

D.C. Cook Licensing Workshop

Objectives

- Promote understanding of NRC process
- Improve licensee submittal quality
- Enhance regulatory interface
- Establish better working relationships

Agenda

- PM roles & responsibilities
- LA roles & responsibilities
- NOED
- Use of PRA in licensing issues
- Risk-informed regulations
- NRR Office Letter 803

Agenda

- Quality of submittals
- ADAMS & Electronic Info Exchange

● DAY 2

- Standard Tech Specs
- PBPM, Strategic Plan
- Open discussion
- Closing Remarks

PROJECT MANAGER RESPONSIBILITIES

JOHN STANG

PM ROLES

- HEADQUARTERS FOCAL POINT
- LICENSEE PERFORMANCE EVALUATION
- PROJECT MANAGEMENT

FOCAL POINT

- KNOWLEDGE OF PLANT DESIGN AND STATUS
- COORDINATE PLANT VISITS, LICENSEE DROP-INS, MEETINGS, AND BRIEFINGS
- ADMINISTRATIVE FUNCTIONS

PM INTERFACES

- LICENSEE
- REGION
- STATE GOVERNMENT, CONGRESS, OTHER GOVERNMENT AGENCIES
- PUBLIC

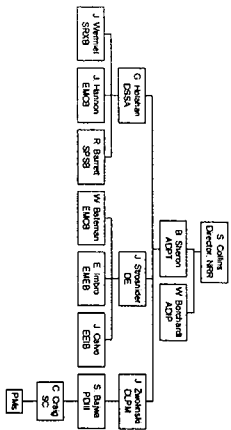
PERFORMANCE EVALUATION

- REGION HAS LEAD
- ROLE OF NRR PROJECTS REDUCED

PROJECT MANAGEMENT

- PMs MANAGE ALL CORRESPONDENCE BETWEEN THE LICENSEE AND NRC HEADQUARTERS

NRR ORGANIZATION



LICENSING ASSISTANT RESPONSIBILITIES

**TONI L. HARRIS
PROJECT DIRECTORATE III,
SECTION 1**

MAIN OBJECTIVE

- Assist Project Managers with completion of all necessary administrative tasks associated with the processing of all licensing activities.

APPLICATION REVIEW AND PROCESSING LICENSING AMENDMENTS

- Amendment Application – Verify that the Oath and Affirmation, the no significant hazards consideration, environmental consideration and Technical Specification change pages are included.
- Check for the implementation date – 30 days, 60 days, etc.

APPLICATION REVIEW AND PROCESSING LICENSING AMENDMENTS

- Supplemental letters – Does it change any part of a previously noticed NSHC ? Does the supplement change any TS pages ?
- TS pages – Are there any outstanding amendments affected by the same TS pages? Do they reflect the most current amendment in our authority file ?

Amendments Submitted by the PM to the LA

- Review the license amendment to establish that the required non-technical data are present, complete, and accurate.
- Review the proposed TS changes and the SE for spelling, punctuation, and to make sure that all of the proposed changes have been addressed in the SE from the incoming submittal.

Amendments Submitted by the PM to the LA

- Review the notice of issuance of amendment (as part of the biweekly notice or issued individually).
- After appropriate concurrences and signatures: Check that the notice period has expired and assign an amendment number and date.

Amendments Submitted by the PM to the LA

- Check that SECY, ADM, and State have been contacted for comments and/or intervention requests.
- Give to secretary for processing.

Other Licensing Activities Federal Register Notices

- Ensure that all documents to be published in the Federal Register (biweekly issuance for an amendment, EA, orders, exemptions) are processed accurately. Log in the LA logbook when published in the FR.

Other Licensing Activities Federal Register Notices

- Verify all citations and comment periods.
- Communicate with appropriate offices to have corrections made to notices.
- Ensure that a copy of the notice is forwarded to the licensee.

Other Licensing Activities Service Lists

- Service lists go with all outgoing documents.
- Maintain all current addresses/titles for service list distribution.
- Ensure updated service lists are forwarded to the NRC Regional Offices.

Other Licensing Activities Orders, Exemptions, EAs

- Review orders, exemptions, EAs, and enforcement actions for non-technical accuracy and agreement with internal guidelines and procedures.
- Ensure that appropriate EPA officials receive copies of EAs (they are added to the service list).

Other Licensing Activities Proprietary Letters

- Responsible for preparation of actions on requests from licensees and vendors to withhold proprietary information from public disclosure.
- Verify submittal of valid affidavit.
- Check to see if a non-proprietary version was sent.

Other Licensing Activities Allegations

- Check document for correct spelling, punctuation, format, and content according to administrative requirements.
- Ensure administrative accuracy by verifying that the required non-technical data are present, complete, accurate, and in conformance with NRC regulations and guidance.

Other Licensing Activities Allegations

- Check that the document is marked properly for sensitive handling and limited distribution.

Other Licensing Activities Controlled Correspondence

- Green Tickets – Receive special attention and include mail addressed to the Chairman, Commissioners, or EDO, 10 CFR 2.206 petitions and correspondence from Congressional constituents.

Other Licensing Activities Controlled Correspondence

- Green Tickets - Usually due in 10 working days. Priority green tickets are assigned to correspondence that is designated to receive high priority attention and usually are due less than 10 working days.

Other Licensing Activities Controlled Correspondence

- Yellow Tickets – Are requests for action within NRR's area of responsibility, addressed to the NRR Director or other NRR personnel.
- A due date for yellow ticket items is 3 weeks from receipt unless some other date is specified in the incoming request.

Other Licensing Activities Notices, Summaries, Briefing

- Check meeting notices/summaries/briefing packages for correct spelling punctuation, format, and dates are correct.
- Check distribution to ensure that the meeting summary is sent to the licensee & service list with internal copies & enclosures sent according to the current distribution list.

**Other Licensing Activities
RAI Letters/Relief Requests**

- Enter relief requests in chronological listing in LA logbook.

**Other Licensing Activities
ADAMS Role**

- QA/QC documents.
- Check profiles.

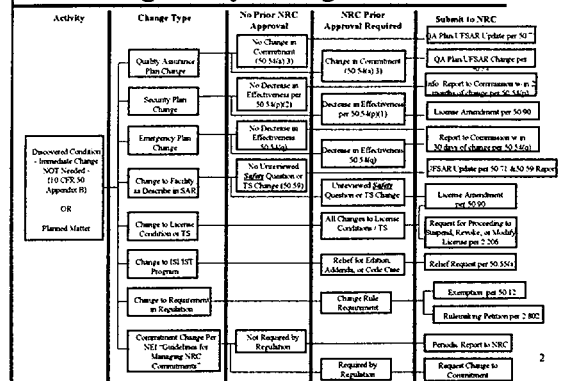
**Other Licensing Activities
Guidance**

- Provide guidance to PMs on processes/procedures.

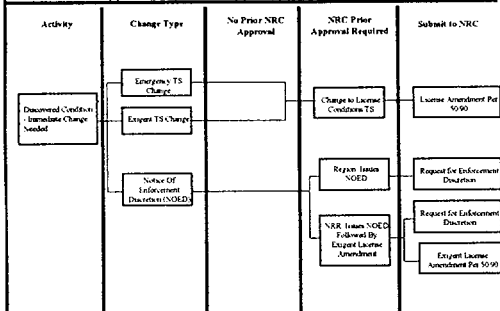
Exigent and Emergency Amendment Processes

NRC/AEP Licensing
Workshop
April 18-19, 2001

Regulatory Change Processes



Regulatory Change Processes - continued



License Amendment - 10 CFR 50.90

◆ Requirements

- Submit as specified in 10 CFR 50.4
- Fully describe changes; follow form of original application
- No significant hazards consideration [50.92(c)]
 - » No significant increase in probability or consequences of an accident previously evaluated
 - » No possibility of a new/different kind of accident from any previously evaluated
 - » No significant reduction in margin of safety

License Amendment - 10 CFR 50.90 - continued

◆ Content

- Oath and affirmation
- Description of amendment
- Deterministic safety assessment
- Optional - supported by risk-informed information
- No significant hazards consideration
- Environment input
 - » To support impact statement per 10 CFR 51.20
 - » To support environmental assessment per 10 CFR 51.21
 - » None if exclusion applies per 10 CFR 51.22(c)
- Revised Technical Specifications or License Condition

License Amendment - 10 CFR 50.90 - continued

◆ Content (con't)

- New or revised commitments identified
- New or revised Design Basis (10 CFR 50.2) and Licensing Basis identified
- Reference to current licensing basis
- Cost Beneficial Licensing Actions (NRC AL95-02)
 - » Total lifetime savings identified
- Need date and basis identified
- Implementation schedule provided

Emergency License Amendment: 50.91

- ◆ Criteria
 - Must meet all License Amendment criteria from 50.91 and 50.92
 - Failure to act on request would result in
 - » Nuclear power plant shutdown
 - » Prevention of resumption of operation or increase in power up to licensed level
 - Issue without prior notice and opportunity for hearing or public comment ONLY if change would NOT involve significant hazards consideration

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Emergency License Amendment: 50.91 -continued

- ◆ Content
 - License Amendment content plus
 - » Explanation of why emergency situation occurred
 - » Explanation of why situation could not be avoided
 - Facts must match NOED request information (if NOED issued)
 - NRC publishes notice for opportunity for hearing and public comment after issuance per 2.106
- ◆ Timing
 - Amendment not issued if failure to be timely created the emergency
 - Request must be submitted w/in 2 working days if NOED issued

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Noticing

- ◆ “Normal” amendments, 50.91(a)(2)
 - Bi-weekly or individual *Federal Register* notices - 30 day comment period
 - Notice of proposed amendment, proposed NSHC, hearing opportunity
 - Notice of issuance
- ◆ If a proposed NSHC determination is not made, use individual notices
 - Can't be handled as an exigent or emergency

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Noticing - Exigent amendment

- Notice in Federal Register (FR) if amendment is to be issued after 15 days but before 30 days
 - » Individual FR notice
 - » Repeat in bi-weekly FR notice
- Notice in local media if amendment is to be issued after 6 days but before 15 days
 - » Repeat in bi-weekly FR notice
- Amendments require a final NSHC determination

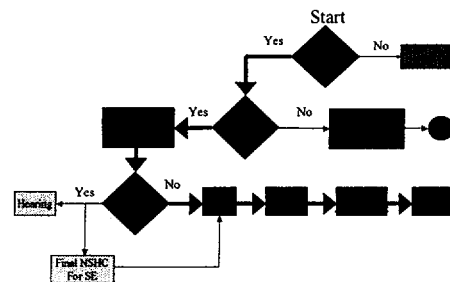
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Noticing - Emergency Amendment

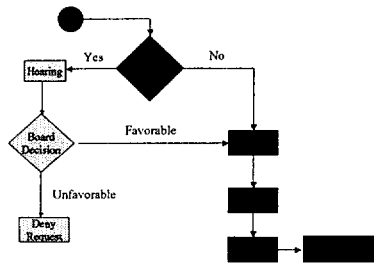
- ◆ Emergency amendments noticed after issuance for comment and an opportunity for hearing

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Amendment Process



Amendment Process



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*NOTICES OF
ENFORCEMENT
DISCRETION*



Contacts:
Herb Berkow (301) 415-1485
L. Raghavan (301) 415-1471

*NOTICES OF
ENFORCEMENT
DISCRETION*

- REVISED STAFF GUIDANCE
- INSPECTION MANUAL
TECHNICAL GUIDANCE
PART 9900
- DECEMBER 12, 2000

*GENERAL AND
BACKGROUND INFORMATION*

- PLEASE USE THIS FOR A QUICK
UNDERSTANDING OF THE
SUBJECT
- FOR DETAILED GUIDANCE,
REFER TO INSPECTION
MANUAL CHAPTER PART 9900
TECHNICAL GUIDANCE

*PART 9900 GUIDANCE CAN
BE DOWNLOADED FROM
THE NETSCAPE BROWSER,
NRC HOME PAGE;
EXTERNAL SERVER,
REFERENCE LIBRARY, NRC
INSPECTION MANUAL;
TECHNICAL GUIDANCE,
PART 9900*

*BACKGROUND AND
CHRONOLOGY*

- 7/85 - ENFORCEMENT GUIDANCE MEMO -
TEMPORARY WAIVERS OF COMPLIANCE
- 3/93 - 10 CFR PART 2, APPENDIX C, SECTION
VII.C (NOW NUREG-1600, SECTION
VII (c). NOED ADDED TO THE POLICY
- 8/93 - STAFF IMPLEMENTATION GUIDANCE
- MANUAL CHAPTER PART 9900
- 5-9/94 - CONGRESSIONAL STAFF AND OIG
REVIEWS
- 01/95 - REVISED GUIDANCE
- 06/99 - REVISED GUIDANCE
- 12/00 - REVISED GUIDANCE

*COMPLIANCE WITH
REQUIREMENTS*

- LICENSEES ARE REQUIRED TO
COMPLY WITH:
 - NRC REGULATIONS
 - INDUSTRY CODES
 - UFSAR
 - LICENSE TECHNICAL SPECIFICATIONS
 - OTHER LICENSE CONDITIONS

PROCESSES FOR ADDRESSING NON-COMPLIANCE WITH REQUIREMENTS

- NOEDS ARE APPROPRIATE ONLY FOR NON-COMPLIANCE WITH TS OR OTHER LICENSE CONDITIONS
- NOEDS ARE NOT APPROPRIATE FOR NON-COMPLIANCE WITH:
 - REGULATIONS - PROCESS EXEMPTIONS - 10 CFR 50.12
 - CODES - PROCESS RELIEFS - 10 CFR 50.55a
 - UFSAR - PROCESS LIC. AMENDMENT - 10 CFR 50.90

BASIS FOR THE POLICY

- REGULATORY AUTHORITY
 - ENFORCEMENT POLICY - NUREG - 1600 "GENERAL STATEMENT OF POLICY AND PROCEDURES FOR NRC ENFORCEMENT ACTIONS"
- BENEFITS
 - AVOID UNNECESSARY SHUTDOWNS
 - ADDRESS UNANTICIPATED SITUATIONS
 - AVOID UNNECESSARY DELAY IN STARTUP WITHOUT A CORRESPONDING SAFETY BENEFIT
- DETRIMENTS
 - POTENTIAL ABUSES - LACK OF PLANNING BY LICENSEES
 - PRECLUDES FULL PUBLIC PARTICIPATION - NO PRIOR NOTICE

NOED POLICY

- NOED IS WARRANTED IN CERTAIN EMERGENCY AND UNANTICIPATED SITUATIONS WHEN FORCED COMPLIANCE WITH A TS, LCO OR WITH OTHER LICENSE CONDITION WOULD INVOLVE:
 - AN UNNECESSARY PLANT TRANSIENT, OR
 - PERFORMANCE OF TESTING, INSPECTION, OR SYSTEM REALIGNMENT THAT IS INAPPROPRIATE FOR THE SPECIFIC PLANT CONDITIONS, OR
 - UNNECESSARY DELAYS IN PLANT STARTUP WITHOUT A CORRESPONDING HEALTH AND SAFETY BENEFIT, OR
 - EXACERBATE AN ALREADY DEGRADED ELECTRICAL GRID DURING AND FOLLOWING SEVERE WEATHER OR OTHER EXTERNAL CONDITIONS THAT COULD HAVE AN ADVERSE IMPACT ON THE OVERALL HEALTH AND SAFETY OF THE PUBLIC.

TWO TYPES OF NOEDs

- (1) RADIOLOGICAL SAFETY CONSIDERATIONS - (REGULAR NOED)
 - FORCED COMPLIANCE WITH LICENSE WOULD INVOLVE PLANT-RELATED RISKS
- (2) SEVERE WEATHER OR OTHER EXTERNAL CONDITION - RELATED NOEDS
 - THIS CONDITION COULD HAVE A POTENTIAL ADVERSE IMPACT ON THE OVERALL HEALTH AND SAFETY OF THE PUBLIC
 - I.E. FORCED COMPLIANCE MAY AFFECT GRID STABILITY
 - THE COMMISSION WILL BE INFORMED OF THE NOED ISSUANCE

EXAMPLE FOR DIFFERENTIATING REGULAR VS EXTERNAL CONDITION--RELATED NOEDS

- ASSUME
 - SEVERE SNOW STORM
 - GRID UNSTABLE
 - EMERGENCY DUE TO NEED FOR POWER
 - AUX FEED PIPE FROZEN AND INOPERABLE
 - AOT IS 24 HOURS

REQUEST NOED TO CONTINUE TO OPERATE FOR 7 DAYS

- IF YOU MEET ALL THE REGULAR NOED CRITERIA INCLUDING THAT THERE IS NO PLANT RISK INVOLVED:
 - REQUEST A REGULAR NOED NOTWITHSTANDING GRID INSTABILITY.
- NOTE: WHEN NO PLANT RISK IS INVOLVED IT IS PREFERABLE TO REQUEST A REGULAR NOED.

*REQUEST A SEVERE
EXTERNAL CONDITION -
RELATED NOED*

- IF THE NON-COMPLIANCE WILL RESULT IN AN ACCEPTABLY SMALL PLANT RISK
- FORCED COMPLIANCE WOULD RESULT IN A SHUTDOWN AND WOULD EXACERBATE GRID INSTABILITY.

THEN, REQUEST SEVERE
WEATHER NOED

- THE STAFF HAS TO FIND THAT THERE IS ACCEPTABLY SMALL PLANT RISK WHEN BALANCED WITH THE OVERALL PUBLIC SAFETY CONSIDERATIONS.

CRITERIA TO BE SATISFIED

- THE FOLLOWING CRITERIA ARE APPLICABLE FOR VARIOUS PLANT CONDITIONS:

*FOR AN OPERATING PLANT,
THE NOED IS INTENDED TO:*

- AVOID UNDESIRABLE TRANSIENTS AND, THUS, MINIMIZE POTENTIAL SAFETY CONSEQUENCES AND OPERATIONAL RISKS OR
- ELIMINATE TESTING, INSPECTION, OR SYSTEM REALIGNMENT THAT IS INAPPROPRIATE FOR THE PARTICULAR PLANT CONDITIONS.

*FOR PLANTS IN A SHUTDOWN
CONDITION*

- THE NOED IS INTENDED TO
 - REDUCE SHUTDOWN RISK BY AVOIDING TESTING, OR INSPECTION
 - REALIGNMENT THAT IS INAPPROPRIATE FOR THE PARTICULAR PLANT CONDITIONS, IN THAT IT DOES NOT PROVIDE AN OVERALL SAFETY BENEFIT, OR MAY, IN FACT, BE DETRIMENTAL TO SAFETY IN THE PARTICULAR PLANT CONDITION.

*FOR PLANTS ATTEMPTING TO
START UP*

- NOED REQUEST MUST MEET A HIGHER THRESHOLD.
- NOEDS ARE TO BE EXERCISED ONLY WHEN :
 - THE EQUIPMENT OR SYSTEM DOES NOT PERFORM A SAFETY FUNCTION IN THE MODE IN WHICH OPERATION IS TO OCCUR, OR
 - THE SAFETY FUNCTION PERFORMED BY THE EQUIPMENT OR SYSTEM IS OF ONLY MARGINAL SAFETY BENEFIT, AND REMAINING IN THE CURRENT MODE INCREASES THE LIKELIHOOD OF AN UNNECESSARY PLANT TRANSIENT OR,
 - THE TS OR OTHER LICENSE CONDITIONS REQUIRE A TEST, INSPECTION, OR SYSTEM REALIGNMENT THAT IS INAPPROPRIATE FOR THE PARTICULAR PLANT CONDITIONS, IN THAT IT DOES NOT PROVIDE A SAFETY BENEFIT, OR MAY, IN FACT, BE DETRIMENTAL TO SAFETY IN THE PARTICULAR PLANT CONDITION.

*SITUATIONS ARISING FROM
SEVERE WEATHER OR OTHER
EXTERNAL CONDITION -RELATED
NOEDS*

- SITUATIONS THAT MAY RESULT IN ELECTRICAL POWER EMERGENCIES
- CONTINUED OPERATION OF THE FACILITY WITH THE NONCOMPLIANCE IS NECESSARY DUE TO GRID STABILITY CONSIDERATIONS
- THE STAFF WILL BALANCE THE OVERALL PUBLIC HEALTH SAFETY BENEFIT WITH THE PLANT RISK OF CONTINUED OPERATION
- PROVIDE DETAILS OF THE NATURE OF THE EMERGENCY AND POTENTIAL CONSEQUENCES TO THE PLANT AND CHALLENGES TO OFF-SITE AND ON-SITE POWER SOURCES

SCOPE AND RESPONSIBILITIES FOR ISSUANCE OF NOEDS

- REGION-ISSUED NOED IS APPROPRIATE WHEN THE NONCOMPLIANCE IS:
 - (1) NONRECURRING AND TEMPORARY,
 - (2) WILL NOT EXCEED 14 DAYS DURATION,
 - (3) RELATED TO THE LIMITS OF A FUNCTION IN AN LCO,
 - (4) RELATED TO AN ACTION STATEMENT TIME LIMIT,
 - (5) RELATED TO A SURVEILLANCE REQUIREMENT,
 - DUE TO THE TEMPORARY NATURE OF THE NON-COMPLIANCE, A FOLLOW-UP LICENSE AMENDMENT IS NOT REQUIRED.
- AUTHORITY FOR ISSUANCE:
 - REGIONAL ADMINISTRATOR OR DIRECTOR OF REACTOR PROJECTS.

NRR-ISSUED NOED MAY ADDRESS NON-COMPLIANCE WITH THE FOLLOWING UNTIL AN AMENDMENT CAN BE PROCESSED

- AN LCO
- AN AOT
- CHANGES TO SURVEILLANCE
- NOTE: SEVERE WEATHER OR EXTERNAL CONDITION-RELATED NOEDS ARE ALWAYS NRR'S RESPONSIBILITY
- THE STAFF WILL ISSUE A FOLLOW-UP LICENSE AMENDMENT ON AN EXIGENT BASIS WITHIN 4 WEEKS
- AUTHORITY FOR ISSUANCE:
 - NRR PD OR ACTING PD

PROCESS

- LICENSEE'S REQUEST
 - (a) MAY BE ORAL. ARRANGE LICENSEE-STAFF TELEPHONE DISCUSSIONS THRU THE RECORDED LINE (301) 816-5100.
 - (b) WRITTEN REQUEST WITHIN 2 BUSINESS DAYS OF THE ORAL REQUEST. EXCEPT FOR SEVERE-WEATHER OR OTHER EXTERNAL CONDITION-RELATED NOEDS WHEN WRITTEN REQUEST SHOULD FOLLOW WITHIN FEW HOURS OF THE VERBAL REQUEST.
 - SEE PART 9900 SECTION C. 4 FOR THE REQUIRED INFORMATION
 - (c) MUST INCLUDE FOLLOW-UP LICENSE AMENDMENT REQUEST

STAFF PROCESSING

- NOED GRANTING
 - (a) MAY BE ORAL FOLLOWED BY WRITTEN CONFIRMATION WITHIN 2 WORKING DAYS OF THE LICENSEE'S WRITTEN REQUEST.
 - (b) WILL SPECIFY MAXIMUM NOED EFFECTIVE PERIOD
 - REGIONAL NOED - MAXIMUM 14 DAYS
 - NRR NOED - UNTIL THE ISSUANCE OF AMENDMENT (GENERALLY 4 WEEKS).

ENFORCEMENT

- ISSUING AN NOED DOES NOT CHANGE THE FACT THAT A VIOLATION WILL OCCUR. NOR DOES IT IMPLY THAT ENFORCEMENT DISCRETION IS BEING EXERCISED FOR ANY VIOLATION THAT MAY HAVE LED TO THE NEED FOR THE NOED.
- IN ALL NOED CASES, ENFORCEMENT ACTION WILL BE TAKEN FOR ANY VIOLATIONS THAT CONTRIBUTED TO THE ROOT CAUSES LEADING TO THE NONCOMPLIANCE.
- INSPECTION REPORT WILL OPEN AN UNRESOLVED ISSUE (URI) AND DOCUMENT ROOT CAUSE VIOLATION DETERMINATION, NOED APPROVAL BASIS, RESULTS OF VERIFICATION ACTIVITIES TO CLOSE URI.

ROAD MAP

- AN NOED CHECKLIST IS PROVIDED IN ATTACHMENT D
 - THIS IS ONLY AN AID TO ASSURE ADHERENCE TO THIS GUIDANCE.
 - IT IS A COMPANION, NOT A SUBSTITUTE, FOR THE DETAILED GUIDANCE.

Use of Probabilistic Risk Assessment in Licensing Issues

Indiana Michigan Power Company Licensing Workshop
D.C. Cook
April 18 and 19, 2001
Jae Joog
Reliability and Risk Analyst
Probabilistic Safety Assessment Branch
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

Commission Final Policy Statement on PRA

- The use of PRA technology should be increased in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

Commission Final Policy Statement on PRA

- PRA and associated analyses (e.g., sensitivity studies, uncertainty analyses, and importance measures) should be used in regulatory matters, where practical within the bounds of the state-of-the-art, to reduce unnecessary conservatism associated with current regulatory requirements, regulatory guides, license commitments, and staff practices. Where appropriate, PRA should be used to support the proposal for additional regulatory requirements in accordance with 10 CFR 50.109 (Backfit Rule). Appropriate procedures for including PRA in the process for changing regulatory requirements should be developed and followed. It is, of course, understood that the intent of this policy is that existing rules and regulations shall be complied with unless these rules and regulations are revised.

Commission Final Policy Statement on PRA

- PRA evaluations in support of regulatory decisions should be as realistic as practicable and appropriate supporting data should be publicly available for review.
- The Commission's safety goals for nuclear power plants and subsidiary numerical objectives are to be used with appropriate consideration of uncertainties in making regulatory judgments on the need for proposing and backfitting new generic requirements on nuclear power plant licensees.

Policy for Applying Risk-Informed Decisionmaking in License Amendment Reviews

- Commission Approved SECY-99-246 and Regulatory Issue Summary 2000-02
- Staff's responsibilities and authority to obtain and use risk information in regulatory decisionmaking

Risk-Informed Regulatory Guides

- RG 1.174: An Approach for using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis
- RG 1.175: An Approach for Plant-Specific, Risk informed Decisionmaking: Inservice Testing (IST)

Risk-Informed Regulatory Guides

- **RG 1.176: An Approach for the Plant-Specific, Risk-Informed Decisionmaking: Graded Quality Assurance (GQA)**
- **RG 1.177 An Approach for the Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications (TS)**

Risk-Informed Regulatory Guides

- **RG 1.178 An Approach for the Plant-Specific, Risk-Informed Decisionmaking: Inservice Inspection of Piping (ISI)**

Standard Review Plans

- **Chapter 19 Use of PRA in Plant-Specific, Risk-Informed Decisionmaking: General Guidance**
- **Chapter 3.9.7 Risk-Informed IST**
- **Chapter 16.1 Risk-Informed TS**
- **Chapter 3.9.8 Risk-Informed ISI**

Risk-Informed TS

- **RGs 1.177 and 1.174; SRP 16.1**
- **Most experienced and mature: AOTs and STIs, and Relaxation of TS restrictions regarding test and maintenance**
- **Both owners' group topical reports and plant-specific submittals**
- **NRC involved in Risk-Informing Standard TS**

Risk-Informed ISI

- **RGs 1.178 and 1.174; SRP 3.9.8**
- **NRC approved WOG topical report (WCAP-14572) and EPRI topical report (EPRI TR-112657) on methodologies**
- **NRC involved in ASME code cases for Risk-Informed ISI; N-560, N-577, and N-578**
- **11 plants reviewed and approved; 13 plants under review (majority limited scope)**

Risk-Informed IST

- **RG 1.175 and 1.174; SRP 3.9.7**
- **San Onofre, South Texas and Comanche Peak approved; Davis Besse (B&W Owners' Group pilot) and Sequoyah under review**
- **NRC involved in ASME code cases for Risk-Informed IST**
- **Generally limited scope**

Risk-Informed GQA

- RG 1.176 and RG 1.174; No SRP (No submittal required)
- South Texas approved; no other applications
- Implementation of the approved GQA program hinges upon exemption of other regulatory requirements, e.g., Equipment Qualifications and Seismic qualifications
- South Texas requested the exemption which is under NRC review; Risk-Informing 10 CFR Part 50 - Option 2

Other Licensing Areas that PRA is used

- Notice of Enforcement Discretion (NOED)
- 50.59 Changes, Tests, and Experiments
- Power uprates
- Exigent/Emergency TS
- Exemptions and Reliefs
- Any other licensing areas which PRA can complement overall decisionmaking

Key Issues in Risk-Informed Licensing Applications

- PRA quality
- Application-specific
- Sufficient scope and detail
- As-built and as-operated
- Uncertainty

Key Issues in Risk-Informed Licensing Applications

- Adherence to guidance
- Compensatory measures and upgrades
- Quality of submittal
- Role of PRA

Benefits

- Safety focus and enhancement
- Flexibility
- Reduction in unnecessary burdens
- Economics

Risk-Informed Regulation

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Ian Jung
Reliability and Risk Analyst
Probabilistic Safety Assessment Branch
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

Two Key Policies

- **Safety Goal Policy Statement (1986)**
- **PRA Policy Statement (1995)**

Safety Goal Policy Statement (1986)

- **Defined an acceptable level of risk from all nuclear power plants.**

PRA Policy Statement (1995)

- **Encouraged the use of PRA in a manner that complements traditional engineering practices.**
- **To implement, a PRA Implementation Plan was developed.**
- **All of the current significant risk-informed activities follow the plan.**

Current Significant Activities

- **Revised Reactor Oversight Process for inspection, enforcement, and assessment - Significance Determination Process**
- **10 CFR Part 50 Options - Options 1, 2, and 3**
- **Plant-specific risk-informed reviews**
- **Risk-informed Standard Technical Specifications**
- **PRA standards**



ATTRIBUTES OF A SOUND

LICENSEE SUBMITTAL

NRC/AEP LICENSING
WORKSHOP
April 18-19, 2001



PROBLEM STATEMENT

- DILEMMA: How to provide the NRC with a quality License Amendment request on a complex technical subject under an evolving regulatory framework?
- ANSWER: Establish expectations for submittals, maintain open lines of communication, and meet periodically to improve the process

2



Benefits of Improved Submittals

- SIMPLIFY -- Reduce extent and duration of interactions between reviewer and requester (reduce RAIs and need for supplements)
- MAXIMIZE -- Number of submittals NRR reviews in-house as least cost producer (more schedule control, lower labor rate, use of precedents)
- REDUCE -- Actions rejected or withdraw

3



Reasons for RAIs

- Complex issues with less than complete information
- Staff unfamiliarity with topic
- NRC learning curve, the first one is always the most difficult

4



BASIC PARTS OF A SUBMITTAL

- Administrative information
- Applicable regulations and design bases
- Technical analyses
- Specific changes to license (TS pages)
- No significant hazards consideration

5



ADMIN INFORMATION

- Clearly explain the What, Why and When for the request
- Refer to prior correspondence & meetings
- Cite appropriate precedence
- Discuss special circumstances (proprietary, exigent request) including regulations
- Is submittal risk-informed
- List commitments and how controlled
- Oath or affirmation, including RAI responses

6



REGULATORY REQUIREMENTS

- Provide the regulatory process for change (normal or exigent TS, relief request)
- Describe current licensing basis applicable to change
- Cite appropriate regulatory requirements and/or guides

7



TECHNICAL ANALYSIS

- Demonstrate how applicable regulations are satisfied
- If appropriate, demonstrate how current design basis is unchanged
- Include sufficient detail for independent assessment
 - Analytical methods used
 - Key input parameters
 - How methods differ from previously approved methods

8



SPECIFIC CHANGES

- Provide marked up and clean copies of affected pages
- Provide a description of each change so that the reviewer can clearly understand the differences
- Verify specific changes are accurate and consistent with licensing documents and plant procedures

9



No Sig Hazards Consideration

- The audience is the Public
- Prepare a stand-alone document that can go into the *Federal Register* w/o any changes
- Directly and completely answer each of the three questions
- Address all proposed changes in LA request including (editorial or admin changes)

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IMPROVING A SOUND SUBMITTAL

- Use plain language
- Inform the PM of upcoming LA submittals
- Each issue has unique complexities – focus
- Before submitting an LA request to the NRC, ask “Is this the best we can do?”

11



General Submittal Concepts/Guidance

- Know the Specific Regulations Affected
- Use Flexibility Allowed by the Regulations
- Keep PM Aware of What is Happening at Plant
- Keep PM Up-to-date With What You Need
- Discuss Requested Need With PM Before Submittal is Written
- Be Clear in What you are Asking of the Staff
- Submit Requests Early, Allowing Adequate Time for Staff Review

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General Submittal Concepts/Guidance -continued

- Provide Future Licensing Needs to Staff Well Before Next Outage
- Plan Ahead for Sholly Notice Period
- Minimize Complexity of the Requests
- Cite Precedents
- Consider Safety Evaluation Perspective
- Provide Complete, Well Written, Thorough, High Quality Submittals
- Provide Copies of Licensing Submittals to PM by Mail and Electronically
- Be Prepared to Interact Promptly with the Staff ¹³

AGENCYWIDE DOCUMENTS ACCESS and MANAGEMENT SYSTEM (ADAMS)

ADAMS ?



ABOUT ADAMS

- A DOCUMENT MANAGEMENT SYSTEM TO BE USED TO ORGANIZE, PROCESS AND MANAGEMENT NRC DOCUMENTS
- RECORDKEEPING SYSTEM
- PUBLIC INFORMATION SYSTEM
- ELECTRIC INFORMATION SYSTEM (EIE)

DEFINITION OF ADAMS

- THE POLICIES, PROCESSES, AND SOFTWARE TO MANAGE UNCLASSIFIED, OFFICAL PROGRAM AND ADMINISTRATIVE RECORDS OF LASTING BUSINESS VALUE TO THE NRC IN AN ELECTRONIC RATHER THAN PAPER-BASED ENVIRONMENT

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Addressee Affiliation (MV)	
Docket Number (MV)	

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ELECTRONIC INFORMATION EXCHANGE (EIE)

- RIS 2001-05, Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM



Standard Technical Specifications/TSTF/CLIP

Discussion Focus

- Generic Technical Specification Changes
- Consolidated Line Item Improvements

GENERIC TECHNICAL SPECIFICATION CHANGES

- Improved Standard Technical Specifications
- Streamline License Amendment Requests
- Streamline NRC Staff Review
- Sponsored by Technical Specification Task Force (TSTF)
- TSTF - Representatives from Four Owners Groups and the Nuclear Energy Institute (NEI)

- Industry Focus has Shifted from Improved Standard Technical Specification (ITS) Submittals to Generic Changes to ITS NUREGS
- Generic Changes Reviewed and Prepared using TSTF Process
- After NRC Approval, Generic Changes are Available for Plants with ITS or who are Developing ITS
- NRC Review Lead times may Necessitate Approval of Plant Specific Change before Generic Change

Generic Change Development Process

- Potential Generic Change Identified by Licensee
- Propose Change to ITS NUREG Through Owners Group TSTF Representative
- Change Reviewed by Owners Group and TSTF
- Submitted to NRC Technical Specification Branch
- NRC Approved Changes Made Available via NRC Webpage

Adopting Generic Changes

- Verify Change Justification Applies
- License Amendment Submittal
 1. Reference generic change justification
 2. Note plant specific differences
 3. Avoid deviation from generic change
 4. Provide plant specific justifications for deviations
 5. Reference generic change on TS mark-up pages
 6. Adopt multiple generic changes in submittal
 7. Use No Significance Hazards Consideration Guidance

Approving Plant Specific Changes Before Generic Changes are Approved

- Nuclear Safety Issues
- Dose Reduction
- Operational Necessity (avoiding unnecessary shutdown or power reduction, or restart operations)
- Exigent or Emergency Circumstances (10 CFR 50.90)

Non-ITS Converted Plants

- May use ITS NUREG Change Justification to Assist in Developing Plant Specific Justification
- Must Consider
 1. Specific format and content of ITS
 2. ITS word usage and definitions
 3. ITS notation conventions
 4. Use of expanded bases in ITS
 5. ITS Section 3.0 Limiting Conditions for Operation

CONSOLIDATED LINE ITEM IMPROVEMENTS

- Process like Generic Technical Specification Change
- Reference RIS 2000-06, "CLIP for Adopting STS Changes for Power Reactors"
- Must be applicable to multiple plants
- Submitted by Industry Group with technical justification for change
- NRC publishes description, Safety Evaluation, preliminary NSHCD, and preliminary EA for 30 day public comment period

CONSOLIDATED LINE ITEM IMPROVEMENTS (con't)

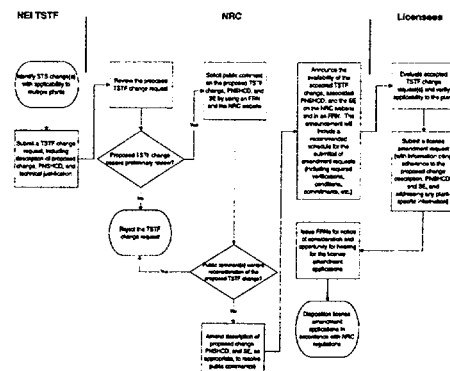
- NRC publishes availability of change for specific period (typically 90 days)
- Not restricted to plants with Improved Standard Technical Specifications
- Submittal relies on SE, preliminary NSHCD, and preliminary EA, and addresses plant specific conditions
- Individual Federal Register Notices Required
- Individual Amendments Required

EXAMPLE:

WOG & CEOG Submittals to Eliminate PASS Requirements

- WOG submittal dated October 26, 1998
- CEOG submittal dated May 5, 1999
- Staff reviewed both submittals
- Public comment period allowed (65 FR 49271)
- NRC approval and model SE (65 FR 65018) available for reference for 1 year period beginning 10/31/00

Consolidated Line Item Improvement Process (CLIP) Flow Chart



THE PLANNING, BUDGETING AND PERFORMANCE MANAGEMENT (PBPM) PROCESS WITHIN NRC

Claudio Craig, NRC/DLPM

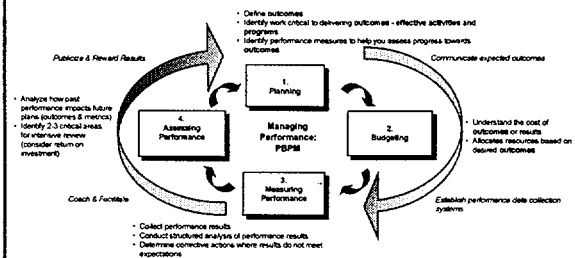
PBPM IMPLEMENTATION A RESULT OF:

- Congressional interest in public sector accountability:
 - Gov't Performance and Results Act
- Other stakeholder interest:
 - Restructuring/deregulation of Electric Power Industry
 - Public interest in increased focus on safety
- General need for better business practices

BACKGROUND - PBPM

- PBPM - a continuous and on-going process composed of:
 - Setting Strategic Direction (Planning)
 - Determining Programs and Resources (Budgeting)
 - Measuring and Monitoring Performance
 - Assessing Performance
- NRC began PBPM process in 1998 by developing strategic plan (2000-2005 strategic plan issued for public comment)

NRC's PBPM Process



Setting Strategic Direction

- Identify outcome-focused strategic goals and performance goals which define "success"
- Strategic goal for Nuclear Reactor Safety
 - NRC will conduct an effective regulatory program...by working to achieve the following strategic goal
 - Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors

Setting Strategic Direction (cont'd)

- Performance Goals (4 pillars)
 - Maintain safety, protect the environment, and the common defense and security
 - Increase public confidence
 - Make NRC activities and decisions more effective, efficient and realistic
 - Reduce unnecessary regulatory burden on stakeholders

Planning and Budgeting



- Identify work required to best ensure that we can achieve desired outcomes
- Identify costs to do that work (FTE, \$)
- Cost/benefit analysis of doing work
- Review/rank all work with respect to contributions to achieving desired outcomes/performance goals

Measuring Performance



- Determine metric
 - e.g., no. of licensing actions processed
- Establish standards for metric
 - e.g., process standard for licensing actions
- Put infrastructure in place to make measurement
 - WPC's RPS/LOP software
- Measure/Report Performance

Assessing Performance



- Compare performance against standard
 - Address out-of-standard occurrences and/or adjust standard
- How did performance contribute to outcomes?
 - Identify positive relationship between performance/outputs and outcomes
- Analyze how past performance impacts future plans
 - Implement changes to improve performance and/or modify plans, if necessary

PBPM Summary



- Tie outputs to outcomes
- Better and more objective measurement of performance
- Facilitate continuous and on-going effort to improve performance

Work Planning Center



- **Managing to Results**
 - Establishing Measures – Monitoring Results
 - Setting Clear Goals and Standards
- **Functioning with an Organizational Focus**
 - Executive, Leadership, Operating Level Teams
- **Continuously Improving**
- **Working at the Right Level**
- **Planning Work and Responding to Changes – Proactive**

Why Centralized Work Planning ?



- **Need to Better Predict Workload**
- **Need for Better Prediction of Resources Required**
- **Need for Better Response to Emergent Work**
- **Need for Better Identification of Impacts from Emergent**

Objectives of the NRR Work Planning Center



- Maintain Appropriate Quality of Products
- Provide Clear Expectations and Accountability
- Provide Up-to-date, Accessible Workload Information for Planning, Budgeting, and Measuring Products
- Optimize the Efficiency of NRR Work Processes
- Establish Objective Means of Allocating and Tracking Workload

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Source: U.S. National Employment Commission in cooperation with Arthur Andersen, Inc.

ORGANIZATIONAL EFFECTIVENESS LEVELS				
LEVEL	PROCESS EFFECTIVENESS	EQUIPMENT EFFECTIVENESS	LEADERSHIP EFFECTIVENESS	PEOPLE EFFECTIVENESS
IV	<i>Reliance of the Process</i> 1. Single set of responsibilities	<i>Fixed Productivity Time</i> 1. Single set, repetitive tasks	<i>Situational Leadership</i> 1. Supervisor issues no orders except in emergencies and in response to requests	<i>Fixed Productivity & Personnel</i> 1. Supervisor issues no orders except in emergencies and in response to requests
III	<i>Procedures & Standards (Improved Dynamically)</i> 1. "One-Product" defined & used for all products 2. Continuous feedback given to employees regarding their performance 3. Work planning & scheduling	<i>Fixed Productivity Time</i> 1. Limited number of equipment changes - scheduling of work done on all equipment 2. Single set of responsibilities	<i>Directive Leadership</i> 1. Supervisor issues orders 2. Supervising staff to deliver results & holding them accountable 3. High supervisor ratings & low ratings of subordinates	<i>Procedural Play or Work System</i> 1. Clearly defined work to push & maintain 2. Challenges with it when to improve 3. Ability to maintain system with no change of standards
II	<i>Clearly Defined Standards for Process & Productivity</i> 1. Methods for dealing with emergency work 2. Empowerment 3. Training planned to, and performance results - and rate of results	<i>Rate-Dependent to One Standard</i> 1. Standardized equipment, time-based 2. Single set of responsibilities 3. Single set of responsibilities	<i>Team-Based Leadership</i> 1. One set of shared goals & vision 2. Accountability to peers for results & following standards 3. Shared responsibility for work 4. Shared responsibility for work 5. Shared responsibility for work 6. Shared responsibility for work 7. Shared responsibility for work 8. Shared responsibility for work 9. Shared responsibility for work 10. Shared responsibility for work 11. Shared responsibility for work 12. Shared responsibility for work 13. Shared responsibility for work 14. Shared responsibility for work 15. Shared responsibility for work 16. Shared responsibility for work 17. Shared responsibility for work 18. 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Multiple shared performance standards 2. Accountability to peers for results & following standards 3. Shared responsibility for work 4. Shared responsibility for work 5. Shared responsibility for work 6. Shared responsibility for work 7. Shared responsibility for work 8. Shared responsibility for work 9. Shared responsibility for work 10. Shared responsibility for work 11. Shared responsibility for work 12. Shared responsibility for work 13. Shared responsibility for work 14. Shared responsibility for work 15. Shared responsibility for work 16. Shared responsibility for work 17. Shared responsibility for work 18. Shared responsibility for work 19. Shared responsibility for work 20. Shared responsibility for work 21. Shared responsibility for work 22. Shared responsibility for work 23. Shared responsibility for work 24. Shared responsibility for work 25. Shared responsibility for work 26. Shared responsibility for work 27. Shared responsibility for work 28. 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I	<i>Empowering Data Their Own Thing</i> 1. "Self-Management" 2. "Teamwork"	<i>Standardized - "It Works, We Fix It"</i> 1. Standardized to the (company) 2. Standardized to equipment failure	<i>Autonomous & Empowered</i> 1. Standardized to the (company) 2. Standardized to equipment failure	<i>I Need to Watch Out for Myself</i> 1. "My way is best" 2. "If I'm not doing it right, I have to do it my way" - my way is best

Implementation



- Centralized issuance of TACs
- WISP to be replaced
- Work assigned and scheduled by the WPC to branch level based on resource pool
- First line supervisors assign work to individuals
- Pilot process began February 22

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Closing Remarks

Feedback Areas

- ♦ Was workshop effective in meeting objectives?
- ♦ What parameters can be used to assess licensing submittal quality?
- ♦ What lessons learned can you integrate into your routine licensing practices?

Feedback Areas

- ♦ Suggestions for improving communications at NRC-licensee interface?
- ♦ Need follow-on workshops?