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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CHAIRMAN RECD

February 25, 2004

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NOTE TO COMMISSIONER ASSISTANTS

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__ Kia Jackson		

FROM: William M. Dean
Assistant for Operations, OEDO

SUBJECT: UPDATE BRIEFING ON FIRE PROTECTION

This note forwards meeting handouts for the staff's February 19, 2004 update briefing of Chairman Diaz, concerning activities related to fire protection. Due to the volume of handouts, only one copy is being provided to each Commission office. The presentation materials can be found in ADAMS at the following Accession Numbers:

ML033560248: R. Croteau Email dated 12/12/03 requesting Fire Protection Briefing for Chairman Diaz

ML040500854: Fire Protection Update Presentation Slides

ML040500862: NFPA 805 Rulemaking

ML040500865: Presentation slides providing update on current Fire Protection Regulatory Issues

ML050500866: NRR Fire Protection Communication Plan

Attachments: As stated

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OBJECTIVE

Respond to the Chairman's request to provide an update on fire protection.

Per request, the subjects addressed are rulemaking, ROP, guidance/consistency for inspections, reducing regulatory uncertainty, and any other current issues.

Summary

- Root cause/s of unique challenges in Fire Protection
- Overall Strategy
- NFPA 805 Rulemaking
- Associated Circuits
- Operator Manual Actions Rulemaking
- Other Initiatives
- Communication Tools

Root Cause/s of Unique Challenges in Fire Protection

- Licensing basis of each plant is different because:
  - Fire hazards analyses and plant configurations are different for each plant
  - Rules made after most plants were constructed
  - Rules left room for interpretations
  - Major issues emerged (Thermolag).

Overall Strategy

- Acknowledge historical facts and the associated inheritance in licensing bases
- Risk-inform solutions (safety focus without unnecessary burden, and improved efficiency and effectiveness)
- Achieve Compliance (change rules, etc., to empower risk-informing and achieve public confidence)

NFPA 805 Rulemaking

- Provides a voluntary means for licensees to re-define poorly defined fire protection licensing bases with well defined criteria
- ACRS endorsed final rule (December 2003)
- Submit SECY for Final Rule to EDO (March 2004)
- Issue Final Rule (forecasted for June 2004)
- Licensees may not adopt revised rule because of the cost and resources required to make transitions and lack of understanding of benefits – provide incentives, educate licensees about benefits
- Identify and overcome challenges in inspection of a performance-based risk-informed rule
- Enhance fire models and fire PSA methodologies.

Associated Circuits

- Provide specific guidance and criteria for licensees and inspectors to resolve long-standing disagreements in associated circuits
- Issued draft RIS (August 2003)
- Issued draft NUREG (January 2004)
- Issue final RIS (forecasted for February 2004)
- Issue SECY to Commission requesting direction on enforcement options (May 2004)
- Ensure safety, staff/industry agreement on rule interpretation .

Industry Proposal and Staff Counter Proposal

- Industry makes proposal (NEI-00-01)
- Significant limitations (overlooks high hot-short probabilities in proposed changes to deterministic approach, risk screening tool non-conservative)
- Staff counter proposal relies on risk-informing
- Staff is considering a resumption of associated circuit inspections 6 months after issuing the RIS
- A panel will be set up to review URI's related to associated circuit issues

Operator Manual Actions Rulemaking

- Will allow licensees relying on unapproved operator manual actions to achieve compliance under the acceptance criteria of the revised rule without prior NRC approval
- Commission approved rulemaking plan (September 2003)
- Published interim criteria for enforcement discretion (November 2003)
- Submit draft interim criteria for enforcement discretion to Commission (May 2004)
- Submit final interim criteria for enforcement discretion (July 2004)
- Submit Proposed Rule to Commission (forecasted for September 2004)
- Regulatory uncertainty due to Backfit Rule implications
- Potential regulatory uncertainty among inspectors and licensees due to limiting rule to III.G.2 .
- Stakeholder comments on the requirement for detection/suppression in the area of fire

Other Initiatives

- Improvement of Fire Protection Significance Determination Process
- Formation of multi-office steering group for Fire Protection
- Encourage Licensees to adopt the Risk-Informed Methodologies
- Quantitative Fire Hazards Evaluation tool.

Some Communication Tools

- Fire Protection Communication Plan, Status Report, and Improvement Plan
- Meeting with the ACRS Subcommittee on Fire Protection (about 2 times/year)
- Monthly call with regional inspectors
- Counterpart meetings with inspectors (2 times/year).
- Periodic meetings with NEI (2-3 times per year)
- Annual NEI Fire Protection Information Forum
- Annual Regulatory Information Conference
- Fire protection issues management public meetings held with industry
- Periodic meetings with Licensees

NFPA 805 RULEMAKING

BRINGING STABILITY

- Provides a voluntary means for licensees to re-define poorly defined fire protection licensing bases with well defined criteria
- Enables licensees to manage their fire protection programs, including changes, with minimal regulatory intervention

CLOSURE ACTIVITIES

- Revise 10 CFR 50.48 to allow adoption of NFPA 805 performance-based approach to fire protection system design and licensing
- Work with NEI to produce industry implementation guide (NEI 04-01)
- Issue regulatory guide to provide licensees with additional guidance
- Update inspection procedures and provide training to inspectors on the implementation of the new rule

PATH TO CLOSURE

Completed Activities

- Proposed rule published for public comment (November 2002)
- ACRS endorsed final rule (December 2003)
- Staff provided comments on draft NEI 04-01 (January 2004)

To-Go Activities

- Submit revised enforcement policy to EDO (March 2004)
- Provide comments on NEI implementation guide, Rev. E (May 2004)
- Submit SECY for final rule to EDO (March 2004)
- Issue final rule (June 2004)
- Issue draft Regulatory Guide (June 2004)
- Issue staff license amendment review guidance (December 2004)
- Issue final Regulatory Guide (December 2004)
- Prepare inspection procedures and training materials; conduct workshops to train inspectors to perform inspections and audits (June 2005)

CHALLENGES → RESPONSES

- Licensees may not adopt revised rule because of the cost and resources required to make transitions → Multi-office effort to develop incentives (e.g., enforcement discretion within the ROP during transition to revised rule)
- Inspection of a performance-based risk-informed rule needs development; inspectors unfamiliar with application → Provide inspection procedures and training of inspectors to the extent needed to ensure proper inspections and audits
- Unapproved fire models and fire PSA methodologies → RES is verifying and validating fire models and developing PSA methodologies

OPERATOR MANUAL ACTIONS RULEMAKING

BRINGING STABILITY

- Will allow licensees currently relying on unapproved operator manual actions to achieve compliance under the acceptance criteria of the revised rule without prior NRC approval
- Will provide reasonable assurance that post-fire operator manual actions will be uniformly evaluated by licensee and inspectors

CLOSURE ACTIVITIES

- Revise 10 CFR 50, Appendix R, Section III.G to allow operator manual actions as an alternative to the fire barrier and separation requirements of Section III.G.2
- Provide operator manual actions criteria for inspection and enforcement discretion pending completion of rulemaking

PATH TO CLOSURE

Completed Activities

- Commission approved rulemaking plan (September 2003)
- Published interim criteria for enforcement discretion for public comment (November 2003)

To-Go Activities

- Submit draft interim criteria for enforcement discretion to EDO (May 2004)
- Issue final interim criteria for enforcement discretion to EDO (July 2004)
- Submit Proposed Rule to Commission (September 2004)

CHALLENGES → RESPONSES

- Heightened stakeholder concerns for safety → Develop and communicate key messages
- Regulatory uncertainty due to Backfit Rule implications associated with previously approved manual actions that use less stringent acceptance criteria → Develop common understanding among program office/inspectors/licensee about backfit rule implications by providing training and public workshops. (Note that even approved manual actions are subject to ROP for risk-significant safety related findings.)
- Potential regulatory uncertainty among inspectors and licensees due to limiting rule to III.G.2 → Consider expanding rule to all of III.G

ASSOCIATED CIRCUITS INSPECTION

BRINGING STABILITY

- Will provide specific guidance and criteria for licensees and inspectors to resolve long-standing disagreements on the interpretation of regulatory requirements for preventing post-fire spurious actuations that could impact safe shutdown

CLOSURE ACTIVITIES

- Issue a Regulatory Issues Summary (RIS) that provides specific guidance for risk-informing inspections of associated circuit failure issues
- Issue a NUREG to establish the current knowledge base on post-fire safe shutdown analysis to enhance the risk-informing process
- Continue training of inspectors in the application of the new guidelines
- Develop means to ensure appropriate enforcement of guidance

PATH TO CLOSURE

Completed Activities

- Issued draft RIS (August 2003)
- Issued draft NUREG-1778 (January 2004)

To-Go Activities

- Issue final RIS for use (February 2004)
- Draft revised inspection procedures for Regions' review (February 2004)
- Issue revised inspection procedures (March 2004)
- Conduct inspector training sessions (April 2004)
- Conduct public meeting (May 2004)
- Issue SECY to Commission requesting direction on enforcement options (May 2004)
- Issue final NUREG-1778 (June 2004)
- Issue additional regulations and guidance, as required for enforcement, and guidance for enforcement discretion (September 2004)
- Withdraw associated circuit analysis inspection moratorium memo (September 2004)

CHALLENGE → RESPONSE

- While risk-informed approach would ensure safety, staff/industry differences on rule interpretation and licensing basis would continue absent further regulatory action → Staff preparing option paper for Commission consideration:
  - Delineates several options for path forward, with and without rulemaking process
  - Requests Commission's concurrence on recommended path

COMMUNICATION TOOLS

- Meeting with regional inspectors (2 times per year)
- Phone conference with regional inspectors on emerging issues (monthly)
- Meeting with the ACRS Subcommittee on Fire Protection (about 2 times/year)
- Periodic meetings with NEI (2-3 times per year)
- Annual NEI Fire Protection Information Forum
- Annual Regulatory Information Conference
- Fire protection issues management public meetings held with industry
- Fire Protection Improvement Plan (public document)
- Fire Protection Communication Plan (provided as handout)
- Fire Protection Status Report
- Participation of public interest groups in initiatives, where appropriate
- Briefings for the Office of Public Affairs for major initiatives that impact external stakeholders
- NRC press releases, when appropriate
- Updates for NRC contractors on developments that could impact their work
- Briefings and presentations to GAO, OIG and ACRS
- DSSA/SPLB Communication Team
- Fire protection public access website

OTHER INITIATIVES

IMPROVEMENT OF FIRE PROTECTION SIGNIFICANCE DETERMINATION PROCESS

- Current process is complex and time-consuming to use
- Updating to simplify the process without reducing safety
- Screens out very low risk findings that do not warrant further NRC involvement
- Facilitates discussions of the bases for significance determinations
- Will solicit feedback from inspectors, regional managers, licensees and the public on the quality of the revised process
- Plan to issue revised SDP for implementation by May 2004
- Will provide training sessions for inspectors in March to May 2004

FORMATION OF MULTI-OFFICE STEERING GROUP FOR FIRE PROTECTION

- Will provide agency-wide coordination to facilitate the resolution of fire protection issues, both technical and policy related
- Will assist in establishing a consistent approach, both internal and external, based on management buy-in from all appropriate offices
- Will provide a broader base of ideas for arriving at solutions to outstanding issues
- Leadership Team endorsed the proposal

ENCOURAGE LICENSEES TO ADOPT THE RISK-INFORMED METHODOLOGIES

- Recognize and reward licensees that take a proactive approach to closing outstanding fire protection issues using risk-informed approaches
- Progress Energy initiated a program to risk-inform circuit analyses and Duke Energy has indicated they will adopt NFPA 805 under the new rule
- Proactive approach of Progress and Duke may encourage other licensees to adopt the new and improved methodologies
- Staff has been encouraging licensees to apply Reg Guide 1.174 methodologies to license amendment applications and exemption requests
- First exemption request using NFPA 805 process and RG 1.174 is currently in review by the staff

QUANTITATIVE FIRE HAZARDS EVALUATION TOOL

- NUREG 1805 provides fire inspectors with a simplified risk-informed methodology to assess potential fire hazards
- Assists in determining if a fire scenario can cause critical damage to safe shutdown components
- Evaluations performed using Microsoft Excel spreadsheet format for ease of application and consistent results

OBJECTIVE

Provide an update to the Chairman on current Fire Protection regulatory issues, including rulemaking, Reactor Oversight Process, guidance/consistency for inspections, and reducing regulatory uncertainty

Issues to be Addressed

- Unique Challenges of Nuclear Plant Fire Protection Programs
- NFPA 805 Rulemaking
- Operator Manual Actions Rulemaking
- Associated Circuits
- Significance Determination Process
- Inspection Guidance/Consistency
- Communications
- Recent Initiatives

Unique Challenges of Nuclear Plant Fire Protection Programs

- Fire protection design challenges
  - Fire behavior and consequences are difficult to accurately predict
  - Fire protection design is different at each plant
- Licensing challenges
  - Licensing basis of each plant is different
  - Postulated fire events to define licensing basis are different
  - Appendix R and 10 CFR 50.48 were issued after most plants had construction permits
  - Forward fit of Appendix R for post-1979 plants was not rule-based (based on NUREG-0800)
  - Rules left room for interpretation (e.g., operator manual actions)
  - Major technical issues emerged (e.g., Thermo-Lag fire barriers)
  - Major fire-induced associated circuit failure analysis issues emerged

NFPA 805 Rulemaking

- Rulemaking amends 10 CFR 50.48 to allow licensees to voluntarily adopt NFPA 805 which is a performance-based risk-informed industry consensus standard
- Gives the licensees ability to clarify and document fire protection licensing basis and minimizes regulatory uncertainty
- Licensees may manage their fire protection program with minimal regulatory intervention using performance-based risk-informed methods

NFPA 805 Rulemaking – Industry Involvement

- Staff held several public meetings since 2002 to gain external stakeholder input
- Industry proposes implementation via NEI 04-01, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)". Staff plans to ultimately endorse NEI 04-01
- Industry performed two pilots – change control (Farley) and transition process (McGuire)
- Staff expects a few plants to begin transition process in the summer of 2004

NFPA 805 Rulemaking Actions

- ACRS endorsed final rule in December
- Staff provided comments on industry implementation guide (NEI 04-01) in January 2004
- Staff plans to send final rule to EDO in March 2004
- Staff plans to develop draft regulatory guide by June 2004

NFPA 805 Rulemaking Challenges/Responses

- Challenge: Licensees may not adopt revised rule because of the cost and resources required to make the transition

  Response: Multi-office staffs developing incentives (e.g., enforcement discretion within the ROP during transition to revised rule)
- Challenge: Inspection of a performance-based risk-informed rule needs development – inspectors unfamiliar with application

  Response : Provide inspection procedures and training of inspectors to the extent needed to ensure proper inspections and audits
- Challenge: Unapproved fire models and fire PSA methodologies

  Response: RES staff is verifying and validating fire models and re-quantifying PSA methodologies
- Challenge: Adequately evaluate licensee developed fire risk models

  Response: Being developed

Operator Manual Actions Rulemaking

- Staff is developing a rule that allows post-fire operator manual actions to ensure safe shutdown
- Rule will allow licensees currently relying on unapproved operator manual actions to achieve compliance through evaluation against the rule's acceptance criteria, without prior NRC approval.
- Licensee evaluations will be available for inspection and verification

Operator Manual Actions Rulemaking Status

- Commission approved Rulemaking Plan in Sept 2003
- Staff published interim criteria for enforcement discretion for public comment in November 2003
- Submit final interim criteria for enforcement discretion in July 2004
- Submit proposed rule to the Commission in September 2004

Operator Manual Action Rulemaking - Challenges/Responses

- Challenge: Heightened stakeholder concerns for safety

  Response: Develop and communicate key messages

- Challenge: Regulatory uncertainty due to Backfit Rule implications associated with previously approved operator manual actions that use less stringent acceptance criteria

  Response: Develop common understanding among program office/inspectors/licensee about backfit rule implications by providing training and public workshops. (Note that even approved operator manual actions are subject to ROP for risk-significant findings.)

Associated Circuits

- Associated circuits are non-safety circuits whose fire-induced failure could prevent operation of, or cause maloperation of, required safe shutdown systems
- Late 1990s: Industry/Staff disagreements on rule interpretation (definition of associated circuits)
- 1998: Enforcement Guidance Memorandum EGM 98-02 Staff agreed to enforcement discretion in return for industry commitment to study issue and propose solution
- 2001: Staff suspended inspection of associated circuit issues
- Industry conducts tests to determine spurious actuation probabilities

Associated Circuits Spurious Actuation Probabilities

- Industry and Staff generally agree on the likelihood of fire-induced spurious actuations
- Sample spurious operation probabilities
  - Internal cable hot shorts between conductors in thermoset and thermoplastic jacketed cable – 0.60
  - Cable-to-cable shorts between unrated type cable (thermoplastic) – 0.20
  - Internal cable hot shorts between conductors in armored cable – 0.15

Associated Circuits - Industry Involvement

- Staff held several public meetings since 1998 to obtain external stakeholder input
- Industry proposes solution via NEI 00-01, "Guidance for Post-Fire Safe Shutdown Analysis"
- Staff has used portions of NEI 00-01 in developing the agency risk-informed position
- Staff is considering rejecting deterministic approach of NEI 00-01, since it interprets Rule to postulate only a single hot short

Associated Circuits Actions

- Staff issued a draft Regulatory Issue Summary (RIS), "Risk-Informing Circuit Inspections", for public comment in August 2003
- Staff issued draft NUREG-1778 to establish Knowledge Base on Post-Fire Safe Shutdown Analysis in January 2004
- Staff plans to issue final RIS in February 2004
- NRC Regions will review proposed roll-out approach in February 2004
- Staff plans to hold a Category 3 meeting in March 2004

Associated Circuits – Challenge/Response

- Challenge: While risk-informed approach would ensure safety, Staff/industry differences on rule interpretation and licensing basis would continue absent further regulatory action
- Response: Staff preparing option paper for Commission consideration
  - Delineates several options for path forward, with and without rulemaking process
  - Requests Commission's concurrence on recommended path

Significance Determination Process

- Fire Protection Significance Determination Process (FP SDP)
  - Current FP SDP viewed as overly conservative
  - Draft revised FP SDP published for public comment October 30, 2003
  - Plan to provide training to inspectors in March-May 2004
  - Plan to finalize FP SDP in May 2004

Inspection Guidance/Consistency

- The following types of communication between NRR and the regions on current guidance and developing new guidance help to promote uniform inspections across regions:
  - Monthly counterpart call with NRR and the regions
  - Periodic counterpart meetings among NRR, OE, OGC and the inspectors
  - Technical Interface Agreement (TIA) process
  - Informal phone and email communications between NRR and the regions
- Considering the formation of a panel of technical staff and management to quickly and consistently respond to inspector questions on interpretation of regulations
- Considering formation of a task group of inspectors to develop inspection guidelines for use on NFPA 805 plants

Communications

- Meeting with the ACRS Subcommittee on Fire Protection (about 2 times/year)
- Periodic meetings with NEI (2-3 times per year)
- Annual NEI Fire Protection Information Forum
- Annual Regulatory Information Conference
- Fire protection issues management public meetings held with industry
- Fire Protection Improvement Plan (updated about once a month, distribution to external stakeholders)
- Fire Protection Communication Plan (updated as needed - distribution to internal stakeholders); provided as handout

Communications – Cont.

- Encourage participation of public interest groups in initiatives that may be of concern to the general public
- Briefings for the Office of Public Affairs provided for major initiatives that impact external stakeholders
- NRC press releases, when appropriate
- Update NRC contractors on developments that could impact their work
- Briefings and presentations to GAO, OIG and ACRS
- DSSA/SPLB Communication Team
- Fire protection public access website

Recent Initiatives

- Formation of a multi-office steering group on fire protection to provide agency-wide coordination of activities to address FP Program challenges; Multi-office (SPLB, IIPB, OE, etc.) effort necessary in order to find unique solutions to unique problems
- Recognize and reward utilities which take proactive actions to encourage participation of others (Progress Energy in risk-informing circuits, Duke Energy Services in NFPA 805)
- Encourage licensees to request risk-informed license amendments based on Reg Guide 1.174 rather than deterministic amendments

attach to pp-3

Released

NRR Office of Nuclear Reactor Regulation

NRR FIRE PROTECTION COMMUNICATION PLAN

BACKGROUND

The Office of Nuclear Reactor Regulation (NRR) of the Nuclear Regulatory Commission (NRC) has initiated a Fire Protection Improvement Program (FPIP) to address outstanding issues associated with the fire protection programs for operating nuclear power plants. These issues have been identified by both internal and external stakeholders and include the following:

- Regulatory requirements for analysis of post-fire spurious actuations caused by failure of associated circuits
- Regulatory requirements for post-fire operator manual actions for compliance with 10 CFR Part 50, Appendix R III.G
- Inspections taking into account the Current Licensing Basis (CLB) at the facility being inspected or giving credit for self assessments
- Treatment of old fire protection design issues and issue management in general
- Application of the fire protection Significance Determination Process (SDP)
- Reliance on fire watches as compensatory measures
- Application of "Quantitative Fire Hazard Analysis Methods" in the inspection program
- NRC position on fire protection equipment included in the scope of License Renewal Application (LRA) reviews
- Guidance in the area of fire protection for advanced reactors
- Risk-informed, performance based rulemaking
- Fire protection program pilot for combined operating license
- Testing of selected fire barrier materials

All of these concerns pointed to the need for a comprehensive FPIP. This Communication Plan describes the program to facilitate communication with all stakeholders during the implementation of the FPIP. The FPIP and the Communication Plan are managed by NRR's Division of Systems Safety and Analysis (DSSA).

Despite numerous challenges, the fire protection program continues to improve by bringing clarity to regulatory requirements and by working toward closure of outstanding issues. The challenges stem from (1) prescriptive regulations that have been interpreted differently, and (2) licensees with varying degrees of specificity in their licensing basis.

The following issued documents demonstrate the progress to-date in providing clarity and bringing the unresolved fire protection issues to closure:

- Regulatory Guide (RG) 1.189, "Fire Protection for Operating Nuclear Power Plants"
- Draft NUREG-1805 (for comment), "Fire Dynamics Tools Quantitative Fire Hazard Analysis Methods for the U.S. Nuclear Regulatory Commission Fire Protection Program" (Volumes 1 and 2) including an accompanying CD-ROM with fire modeling spreadsheets
- Draft Regulatory Issue Summary (RIS), "Risk-Informed Inspection Guidance for Post-Fire Safe-Shutdown Inspections" on risk-informed associated circuit analysis

- Proposed risk-informed, performance-based fire protection rule change based on National Fire Protection Association (NFPA) 805, "Performance-Based Standard for Fire Protection of Light Water Reactor Electric Generating Plants"
- Draft NUREG-1778 (for comment), "Knowledge Base of Post-Fire Safe-Shutdown Analysis"
- Proposed Interim Criteria to evaluate the acceptability of operator manual actions used by licensees in support of a proposed rule on operator manual actions
- Revised NUREG-0800, "Standard Review Plan", Section 9.5.1, "Fire Protection Program"

In addition, substantial improvements have been made, and will continue to be made, in the area of inspector training.

COMMUNICATION PLAN - OBJECTIVES

The objective of this Communication Plan is to describe approaches for facilitating communication during the implementation of the NRR FPIP started in October 2002. This Communication Plan is non-public because it contains pre-decisional and staff information.

COMMUNICATION PLAN - SUMMARY DESCRIPTION

The Fire Protection Communication Plan lists the stakeholders interested in the FPIP; describes Plant Systems Branch's (SPLB's) communication with internal stakeholders; describes staff's communication with external stakeholders; describes the DSSA/SPLB Communication Team; and provides a list of frequently asked questions and answers.

NRC stakeholders inside and outside of NRR will have varied levels of interest and involvement in the FPIP. SPLB/DSSA is responsible for communicating with other organizations within the NRC outside of NRR, as well as with stakeholders external to the NRC who may have an interest in the improvement effort. The FPIP will be formulated and implemented in an open atmosphere that seeks input from all interested parties. Constructive feedback will be a key element in successful implementation of the comprehensive plan.

STAKEHOLDERS

NRR's efforts in explaining the FPIP to other interested parties will consider the stakeholders listed in the table below. This communication plan is intended to describe the activities planned and explain what we are doing and how it might impact the various stakeholders inside and outside of NRR.

Stakeholders	
Internal (NRC)	External (NRC and Public)
• Executive Team (ET)/Leadership Team (LT) • Division of Regulatory Improvement Programs (DRIP)/Division of Inspection Program Management (DIPM)/Division of Licensing Project Management (DLPM) • NRC Regional Offices • Office of General Council (OGC)/Office of Enforcement (OE) • NRC Office of Nuclear Regulatory Research (RES) • Executive Director for Operations (EDO)/Commission Office Staff	• Industry related groups Nuclear Energy Institute (NEI), Nuclear Steam System Supplier (NSSS), vendors and individual utilities • Public interest groups (Union of Concerned Scientists (UCS)) and Media • NRC Consultants/Contractors • General Accounting Office (GAO) and Office of Congressional Affairs • Office of Inspector General (OIG) • Advisory Committee on Reactor Safeguards (ACRS)

COMMUNICATIONS WITH INTERNAL STAKEHOLDERS

1. Communications with NRR Executive/Leadership Teams

The ET and will be periodically briefed on the status of the FPIP as major milestones are achieved. When appropriate, the LT will also be informed, particularly when budget/resource considerations are indicated.

2. Communications with other NRR Divisions

Work associated with generic communications, interfacing with NEI and owners groups, and rulemaking activities will be coordinated with DRIP. Work involving inspector training activities, SDP improvement efforts, and transition to rulemaking activities that impact the Reactor Oversight Program (ROP), such as the rulemaking on operator manual actions, will be coordinated with DIPM. Support from DLPM will be necessary when interacting with regions and licensees on technical and policy matters in the fire protection area. SPLB/DSSA is responsible for effectively communicating with other NRR Divisions to arrange the necessary support and coordination.

3. Communications with Regional Offices

Experience has shown that alignment with the regions is essential to obtain successful resolution of controversial issues. When specific milestones are reached that may have applicability to the regional offices, SPLB will take the lead to ensure that they are informed. Appropriate venues for the information exchange will be used, including periodic counterpart management meetings, interoffice coordination meetings, conference calls and workshops. SPLB will work with IIPB to provide updates on FPIP status during monthly phone calls and will participate in periodic counterpart meetings held with regional division directors as needed to maintain cognizance of FPIP status. Consideration will be given to video conferencing future quarterly training sessions to allow for a wider audience. Regional participation in workshops and pilot projects will be sought as appropriate.

4. Communications with Office of General Counsel and Office of Enforcement

OGC has a direct role in many of the activities involving fire protection, including rulemaking, contested enforcement actions, the backfit process and interpretations of regulations. Experience has shown that the program office needs to work closer with OGC to obtain their alignment on controversial issues to create a single unified NRC position. As such, they should be made aware of activities designed to improve the program. OGC will be consulted on improvement activities with respect to legal issues. SPLB will be responsible for informing OGC of program status. When appropriate, OGC participation or consultation will be requested for workshops and pilot projects. OE has a direct role in providing interim enforcement guidance while rulemaking is underway. SPLB will be responsible for informing OE of FPIP status.

5. Communications with the Office of Nuclear Regulatory Research

RES currently has representatives working on the fire protection SDP Improvement Program. RES has been requested to conduct testing on selected fire barrier materials to determine their adequacy and is supporting the NRR staff in developing risk-informed tools for use in rulemaking. NRR staff works closely with RES on the development of the Fire Risk Research Plan. When specific milestones are reached that may have applicability to research activities, SPLB will take the lead in seeing that they are informed. Appropriate venues for the information exchange will be used, including periodic management meetings, interoffice coordination meetings (including steering group meetings, when applicable), conference calls and workshops.

6. Communications with Executive Director for Operations and Commission Office Staff

Periodically, particularly as key milestones in FPIP occur, the staff may be called upon to brief the EDO and Commission staffs. DSSA/SPLB will provide key documents and information to the EDO staff as appropriate, and be prepared to forward selected items to the Commission if warranted. The Commission Technical Assistants (TAs) will be briefed on program implementation if desired by the TAs to keep the Commission offices informed of program status.

7. Multi-Office Steering Group for Fire Protection

An agency-wide Fire Protection Steering Group has been formed to ensure a coordinated approach among internal stakeholders to resolving outstanding fire protection issues that will be based on management buy-in from all appropriate divisions and offices. The group includes representatives from DSSA, DIPM, DRIP, OE, OGC and the regions. Other offices/divisions are invited to participate as appropriate to the issues being addressed.

COMMUNICATIONS WITH EXTERNAL STAKEHOLDERS

1. Communications with Industry Groups, Vendors and Utilities

The staff will continue to rely on NEI for obtaining and representing industry consensus on fire protection issues and to facilitate industry participation on special FPIP working groups that may be formed as the need arises. Consideration will be given to obtaining feedback from individual utilities on specific FPIP improvements that are designed to improve the licensee interface. When appropriate, breakout sessions may be scheduled at the NEI-sponsored periodic Fire Protection Information Forums or the annual Regulatory Information Conference. Ad hoc workshops may also be scheduled to accommodate specific concerns. The staff and NEI have been conducting periodic (once every 4 to 6 months) meetings to discuss current fire protection efforts and issues at the management level. These meetings are attended by DSSA and SPLB management, staff, industry, and the public. The meetings provide an opportunity to discuss stakeholder views, issues, and status of projects, as well as make presentations that are open to the public. Meetings are normally held at NRC headquarters and occasionally at NEI.

2. Communications with Public Interest Groups and Media

The staff will continue efforts to obtain feedback from other external stakeholders at public meetings that involve fire protection issues. This will include solicitation of the UCS, Public Citizen, and other similar organizations to participate in specific initiatives that directly impact the interface with the external organizations. For example, a proposed improvement in the use of fire watches as compensatory measures would include some interaction with public stakeholders to obtain their views and input if there is a change in the process. This interaction could take place in a workshop expressly designed for that purpose, or in a breakout session of a larger workshop that would be covering several issues. Briefings for the Office of Public Affairs (OPA) will be given when major initiatives are taken that impact external stakeholders, and NRC press releases will be prepared when warranted.

3. Communications with NRC Contractors

Contractor organizations that support the work of NRR need to be made aware of developments in fire protection issues and processes that will affect their work for the staff. Process owners and change implementers will need to recognize when their actions will affect the technical and administrative contract support groups. Process owners need to ensure that the various contractors are notified by contract managers when changes are implemented that will affect their work. SPLB will take the lead to see that the proper notifications are made.

4. **Communications with General Accounting Office and Office of Congressional Affairs**

DSSA will work with OCA as required to ensure that any survey needs are met. Staff provide briefings or presentations and answers to survey questions, when requested by GAO and Congress.

5. **Communications with Office of Inspector General**

Information briefings will be offered to the OIG as necessary to help ensure that their independent oversight role is satisfied.

6. **Communications with Advisory Committee on Reactor Safeguards**

The ACRS Fire Protection Subcommittee monitors staff activities closely and will follow the progress of the FPIP. DSSA/SPLB will keep ACRS advised of FPIP status through periodic (semi-annual) briefings and routine contacts.

KEY MESSAGES

1. NRR is providing increased management attention to address both emerging and longstanding fire protection issues with the goal to establish timely closure plans and work with stakeholders to produce safe and realistic solutions.
2. NRR welcomes input from all interested stakeholders on how to resolve fire protection issues. A recent example was a public meeting on the use of operator manual actions as an alternative to prescriptive barrier/separation criteria in 10 CFR Part 50, Appendix R. The outcome is rulemaking currently in progress that proposes to allow the use of operator manual actions when those actions have been shown to be safe and reliable.
3. Risk-informed methods and techniques will be prudently employed to provide reasonable assurance of safety when developing solutions to fire protection issues.

COMMUNICATION TEAM

The DSSA/SPLB Communication Team will consist of the Deputy Director, DSSA; the Branch Chief, SPLB; and the Section Chief of the Fire Protection Engineering and Special Projects Section. The team will be supported in the ROP/SDP improvement area by the Branch Chief of IIPB and the Branch Chief of the Probabilistic Safety Assessment Branch (SPSB).

FREQUENTLY ASKED QUESTIONS (FAQs)

1. Why have major issues such as post-fire safe-shutdown associated circuit analysis and operator manual actions become so highly visible and controversial recently?

   Answer The most likely cause of the unexpectedly large number of findings appears to be the way licensees have resolved concerns related to Thermo-Lag (Generic Letter 92-08). Thermo-Lag is the brand name of a heat transfer material that was used as a rated 1- or 3-hour fire-barrier to protect electrical circuits required for post-fire safe-shutdown. In the process of resolving the Thermo-Lag concerns, analysis techniques that may not have been approved by the staff (assuming only one electrical short, or providing operator manual actions to operate equipment that was previously protected) were employed that raised questions by inspectors engaged in the new ROP.

2. Why did the NRC stop inspection of post-fire associated circuit safe-shutdown analyses?

   Answer The applicable regulations are subject to interpretation and the plant licensing bases are not always clear, resulting in much confusion and different interpretations of what is required. NRR is working with the industry to develop inspection guidance that will clarify the regulatory requirements for post-fire associated circuit analyses. Due to the uncertainty surrounding this issue, a

moratorium has been placed on inspection of associated circuit analyses until an appropriate level of guidance has been provided by the NRC.

3. What is being done to improve inspector knowledge of the CLB at a facility undergoing a fire protection inspection?

   Answer Case studies will be employed in future periodic training plans to reiterate the importance of understanding the licensing basis before pursuing enforcement for fire protection deficiencies. If there is a question about the applicability of the licensing basis, it needs to be resolved before proceeding with enforcement. Other opportunities for NRC action would include a range of options depending upon the risk significance of the item. NRR staff will be provided with refresher training on the backfit process to enable more intelligent choices when exploring options for regulatory action. If a backfit cannot be supported, an Information Notice may be indicated or the matter could be forwarded to RES for consideration as a potential generic safety issue.

4. What is being done to improve the capability of fire protection engineers and inspectors to apply risk information in their evaluations?

   Answer Fire protection engineers are being encouraged to take probabilistic risk assessment (PRA) training. Both engineers and inspectors obtain on-the-job training when they work with senior risk analysts to evaluate ROP findings in the SDP, and some engineers have had the opportunity to work on the SDP improvement program. A seminar on risk-informing fire protection was held in October 2002, and further opportunities to enhance the on-board capability of the staff are being explored.

5. How are emerging issues identified, captured and tracked to closure in the fire protection area?

   Answer Fire protection engineers are routinely contacted by regional inspectors with emerging issues. Issues that are identified as generic and worthy of further evaluation are promptly brought to management attention. These generic emerging issues are then addressed between the staff and industry through a protocol for resolution of emerging fire protection issues. This protocol (ML031210232) is a product of the periodic fire protection issues management public meetings held with industry. Resolution of the issues occurs through the periodic fire protection working group meetings with the industry (e.g., NEI). Other plant specific issues are resolved by proper coordination with NRR project managers and participation in conference calls between regional inspectors and NRR fire protection engineers. A plant specific issue will be prioritized and a determination made as to the appropriate follow up approach, which may include tracking on a plant specific basis or as a generic issue to be resolved via the above protocol. Generic action such as an Information Notice (IN), or a Task Interface Agreement (TIA) and subsequent backfit consideration, may ultimately result.

UPDATES AND REVISIONS

The SPLB Branch Chief will monitor the status of this communication plan on a periodic basis and judge its effectiveness based on progress being made toward resolving emerging and longstanding issues. Changes to the plan will be made as appropriate until the unresolved issues are closed out.

SCHEDULE OF ACTIVITIES

A summary level schedule of the activities that support the closure of the unresolved fire protection issues will be provided in a separate "Fire Protection Status Report".