

February 12, 1999

Dr. Carl A. Paperiello, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Two White Flint Center
Washington, D.C. 20555-0001

REFERENCE: 10 CFR Part 70 Rulemaking: Progress Achieved

Dear Dr. Paperiello:

I would like to commend the Nuclear Regulatory Commission (NRC) for the recent progress realized in revising 10 CFR Part 70. NEI is particularly pleased with the response of the NRC to its letter of November 1, 1998 on Chemical Safety concerns which has resulted in the incorporation of the substance of the 1988 NRC-OSHA Memorandum of Understanding into the proposed Rule revisions. We believe that the Staff's proposed changes to the rule, for all intents and purposes, have resolved our concerns in the area of chemical safety. They constitute a major step forward in addressing our concerns that the rule be more 'risk' based as opposed to 'consequence' based.

I would also like to complement the NRC on the success of the January 13, 1999 public meeting on Nuclear Criticality Safety (NCS). At that meeting there was an excellent and full-ranging discussion of the NCS issues addressed in NEI's December 17, 1998 letter to you. Proposed changes to the Rule, recently posted on the NRC's Website, appear to reflect considerable progress on our criticality safety-related concerns as well. In support of your request for assistance in addressing nuclear criticality safety in both the rule and Standard Review Plan (SRP), NEI was pleased to promptly provide you on January 21, 1999 with our critique of Chapter 5 of draft NUREG-1520. We hope that our suggestions for reformatting and revising this document will assist the NRC Staff in preparing its revision to be released in mid-February, 1999.

Dr. Carl A. Paperiello
February 12, 1998

Page 2

In the Enclosure to this letter, NEI provides additional comments on changes made to §70.60 and §70.62 by the NRC in its December 17, 1998 Website posting, and on some topics of discussion at the January 13, 1999 public meeting on NCS.

We look forward to receiving your reaction to suggestions made in our previous four letters to you on NCS (December 17, 1998), Integrated Safety Analysis (December 22, 1998), SRP Chapter 5 (January 22, 1999) and Reporting-Baseline Design Criteria-Change Mechanism (January 26, 1999) as well as this letter. In addition, we intend to provide suggestions for addressing the inclusion of a backfit provision in the rule, reflecting the advice of the Commissioners in the December 1, 1998 SRM. We would also like to reiterate that our recent efforts, and those of the NRC Staff, have been largely (and properly) focused on our most important comments on the rule itself, and that we believe that very significant modifications are still required to the SRP. We hope to work with the Staff on those modifications over the coming weeks.

Significant progress has been made to date in developing a revised 10 CFR Part 70 that is more risk-informed and performance-based. While a lot of work remains to be done, we appreciate the commitment and openness being exhibited by the NRC Staff in addressing the issues and suggestions being offered by the industry. In this regard, we look forward to working cooperatively on the remaining items that need to be reviewed and revised.

Sincerely,

Marvin S. Fertel
Enclosure

cc: The Honorable Shirley A. Jackson, Chairman, NRC
The Honorable Greta J. 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

ENCLOSURE

COMMENTS ON PROPOSED REVISIONS TO 10 CFR PARTS 70.60 AND 70.62 AND ON NUCLEAR CRITICALITY ISSUES RAISED AT THE JANUARY 13, 1999 PUBLIC MEETING

I. Introduction and General Comments

- (a) ***NRC Web Page Postings***: NEI recommends that the complete set of proposed revisions to the Part 70 Rule contained in SECY-98-185 be posted on the NRC Web Page. All text deletions, additions and revisions should be clearly identified through red-lining, strikethroughs and markings in the page margins. These editorial procedures will greatly facilitate identification by the reader of what changes have been made. Changes to one subsection frequently affect other sections, and only by posting the entire proposed rule revisions can these dependencies be clearly identified. Annotations of explanatory text that explain why a particular change has been proposed by the NRC should still be included.
- (b) ***Integrated Safety Analysis (ISA)***: Recommendations in NEI's letter of December 22, 1998 concerning the Integrated Safety Analysis (ISA), Preliminary ISA and Decommissioning ISA are not reflected in the NRC's proposed December 1998 revisions. We look forward to receiving NRC's reactions to these recommendations and proposed revisions.

II. Comments on §70.60 and §70.62 Proposed Revisions

NRC's December, 1998 *revisions-in-total* of sections §70.60 and §70.62 address comments raised in NEI's November 1, 1998 letter addressed to Dr. Carl Paperiello entitled *10 CFR Part 70 Regulation of Chemical Hazards*. The NRC proposed revisions to address industry's concerns over chemical safety, but also made several additional changes. In NEI's judgment, several of these supplementary changes require clarification or are inappropriate for inclusion in the Part 70 rule. Specific NEI concerns are addressed below:

- (a) ***Administrative and Engineered Controls***: Definitions of 'administrative control' and 'engineered control' that are consistent with the ANSI/ANS Series 8 standards should be included in §70.4.
- (b) ***Decommissioning ISA***: Draft §70.62(a)(3) requires a decommissioning ISA if any "...potentially hazardous activities..." are anticipated. A separate decommissioning ISA is not warranted as facility changes during decommissioning can be processed

through a facility's *existing* ISA program, just like operational changes. If the facility ISA does not have to be submitted to the NRC for approval, neither should a decommissioning ISA require NRC approval. The requirement for a decommissioning ISA appears to be inconsistent with the NRC's overall decommissioning process that requires submittal and approval of a decommissioning plan. There is, therefore, no need for a redundant decommissioning ISA. NEI recommends that §70.62(a)(3) be deleted.

- (c) **ISA Results and ISA Summary:** NEI concurs with the direction contained in the December 1, 1998 SRM on SECY-98-185 that the results of the ISA should *not* be included in the license. The license should specifically contain a licensee's commitments to safety programs, including one to conduct, maintain, implement and update the ISA. An ISA Summary outlining the ISA methodology, identifying high-risk accident sequences and implemented safety controls and control assurances would be submitted to the NRC for placement on the licensee's docket and for use by the NRC staff in reviewing a license application. The complete ISA ('results of the ISA') would be maintained at the licensed facility for NRC inspection and updating when the facility or its processes are modified.

The way in which the ISA is to be used in the licensing process is not correctly portrayed in the *revisions-in-total* to §70.72. For example, subsection §70.62(c)(4) states that the ISA Summary constitutes part of a license application that is to be approved by the NRC. The proposed revisions to the Rule state that the ISA Summary incorporates the *complete* results of the ISA, whereas it will only include information pertaining to higher-risk accident sequences. The definition of ISA Summary in §70.4 requires revision.

- (d) **Design Basis for Items Relied on For Safety:** NEI has recommended in its letter of January 26, 1999 that design bases only be included in the licenses for new facilities. Design base information would, in addition, only be required for those higher-risk accident sequences tabulated in the ISA Summary. The language of §70.62(c)(vi) should be clarified to require detailed information only on the items relied on for safety for ISA Summary-identified accident sequences. Part 70 baseline design criteria would not apply to existing, licensed facilities or to changes that may be made to them in the future.

- (e) **ISA Team Qualifications:** Draft §70.62(c)(2) requires the ISA team to consist of facility employees. This language is too prescriptive and does not grant a licensee the option of having contractor personnel with the desired expertise participate in the ISA. The term 'employee' should be replaced by 'person' throughout this section.

- (f) **ISA Revalidation:** Draft §70.62(c)(3) requires periodic revalidation of the ISA. Although this requirement may be consistent with the OSHA requirements in 29 CFR 1910.119(e)(6), it is not consistent with the philosophy espoused in SECY-98-185 that the ISA is a ‘*living document*’ that will be updated and revised throughout the life of a facility. For such a ‘*living document*’ the periodic revalidations would appear superfluous as licensees will ensure that the ISA is maintained current and that any facility or process changes are promptly and thoroughly evaluated.
- (g) **Preliminary ISA:** The NRC has removed the ‘preliminary ISA’ requirement of §70.62(a)(3)(ii) from the December 1998 revision-in-total. NEI concurs with the SRM direction that a preliminary ISA be prepared and submitted to the NRC prior to constructing a new facility or process. As noted in its December 22, 1998 letter to the NRC, NEI recommends that the American Institute of Chemical Engineering (AIChE) terminology be employed (‘*preliminary Process Hazards Analysis*’ rather than ‘*preliminary ISA*’) for this study which is prepared at the conceptual engineering phase of a project. Further discussion of this recommendation is presented in NEI’s December 22, 1998 letter.
- (h) **ISA Filing by Existing Licensees:** The term ‘*compliance plan*’ used in §70.62(c)(5)(i) conveys the potentially negative and incorrect connotation that an existing licensee is not in regulatory compliance until the ISA program is fully implemented. NEI recommends that the term ‘*compliance plan*’ be replaced simply by ‘*program*’ in this subsection.
- (i) **Management Measures:** Introduction of the ‘Management Measures’ term in §70.62(d) as a replacement for ‘quality assurance’ is commendable. This subsection presents eight measures that are to be satisfied to provide sufficient assurance that items relied on for safety will be available and reliable when required. However, these eight measures appear overly prescriptive and should be relocated to ¶5.4.4 (‘Management Measures’) in the SRP as acceptable, ‘possible’ measures to provide the required assurance. Some additional language should be added to assure the NRC that an item relied on for safety will have assurances of availability and reliability that are appropriate to the nuclear criticality risk it is designed to prevent or mitigate. NEI recommends that this subsection be simplified to read:

“(d) management measures. Each licensee or applicant shall establish management measures to ensure that each item relied on for safety described in the ISA Summary will perform its intended function when needed. The assurance of availability and reliability of such an item relied on for safety may be graded to the risk it is designed to prevent or mitigate.”

(j) **Unacceptable Vulnerabilities:** This term is used in §70.62(c)(5) to refer to plant or procedural deficiencies identified in the facility ISA which must be addressed. Inclusion of this term could be construed to require performance of detailed and costly vulnerability analyses. NEI recommends that the term ‘unacceptable vulnerabilities’ be replaced by ‘unacceptable performance deficiencies’ to avoid this potential misinterpretation.

(k) **Definitions (§70.4):** Definitions of ‘ISA Summary’ and ‘Results of the ISA’ do not correctly reflect our understanding of the consensus achieved at the December 3 and 4, 1998 NRC public meeting. ‘Results of the ISA’ is *not* the same as ‘Integrated Safety Analysis Summary’ (or ISA Summary). The proposed definition of ISA Summary would include redundant information that is already contained in a facility’s license. As discussed in detail in NEI’s letter of December 22, 1998 and at the NRC December 3rd and 4th public meeting, the ISA Summary is to identify higher-risk accident sequences identified in the ISA. The following definition proposed by NEI is recommended for inclusion in §70.4 instead of that proposed in the December 1998 NRC posting:

“ISA summary means a synopsis of the results of the ISA that succinctly describes the facility or its processes, identifies the disciplines of expertise and minimum qualifications of the individuals who performed the ISA and outlines the approach and methodologies used in performing it. The ISA summary identifies and describes those credible accident sequences, whose unmitigated consequences could exceed the consequences of concern in §70.60(b), the safety controls (or items relied on for safety) to mitigate the risk of such accidents to an acceptable level and the measures to ensure the availability and reliability of such controls. The ISA summary shall be placed on the docket and shall be updated annually by the licensee, but shall not constitute part of the license.”

As noted in paragraph (k) above, the term ‘unacceptable vulnerabilities’ in §70.4 should be replaced by ‘unacceptable performance deficiencies.’

III. Comments on Nuclear Criticality Safety Issues

The NRC’s January 13, 1999 public meeting prompted considerable discussion on NCS issues in the Part 70 Rule. Confirmation by the NRC Staff that the probabilistic content would be removed from the Rule and SRP and that double contingency would not be implemented in a

probabilistic manner was especially welcome. NEI provides the following comments on topics of discussion to clarify industry's positions.

(a) *Historical NCS Data:* NRC stated that the requirement of §70.65 for a licensee to describe operational events over a ten-year period that had a significant impact on safety was to ensure consideration of such incidents during the preparation of the facility's ISA. NRC wants a licensee to distill 'lessons learned' from any significant, safety-related incidents and to incorporate them into the facility's safety programs. The NRC confirmed that requests should not be made for information that the agency already possesses. Industry believes that a list of such events does not belong in a license, as it constitutes neither a safety commitment nor a performance criterion.

NEI recommends that the list of operational events not be incorporated in the license. An acceptance criterion could, however, be inserted into the ISA chapter of the SRP that would require an applicant to examine ten years of operational events in preparing the ISA.

(b) *Controls vs. Control Systems:* The definition of 'item relied on for safety' should be revised to more closely reflect industry practice. The draft rule states that a control necessary to prevent a high- or intermediate-consequence event is an 'item relied on for safety'. An 'item relied on for safety' may, however, consist of several individual controls (engineered or administrative), each of which may differ in its safety significance and robustness, but which, when combined with the other constituent controls will adequately prevent or mitigate an accident sequence. A failure of one constituent control will not result in a §70.60(b) or (c) consequence of concern being exceeded. NEI recommends that the term 'set of controls' or 'control system' be used throughout the rule to clarify the broader meaning of control. For example, §70.60(e), as amended by the December NRC modifications, should read:

“(e) Each engineered or administrative control or control system necessary to comply...”