary, the rule states that the staff is to consider all factors that are relevant and material to the proposed backfit. Because licensees usually have more complete

information about their plant than that available to the staff, special attention should be paid to these questions.

4. Is the affected plant a standardized unit referencing a design approval?

Note: For design approvals and facilities referencing such approvals, the direct and indirect costs of implementing a backfit on the *lead* plant referencing the design approval should be justified in view of the increased protection to the public from the backfit. Successful implementation of a viable standardization policy requires that the backfit be justified for the *lead* plant before it is imposed on the design approval or any other units referencing the design approval.

E. Consideration of Averted Costs:

1. Has the staff considered off-site and on-site averted costs as part of its backfitting analysis?
2. What averted costs were identified?
3. Are these costs correctly identified?

Note: One controversial aspect of the cost-benefit analysis is that it does not explicitly call for consideration by the staff of averted on-site costs. The Commission has directed the staff *not* to consider this cost element during the trial use of safety goals. This is the Commission's interim position until a final position on safety goals is taken. Therefore, licensees should focus on this aspect of the staff's analysis.

F. Backfits Imposed to Achieve Compliance:

1. Did the staff correctly identify a requirement applicable to your plant?
2. Did the staff properly conclude that this requirement was not satisfied?

3. Will achievement of the objectives of the backfit bring the plant into compliance with this requirement?

4. Is the proposed backfit going to accomplish the objective identified by the staff?

Note: See Question I.D., above.

5. Is there evidence that alternative designs have been considered?

G. Backfit to Restore an Acceptable Level of Safety:

1. Did the staff correctly find that the facility will pose an undue risk without imposition of the backfit?
2. Will achievement of the backfit resolve the undue risk identified by the staff?
3. Is there evidence that alternative designs have been considered?

Note: See Question I.E., above.

III. Information Requests

A. Nature of Information Request:

1. Is the information request associated with a review of a license application or amendment?
2. Is the information requested pursuant to 10CFR50.54(f) or Appendix O?
3. If so, is it sought to verify compliance with the existing licensing basis of the plant:
 - a. Is this purpose stated explicitly?
 - b. What specific aspect of the licensing basis is being examined?
 - c. Is the information reasonably related to this determination?

Note: Information requests necessary for (1) license and license amendment application reviews and (2) verification of compliance with the existing licensing basis of a facility are not subject to these backfit management controls.

B. Use of 10CFR50.54(f) or Appendix O for Information Leading to a Backfit:

1. Is the information request generic, i.e., sent to a number of plants?
 - a. What is the effective date of the request?
 - b. Has the CRGR reviewed the information request?
 - c. Did the CRGR review contemplate issuance of the information request to plants or design approval holders of your type, class and vintage?
2. Is the information request plant-specific?
 - a. Did the staff identify the reasons for the request?

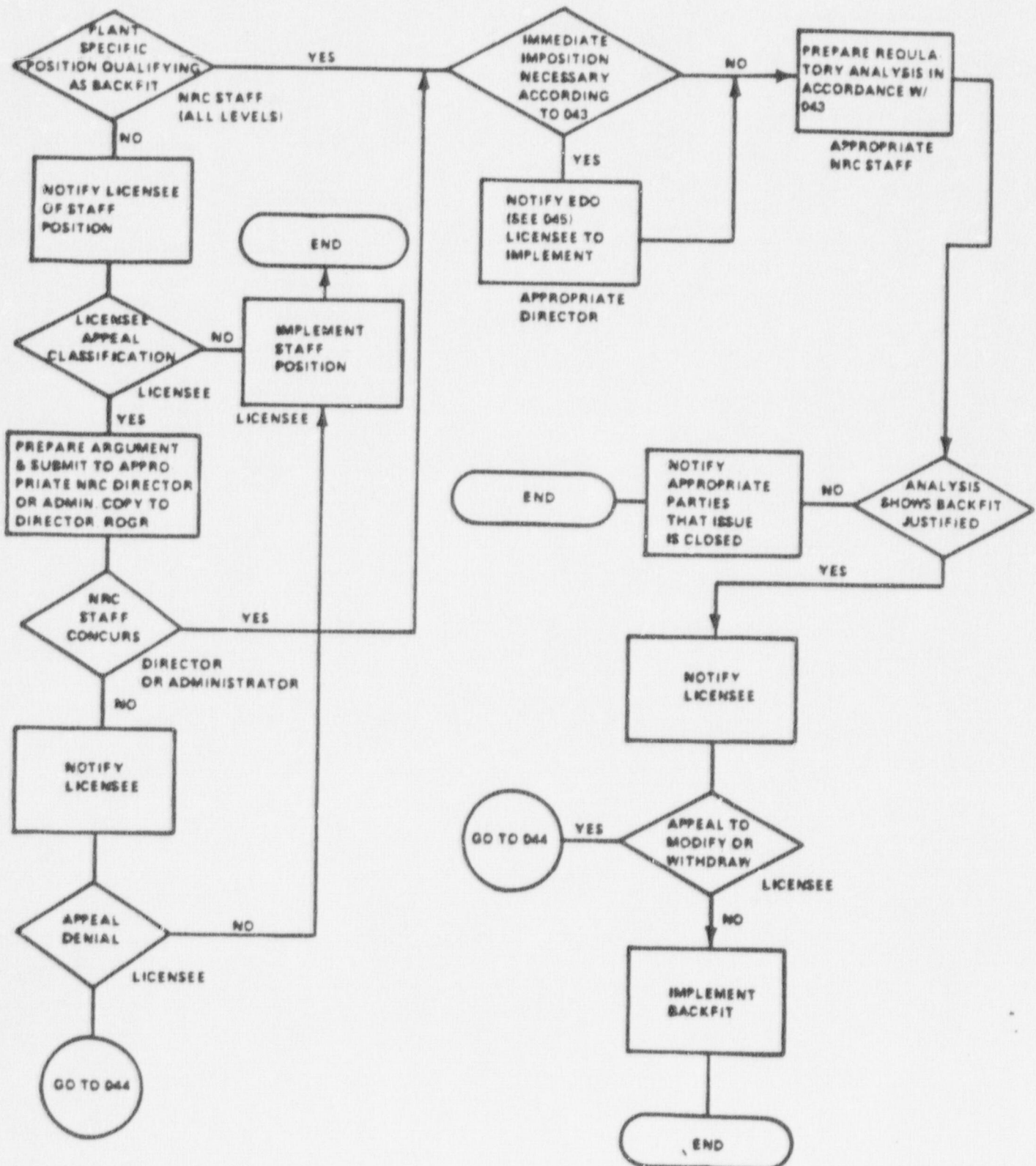
- b. Are those reasons correct?
- c. Is the information request justified in view of the potential safety significance of the issue?
- d. Has the EDO approved the information request?

Note: These questions reflect the procedures established in the backfitting rule for the management of information requests. It should be noted that the staff internal review process is meant to ensure that *all* information requests are well founded, *even when no backfit may result.*

LOGIC DIAGRAMS

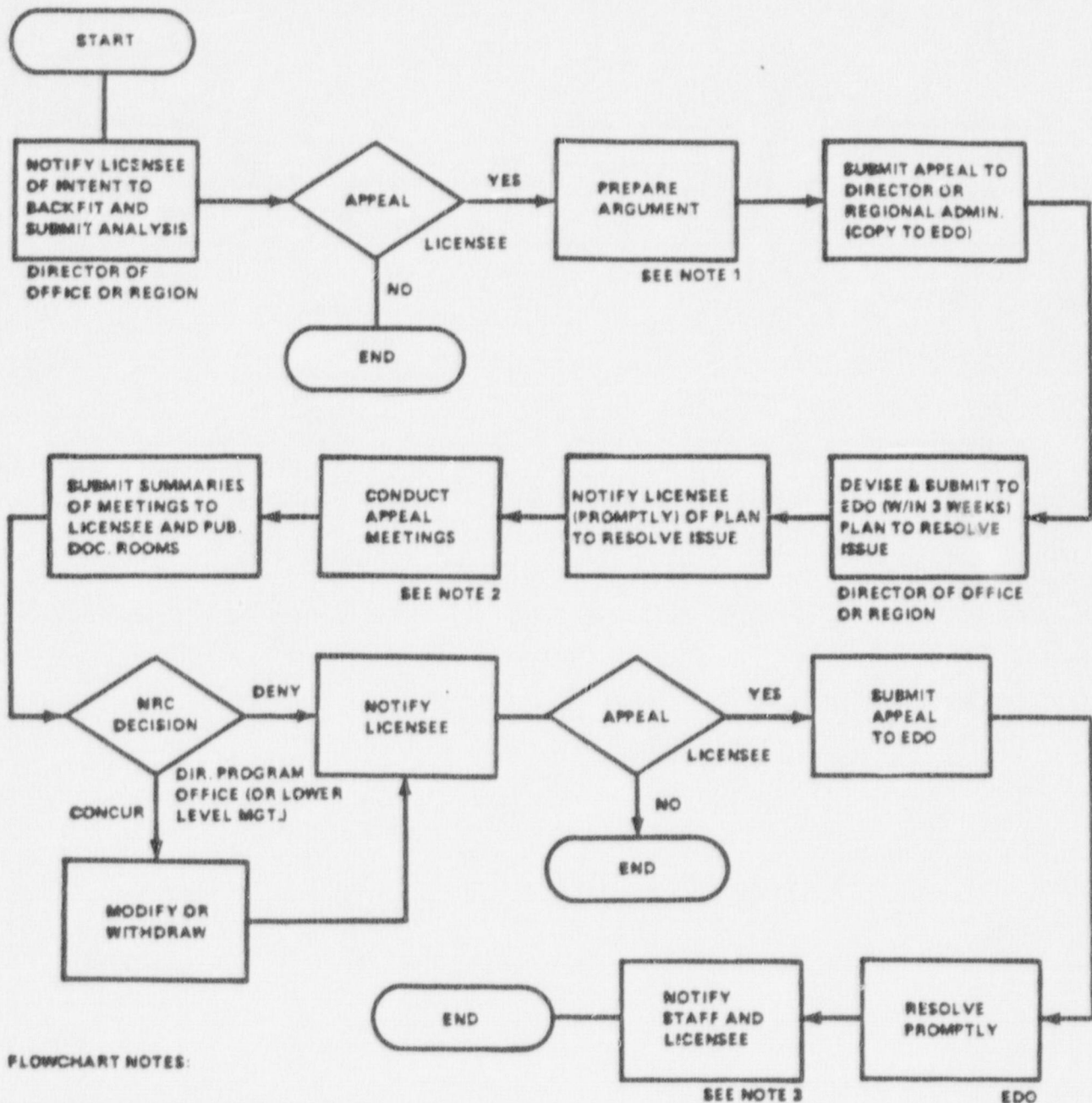
NOTE: The numbers 042, 044, 045 at the heading of each logic diagram corresponds to the section in the Staff Manual Chapter 0514 (See Appendix C)

D42 IDENTIFYING PLANT-SPECIFIC BACKFITS



044 APPEAL PROCESS

1. Appeal to Modify or Withdraw Proposed Plant-Specific Backfit



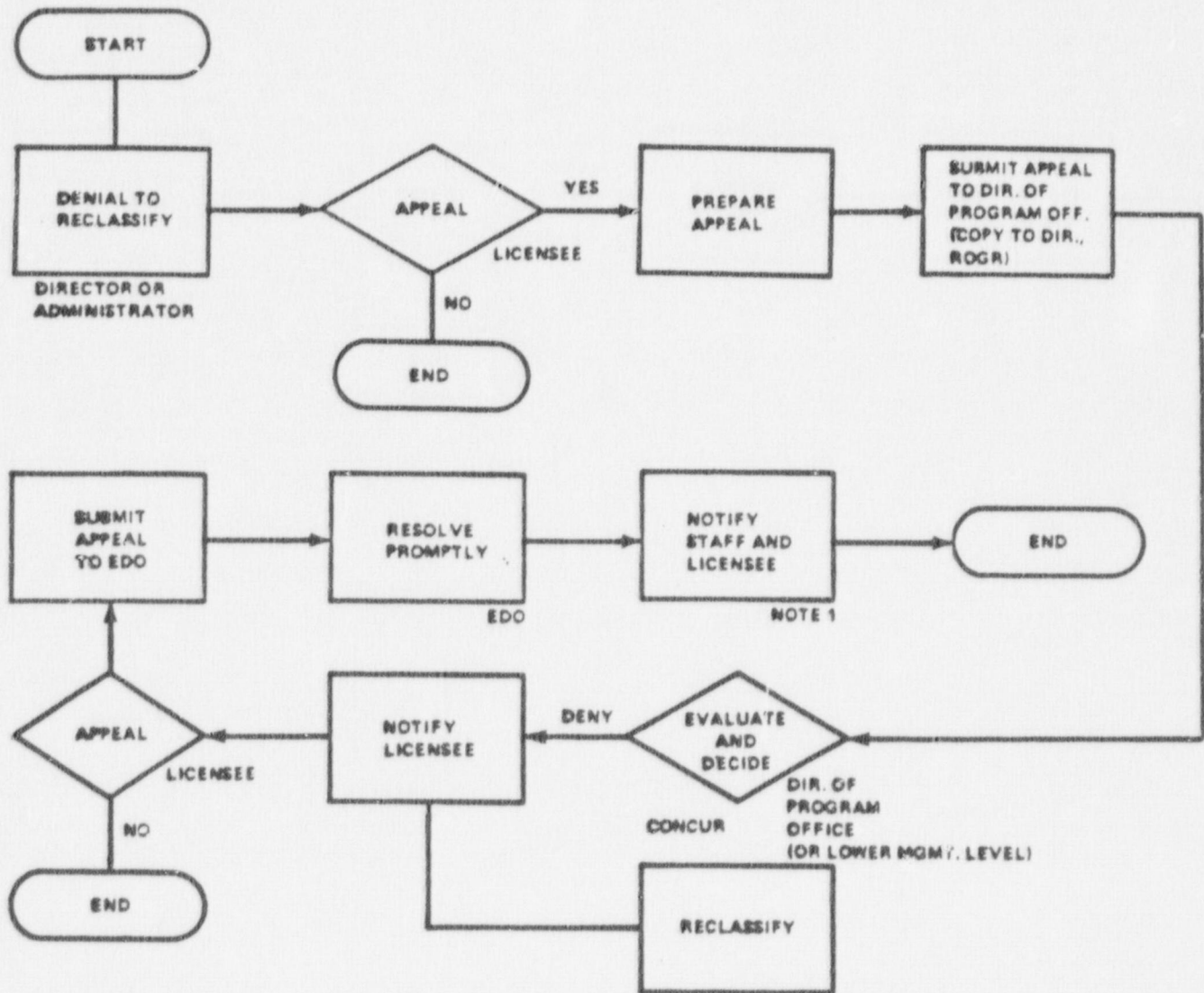
FLOWCHART NOTES:

1. The appeal should provide arguments against the rationale for imposing a backfit as presented in the staff's regulatory analysis.
2. During the appeal process, primary consideration shall be given to how and why the proposed backfit provides a substantial increase in overall protection and whether the associated costs of implementation are justified in view of the increased protection.
3. Further appeals are to be dealt with within the normal licensing or inspection appeal process.

20630-6

044 APPEAL PROCESS

2. Appeal to Reverse a Denial to Reclassify a Staff Position to a Plant-Specific Backfit

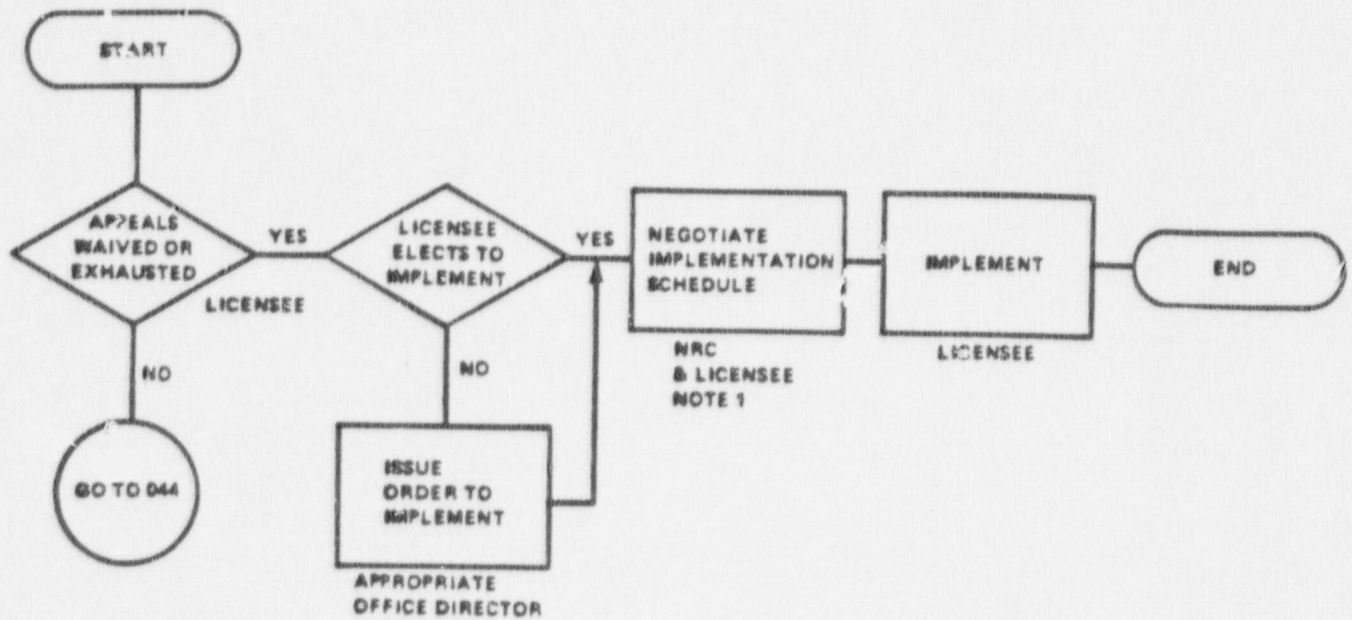


FLOWCHART NOTES:

1. Further appeals are to be dealt with with the normal licensing or inspection appeal process.

20630-6

045 IMPLEMENTATION OF BACKFITS



FLOWCHART NOTES

1. Scheduling criteria should include the importance of the backfit relative to other safety related activities underway, or the plant construction or maintenance planned for the facility, in order to maintain high quality construction and operations. For plants that have integrated schedules, the integrated scheduling process can be used for this purpose.

20630-6

APPENDIX A

Text of the Rule and Conforming Provisions

§2.204 Order for Modification of License

The Commission may modify a license by issuing an amendment on notice to the licensee that the licensee may demand a hearing with respect to all or any part of the amendment within twenty (20) days from the date of the notice or such longer period as the notice may provide. The amendment will become effective on the expiration of the 20-day period during which the licensee may demand a hearing. If the licensee requests a hearing during this 20-day period, the amendment will become effective on the date specified in an order made following the hearing. When the Commission finds that the public health, safety or interest so requires, the order may be made immediately effective. If the amendment involves a backfit, the provisions of §50.109 of this chapter shall be followed.

§50.109 Backfitting

(a) (1) Backfitting is defined as the modification of or addition to systems, structures, components or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previously applicable staff position after:

- (i) the date of issuance of the construction permit for the facility for facilities having construction permits issued after October 21, 1985; or
- (ii) six months before the date of docketing of the operating license application for the facility for facilities having construction permits issued before October 21, 1985; or

(iii) the date of issuance of the operating license for the facility for facilities having operating licenses; or

(iv) the date of issuance of the design approval under Appendix M, N or O of this part.

(2) The Commission shall require a systematic and documented analysis pursuant to Paragraph (c) of this section for backfits which it seeks to impose. Imposition of a backfit pursuant to Paragraph (a)(4)(ii) of this section shall not relieve the Commission of performing an analysis after the fact to document the safety significance and appropriateness of the action taken.

(3) The Commission shall require the backfitting of a facility only when it determines, based on the analysis described in Paragraph (c) of this section, that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.

(4) The provisions of Paragraphs (a)(2) and (a)(3) of this section are inapplicable and, therefore, backfit analysis is not required and the standard does not apply where the staff finds and declares, with appropriate documented evaluation for its finding, either:

- (i) that a modification is necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee; or

- (ii) that an immediately effective regulatory action is necessary to ensure that the facility poses no undue risk to the public health and safety.³

Such documented evaluation shall include a statement of the objectives of and reasons for the modification and the basis for invoking the exception.

- (b) Paragraph (a) of this section shall not apply to backfits imposed prior to October 21, 1985.
- (c) In reaching the determination required by Paragraph (a) of this section, the Commission will consider how the backfit should be prioritized and scheduled in light of other regulatory activities ongoing at the facility and, in addition, will consider information available concerning any of the following factors as may be appropriate and any other information relevant and material to the proposed backfit:
 - (1) Statement of the specific objectives that the proposed backfit is designed to achieve;
 - (2) General description of the activity that would be required by the licensee or applicant in order to complete the backfit;
 - (3) Potential change in the risk to the public from the accidental off-site release of radioactive material;
 - (4) Potential impact on radiological exposure of facility employees;
 - (5) Installation and continuing costs associated with the backfit, including the cost of facility downtime or the cost of construction delay;
 - (6) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements;

³For those modifications which are to ensure that the facility poses no undue risk to the public health and safety and which are not deemed to require immediately effective regulatory action, analyses are required. These analyses, however, should not involve cost considerations except only insofar as cost contributes to selecting the solution among various acceptable alternatives to ensuring no undue risk to public health and safety.

- (7) The estimated resource burden on the NRC associated with the proposed backfit and the availability of such resources;
- (8) The potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed backfit;
- (9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

- (d) No licensing action will be withheld during the pendency of backfit analyses required by the Commission's rules.
- (e) The Executive Director for Operations shall be responsible for implementation of this section and all analyses required by this section shall be approved by the Executive Director for Operations or his designee.

§50.54 Conditions of Licenses

- (f) The licensee shall at any time before expiration of the license, upon request of the Commission submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended or revoked. Except for information sought to verify licensee compliance with the current licensing basis for that facility, the NRC must prepare the reason or reasons for each information request prior to issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each such justification provided for an evaluation performed by the NRC staff must be approved by the Executive Director for Operations or his or her designee prior to issuance of the request.

Appendix O — Standardization of Design, Staff Review of Standard Designs

- 8. Information requests to the approval holder regarding an approved design shall be evaluated prior to issuance to ensure that the

burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each such evaluation performed

by the NRC staff shall be in accordance with 10CFR50.54(f) and shall be approved by the Executive Director for Operations or his or her designee prior to issuance of the request.

APPENDIX B

Examples of Backfit Situations

General

In this section, selected regulatory activities and documents are reviewed with the intent of making the licensee aware of the positions taken by the NRC that impact the decision of whether a specific issue should be considered a backfit. This discussion is intended to aid the licensee in identifying potential backfits and taking the necessary actions provided in the final backfit rule. As in any situation of this nature, judgment will play a role in the final determination. However, there are specific regulatory documents and positions that should be considered in making that judgment.

As is evident from the definition, a plant-specific backfit has the elements of a change from an already established practice to conform to an applicable requirement. An applicable requirement is defined as one from the body of requirements established before certain defined milestones in the plant's licensing history (these are specified in the rule). If the staff's action is directing, telling or coercing in any way to obtain a change to the design, construction or operation of a facility, this is a backfit. A suggestion asking a licensee to consider a proposed action may not be a backfit.

Actions proposed by a licensee are not backfits. Even if the change or addition meets the definition of backfit and arose from an information exchange between the licensee and the staff, it is not a backfit. The critical element is the imposition of change in any way by the staff.

Standard Review Plans (SRPs)

When the NRC was deciding whether applicants for operating licenses should review the FSAR against the SRPs, a new 10CFR50.34 section, "Conformance with the Standard Review Plan (SRP)," was issued. Subparagraph Section 50.34(g)(3) states that "The SRP was issued to establish criteria that the NRC staff intends to use in evaluating whether an applicant/licensee meets the Commission's regulations. The SRP is not a substitute for the regulations and compliance is not a requirement (emphasis added)."

Questions intended only to enable staff understanding of proposed actions, in order to determine whether the actions will meet the *intent* of the SRP, is *not* a backfit.

Acceptance criteria which appear more stringent than those contained in the SRP or are in addition to those specified in the SRP, whether in writing or verbal, are plant-specific backfits. Actions volunteered by licensees, which are in excess of the criteria in the SRP, generally do not constitute plant-specific backfits. However, if the staff implies or suggests that a specific action in excess of already applicable requirements is the only way for the staff to be satisfied, the action is a plant-specific backfit whether or not the licensee agrees to take such action.

Application of an SRP to an operating plant after the license is granted is a backfit unless the SRP was approved specifically for operating plant implementation and is applicable to such operating plant. However, in order to issue an amendment to a license, the staff must reach a current finding of compliance with regulations applicable to the amendment. Review to new SRP revisions is not permitted to determine current compliance with regulations.

As a specific example, review of an application for a license amendment to authorize use of a reload reactor core will normally not involve a new finding of compliance. However, if a new fuel design or a new thermal-hydraulic correlation and associated operating limit are involved, such changes are clearly advances in design and operation which may warrant review against the criteria used to approve the initial license issuance. This is not considered a backfit.

Licensees should assure that revisions in design or operation that raise questions only about potential reduced margins of safety, as defined in the basis for any Technical Specification, are reviewed by reanalysis of the same accident sequences and associated assumptions as analyzed in the FSAR for the initial license issuance.

During reload reviews involving new designs or new analyses, staff proposed positions with regard to technical matters not directly part of the changes proposed are backfits.

Example Case

As a typical example, let's assume that the current SRP (NUREG 0800) is definitely applicable to a licensee, specifically by 10CFR50.34 (g) which required the licensee to address its conformance to the "Acceptance Criteria" of the SRP.

In this particular instance, the "Review" section of the SRP requested an analysis to be performed in a particular fashion; however, due to changes in technology and state-of-the-art, the licensee performs a different analysis which the licensee believes will meet the "Acceptance Criteria" of the SRP.

When the staff received the licensee's analysis, they had no procedures or comparable analytical tools to evaluate the licensee's submitted analysis. Therefore, the staff took the position that they would not evaluate the analysis because it was not consistent with the SRP, Reg Guide, NUREG or 10CFR. They requested the licensee perform the analysis in the SRP. This is based on the fact that the SRP in effect for this licensee was applicable to this docket and therefore utilizing the backfit rule (50.109) no backfit is required (since it was in the SRP initially) and the licensee must utilize the routine NRR appeal process or commit to perform the requested analysis.

The questions are:

1. Is this a backfit? Why?
2. What is the next step for the licensee?
3. Would this request, if accommodated, be justifiable in a utility commission prudence audit?

Q.1 Is this a backfit?

Yes. 10CFR50.34(g) specifically states that the SRP's guidance and compliance is not required. In addition, the introduction of the SRP instructs its users that compliance is not mandatory. The backfit exists not in the staff requesting an analysis but the change in position that the SRP is now a requirement (even though the licensee's analysis demonstrates conformance with the regulations called out in the SRP and thereby fulfills the regulatory purpose).

Q.2 What is the next step for the licensee?

The next step is to file the backfit appeal in accordance with 50.109 and the latest information supplied by the NRC formally to licensees as to the procedure for backfit processing.

Q.3 Would the request, if accommodated, be justifiable in a utility commission prudence audit?

Perhaps not. The licensee may not be able to demonstrate the effective use of the "backfit rule" since the staff had determined that, in their interpretation, no backfit had existed. In addition, most auditors are aware that only regulations and docketed commitments are requirements. Besides, the licensee has already demonstrated conformance with the applicable regulation.

Regulatory Guides

As part of the generic review process, the CRGR designates which plant or groups of plants should be affected by new or modified regulatory guides. Such a process is not a plant-specific backfit although the provisions of the backfit rule must be fulfilled. Any staff proposed plant-specific implementation of a regulatory guide provision for a plant not encompassed by the generic applicability finding of CRGR is a plant-specific backfit. A staff action that expands on, adds to or modifies a generically approved regulatory guide already applicable is a plant-specific backfit.

Example Case

Let us assume that the licensee committed in the docketed OL application (FSAR) to meet the underlying requirements of Reg. Guide 1.68.2 "Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants".

The plant has been operating for over 5 years and has just completed numerous TMI and Appendix R modifications and is considering some Davis-Besse and ATWS modifications. The NRC Resident Inspector has noticed that the plant procedures have doubled in 5 years and that the Appendix R procedures address shutdown of the plant from a remote location assuming a control room fire.

The resident inspector has approached plant management and stated that he plans to take enforcement action. His basis is that the original com-

commitment to Reg Guide 1.68.2 required meeting GDC 19 and that the plant, "demonstrate that the number of personnel available to conduct the shut-down operation is sufficient to perform the many actions required by the procedure in a timely manner". He contends that the plant is now not meeting its original commitment nor assuring it is at the original level of safety without a full demonstration. He states that this is not a backfit because this was an original licensee commitment which is merely necessary to return the facility to an acceptable level of safety.

The questions are:

1. Is this a backfit? Why?
2. Must the utility demonstrate this to the Resident?

Q.1 Is this a backfit?

Yes. First, the plant has not degraded its original commitment. Therefore, the original level of safety is still present. Second, the initial thrust of Reg. Guide 1.68.2 is to meet GDC 19, not Appendix R. The inspector is using this Reg. Guide as acceptance criteria for Appendix R; this use is not approved by the Commission and if required, would constitute a change of staff position and/or licensing bases. Third, demonstrating that "sufficient number of personnel are available" is not an underlying requirement of Reg. Guide 1.68.2. In fact it is not even a requirement of GDC 19 which addresses plant shutdown outside of the control room. It could be considered that GDC 19 infers to "sufficient personnel available". However, the NRC review for sufficient personnel is conducted pursuant to 10CFR50, Appendix B, Organization, where the staff addresses adequate personnel staffing levels.

Q.2 What is the licensee's next step?

The licensee must file a backfit appeal utilizing the information in Answer 1 as a basis. The process must follow 50.109 and the latest approved backfit process identified to licensees. This filing will ensure that the plant would not have to shut down for this specific issue until a decision is rendered.

Plant-Specific Orders

An order issued to cause an action which is not otherwise an applicable requirement is a plant-

specific backfit. An order effecting prompt imposition of a backfit may be issued prior to completing any of the procedures set forth in the rule provided that the appropriate Office Director determines that prompt imposition is necessary, a justification for prompt imposition is approved. A full modification analysis must be completed subsequent to the order.

An order issued to confirm commitments to take specific actions, even if the action is in excess of previously applicable requirements, is not a plant-specific backfit provided the commitment was not obtained by the staff as the only alternative in order to gain staff approval. Discussion or comments by the NRC staff identifying deficiencies observed, whether in meetings or in written reports, do not constitute requirements and thus are not backfits. Definitive statements directing specific actions to satisfy staff positions are backfits unless the action is explicitly an already applicable requirement for the plant in question.

Inspections

NRC inspection procedures govern the scope and depth of staff inspection of activities such as design, construction and operation. As such, they define those items the staff is to consider in its determination of whether the licensee is conducting his activities in a safe manner. The conduct of an inspection establishes no new requirements and is not a plant-specific backfit.

Staff requirements to the effect that the contents of an NRC inspection procedure are positions that must be met by the licensee constitute a plant-specific backfit. Discussion or comment by the inspector regarding deficiencies observed in the conduct of activities, whether in meetings or in written inspection reports, do not constitute requirements. Staff requests that specific actions be taken as a result of inspections, where those actions are different from ones previously taken, are backfits (previous compliance assumed). Discussions of inspector comments in technical areas wherein prior NRC requirements or licensee commitments do not exist are not regulatory requirements. If during such discussions, the licensee elects to take actions in response to the inspector's comments, these are done at the licensee's initiative and therefore such action is not a backfit provided the inspector does not indicate that the specific actions are the only way to resolve a particular issue. If the

inspector indicates that a specific action must be taken, such action is a backfit unless the measure is remedial for compliance with an existing requirement.

For example, if the FSAR commits to ANSI N18.7 and the inspector finds that implementing procedures do not contain all of the elements required by ANSI N18.7, direction from the staff that all these elements must be included in the implementing procedures, is not a backfit. If an inspector finds all the *required* elements of ANSI N18.7 are included, but certain of the *optional* elements are not in the implementing procedures and he indicates that the implementing procedures must include any or all of the optional elements, this is a backfit whether or not the licensee agrees to include these elements.

Notice of Violation

A notice of violation requesting description of proposed corrective action is not a backfit. Commitments by the licensee in the description of corrective action to be taken are not backfits. A request by the staff to consider some specific action in response to a notice of violation is not a backfit. However, if the staff is not satisfied with proposed corrective actions and requests alternative or additional actions, those requested actions, whether requested orally or in writing, are backfits. (Previous compliance assumed)

Discussions during enforcement conferences in response to requests for advice regarding corrective actions are not backfits. However, definitive statements directing specific actions to satisfy staff are backfits.

Bulletins

I&E Bulletins which contain action requests of licensees undergo the generic review process of CRGR. Bulletins are not requirements and the fact of CRGR review and/or approval does not alter the status of a bulletin. Therefore, it is not necessary to apply the plant-specific backfit process to the ac-

tions requested in a bulletin, however, if the staff expands the action requested by a bulletin during its application, such action is a plant-specific backfit.

Reanalysis of Issues

Throughout plant lifetime, many individuals on the NRC staff have an opportunity to review the requirements and commitments encumbered upon a licensee. Undoubtedly there will be occasions when a reviewer concludes that a program in a specific area does not satisfy a regulation, a license condition or a commitment. In the case where the staff previously accepted the program as adequate, any staff specified change in the program is a backfit.

In the case of an NTOL, once the SER is issued, the staff has indicated acceptance of the programs described in the SAR and has concluded that they satisfy the NRC requirements. If the staff subsequently requires additional action other than that specified in the SER, such action is a backfit.

Examples That Are Not Backfits

The following are a few examples that can not be classified as backfits:

- The licensee when applying for the operating license explicitly committed in the FSAR to provide automatic closure on fire dampers but failed to do so. The staff requires it later during operation. This is not a backfit.
- The staff in the SER for the Operating License interpreted a Standard, committed to by the applicant, to require certain written procedures. Requiring the licensee to have the procedures is not a backfit.
- In response to an I&E enforcement conference, the licensee commits in writing to make certain modifications to correct the deficiencies. This is not a backfit.

THE BACKFIT RULE

PRESENTED AT THE INDUSTRY WORKSHOPS

Dallas, Texas

- April 29, 1986

King of Prussia, Pennsylvania

- May 8, 1986

Atlanta, Georgia

- May 14, 1986

Chicago, Illinois

- May 22, 1986

**James H. Sniezek
USNRC/EDO**

BACKGROUND

- TMI Action Plan
- Feedback From Industry and Staff
- Survey of Licensees
- Committee to Review Generic Requirements
- Regulatory Reform Task Force
- Staff Instructions - 1983

BACKFITTING

- Request for Information Rule 50.54(f)
- Backfit Rule 50.109
- Published in Federal Register September 20, 1985
- Effective Date - October 21, 1985

APPLIES TO

- | | | |
|---|---|---------------------|
| ● Generic Actions | - | CRGR |
| ● Plant-Specific Actions | - | Manual Chapter 0514 |
| ● Power Reactors | | |
| ● Backfits Imposed After October 21, 1985 | | |

REQUEST FOR INFORMATION RULE

50.54(f)

● Commission May Request Licensee Statements Under Oath

● Purpose: To Determine

- Modification of License
- Suspension of License
- Revocation of License

● Justification for Request Required¹

- Burden to Be Imposed
 - Potential Safety Significance of Information
- #### **● Approval by EDO or Designee Prior to Issuance**

^{1/} Except When Information Is Being Sought to Verify Compliance With Licensing Basis

BACKFITTING RULE - 50.109

- **Definition of Backfit - (a)(1)**

- Change to System, Structure, Component or Design of a Facility
- Change to Design Approval or Manufacturing License
- Change to the Procedures or Organization

WHICH MAY RESULT FROM

- New or Amended Rules
- Imposition of a New or Amended Staff Position

AND

- **The New/Amended Rule/Staff Position
Occurs After**

- **Date of CP Issuance (After October 21, 1985)**
- **6 Months Before Docketing of OL (CP Issued Before
October 21, 1985)**
- **Issuance of OL**
- **Issuance of Design Approval (Appendices M, N and O)**

BACKFIT ANALYSIS - (a)(2) AND (c)

- Systematic and Documented
- Determine How Prioritized and Scheduled
- Take Into Account As Available
 - Specific Objectives of Backfit
 - Activity Required of Licensee
 - Change in Accidental Offsite Radiological Risk to Public
 - Potential Impact on Radiological Exposure of Onsite Workers

BACKFIT ANALYSIS - (a)(2) AND (c) (continued)

- Installation and Continuing Licensee Costs
- Impact on Operational Complexity/
Relationship to Regulatory Requirements
- Impact on NRC Resources
- Impact of Differences in Facility Types
- Whether Interim or Final Action
- Other Germane Factors

BACKFIT DETERMINATION - (a)(3)

- Determination is Based on Backfit Analysis
- Commission Shall Require Backfit Only If
 - There is Substantial Increase in Overall Protection

AND

- Costs of Implementation Are Justified

EXCEPTIONS - (a)(4)

- Backfit Analysis of 50.109(c) and Justification of 50.109(a)(5) Not Required
 - Modification Necessary for Compliance
 - Action to Ensure No Undue Risk
- Documented Evaluation of Exception
 - Basis for Invoking Exception
 - Reason for the Modification
- Analysis Required (a)(2)
 - Safety Significance
 - Appropriateness of Action (No Balancing of Safety and Cost)

IMPACT ON LICENSING (d)

- **Licensing Action Not to Be Withheld**
 - Analysis
- **Staff Extended This Concept**
 - Construction
 - Operations
 - Appeals

RESPONSIBILITIES (e)

- Executive Director for Operations (EDO)
 - Implementation of 50.109
- EDO or Designee
 - Approve All Analysis
- Designee
 - Office Directors/Deputy
 - Regional Administrators/Deputy

BACKFIT WORKSHOP WITH INDUSTRY

April 29, 1986 - Dallas, Texas

May 8, 1986 - King of Prussia, Pennsylvania

May 14, 1986 - Atlanta, Georgia

May 22, 1986 - Chicago, Illinois

NRC STAFF IMPLEMENTATION OF 10 CFR 50.109 FOR PLANT-SPECIFIC BACKFIT MANAGEMENT

Tom Cox
USNRC/EDO

**NRC IMPLEMENTATION
OF THE BACKFIT RULE
FOR PLANT-SPECIFIC BACKFITTING
MC 0514**

- 1. Executive Director for Operations (EDO)
Level Directive - Chapter 0514**
- 2. Office Level - HQ Office Procedures
Regional Office Procedures**
- 3. Above Documents Were in Place in 1985**
- 4. Chapter 0514 Recently Revised and Issued
to Staff and Industry**
- 5. Revision of Office Procedures Underway**

NRC STAFF TRAINING PROGRAM

1. Nine Seminars on Chapter 0514 During 1985

- Office of Nuclear Reactor Regulation (NRR)
- Office of Nuclear Material Safety and Safeguards (NMSS)
- Office of Inspection and Enforcement (IE)
- Office of Nuclear Regulatory Research (RES)
- Five Regions

- Approximately 700 Staff Members Participated

2. Additional Seminars in Five Regions During 1985 on Cost/
Benefit Analysis
3. Repeat Seminars Will Be Held in 1986 in Offices and Regions

CHAPTER 0514 ELEMENTS

1. Responsibilities and Authorities (0514-03)
 - EDO
 - Office Directors and Regional Administrators
 - NRC Staff
2. Requirements - 10 CFR 50.54(f) Information Requests (041)
3. Requirements - Identifying Plant-Specific Backfits (042)
4. Requirements - Preparing and Handling Regulatory Analyses (043)

CHAPTER 0514 ELEMENTS

(continued)

5. Requirements - Appeal Process (044)
6. Requirements - Implementation of Backfits (045)
7. Requirements - Recordkeeping and Reporting(046)
8. Exceptions (047)
9. Definitions (050)
10. Guidance for Making Backfit Determinations (Appendix A - 060)

RESPONSIBILITIES AND AUTHORITIES

1. EDO Responsible to Commission for Successful Conduct of Program.
2. EDO Has Delegated Authority and Responsibility to Office Directors/Regional Administrators (ODs/RAs) to Review Cases and Make Decisions.
3. EDO May Review and Modify Decisions - But It is Not Required. EDO Will Be Final Appeal Authority.

RESPONSIBILITIES AND AUTHORITIES (continued)

4. Director, Regional Operations and Generic Requirements Staff (ROGR) Shall Assure That Process Controls Are Developed, Maintained, and Communicated to Licensees.
5. ODs/RAs Will Assure That Procedures Are in Place in Each Office for Managing Plant-Specific Backfitting.

RESPONSIBILITIES AND AUTHORITIES

(continued)

6. ODs/RAs Shall Approve Regulatory Analysis and Make Backfit Determination Before Transmitting Proposed Backfit and Analysis to Licensee.
7. ODs/RAs Will Consider Claims of Backfit by Other Than NRC Staff.
8. ODs Make Final Decisions on Appeals.
9. NRC Staff Has Primary Responsibility to Identify Backfits - But Others May Identify Potential, or Claimed Backfits.

DEFINITION OF PLANT-SPECIFIC BACKFIT

1. Staff Position May Be a Proposed Backfit if it Would Cause a Change From Already Applicable Regulatory Staff Positions.
2. Staff Position is a Proposed Backfit if it is a Change and is First Identified to Licensee in Writing After Certain Licensing Milestones:
 - Operating Reactor - After License Issuance
 - Operating License Review - After 6 Months Before Docketing
 - New Applications - After CP Issuance
 - Standardized Applications - After Design Approval by NRC
3. Plant-Specific - Unique to One Unit (Docket Number)
 - Unique to More Than One Unit at Same Site if Same Change Affects All Units in the Same Way.

DEFINITION OF APPLICABLE REGULATORY STAFF POSITIONS

1. Positions Already a Part of the Licensing Basis of a Licensee.
2. Three Kinds of Applicable Regulatory Positions:
 - (A) Legal Requirements
 - (B) Written Commitments by Licensee
 - (C) NRC Staff Positions - Generic and Officially Approved as Applicable to the Specific Licensee

IDENTIFYING PLANT-SPECIFIC BACKFITS

1. NRC Staff Primarily Responsible to Identify Proposed Backfits.
2. When NRC Identifies Backfit, Staff Completes Regulatory Analysis and Required Determination before Communicating Backfit and Regulatory Analysis to Licensee.
3. NRC Identified Backfit will be Issued by OD or RA.
4. Licensee May Initiate Claim of Backfit. Licensee Claim Must be Written to OD/RA of Staff Issuing the Position, with Copy to EDO.

IDENTIFYING PLANT-SPECIFIC BACKFITS(Continued)

5. If Staff Determines that Position Claimed to be a Backfit is a Backfit, Regulatory Analysis is Started Immediately.
6. IF Staff Determines that Position Claimed to be a Backfit is not a Backfit, OD/RA Documents Basis for Decision and Transmits it to the Licensee. A Documented Basis is Required to be Forwarded with the Transmittal.
7. In Case of Licensee Claim of Backfit, OD/RA Receiving Claim Shall Report to EDO and Inform the Licensee, within 3 Weeks of Receipt of Claim, of the Results of the Determination and the Plan for Resolving the Issue.

IDENTIFYING PLANT-SPECIFIC BACKFITS(Continued)

8. Staff Proposed Position May be Found not to be a Backfit for These Reasons:
 - (A) Position is a Previously Applicable Regulatory Position,
or
 - (B) Director of NRR, NMSS or IE Determines that Modification is Necessary to Ensure no Undue Risk.
In These Cases, No Regulatory Analysis is Required but OD Must Provide Documented Evaluation to Support Action Taken.
9. When Licensee is Informed that Claimed Backfit is not a Backfit, Licensee May Appeal This Determination.

REGULATORY ANALYSIS

1. Initiated on Staff Identification of Backfit, either Identified by Staff or Claimed by Licensee and Subsequently Determined to be a Backfit.
2. Analysis may be Terminated by Staff if the Analysis Done Supports Dropping the Issue. All Parties will be Notified and Disposition Entered in Plant-Specific Backfit System.

REGULATORY ANALYSIS (Continued)

3. Regulatory Analysis must be Completed and a Determination made that Backfit is Warranted and will be imposed Prior to Communicating Backfit and Regulatory Analysis to Licensee. OD/RA Will Make this Determination and Forward a Copy of Documents to EDO Prior to Transmitting to Licensee.
4. To Impose Backfit, OD/RA Must Determine that there is a Substantial Increase in Protection and that the Direct and Indirect Costs are Justified.

REGULATORY ANALYSIS - CONTENT

1. Thirteen Elements in the Analysis Listed in Chapter 0514
2. There are Nine Factors in 50.109(c) Analysis. Chapter 0514 Drops No. 8 in the Rule Analysis Because it is Generic. Five are Added:
 - (A) Qualitative Factors, Including Operational Trends, Events, and SALP or Similar Performance Reports
 - (B) NRC Interoffice Coordination
 - (C) Basis for Schedule for Implementation
 - (D) Schedule for Staff Actions
 - (E) Importance of Issue Relative to Other Ongoing Safety-Related Work at the Facility

REGULATORY ANALYSIS-CONTENT (Continued)

3. Primary Emphasis is on Evaluation of:

(A) Effect on Public Risk Due to Accidents

(B) Effect on Occupational Exposure

(C) Installation and Continuing Costs, Including Downtime
or Construction Delay

(D) NRC Costs

DOCUMENTS USED BY NRC FOR ANALYSES

NUREG/BR-0058, Rev. 1, May 1984, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission"

NUREG/CR-3568, December 1983, "A Handbook for Value-Impact Assessment"

NUREG/CR-3971, October 1984, "A Handbook for Cost Estimating"

APPEAL PROCESS

1. Two Types of Appeal

(A) To Reverse a Denial of Licensee Claim of Backfit

(B) To Modify or Withdraw a Staff Proposed Backfit

2. Appeal to Reverse a Denial of Claim should be Addressed to Director of Program Office Having Responsibility for that Proposed Position. Copy to EDO.

- Appeal should be Based on NRC Evaluation of Licensee Claim, and any New or Additional Info Bearing on Backfit Determination by NRC

- Will be Decided by Program OD if not Resolved at Lower Level

APPEAL PROCESS (Continued)

3. Appeal to Modify or Withdraw Staff Proposed Backfit should be Addressed to OD or RA Who Issued Proposed Backfit. Copy to EDO.
 - Appeal should Focus on Rationale of Staff's Regulatory Analysis
 - Will be decided by Program OD if not Resolved at Lower Level.

IMPLEMENTATION

1. After Issuance of Proposed Backfit, Licensee Will Either Implement or Appeal.
2. After Appeal and Subsequent Final Decision to Backfit, Licensee May Elect to Implement. If Licensee does not Elect to Implement, Backfit May be Imposed by Order of the OD.
3. Implementation will Normally be Accomplished on a Negotiated Schedule. Integrated Schedule Process May be Used.

IMPLEMENTATION (Continued)

4. Staff Position May be Imposed Without Regulatory Analysis if Position is not a Backfit or if a Backfit is Necessary to Assure No Undue Risk at the Facility. EDO is Notified and a Documented Evaluation Stating Objectives and Reasons Must be Prepared. Evaluation must Normally Issue with the Action Taken by NRC.
5. If Program OD Believes that Immediately Effective Action is Necessary in Undue Risk Situation, Evaluation May Follow the Backfit.
6. Backfit Actions in Progress shall not Interrupt or Delay Plant Construction, Operations or Licensing.

FUNDAMENTAL CONCEPTS IN DETERMINING WHETHER A STAFF ACTION IS A BACKFIT

1. Is the Position a Previously Applicable Regulatory Staff Position?
2. Timing of the Position Relative to Regulatory Milestones.
3. Has the Licensee Really Volunteered to Take Action?
4. Actions Proposed by Licensee Resulting from Normal Staff/Licensee Discussions Concerning an Issue are not Backfits.

FUNDAMENTAL CONCEPTS IN DETERMINING WHETHER A STAFF ACTION IS A BACKFIT (Continued)

5. Would the Staff Position Cause the Licensee to Change Design, Construction or Operation?
6. Is the Staff Action Directing, Telling or Coercing, or Merely Suggesting or Asking the Licensee to Consider the Staff Proposed Action?
7. Is the Licensee in Noncompliance with an NRC Rule, Reg., License Condition, Tech. Spec?
8. Is the Licensee Meeting Written Commitments to the NRC?

SPECIFIC APPLICATIONS OF BACKFITS

INSPECTION

1. Inspection of any Item/Activity is Not By Itself a Backfit.
2. Identification of Deficiencies and Discussions with Licensees Regarding the Deficiencies are not Backfits.
3. Licensee Agreement to Take Action in Response to Inspector Findings is not a Backfit Provided the Licensee is not Faced with an Ultimatum.
4. If the Staff Indicates a Certain Action is the Only Way for the Staff to be Satisfied, that Action is a Backfit.

ENFORCEMENT

1. ENFORCEMENT OF NRC REQUIREMENTS AND LICENSEE WRITTEN COMMITMENTS IS NOT A BACKFIT.
2. A NOTICE OF VIOLATION (NOV) REQUESTING DESCRIPTION OF CORRECTIVE ACTION IS NOT A BACKFIT.
3. LICENSEE COMMITMENTS IN RESPONSE TO NOV ARE NOT BACKFITS.
4. DISCUSSIONS DURING ENFORCEMENT CONFERENCES AND RESPONSES TO REQUESTS FOR ADVICE ARE NOT BACKFITS.
5. A STATEMENT TO A LICENSEE DIRECTING A SPECIFIC ACTION TO SATISFY THE STAFF IS A BACKFIT.

LICENSING — USE OF SRP

1. SRP is Management Approved Scope and Depth of Review to give Reasonable Assurance that Licensee will Satisfy NRC Regulations.
2. Using the Current SRP in an OL Review is not a Backfit if the SRP Was Effective 6 Months Prior to Start of the OL Review (6 Months Prior to Docketing OL Application).
3. Using Acceptance Criteria More Stringent than or in Addition to SRP Criteria is a Backfit.

LICENSING - USE OF SRP (Continued)

4. Staff Discussions with Licensees Regarding the Merits of Actions which are Beyond SRP Criteria are Not Backfits Unless the Staff Leaves the Licensee no other Reasonable Alternative.
5. Application of Current SRP Criteria to an Operating Plant Generally is Considered a Backfit Unless the SRP Was Specifically Approved for Operating Plant Implementation.

SUMMARY

1. Backfitting is an Expected Staff Activity
2. Backfitting is to be Conducted in a Controlled Manner
3. Backfitting Concepts are Straightforward
 - Is Position a Previously Applicable Staff Position?
 - Status of Licensee in Regulatory Process.
 - Is Licensee Being Coerced?
 - Is Compliance/Conformance Involved?

SUMMARY (Continued)

- 4. Backfit Process
 - Identify and Determine
 - Regulatory Analysis
 - Management Approval
 - Transmittal to Licensee
 - Implement or Appeal
 - Final Disposition

CASE-2186
Keppler

JUN 19 1986

Docket No. 50-255

Consumers Power Company
ATTN: Dr. F. W. Buckman
Vice President
Nuclear Operations
212 West Michigan Avenue
Jackson, MI 49201

Gentlemen:

On May 21, 1986, Region III directed the Palisades facility to shut down pending completion of an investigation into the cause of the May 19 reactor trip and subsequent equipment failure. Subsequently, we issued a Confirmatory Action Letter describing actions that you would take prior to restart of the facility.

Pursuant to NRC Manual Chapter 0514, "NRC Program for Management of Plant Specific Backfitting of Nuclear Power Plants," we have prepared an evaluation setting forth the justification for our actions. A copy of this evaluation is enclosed for your information.

Please let us know if you have questions regarding this evaluation.

Sincerely,

James G. Keppler
Regional Administrator

Enclosure: Palisades Evaluation
Report

cc w/enclosure:

Mr. Kenneth W. Berry, Director
Nuclear Licensing
J. F. Firlit, General Manager
DCS/RSB (RIDS)
Licensing Fee Management Branch
Resident Inspector, RIII
Ronald Callen, Michigan
Public Service Commission
Nuclear Facilities and
Environmental Monitoring
Section

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Nephus/les
06/09/86

RIII

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Burgess
6/10/86

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Guidemond
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Davis
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