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DIRECTOR, LICENSING
NUCLEAR GENERATION

Rules and Directives
Branch
USNRC

66 FR 22134

5/3/01

7

July 2, 2001

Chief, Rules and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T-06 D59
Washington, DC 20555-0001

SUBJECT: Workshop on Reducing Unnecessary Regulatory Burden

The subject workshop was noticed in the *Federal Register* on May 3, 2001 (66 FR 22134). NEI comments in response to the notice were submitted to you by letters dated May 11 and May 29, 2001. The purpose of the earlier letters was to provide NRC with a draft list of burden-reduction issues for use at the NRC workshop on May 31, 2001. The purpose of this letter is to provide a final "Consolidated Industry List" of burden-reduction issues (attached) that supersedes the earlier lists. NEI recommends that NRC use the consolidated list to help prepare and implement a Burden Reduction Action Plan.

The reduction of unnecessary regulatory burden has been a recurring subject of discussion between NRC and the nuclear industry. Some discussions have led to successful initiatives, for example, the "cost beneficial licensing action" (CBLA) initiative of a few years ago. However, too many of the initiatives have languished far too long without substantive progress. An integrated NRC action plan, with specific deliverables and milestones, should be established to expedite the resolution of these issues.

A primary opportunity for burden reduction lies in the area of reporting requirements. There are over a hundred reporting requirements, many outdated and of uncertain value, that no longer serve an effective regulatory purpose. A consolidated review to identify and eliminate (or revise) outdated, duplicative, or inconsistent reporting requirements would be an effective way to demonstrate NRC's commitment to reducing unnecessary regulatory burden.

Template - ADM-013

E-RIDS = ADM-03

Att = M. Karabelnikoff (MK)

Administrative Points of Contact

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Please contact me at (202)739-8109 (lxh@nei.org) or Mike Schoppman at (202)739-8011 (mas@nei.org) if you have questions about this comment letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lynnette Hendricks".

Lynnette Hendricks

Attachment

c: Roy Zimmerman, NRC Office of Research
Suzanne Black, NRC Office of Nuclear Reactor Regulation
NEI Administrative Points of Contact
NEI Licensing Action Task Force

CONSOLIDATED INDUSTRY LIST
Reducing Unnecessary Regulatory Burden while Maintaining Safety

Explanatory Notes:

1. This list is a consolidation of several lists referenced by industry stakeholders at a NRC Workshop in Rockville, Maryland on May 31, 2001. Refer to *Federal Register* notice 66 *FR* 22134, May 3, 2001, for a discussion of workshop objectives.
2. The row of numbers at the top of the list indicates the references that were reviewed to identify the issues in the first column. The title of each reference is listed on page 10.
3. The notations within the list (e.g., Section, Table, Enclosure, and Attachment numbers) direct the reader to locations within the references where the issues are addressed.
4. The summary section of the May 3 Federal Register notice states "this workshop will focus on three areas: Risk informing portions of 10 CFR Part 50, reforming outdated or paperwork oriented regulations, reviewing other regulatory requirements (e.g., technical specifications) for burden reduction opportunities." This Consolidated Industry List cites the focal point(s) for each issue in the first column of the list:
 - ❖ Risk informing 10 CFR
 - ❖ Paperwork reduction
 - ❖ Process improvement
5. Also, the issues have been "binned" by category in the first column, depending on whether they are "new" or "in progress." The categories are shown at the bottom of each page of the list:

A1 = New (short term, less than 1 year)	B1 = In progress (short term, less than 1 year)
A2 = New (mid term, 1 to 3 years)	B2 = In progress (mid term, 1 to 3 years)
A3 = New (long term, 3 to 5 years)	B3 = In progress (long term, 3 to 5 years)
6. In column 12, the designation "LATF" means that the issue is within the scope of the NEI Licensing Action Task Force.
7. In column 12, the designation "X" means that the issue is within the scope of an industry group other than the LATF.
8. Each issue has been designated in the last column as having a high, medium, or low collective priority to industry stakeholders. Priorities are based on a subjective estimate of industry-wide impact based on three main factors: operational impact, cost impact, and/or impact on prospective new plant applicants.

BURDEN-REDUCTION ISSUE	DOCUMENTS THAT TRACK EVOLUTION OF THE ISSUE (see list of references on page __)												RELATIVE PRIORITY	
	1	2	3	4	5	6	7	8	9	10	11	12		
CODES & STANDARDS (10 CFR 50.55a) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Implement risk-informed inservice inspection (B1).</i> 2. <i>Develop standards for the use of risk information (B2).</i> 3. <i>Initiate rulemaking to simplify 50.55a (A3).</i> 4. <i>Simplify and expedite the process for reviewing relief requests (B2).</i> 5. <i>Simplify and expedite the process for approving and publishing Code Cases (B2).</i>	§3.4			Table 2	Table 2					§2.3.7 App A	√		LATF X	HIGH
COMBUSTIBLE GAS CONTROL (10 CFR 50.44) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Eliminate the regulation based on increased knowledge of post-accident phenomenology & the use of risk-informed concepts (B1).</i>	§2.11		§4.0	Table 2	Table 2						√		X	HIGH
COMPUTER SOFTWARE ❖ Process improvement 1. <i>Generate guidance to facilitate the use of digital computer systems (B2).</i>				Table 4									X	HIGH
CONTROL ROOM HABITABILITY ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Expedite resolution of the current generic issue (B1).</i>	§3.22			Table 4	Table 2						√		X	MEDIUM
DECOMMISSIONING ❖ Process improvement 1. <i>Ensure consistency with license termination requirements (10 CFR 50.82) and interfaces with other programs, such as security and emergency preparedness (B1).</i> 2. <i>Resolve decommissioning funding issues (B1).</i>										§2.3.3			X	MEDIUM
ECCS MODELS (10 CFR 50, App. K) ❖ Risk informing 10 CFR 1. <i>Revise, relocate, or eliminate requirements associated with low-frequency LOCA events (B2)</i>	§2.7	§4.0		Table 2							√		X	HIGH

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EMERGENCY PLANNING (10 CFR 50.47 & App. E) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Revise regulations to incorporate new information (e.g., revised source term) and risk-informed concepts (B3).</i> 2. <i>See Appendix 1 for additional issues.</i>	§2.4								App A	√	√	X	MEDIUM
FINANCIAL QUALIFICATIONS (10 CFR 50.33(f) & App. C) ❖ Paperwork reduction 1. <i>Eliminate 10 CFR requirements and relocate to guidance documents, based on the lack of a causal relationship between financial qualifications and safety (B1).</i>	§3.9			Table 2	Table 2							X	LOW
FIRE PROTECTION (10 CFR 50 App. R) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Complete the resolution of several long-standing issues through publication of improved, risk-informed regulatory guidance documents (B1).</i> 2. <i>Permit the use of robotics, cameras, or other compensatory measures in place of fixed or roving fire watches (A1).</i> 3. <i>Resolve open issues through interactions between the NRC staff and the NEI Fire Protection Working Group (B1).</i>	§2.2.1 thru §2.2.7			Table 2	Table 2				§2.3.4 §2.3.9 §2.3.14 App A	√		X	HIGH
FITNESS FOR DUTY (10 CFR 26) ❖ Process improvement 1. <i>Respond to industry recommendations regarding the current regulation (B2).</i> 2. <i>See Appendix 1 for additional issues.</i>						Encl 4		Att 1	§2.3.5		√	X	MEDIUM
FUEL-RELATED ISSUES ❖ Process improvement 1. <i>Use new methodologies and remove unnecessary conservatism to revise, relocate, or eliminate specific technical specifications (A2).</i> 2. <i>See Appendix 1 for additional issues.</i>											√		MEDIUM

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HOT PARTICLES ❖ Process improvement 1. Complete resolution of this issue (revise the methodology for evaluating the dose impact from hot particles) in the near term (B1).						Encl 21								MEDIUM
HUMAN PERFORMANCE ❖ Process improvement 1. Determine the feasibility of regulatory guidance. This issue is in the research & development phase (B3).				Table 4										LOW
INSPECTIONS ❖ Risk informing 10 CFR ❖ Process improvement 1. Use risk information and the results of prior inspections to determine inspection plans (B1). 2. Continue the current effort to establish the baseline inspection program for the reactor oversight process (B2).	§3.6											X		MEDIUM
LICENSING PROCESS (10 CFR 50.90 - 50.92) ❖ Process improvement 1. Endorse the NEI White Paper on <u>Unintended Technical Specification Action (UTSA)</u> to expedite corrective, emergency, and exigent amendments that are submitted to correct minor discrepancies (B1). 2. Expand the use of the <u>Consolidated Line Item Improvement Process (CLIIP)</u> described in Regulatory Issue Summary 2000-06 (B1). 3. Establish a well-defined process for expedited regulatory review of <u>power uprate amendments</u> (B1). 4. Identify and pursue additional licensing process improvements through the <u>Licensing Action Task Force</u> (B2).	§2.3					Encl 2	Encl 3	Att 8		√		LATF X		HIGH
LICENSEE CONTROL OF PROGRAMS ❖ Process improvement 1. Revise regulations and guidance to provide consistent, complementary change processes for QA, security, emergency, and fire-protection plan changes (B2).										§2.3.9		LATF X		MEDIUM

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NEW PLANT ISSUES ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Ensure consistency among 10 CFR Parts 21, 50, 51, 52, etc. for new plants (B3).</i> 2. <i>Revise 10 CFR 50.34(f) to eliminate or relocate outdated TMI action plan requirements for new license applicants (A2).</i> 3. <i>Expedite resolution of initial application issues for new plants (B1). For example:</i> <ul style="list-style-type: none"> • Operator staffing • Fuel cycle impacts • Antitrust requirements • Decommissioning funding • Review fees • Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) • Site approval 	§3.5 §3.30			Table 2		Encl 11						X	HIGH
POST ACCIDENT SAMPLING SYSTEM (NUREG-0737, II.B.3) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Use PASS elimination to pilot the Consolidated Line Item Improvement Process (CLIIP) for Westinghouse and CE plants (B1).</i> 2. <i>Extend PASS elimination to GE and B&W plants (A2).</i>	§2.15		§2.0			Encl 11	Encl 2					LATF X	HIGH
QUALITY ASSURANCE (10 CFR 50, App. B) ❖ Risk informing 10 CFR ❖ Paperwork reduction ❖ Process improvement 1. <i>Update and consolidate regulatory guidance associated with quality assurance (A2).</i>	§2.14 §3.20 §3.23			Table 2 Table 3 Table 4		Encl 8	Encl 8		§2.3.9 §2.3.13 §2.3.14 App A	√		LATF X	MEDIUM
RADIATION PROTECTION (10 CFR 20) ❖ Process improvement 1. <i>Review and revise requirements to incorporate experience in implementing the 1991 revision of Part 20 (A3).</i> 2. <i>See Appendix 1 for additional issues.</i>								Att 4	App A		√	X	MEDIUM

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REACTOR VESSEL MATERIALS ISSUES (10 CFR 50, App. G & App. H) ❖ Risk informing 10 CFR 1. <i>Update methods to verify compliance with regulations on fracture toughness and surveillance capsules (B2).</i>											√			HIGH
REGULATORY GUIDANCE REVIEW ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Conduct a comprehensive review of regulatory guidance (Reg. Guides, SRP, BTPs, NUREGs, generic communications, and the inspection manual) to ensure consistency and to include risk concepts and new information (A3). Some examples are:</i> <ul style="list-style-type: none"> ▪ Design basis tornado ▪ Turbine missiles ▪ Reg. Guide 1.97 ▪ Seismic design 	§3.13 §3.16 §3.18 §3.19 §3.25 §3.26		§3.0	Table 2 Table 4	Table 2					§2.3.15	√			MEDIUM
REPORTING REQUIREMENTS ❖ Paperwork reduction 1. <i>Consolidate in one change process the updating of 10 CFR reporting requirements (B2). Screen for duplication, uniformity of thresholds, and consistency of time limits. Eliminate all reports that do not serve an important stakeholder function.</i> 2. <i>See Appendix 1, Appendix 2, and Reference 8 for additional issues.</i>	§2.9 §3.7 §3.27			Table 2 Table 4		Encl 7 Encl 1	Encl 1	Att 5	§2.3.16 App A	√	√	LATF X		HIGH
RESIDUAL CONTAMINATION ❖ Process improvement 1. <i>Establish a threshold for unrestricted use of decontaminated materials and equipment (B2).</i>	§3.1					Encl 19							X	MEDIUM

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RISK-INFORMED REGULATION ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Implement risk-informed Part 50, Option 2 (B1).</i> 2. <i>Implement risk-informed Part 50, Option 3 (B2).</i> 3. <i>Implement the NRC Risk Informed Regulation Implementation Plan (B1, B2, B3).</i> 4. <i>Expand the scope of structures, systems, and components subject to commercial grade procurement and dedication practices (B1).</i> 5. <i>Apply to "contents of applications" requirements in 10 CFR 50.34 (A3).</i> 6. <i>Apply to "emergency planning" requirements in 10 CFR 50.47 (B2).</i> 7. <i>Apply to "environmental qualification" requirements in 10 CFR 50.49 (B2). See additional detail in Appendix 5.</i> 8. <i>Apply to the revised 10 CFR 50.59 on "changes, tests, and experiments" (A3).</i> 9. <i>Apply to "pressurized thermal shock" requirements in 10 CFR 50.61 (A3).</i> 10. <i>Apply to "ATWS" requirements in 10 CFR 50.62 (A3).</i> 11. <i>Apply to "station blackout" requirements in 10 CFR 50.63 (A3).</i> 12. <i>Apply to records & reporting requirements in 10 CFR 50.71 - 50.73 (A3).</i> 13. <i>Apply to "general design criteria" in App. A to 10 CFR 50 (A3).</i> 14. <i>Apply to "quality assurance" requirements in App. B to 10 CFR 50 (A3).</i> 15. <i>Apply to "containment leakage testing" requirements in App. J to 10 CFR 50 (A3).</i> 16. <i>Apply to NEI Guideline 99-04 on commitment management (A2).</i> 17. <i>Revise the methodologies used to evaluate external events (B3).</i> 18. <i>Apply to post-accident analysis methods, i.e., severe-accident and dose-consequence analysis methods (B2).</i> 19. <i>See Appendix 3 for additional issues.</i>	§2.4 §2.6 §2.12 §3.2 §3.5 §3.8	§2.0		Table 2 Table 3 Table 4	Table 2	Encl 10 Encl 12 Encl 13 Encl 18	Encl 4 Encl 7 Encl 9	Att 6 Att 7 Att 11	§2.3.1 §2.3.2 §2.3.11 §2.3.12 §2.3.19 App A Vol 4	√	√	X	HIGH

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RULEMAKING PROCESS ❖ Process improvement 1. <i>Revise the rulemaking process to reduce complexity and improve efficiency (A3).</i>									§2.3.17			LATF	HIGH
SECURITY (10 CFR 73) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Respond to industry recommendations regarding the current regulation (B2).</i> 2. <i>Establish allowed outage times (AOTs) for selected security functions (A2). Immediate compensatory staffing for certain security system failures is not necessary.</i> 3. <i>Resolve open issues through interactions between the NRC staff and the NEI Security Working Group (B2).</i> 4. <i>See Appendix 1 for additional issues.</i>	§2.8			Table 2 Table 3 Table 4		Encl 9 Encl 14	Encl 6	Att 2 Att 9	§2.3.9 §2.3.18	√	√	X	HIGH
STANDARD REVIEW PLAN (10 CFR 50.34(g)) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Eliminate reference to the SRP in regulations because compliance with the SRP is not a requirement (A3). Use SRPs as guidance and update them to include risk-informed concepts.</i>	§2.13			Table 3									MEDIUM
TECHNICAL SPECIFICATIONS (10 CFR 50.36) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Improve the regulatory process for reviewing, approving, and referencing vendor <u>Topical Reports</u> prepared in support of license amendments (B1).</i> 2. <i>Maximize relocation of Tech Specs to licensee-controlled documents (B1).</i> 3. <i>Expedite review, approval, and implementation of risk-informed Tech Spec initiatives (see Appendix 4) using the Consolidated Line Item Improvement Process (B1, B2).</i> 4. <i>Eliminate the Tech Spec requirement for an "offsite review committee" (A1).</i>	§2.1.1 §2.1.2 §2.1.3 §2.1.4 §2.1.5			Table 4				Att 3 Att 8	§2.3.8 §2.3.10	√		LATF X	HIGH

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TMI REQUIREMENTS (10 CFR 50.34(f)) ❖ Risk informing 10 CFR ❖ Process improvement 1. <i>Eliminate or relocate outdated TMI action plan requirements (A2).</i> 2. <i>Eliminate the shift technical advisor (STA) position based on the accumulation of operating experience and improvements in control room diagnostic capabilities (A2).</i>												X	MEDIUM

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LIST OF REFERENCES:

1. NUREG/CR-4330, Volume 1 (PNL-5809), "Review of Light Water Reactor Regulatory Requirements, Identification of Regulatory Requirements That May Have Marginal Importance To Risk," April 1986.
2. NUREG/CR-4330, Volume 2 (PNL-5809), "Review of Light Water Reactor Regulatory Requirements, Assessment of Selected Regulatory Requirements That May Have Marginal Importance To Risk," (reactor containment leakage rates, MSIV leakage control systems, fuel design safety reviews), June 1986.
3. NUREG/CR-4330, Volume 3 (PNL-5809), "Review of Light Water Reactor Regulatory Requirements, Assessment of Selected Regulatory Requirements That May Have Marginal Importance To Risk," (post-accident sampling system, turbine missiles, combustible gas control, charcoal filters), May 1987.
4. Battelle Columbus Laboratory, "Effectiveness of LWR Regulations in Limiting Risk," May 26, 1989.
5. Sciencetech, Inc., "Elimination of Marginal Safety Requirements, Task 2, Application of Methodology and Development of Recommendations," March 1991.
6. NEI letter to NRC (Rasin to Meyer), "Solicitation of Public Comments on Special Review of NRC Regulations, *Federal Register* Volume 57, Number 36, February 24, 1992," March 6, 1992.
7. NEI letter to NRC (Rasin to Meyer), "Solicitation of Public Comments on Elimination of Requirements Marginal to Safety, *Federal Register* Volume 57, Number 23, February 4, 1992," May 4, 1992.
8. NEI letter to NRC (Colvin to Selin), examples of potential changes to regulations and regulatory processes, December 21, 1992.
9. NEI letter to NRC (Floyd to Gillespie), NEI comments on NRC Regulatory Review Group report, Volume 2 (Regulations) and Volume 4 (Risk Technology Application), July 29, 1993.
10. NEI letter to NRC (Colvin to Meserve), risk-informed improvements to technical requirements, January 19, 2000.
11. Exelon (ComEd) List
12. NEI Licensing Action Task Force (LATF) or industry group other than the LATF.

LIST OF APPENDICES:

1. "Meeting with NRC Office of Research, Unnecessary Regulatory Burden," ComEd (now Exelon) list, June 14, 2000.
2. "Reporting Requirement Burden Reduction," NEI Licensing Action Task Force list.
3. Risk-Informed Improvements to NRC (10 CFR Part 50) Technical Regulations, NEI Survey Results, NEI letter to NRC (Colvin to Meserve), January 19, 2000.
4. "Risk-Informed Technical Specifications," 8 initiatives from NEI project description, May 2001.
5. Environmental Qualification Topics.

APPENDIX 1

Meeting with NRC Office of Research

Unnecessary Regulatory Burden

June 14, 2000



Radiation Protection

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 19.13(b) – advise workers annually of their dose	Revise requirement to only advise workers of their dose upon request or if workers received >100 mrem/yr (general public dose limit)	Information is not useful to workers – workers have means to routinely access their own dose information onsite, always available upon request if worker is no longer onsite.	Administrative cost for letter generation, reviews, mailing estimated at \$6K per year.
10 CFR 20.1904 – each container of licensed material must be labeled; the label must contain specified information	Revise the requirement so that individual containers inside a radiologically posted area (RPA) do not require labeling unless the container's dose rate/contamination level is greater than ambient for the RPA.	Inside a RPA, all material is presumed to be potentially radioactive; no value added to worker maintaining dose ALARA unless level of radioactivity of container is above ambient.	\$50K per year per site; \$250K total (technician and supervisory person-hours)
10 CFR 20.2104 – determination of prior occupational dose requires an attempt to obtain records of cumulative occupational dose	Revise requirement so that an attempt to obtain records of cumulative occupational dose is not required except for a planned special exposure	Cumulative occupational dose information is not useful since all dose limits are annual.	\$100K per year per site; \$500K total
Occupational Radiation Exposure Report (Technical Specifications) - submit an annual report of personnel receiving > 100 mrem in a format consistent with Regulatory Guide 1.16	Eliminate report requirement	Data for specific areas could be provided on an as-needed basis. Dose data is already reported annually to NRC per 10 CFR 20.2206. The information developed for this report is not used by us.	\$30K annual savings from eliminating administrative cost to input data, generate reports, resolve discrepancies

Fitness for Duty

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 26.3 – definition of suitable inquiry requires best-effort verification of employment history for past 5 years	Reduce best-effort verification of employment history to 3 years	Current definition permits a check to 3 years if unable to obtain any further information	Background investigation cost reduced by approximately 40%, resulting in \$60K annual savings
10 CFR 26, Appendix A, Section 1.2 – definition of permanent record book requires a permanent record book	Eliminate the permanent record book	All the information recorded in it is redundant to the information recorded on the chain of custody forms and entered into the FFD Information System	Administrative cost savings (i.e., data entry, maintenance of books, auditing books) of \$50K/year
10 CFR 26, Appendix A, Section 2.1(a) – requirement to test for drugs on a for-cause alcohol test	Eliminate requirement to perform urinalysis test for drugs as a result of an "odor-of-alcohol" occurrence	Cause for test was alcohol, not drugs; experience indicates no positive results from urinalysis for drugs	Cost of individual's time pending outcome of urinalysis plus cost of urinalysis – \$9K/year
10 CFR 26, Appendix A, Section 2.7(e)(1) – initial and confirmatory tests cut-off level of 300 ng/ml for opiate metabolites	Increase opiate metabolite cut-off level to 2000 ng/ml for initial and confirmatory tests	DOT regulation changed to increased cut-off level of 2000ng/ml; experience indicates positive initial test results at 300ng/ml do not result in access being denied	Cost of individual's time pending outcome of laboratory results plus cost of laboratory analysis – \$165K/year
10 CFR 26 Appendix A Section 2.8(c)(3) - a minimum of 10 percent of all test samples shall be quality control specimens	Reduce percentage of quality control specimens to 0	Laboratories used are inspected by the NRC and certified by DHHS, without performance issues, additional control checks provide no benefit	\$10.4K annual savings from reduction in administration and laboratory costs

Physical Protection

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 73.1(a)(i) and (ii) – requirement to protect against radiological sabotage involving an insider threat	Eliminate the requirement to protect against the insider threat	Compliance with 10 CFR 26 and 10 CFR 73.56 establishes the basis that all persons inside the protected area with unescorted access are trustworthy and reliable; therefore the insider threat is not credible	\$100K savings in personnel reduction per site; \$500K total
10 CFR 73.21(b)(1)(i) through (iv) and (xi) through (xiii) – requirements to classify and maintain/protect information, not critical to the defense of the facility, as Safeguards Information	Eliminate requirements and only classify defensive plans and number of armed responders as Safeguards Information	Information currently listed in identified sections is not relevant to today's defensive strategies and knowledge of this information would not allow unauthorized or undetected access to a facility or compromise response capability	\$114K Safeguards Information handling/storage costs across 5 sites
10 CFR 73.55(c)(5) – lighting requirement of 0.2 ft.-candles in all exterior areas within protected area (PA) beside the isolation zone	Eliminate 0.2 ft.-candle lighting requirement from all other areas within the PA beside the isolation zone	0.2 ft.-candle lighting within the PA does not add any value to assessing the threat which occurs at the isolation zone and is the point at which security personnel initiate actions to neutralize the threat	\$18K savings in lighting maintenance costs across 5 sites

Physical Protection

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 73.55(d)(4) – requirement that vehicles in the PA be escorted by a member of the security organization	Eliminate the requirement for vehicles entering the PA to be escorted by a member of the security organization	Vehicles would be driven/escorted by individuals badged and granted unescorted access, whose trustworthiness and reliability has been established in accordance with 10 CFR 26 and 10 CFR 73.56.	\$100K savings in security force reduction per site; \$500K total
10 CFR 73.57 - fingerprints for persons to be granted unescorted access must be submitted to the FBI through the NRC with the results returned through the NRC	Eliminate NRC as the intermediary in the criminal history check	The submittal and return through the NRC adds no value and delays obtaining the results for 2 to 6 months versus 24 to 48 hours if we were allowed to submit electronically directly to the FBI	
10 CFR 73.56 - develop information, in part, concerning an individual's credit history, education, and military service prior to granting unescorted access	Eliminate requirement to perform credit, education, and military service checks	These checks have resulted in no denial of unescorted access and provide no value	\$82.5K annual savings by eliminating unnecessary checks
10 CFR 73.55 - requires certain areas and equipment to be designated as vital	Eliminate vital area and equipment designation	Focus of security is now to protect target sets needed to achieve and maintain safe shutdown, the vital designation is no longer meaningful	\$50K annual savings by eliminating costs for maintenance, repair, and compensatory measures

Emergency Preparedness

Unnecessary Regulatory Burden	Proposed Reduction In Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 50.47(c)(2) - plume exposure pathway emergency planning zone (EPZ) shall consist of an area of about 10 miles in radius	Reduce EPZ to five mile radius	Revised source terms	Siren maintenance costs reduced \$200K/yr Public information brochure distribution cost reduced \$47K/yr
NUREG-0654, Appendix 4 - as local conditions change, the evacuation time estimate should be updated	Eliminate requirement to update evacuation time estimates (ETE)	Information is not used for emergency preparedness	\$25K savings from eliminating administrative cost to update ETE

Nuclear Fuels

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 50.36(c)(1)(i)(A) has been interpreted to require including the value of the minimum critical power ratio (MCPR) in the safety limits section of Technical Specifications	Relocate the value of the MCPR safety limit to a licensee controlled document (e.g., core operating limits report) so that it can be revised under the 10 CFR 50.59 process	The NRC has approved vendor topical reports that provide the methodology we use for determining cycle-specific MCPR safety limits	One technical specifications change request per year - \$75K
10 CFR 50.36(c)(5) has been interpreted to require listing in the administrative controls section of Technical Specifications the methodologies (i.e., topical report number, title, date, revision) used to determine the limits in the core operating limits report (COLR)	Relocate this information to the COLR so that it can be revised under the 10 CFR 50.59 process	All the methodologies listed have been approved by the NRC.	One technical specifications change request per year - \$75K
10 CFR 50.46(a)(3)(ii) – requirement to submit a 30 day report any time the absolute value of peak cladding temperature (PCT) changes by >50°F and an annual report for any change	Eliminate these reporting requirements	This is the only core parameter whose calculated value is required to be reported to the NRC. This parameter only needs to be tracked internally by the licensee and available for NRC inspection upon request.	\$20K per year for annual report and one 30 day report

Nuclear Fuels

<p>10 CFR 50, Appendix K, Section I.A.4 - requirement that decay heat rate be 1.2 times the value calculated using the 1971 ANS Standard</p>	<p>Use more realistic approach for calculating heat generation rates from radioactive decay of fission products</p>	<p>The current requirement applies an unnecessary and unrealistic conservatism</p>	<p>Result would be lower calculated PCT that will allow relaxation of ESF equipment performance assumptions (e.g., diesel generator start time, ECCS pump flow, valve stroke time). Cost savings potential in \$M.</p>
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Reporting Requirements

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 26.71(d) - submittal of fitness-for-duty (FFD) program performance data every six months	Eliminate requirement to submit the data	FFD program performance data will still be collected, compiled and available for inspection	\$8K annual savings from eliminating administrative cost to submit data
10 CFR 50.4(b)(6) - submit signed original and 10 copies of updated final safety analysis report (UFSAR) replacement pages to the Document Control Desk (Note: this also applies to other documents periodically updated that are referenced in UFSAR, e.g., fire protection report, etc.)	Eliminate requirement to include 10 copies of updated document replacement pages	Now that NRC is using ADAMS and reducing dependency on paper copies of documents, it no longer makes sense to send the Document Control Desk 10 copies	\$4 K annual savings by eliminating administrative cost to prepare 10 additional copies of each updated document
10 CFR 50.36a(a)(2) - submit annual radioactive effluent reports	Eliminate requirement to submit an annual report	10 CFR 50 Appendix I Section IV.A requires the NRC be notified if actual release during any calendar quarter would exceed one-half the design objective annual exposure; otherwise routine information available for inspection	\$8K savings annually by eliminating cost to submit report
10 CFR 50.54(p)(2) and 10 CFR 72.44(e) - submit within 2 months changes made to physical security plans without prior NRC approval	Eliminate requirement to submit changes made without prior NRC approval	Submittal is of informational nature only, physical security plans are available for inspection as are any related evaluations of changes made without NRC prior approval	\$6K savings by eliminating cost to submit changes

Reporting Requirements

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 50.54(q), 10 CFR 50 Appendix E Section V, and 10 CFR 72.44(f) - submit within 30 days any changes made to the emergency plan or implementing procedures without prior NRC approval (Note: 10 CFR 72.44(f) is similar requirement but allows six months)	Eliminate requirement to submit changes made without prior NRC approval	Submittal is of informational nature only, emergency plan and implementing procedures are available for inspection as are any related evaluations of changes made without NRC prior approval	\$10K savings by eliminating cost to submit changes
10 CFR 50.54(w)(3) - annual property insurance coverage report specifying level of insurance maintained and its source	Eliminate requirement to submit report	10 CFR 50.54(w)(1) specifies amount of insurance required and acceptable sources, a licensee is required to comply with the regulations, submittal of the information annually serves no purpose and is not required in the case of other regulations to demonstrate compliance	\$4K annual savings from eliminating cost to submit report
10 CFR 50.54(bb) - submit to NRC for review and preliminary approval the irradiated fuel management and funding plan and notify the NRC of any future significant changes	Eliminate requirement to submit plan and future notifications	In part, the information required is redundant to that required by 10 CFR 50.82 in the post-shutdown decommissioning activities report and the site specific decommissioning cost estimate. Also, if a licensee chooses dry cask storage, the NRC is notified in accordance with 10 CFR 72.	\$10K savings from eliminating cost to submit plan and future notifications

Reporting Requirements

Unnecessary Regulatory Burden	Proposed Reduction in Regulatory Burden	Basis for Proposed Reduction	Estimated Cost Savings
10 CFR 50.59(b)(2) and 10 CFR 72.48(b)(2) - periodically submit a summary of 10 CFR 50.59 and 10 CFR 72.48 evaluations	Eliminate requirement to submit summary reports	The completed evaluations are available for inspection, the submittal is of only informational nature	\$125K savings annually by eliminating cost to submit report
10 CFR 50.71(b) - submit the annual financial report, including the certified financial statements, upon issuance of the report	Eliminate requirement to submit report	Submittal is of informational nature only, the annual report is available for inspection	\$2K annual savings from eliminating cost to submit report
10 CFR 72.44(d)(3) - submit an annual report of radioactive effluents	Eliminate requirement to submit report for dry cask storage types which do not have effluents	No value added to submit a report of effluents when by design no effluents will occur and the NRC acknowledges this in the cask safety evaluation	\$1K annual savings from eliminating cost to submit report
10 CFR 140.21 - submit annually evidence of guarantee of payment of deferred premiums	Eliminate submittal requirement	Submittal is of informational nature only and the reporting requirement is redundant to base regulation 10 CFR 140.11 which a licensee must be in compliance	\$4K annual savings from eliminating cost to submit report

APPENDIX 2

Reporting Requirement Burden Reduction

A list of current reporting requirements to consider for revision or elimination is provided below. The list was prepared by the NEI Licensing Action Task Force and first discussed with the NRC staff at a public meeting on September 19, 2000. It is derived from (1) a list of reporting requirements maintained by TXU Electric for the Comanche Peak Steam Electric Station and (2) a list of proposed rule changes provided by Commonwealth Edison at a meeting with the NRC Office of Research on June 14, 2000.

1. 10 CFR 26.71, Recordkeeping requirements [26.71(d)]

Submit fitness-for-duty (FFD) program performance data every six months.

CHANGE: Eliminate the requirement to submit data.

JUSTIFICATION: FFD program performance data will be collected and compiled. It is available for on-site inspection.

2. 10 CFR 50.4, Written communications [50.4(h)(6), Updated FSAR]

Submit signed original and 10 copies of updated final safety analysis report (FSAR) replacement pages to the Document Control Desk (Note: this includes other documents periodically updated that are referenced in UFSAR, e.g., fire protection report, etc.)

CHANGE: Eliminate the requirement for multiple copies.

JUSTIFICATION: ADAMS reduces the need for multiple paper copies. This issue is also addressed in RIS 2001-05, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or by CD-ROM."

3. 10 CFR 50.36a, Technical specifications on effluents from nuclear power plants [50.36a(a)(2)]

Submit an annual radioactive effluent report.

CHANGE: Eliminate the requirement to submit an annual report.

JUSTIFICATION: Appendix I to 10 CFR 50 (*Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents*) contains data collection requirements. The data are available for on-site inspection.

4. 10 CFR 50.46, Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors [50.46(a)(3)(ii)]

Submit an annual report of changes or errors in the ECCS evaluation model. If a change or error is significant, submit within 30 days.

CHANGE: Eliminate the requirements for these reports.

JUSTIFICATION: This is the only calculated core parameter that is required to be reported to the NRC. It is monitored by the licensee and is available for on-site inspection. Report, when necessary, in accordance with 10 CFR 50.72 and 50.73.

**5. 10 CFR 50.54, Conditions of licenses [50.54(p)(2), site security plans];
10 CFR 72.44, License conditions [72.44(e), ISFSI security plans]**

Submit a report of each change to a security plan made without prior NRC approval. Submit within 2 months after the change is made.

CHANGE: Eliminate the requirement to submit changes made without prior NRC approval.

JUSTIFICATION: The reports are "informational." Security plans and procedures, including documentation of changes, are available for on-site inspection.

**6. 10 CFR 50.54, Conditions of licenses [50.54(q), site emergency plans];
10 CFR 72.44, License conditions [72.44(f), ISFSI emergency plans]**

Submit a report of each change to an emergency plan made without prior NRC approval. Under 50.54(q), submit within 30 days after the change is made. Under 72.44(f), submit within six months.

CHANGE: Eliminate the requirement to submit changes made without prior NRC approval.

JUSTIFICATION: The reports are "informational." Emergency plans and procedures, including documentation of changes, are available for on-site inspection.

7. 10 CFR 50.54, Conditions of licenses [50.54(w)(3), insurance]

Submit an annual insurance/financial-security report on April 1.

CHANGE: Eliminate the requirement for this report.

JUSTIFICATION: Licensees must comply with 10 CFR 50.54(w)(1), which specifies the required amount and acceptable sources of insurance. Compliance can be verified by inspection.

8. **10 CFR 50.54, Conditions of licenses [50.54(bb), irradiated fuel management after cessation of reactor operation]**

Submit written notification of the program a licensee plans to use to manage and provide funding to manage irradiated fuel following permanent cessation of reactor operation (before title to the fuel is transferred to DOE for disposal in a repository). Submit within 5 years before OL expiration, or within 2 years following permanent cessation. Notify NRC of significant changes to the program described in the initial notification.

CHANGE: Eliminate the requirement for initial and subsequent notifications.

JUSTIFICATION: In part, the information is redundant to that required by 10 CFR 50.82 in the post-shutdown decommissioning activities report and the site-specific decommissioning cost estimate. Also, if a licensee uses on-site dry cask storage, the NRC is notified in accordance with 10 CFR 72.

9. **10 CFR 50.59, Changes, tests, and experiments [50.59(d)(2)]**
10 CFR 72.48, Changes, tests, and experiments [72.48(b)(2)]

Submit a summary report of changes, tests, and experiments. Operating reactor licensees submit at intervals not to exceed 24 months. ISFSI licensees submit at least annually.

CHANGE: Eliminate the requirement to submit summary reports of changes, tests, and experiments.

JUSTIFICATION: The reports are "informational." Licensee evaluations are available for on-site inspection.

10. **10 CFR 50.71, Maintenance of records, making of reports [50.71(b)]**

Submit an annual financial report, including certified financial statements.

CHANGE: Eliminate requirement to submit report.

JUSTIFICATION: The submittal is "informational." It is available for on-site inspection.

11. **10 CFR 50.75, Reporting and recordkeeping for decommissioning planning [50.75(f)(1)]**

Submit reports on the status of decommissioning funding at least once every 2 years.

CHANGE: After the initial submittal (March 31, 1999), update the report only if the funding approach changes, upon merger or acquisition, or approximately 5 years before decommissioning (as part of the decommissioning plan).

12. 10 CFR 72.44, License conditions [72.44(d)(3)]

Submit an annual report of radioactive effluents (licensees authorized to receive, handle, and store spent fuel or high-level radioactive waste).

CHANGE: Eliminate the requirement to submit a report for dry cask storage types that do not have effluents.

JUSTIFICATION: NRC safety evaluations for dry storage casks acknowledge designs that preclude effluents.

13. 10 CFR 140.15, Proof of financial protection [140.15(b)(1)]

File annual financial statements.

CHANGE: Consider deleting this requirement.

JUSTIFICATION: Determine the regulatory need for this report. If it is not reviewed and used by NRC staff for an identified purpose, it should be eliminated.

14. 10 CFR 140.21, Licensee guarantees of payment of deferred premiums

Submit evidence annually of guarantee of payment of deferred premiums.

CHANGE: Eliminate this requirement.

JUSTIFICATION: The submittal "informational." It is redundant to 10 CFR 140.11 (Amounts of financial protection for certain reactors).

15. Standard Tech Spec 5.6.4, Monthly Operating Report

Monthly report of operating statistics and shutdown experience.

CHANGE: Eliminate requirement from Technical Specifications.

JUSTIFICATION: Determine the regulatory need for this report. Elimination would reallocate approximately 600 man-hours per year per unit.

APPENDIX 3



NUCLEAR ENERGY INSTITUTE

Joe F. Calvin
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

January 19, 2000

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Chairman Meserve:

There is general support in the industry for the overall approach on improving NRC technical requirements proposed by the NRC staff in SECY 99-264, *Proposed Staff Plan for Risk-Informing Technical Requirements in 10 CFR Part 50*.

We have been working on risk-informed improvements to fire protection, security, and technical specifications for a number of years. It is important to achieve a satisfactory conclusion to these three projects as soon as possible. Such an accomplishment, together with a successful industrywide implementation of the new NRC oversight process, will provide a clear signal that the effectiveness and efficiency of the NRC regulatory regime is being improved.

The industry believes that resources for risk-informed improvements to NRC technical requirements (SECY 99-264) should focus first on:

- 10 CFR 50.46, *Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors*, including Appendix K to Part 50, and
- Rulemaking on 10 CFR 50.44, *Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors*.

Section 50.46 and its accompanying appendix, Appendix K to Part 50, are central elements in the regulatory regime for nuclear power plants. They are directly linked to numerous NRC regulatory requirements and guidance documents. A better understanding of the safety and economic benefits from Section 50.46 (including Appendix K) improvements will provide an important basis for justifying and planning future risk-informed improvements to NRC technical requirements. The recent NEI survey on risk-informed improvements to NRC technical requirements (see Enclosure) indicates a potential resource benefit from Section 50.46 enhancements of up to \$3 million/unit/year while providing for an increased focus on safety-significant matters.

- **10 CFR 50.61, Fracture toughness requirements for protection against pressurized thermal shock events**
- **10 CFR 50.68 – Criticality accident requirements**
- **Appendix A to Part 50, General Design Criteria and associated regulatory guidance documents: Criteria 13, 35, 36, 37, 38, 39, 40, 54, and 56**
- **Appendix B to Part 50, and associated regulatory guidance documents**
- **Appendix E to Part 50, Emergency Planning and Preparedness for Production and Utilization Facilities**
- **Appendix G to Part 50, Fracture Toughness Requirements**
- **Appendix H to Part 50, Reactor Vessel Material Surveillance Program Requirements**
- **Appendix J to Part 50, Primary Reactor Containment Leakage Testing for Water-Cooled Power**

- GDC 4, Appendix A to Part 50, and the associated regulatory guidance documents that are linked to pipe-whip and dynamic effects – Estimated benefit of between \$100k and \$500k/unit/year based on input from 19 units.
- Environmental qualification of electric equipment important to safety for nuclear power plants, 10 CFR 50.49 – Estimated benefit between \$100k and \$300k/unit/year based on input from 28 units. Unclear from the responses as to what portion of the estimated benefit would be derived from SECY 99-256 (Option 2) activities.
- Standards for combustible gas control system in light-water-cooled power reactors, 10 CFR 50.44 – Estimated benefit of approximately \$200k/unit/year based on input from 24 units.
- GDC 19, Appendix A to Part 50, and associated regulatory guidance documents linked to Control Room Ventilation – Estimated benefit \$100k - \$250k/unit/year based on input from eight units.
- GDC 17, Appendix A to Part 50, and associated guidance documents, Electric Power Systems - Estimated benefit of approximately \$300k/unit/year based on input from five units.

Other NRC Regulations Identified as Possible Candidates for Improvement

This list represents regulations identified as potential candidates for improvement by less than five units or whose estimated potential benefit is less than \$50,000/unit/year.

- 10 CFR 50.62, Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants
- 10 CFR 50.34, Contents of applications; technical information – need for regulatory consistency
- 10 CFR 50.71, Maintenance of records, making of reports – linked to changes in Section 50.34
- 10 CFR 50.54, Conditions of licenses
- 10 CFR 50.59, Changes, tests and experiments – to be assessed following the implementation of recent Section 50.59 amendments and SECY 99-256 (Option 2) activities
- 10 CFR 50.72, Immediate notification requirements for operating nuclear power reactors – to be assessed following experience with implementing the recent Section 50.72 amendments
- 10 CFR 50.73 – to be assessed following experience with implementing the recent Section 50.73 amendments

**Risk-Informed Improvements to NRC (10 CFR Part 50)
Technical Regulations
NEI Survey Results**

General Summary

The list of regulations encompasses changes to associated regulatory guidance documents¹. It is possible that there would be minimal or no change to the referenced regulation, but substantial change to the regulatory guidance documents.

Sixty-one units (59 percent of licensed units) responded to the October 1999 NEI survey.

The majority of the respondents emphasized that resources should be first focused on those regulatory improvement activities that have already started, especially:

- Fire protection, 10 CFR 50.48 and Appendix R
- Technical Specification activities
- Security, 10 CFR Part 73

NRC Regulations Identified as Prime Candidates for Assessment and Change

The regulations listed represent feedback from at least five or more units with an estimated potential benefit in excess of \$50,000/unit/year.

- LOCA, ECCS analyses – 10 CFR 50.46 and Appendix K to Part 50 – Estimated range of benefits² \$25k/unit/year to \$3 million/unit/year based on input from 37 units. The larger estimates included benefits from revenue enhancements, but do not include averted costs.
- Codes and Standards, 10 CFR 50.55a – Estimated benefit ranged between \$200k and \$500k/unit/year based on input from 26 units. Improvements are not dependent on changes to consensus codes and standards documents.

¹ The term "regulatory guidance documents" includes: NRC regulatory guides, NUREGS, the NRC Standard Review Plan, NRC Branch Technical positions, and industry consensus standards, e.g., IEEE 279, ASME Section XI, etc., that are referenced in NRC guidance documents or regulations.

² The benefit estimates do not include costs associated with reductions in revenue (averted costs).

The Honorable Richard A. Meserve
January 19, 2000
Page 2

We agree that there is sufficient analysis from the work performed in support of the NRC Safety Evaluation Report on the hydrogen recombiner exemption for Southern California Edison's San Onofre Nuclear Generating Station to enable an immediate rulemaking for improving 10 CFR 50.44.

The industry has been impressed by the dedication and work of the NRC staff in improving the efficiency and effectiveness of the NRC regulatory regime during 1999. If you have any questions on our suggestions, please contact me or Mr. Ralph Beedle (202-739-8088), or have the staff contact Mr. Steve Floyd (202-739-8078).

Sincerely,



Joe F. Colvin

Enclosure

- c The Honorable Greta Joy Dicus, Commissioner, NRC**
- The Honorable Nils J. Diaz, Commissioner, NRC**
- The Honorable Edward McGaffigan Jr., Commissioner, NRC**
- The Honorable Jeffrey S. Merrifield, Commissioner, NRC**
- Dr. William D. Travers, Executive Director for Operations, NRC**

APPENDIX 4

RISK-INFORMED TECHNICAL SPECIFICATION INITIATIVES

INITIATIVE	TITLE
1	Technical Specification Actions - End States
2	Missed Surveillance - SR 3.0.3
3	Increase Flexibility in Mode Restraints - LCO 3.0.4
4a	Individual Risk-Informed AOTs
4b	Risk-Informed AOTs with CRMP/MR Backstops
5a	Relocate SRs Not Related to Safety to Licensee Control
5b	Relocate STIs of all SRs to Licensee Control
6a	Modify LCO 3.0.3 Actions and Timing 1 hour to 24 hour AOT
6b	Provide Conditions in the LCOs for those Levels of Degradation where no Condition Currently Exists
6c	Provide Specific Times for those Conditions that Require Entry into LCO 3.0.3 Immediately
7	Non-TS Support-System Impact on TS LCOs
8	Remove/Relocate All Non-Safety Systems & Non-Risk-Significant Systems out of TS

AOT = Allowed Outage Time
 CRMP = Component Reliability Monitoring Program
 LCO = Limiting Condition for Operation
 MR = Maintenance Rule
 SR = Surveillance Requirement
 STI = Surveillance Test Interval
 TS = Technical Specifications

Discussion of initiatives

Initiative 1: Revise action requirements, where appropriate, to specify hot shutdown versus cold shutdown as endstate.

Current technical specification action requirements generally require that the unit be brought to cold shutdown when the limiting condition for operation for a technical specification system has not been met. Depending on the system, and affected safety function, the requirement to go to cold shutdown may not represent the most risk effective course of action. For example, steam driven equipment that could be used as a source of injection or makeup is rendered nonfunctional during cold shutdown, thus removing a potential success path for mitigation of initiating events. To address this situation, each owners group will prepare a qualitative risk analysis providing the basis for changes to this action requirement where appropriate (generally changing the end state from cold shutdown to hot shutdown). The CEOG and BWROG analyses have already been submitted to NRC. The revised technical specification pages (traveler) will be submitted following issuance of NRC safety evaluations on these reports. The remaining owners groups will be expected to develop technical bases to support their inclusion in this initiative later this year.

Initiative 2: Revise requirement to shutdown in event of missed surveillance

Existing technical specifications require that the limiting condition for operation be entered, potentially leading to a plant shutdown requirement, if a missed surveillance cannot be performed within a specified grace period, following discovery. In certain cases, a missed surveillance cannot be performed without a mode change, and the risk impact of a mode change is generally greater than that involved in deferring the surveillance. In most cases, the equipment remains capable of performing its function even though a surveillance has been missed. The proposed change allows that an unintentionally missed surveillance may be treated as an emergent condition and rescheduled through the licensee's 10 CFR 50.65(a)(4) configuration risk management program for performance at the appropriate opportunity, up to the time of the next schedule surveillance. The change is not intended to allow intentional missing of surveillances, and all missed surveillances must be entered into the plant's corrective action program, which is subject to NRC inspection.

Initiative 3: Increased flexibility in mode restraints

LCO 3.0.4 specifies that the plant cannot go to higher modes (move towards power operation) unless all technical specification systems normally required for the higher mode are operable. (There are some existing exceptions to this requirement). In contrast, if already in the higher mode, and the same system is inoperable, plant operation is allowed

to continue for the duration of the allowed outage time. The purpose of this initiative is to resolve this discrepancy, by allowing entrance into the higher mode with the system inoperable, and entering the LCO applicable to the higher mode. This provides additional operational flexibility and, for the majority of systems, does not represent a risk increase from the current requirements. Each owners group has prepared a generic qualitative risk analysis comparing the at-power risk with the risk in lower modes. These evaluations have identified a limited number of systems that should retain the restriction on entering the mode of applicability, unless justified by plant specific analysis. A plant mode change, with equipment out of service, is also required to be evaluated under 10 CFR 50.65(a)(4), with regard to the prevailing plant configuration, and this evaluation must be taken into account in addition to the above qualitative risk analyses.

Initiative 4: Replacement of allowed outage times with configuration risk management approach

Current technical specifications contain equipment-specific outage times, limiting conditions for operation, and action statements (e.g., if the diesel generator is inoperable, restore within 7 days. If not restored, take actions to proceed to plant shutdown within 24 hours.) Current technical specifications address systems that directly support other systems, but otherwise do not generally account for the combined risk impact of multiple concurrent out of service conditions. The maintenance rule configuration risk assessment requirement was added to address this consideration, but does not obviate compliance with current technical specifications requirements. These current requirements may present inconsistencies with the maintenance rule requirement, and may require plant shutdown, or other actions, that are not the most risk-effective actions given the specific plant configuration. The overall objective of this initiative is to modify the technical specifications to reflect a configuration risk management approach that is more consistent with the maintenance rule (a)(4) approach.

The scope of this initiative is limited to those action requirements and limiting conditions for operation that address configuration and operability of plant equipment, and are thus amenable to a risk assessment process. Existing technical specification actions and limiting conditions relative to plant parameters, such as fuel limits, pressure limits, or power-flow distribution maps, would not be affected. Further, this initiative applies to systems, components, and equipment that are explicitly addressed by technical specifications. Initiative 7 addresses the treatment of design features that are implicitly captured into technical specifications through the definition of OPERABILITY.

The intent of this initiative is to address situations where the equipment's primary safety function is not available. Initiative 7 is intended to address situations where design features required for low probability initiating events are degraded, but the system's primary safety function is maintained.

Under the current technical specifications, if the licensee encounters an equipment out of service condition resulting in a shutdown requirement that is contrary to the actual risk significance, the licensee would likely contact NRC and request expedited notification of enforcement discretion, using the risk analysis to support a one-time deferral of the shutdown requirement for an agreed-upon time frame. This initiative can be viewed as establishing a uniform action for this process, and codifying it into the technical specifications themselves.

A fundamental consideration is the scope and quality of the risk analysis necessary to support adaptation. Analysis scope (e.g., the need or expectation to quantitatively address fire and other external events, shutdown risk, and transition risk) is of particular importance, as there are currently few plants with full scope risk analyses. A related issue involves the degree to which the approach can be tailored to accommodate different levels of risk analysis scope and/or quality. A final issue involves the need to delineate risk management actions (based on the risk assessment results) in a more explicit fashion than currently allowed through the (a)(4) implementation guidance. However, the basic philosophy and approach of the (a)(4) guidance should provide an appropriate foundation for this activity.

The configuration risk management approach can be adopted to the existing format and content of technical specifications, without the need for rulemaking to 10 CFR 50.36. This is effected through the following modifications:

1. Develop a "backstop" allowed outage time, that would provide the maximum allowable outage time for a specific system. The intent is to preserve the design basis and not allow de facto permanent plant changes through extended equipment outages for low risk significant systems. The existing allowed outage time would also be maintained as an option, should the plant not wish to use the configuration management approach (see item 2 below) for a given situation. However, even in this case a maintenance rule (a)(4) assessment would always be required.
2. Provide an alternative action requirement, upon entry into an LCO, to perform a configuration risk assessment and determine an appropriate allowed outage time, up to the backstop, reflective of the existing plant configuration (and subject to change based on emergent conditions).
3. Delineate requirements for timely performance of the assessment and performance of risk management actions, up to plant shutdown, based on the assessment result.
4. Add a programmatic description of the configuration risk management program to the administrative controls section.

In addition to the above, a longer term approach is under consideration to provide more significant changes to the fundamental structure of technical specifications. This would

require rulemaking to 10 CFR 50.36, and would replace the current system of allowed outage times, limiting conditions for operation, action requirements, and surveillance requirements in its entirety. The new structure would include requirements to manage and maintain risk metrics (e.g., core damage, large early release) within specified values, addressing instantaneous risk, integrated risk, and cumulative risk.

Initiative 5: Removal of surveillance test intervals to licensee controlled risk-informed program

Current technical specifications provide specific surveillance requirements and surveillance test intervals. Compliance with these requirements is necessary to retain operability of the equipment, and avoid entrance into action requirements. The surveillance requirements address function of the primary safety systems as well as instrumentation and control logic, etc.

The goal of this initiative is to develop a risk-informed process that would establish surveillance intervals based on risk insights, equipment availability and reliability factors, performance history, etc. Upon development and approval of this process, the intent would be to retain the existing surveillance requirements in the technical specifications, but to remove the equipment-specific surveillance test intervals. Test intervals would be controlled through the above process and described in a licensee controlled document. Again, backstops could be established and retained in the technical specifications, if necessary. Fundamental considerations for the methodology to derive risk-informed surveillance intervals should not differ substantially from those previously addressed in the development of risk-informed inservice testing, as approved by NRC. Issues of risk analysis scope and quality would pertain, similar to those for the allowed outage time initiative.

Initiative 6: Modify limiting condition for operation 3.0.3

This LCO provides for immediate action to initiate plant shutdown if a specific LCO is not met, and its associated actions are not met. This LCO covers many potential situations, and for some of these, immediate plant shutdown is not the most risk effective course of action for the specific configuration. A configuration risk management approach, similar to that described in initiative 4 above, can be employed to determine more appropriate allowed outage times. Additionally, configuration-specific AOTs could be developed for certain configurations currently result in entrance into Technical Specification 3.0.3 (this is essentially a pre-evaluated risk analysis). The same general considerations apply to this initiative as to initiative 4.

Initiative 7: Provide deferred entry into LCO for degraded conditions involving design features that are not specifically addressed by technical specifications

Currently, the definition of OPERABILITY requires that a system or device be capable of performing its specified safety functions, and if not met, the limiting condition for operation (LCO) must be entered, often leading to plant shutdown requirements. The specified safety functions are derived from the accident analyses described in the updated final safety analysis report. Currently, the LCO may be entered because the ability to function in a postulated design basis event is temporarily affected by a maintenance activity, or other condition in the plant. Often, the postulated event is a very low probability occurrence, and the overall safety function is still available for the vast majority of anticipated challenges. As an example, an injection system may be fully capable of delivering design flow and pressure, but its ability to function following a high energy line break may be affected because barriers pertinent to that function are temporarily affected by maintenance activities.

NRC generic letter 91-18 provides general guidance on the treatment of degraded conditions with respect to operability; however, this guidance is limited with respect to treatment of maintenance activities, is not risk-informed, and predates the promulgation of the maintenance rule configuration assessment requirement. Implementation guidance for this section of the maintenance rule discusses the need to address temporary plant alterations through risk analysis and management, but the use of the (a)(4) approach does not relieve technical specification compliance issues. Thus, the intent of this initiative is to reduce existing inconsistency with the maintenance rule relative to design features not contained directly in the technical specifications. A similar issue exists relative to component lists (e.g., snubbers, containment penetration overcurrent protection, motor thermal overloads) that were removed from the body of technical specification through the improved standard technical specifications, but whose function is implicit to operability. Initiative 7 could not address these items, as they will be handled through a separate effort.

The goal of this initiative is to develop a risk-informed approach that allows for deferred entry into an LCO for situations involving temporary degradation of design features. The deferral time would be a function of the frequency of the initiating event for which the design feature provides protection. The maintenance rule (a)(4) assessment would be controlling, since it addresses the specific plant configuration at the time of the degradation, but the deferral time would be expected to be consistent with the (a)(4) approach for most situations.

The proposed change would be effected through a new limiting condition for operation, 3.0.9, which would reference a basis listing of the deferral times. Simplified risk analysis, based on initiating event frequencies, would be used to determine the deferral times. Some restrictions may be necessary relative to simultaneous treatment of redundant trains.

Initiative 8: . Remove/relocate non safety systems and non risk significant systems out of scope of technical specifications

This initiative would reform the scope of technical specifications to address systems that truly meet the current 50.36 scoping criteria. Some systems in existing standard technical specifications are not believed to meet the three deterministic criteria, nor to be risk significant. A more fundamental consideration for long term technical specification reform, should rulemaking be considered, would be to modify the scope to address only risk significant systems.

APPENDIX 5

Equipment Qualification Topics - Burden Reduction Initiative

1. Focus on Risk-Significant Periods for Long-Term Post Accident Operability *
2. Permit Graded Qualification Methods Based on Equipment Risk Significance *
3. Permit Graded Qualification Methods Based on Severity of Accident Environment *
4. Alternative Qualification Methods for Equipment Exposed to Radiation-Only Harsh Conditions *
5. Permit Use of Realistic (Best-Estimate) Methods to Define Accident Environment Steam Conditions*
6. Permit Use of Realistic Methods to Define Accident Environment Radiation Conditions*
7. Permit Flexibility When Establishing EQ-Required Maintenance, Surveillance, & Replacement Intervals *
8. Clarify Guidance-Only Status of Regulatory Guide 1.97 *
9. Reaffirm 10 CFR 50.49 Regarding Equipment Scope

* Topics raised in the context of the NRC Program for Elimination of Requirements Marginal to Safety (NRC Workshop, April 27 - 28, 1993).

1. Focus on Risk-Significant Periods for Long-Term Post Accident Operability

Discussion: The operating time provisions of 10 CFR 50.49 should be limited to the ‘mitigation phase’ and possibly the initial portion of the ‘recovery phase’ of applicable accidents. Based on 10 CFR 50.49 and NRC guidance document statements regarding the need to qualify equipment for the “duration of the accident function”, licensees have established operating times for equipment operating in the ‘accident recovery’ phase that range from 30 days to over 1 year. Numerous risk-based documents, including the NRC-sponsored NUREG/CR-5313, *EQ Risk Scoping Study*, indicate that the risk significant period is limited to the first days of an accident (i.e., accident mitigation phase) and EQ issues associated with long term post-accident equipment operability are not risk significant. Accordingly, the operating time provisions of 10 CFR 50.49 should be interpreted as being limited to the first few days or weeks post-accident. For equipment that could be used as part of long-term accident recover actions, equipment operability should be addressed under accident management or plant recovery actions. If risk based insights identify risk significant equipment operations during the recovery phase then the provisions of 50.49 could be selectively applied to such equipment.

2. Permit Graded Qualification Methods Based on Equipment Risk Significance

Discussion: 10 CFR 50.49 and related guidance documents establish uniform qualification methods for demonstrating compliance. They do not currently provide flexibility for the use of methods that would provide a graded level of assurance commensurate with equipment risk significance. Modifications to the regulatory scheme should be made to permit alternative, possibly innovative methods that would be applied based on the risk significance of the equipment items for those accidents producing harsh conditions.

3. Permit Graded Qualification Methods Based on Severity of Accident Environment

Discussion: 10 CFR 50.49 and related guidance documents establish uniform methods for demonstrating compliance. They do not currently provide flexibility for the use of methods that would provide a graded level of assurance commensurate with the severity of the environmental conditions. Currently, a two tiered approach applies. For safety-related equipment outside the scope of 10 CFR 50.49 (i.e., mild environment equipment), equipment selection, application, operation and performance reviews are considered acceptable methods of demonstrating operability. For equipment exposed to ‘harsh’ conditions (i.e., conditions significantly different than normal) the 10 CFR 50.49 methods must be used regardless of environmental severity. Modifications to the regulatory scheme should be made to permit alternative methods to equipment within the scope of 10 CFR 50.49 that would be applied based on the relative severity of the harsh accident conditions.

4. Alternative Qualification Methods for Equipment Exposed to Radiation-Only Harsh Conditions

Discussion: (This item is a subset of the previous comment.) 10 CFR 50.49 limits the scope of its applicability to certain electrical equipment exposed to ‘harsh’ accident conditions (i.e., those significant more severe than conditions occurring during normal operation, including anticipated operational occurrences). For certain equipment, particularly some equipment located outside primary containment, the only accident condition that is significantly more severe is radiation. This equipment has been termed “radiation-only harsh equipment”. For newer plant equipment (i.e., equipment that cannot be qualified using the guidance of the DOR Guidelines or NUREG-0588 Cat. II) the NRC and licensees have interpreted the 10 CFR 50.49 provisions as requiring sequential type testing including aging simulations. However, adequate assurance of operability can be established using less burdensome methods, such as evaluations based on existing data on the radiation capabilities of the materials of construction.

5. Permit Use of Realistic (Best-Estimate) Methods to Define Accident Environment Steam Conditions

Discussion: LOCA/HELB steam/temperature/pressure conditions are currently based on extremely conservative, deterministic DBA assumptions including a DEGB of the largest RCS pipe. Some of these events and associated conditions are highly improbable based on fracture mechanic (leak-before-break) considerations. Currently acceptable methods of establishing environmental conditions are based on the conservative assumptions and codes used for containment analysis. More realistic environmental conditions should be developed based on risk significant events, fracture mechanics considerations, and best estimate environmental analyses.

6. Permit Use of Realistic Methods to Define Accident Environment Radiation Conditions

Discussion: Licensees are currently required to LOCA-qualify equipment using either the TID-14844 source term or an Alternate Source Term (AST). Under both methods, the source term assumes a significantly degraded core and does not represent the source term associated with LOCA mitigation based on DBA criteria and assumptions (e.g., FSAR Chapter 15 analysis). Consequently, equipment designed to mitigate a LOCA is required to be qualified to radiation levels that would only occur if required equipment failed to properly function (i.e., an unmitigated LOCA or severe accident). More realistic radiation conditions should apply to equipment required for LOCA mitigation. More severe radiation conditions (e.g., TID-14844) could be applied to equipment deemed important to severe accident mitigation.

7. Permit Flexibility When Establishing EQ-Required Maintenance, Surveillance, & Replacement Intervals

Discussion: Licensees often interpret NRC requirements as precluding flexibility when establishing maintenance actions based on qualified life calculations or vendor EQ requirements. Given the uncertainty and subjective nature of these bases, licensees should possess the flexibility to identify and adjust EQ maintenance schedules, including the establishment of “grace periods” using other factors including risk significance, the maintenance rule, and related guidance regarding maintenance planning and managing risk.

8. Clarify Guidance-Only Status of Regulatory Guide 1.97

Discussion: Some NRC staff have incorrectly concluded that the footnote reference in 10 CFR 50.49 to Regulatory Guide 1.97 Rev. 2 codifies the qualification provisions of the regulatory guide. This incorrect interpretation has limited licensee flexibility when seeking to take exception to the guidance in Regulatory Guide 1.97 concerning qualification. The NRC should clarify that Regulatory Guide 1.97 is guidance, and that the reference to the Guide in 10 CFR §40.49 has not “incorporated by reference” its provisions and, therefore, those provisions are not codified as regulations and remain guidance.

9. Reaffirm 10 CFR 50.49 Regarding Equipment Scope

Discussion: Some NRC staff have incorrectly concluded that equipment exposed to relatively severe environmental conditions during normal operation, including anticipated operational occurrences, and similar conditions during accidents must be qualified in accordance with 10 CFR 50.49. For example, an item located near BWR main steam lines may be exposed to a high, integrated radiation dose during normal operation that may exceed the dose during accident conditions. 10 CFR 50.49 specifically excludes such equipment from its scope if the accident conditions are not significantly different from those occurring during normal operation, including anticipated operational occurrences. Assurance of operability for such equipment is provided by appropriate equipment design and procurement coupled with maintenance/surveillance and performance monitoring programs (See SRP 3.11). Incorrectly requiring implementation of the qualification methods, documentation, and replacement requirement of 50.49 for such equipment burdens licensees by applying these strict controls in unnecessary applications.