NEI

NUCLEAR ENERGY INSTITUTE

May 10, 1994

Mr. William T. Russell, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Russell:

Your letter of February 16, 1994, providing feedback on the industry's draft position on severe accident management and the PWR Owners Group Severe Accident Management Guidance material, was a positive step in bringing the severe accident management issue to closure. The overall philosophy stated in your letter indicates close agreement between the industry and the NRC staff, especially on a conceptual or policy level, and for the most part on the technical level. Yet, the detailed comments and suggestions in the enclosures exposed a difference in our expectations in some specific implementation issues.

As a result, the NUMARC Severe Accident Working Group determined that it was premature to request a binding vote on the draft position by the NUMARC Board of Directors on March 2. Instead, they recommended that a binding vote be sought only if there is agreement between the NRC and the industry on all significant implementation issues.

We remain committed to appropriately addressing the severe accident management topic as the final piece in an ambitious response by each licensee to the practical objectives outlined in the Commission's Policy Statement on Severe Reactor Accidents. Yet, the industry is willing to adopt a formal industry position only if there is reasonable assurance that the effort can be accomplished in an efficient and cost-effective manner that will provide a uniform basis for meeting the objectives of both the industry and the NRC.

Therefore, we are requesting the careful consideration by senior NRC staff management of the enclosed positions, which represent the results of a substantive industry effort and commitment. Enclosure 1 provides a revised draft of the formal industry position, which reflects changes made to accommodate some of the NRC staff suggestions.

Enclosure 2 provides responses to the more significant NRC staff comments contained in your letter of February 16, 1994. These responses address the areas where there is not yet an acceptable level of agreement between the NRC and the industry. Contrary to my letter to you dated March 23, 1994, we have concluded that further technical interactions at this time

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PDR per: Bob Palla

are unnecessary. Instead, we believe the responses provided in these enclosures provide a clear indication of our perspective and intentions. To the extent warranted, we have made every attempt to address the NRC staff concerns and suggestions. While we recognize this response is rather detailed, we hope that the NRC staff finds it useful in closing out the remaining differences in our expectations.

Should senior NRC staff management find further clarification necessary, the Severe Accident Working Group is prepared to support a final meeting on June 3, 1994. Recognizing the extensive effort expended to date on this subject, the fact that current products are now, or will be by the end of the year, ready for industry implementation, and the improvements that implementation of these products will yield, the industry sees no reason to further delay implementation. We would appreciate an expeditious response closing out these issues as well as your indication of the need for the June 3 meeting.

Please direct any questions regarding these positions to either myself or Dave Modeen of the NEI staff.

Sincerely,

William H. Rasin
Vice President and Director,
Technical

WHR/DJM/rs

c: Ashok Thadani, NRC
Martin Virgilio, NRC
Robert Palla, NRC

PROPOSED "INDUSTRY POSITION" ON SEVERE ACCIDENT MANAGEMENT

I. ADDITION TO NEI 91-04, REVISION 1 (formerly NUMARC 91-04) FOREWORD:

Section 5.0 of this document is intended for the use of Nuclear Energy Institute (NEI) utility members in association with the formal industry position approved by NEI Utility Members on June 9, 1994. The approved formal industry position is:

EACH LICENSEE WILL:

ASSESS CURRENT CAPABILITIES TO RESPOND TO SEVERE ACCIDENT CONDITIONS USING SECTION 5 OF NEI 91-04, REVISION 1, "SEVERE ACCIDENT ISSUE CLOSURE GUIDELINES."

IMPLEMENT APPROPRIATE IMPROVEMENTS IDENTIFIED IN THE ASSESSMENT, WITHIN THE CONSTRAINTS OF EXISTING PERSONNEL AND HARDWARE, BY JULY 1, 1997.

II. REVISION TO NEI 91-04, REVISION 1, SECTION 5:

5.0 SEVERE ACCIDENT MANAGEMENT CLOSURE

5.1 Scope of Severe Accident Management

Accident management consists of those actions taken during the course of an accident by the Emergency Response Organization (ERO); specifically plant operations, technical support and plant management staff, in order to:

- Prevent the accident from progressing to core damage;
- Terminate core damage progression once it begins;
- Maintain the capability of the containment as long as possible; and
- Minimize on-site and off-site releases and their effects.

The latter three actions constitute a subset of accident management referred to as severe accident management, or more specifically, severe accident mitigation. Post-TMI actions and IPE insights have already addressed most aspects of preventing core damage. The

focus of the industry effort is to provide guidance where Emergency Operating Procedures (EOPs) are no longer effective, or revise EOPs if appropriate.

The goal of severe accident management is to enhance the capabilities of the ERO to mitigate severe accidents and prevent or minimize any off-site releases. The objective is to establish core cooling and ensure that any current or immediate threats to the fission product barriers are being managed. To accomplish this the ERO should make full use of existing plant capabilities, including standard and non-standard uses of plant systems and equipment.

Significant interaction among utility, INPO, EPRI, vendor Owners Groups, NRC, and other recognized experts has produced the foundation of actions and plant response from which plant-specific severe accident management guidance can be developed (see References 11, 12 and 13). These actions can be categorically divided into elements similar to those described by the NRC in SECYs 88-147 and 89-012 (References 3 and 9).

5.2 Severe Accident Management Closure Process

The severe accident management closure process for a given licensee is recommended to consist of the following steps (illustrated in Figure 6):

- Evaluate industry-developed bases and Owners Group severe accident management guidance (SAMG) along with the plant IPE and current capabilities, to develop severe accident management guidance. Consider other generic and plant-specific information (e.g., NRC and industry studies, PSA results, etc.) as appropriate;

- Interface SAMG with the plant's Emergency Plan;

- Incorporate severe accident material into appropriate training programs; and

- Establish a means to consider and possibly adopt new severe accident information from licensee self assessments, applicable NRC generic communications, PRA studies, etc.

Because this is an industry initiative, there are no specific regulatory criteria. Rather, industry has defined its goals and objectives by its actions relative to severe accident management. These include, but are not limited to, performance and submittal of IPE and IPEEE, development of generic (Owners Group) SAMG, and numerous interactions

at various levels among industry, NRC and vendor personnel. The following element descriptions provide a tool that may be used for focusing licensee efforts to enhance their capabilities.

5.3 Severe Accident Management Implementing Elements

5.3.1 Severe Accident Management Guidance/Strategies for Implementation

Guidance is to be provided for use by ERO personnel in assessing plant damage, planning and prioritizing response actions, and implementing strategies that delineate actions inside and outside the control room. Strategies and guidance will be interfaced with the utility EOPs and Emergency Plans.

The guidance should include: (1) an approach for evaluating plant conditions and challenges to plant safety functions; (2) operational and phenomenological conditions that may influence the decision to implement a strategy, and which will need to be assessed in the context of the actual event; and (3) a basis for prioritizing and selecting appropriate strategies, and approaches for evaluating the effectiveness of the selected actions.

The strategies should make maximum use of existing plant equipment and capabilities, including equipment and alignments that may not be part of the typical "safety-related" systems. Critical resources and procedures, if necessary, to implement strategies will be identified and reasonably available, but need not be prestaged. Rather, what is important is a clear delineation of the flow of information, identification of the decisions that have to be made, and some up front consideration of the viability of implementing the more significant strategies (e.g., not detailed procedures, but a small number of lists that include a description of system lineups, benefits and negative impacts, interlocks to be overridden, special equipment required, etc.).

5.3.2 Training in Severe Accidents

Severe accident training should be provided for ERO personnel commensurate with their responsibilities defined in the Emergency Plan. In particular, training is recommended for those specific personnel with the following severe accident assessment and mitigation responsibilities:

- evaluators responsible for assessing plant symptoms in order to determine the plant damage condition(s) of interest and potential strategies that may be utilized to mitigate an event

- decision makers in the ERO designated to assess and select the strategies to be implemented

- implementers responsible for performing those steps necessary to accomplish the objectives of the strategies (e.g., hands-on control of valves, breakers, controllers, and special equipment)

Existing training programs already address most of the tasks associated with strategy implementation by implementers (e.g., licensed and non-licensed operators, maintenance personnel, radiation protection specialists, etc.). Thus, it is expected that severe accident considerations should be a minor addition to the scope of their training, commensurate with the frequency, importance and difficulty of the potential tasks. The areas of emphasis and level of detail in the implementers training will be different than that provided to the evaluators or decision makers.

Suggested learning objectives and related training materials will be developed using a systematic approach to training and include training techniques proven successful with similar materials.

5.3.3 Computational Aids for Technical Support

ERO personnel should be provided computational aids, as appropriate, in estimating key plant parameters and plant response relative to accident management decisions. The aids should be easy to use and need not be computer based.

5.3.4 Information Needed to Respond to a Spectrum of Severe Accidents

Provide an awareness, and encourage use, of instrumentation that is reasonably expected to be available for assessing plant status. The availability and survivability of the information source and the ability of these sources to provide indication of sufficient accuracy for the intended use should be considered. Alternative means for providing necessary information should also be considered.

5.3.5 Delineation of Decision-Making Responsibilities

Ensure responsibilities for authorizing and implementing accident management strategies are delineated as part of the Emergency Plan. The ERO personnel task descriptions should be modified to specify responsibilities. Nonetheless, the decision-making process needs to be flexible enough to accommodate situations beyond the scope of currently recognized situations.

5.3.6 Utility Self-Evaluation

Self-evaluation of the licensee's severe accident response capability is recommended to ensure its feasibility and usefulness. An initial evaluation, prior to implementing severe accident management, should be performed to ensure the Severe Accident Management Guides (SAMGs) can be integrated into the licensee's emergency response capability without adversely affecting emergency response.

Periodic table-top and/or inter-facility mini-drills should be utilized to ensure that ERO personnel are familiar with the use of the SAMGs and with the interfaces and delineation of responsibilities between EROs during SAMGs use. The objective of the table-top and/or inter-facility mini-drills should be training, evaluating and improving the in-plant, severe accident management response capability. These activities should include exercising of preventive or mitigative measures as well as appropriate critiques immediately following the drill to capture lessons learned (e.g., assess performance and perform a technical assessment of any useful preventive or mitigative measures identified during drills).

There is no need for such mini-drills to be part of the graded Emergency Plan exercises; in any case, evaluations of severe accident strategy use should be separate from these formal exercises.

6.0 **REFERENCES** (additions to existing list in NUMARC 91-04)

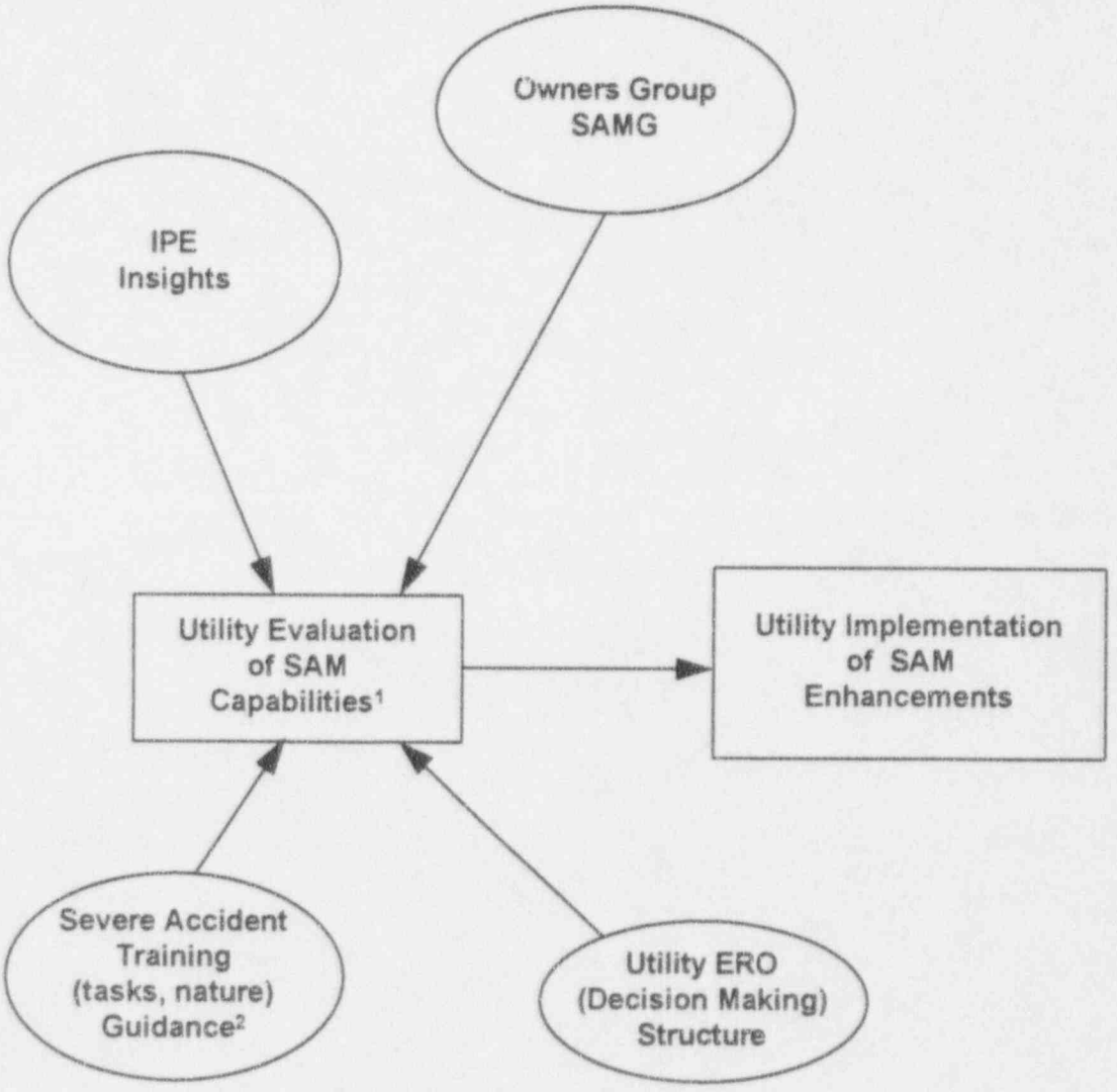
11) NUMARC 92-01, A Process for Evaluating Accident Management Capabilities, April 1992.

12) EPRI Report TR-101869, Severe Accident Management Guidance Technical Basis Report, December 1992.

13) NSSS Owners Group-Specific Accident Management Guidance Reports, to be published.

Figure 6

Severe Accident Management Closure Process



Key:

SAM = Severe Accident Management
SAMG = Severe Accident Management Guidance
ERO = Emergency Response Organization
IPE = Individual Plant Examination

1. Utilize NEI Report 91-04 Revision 1 (formerly NUMARC Report 91-04) section 2 to assist in determining amount of effort warranted. NUMARC Report 92-01 offers insights as to appropriate attributes for given accident management elements.

2. Generic industry task analysis, learning objectives and activities and lesson plans will be available.

Enclosure 2

INDUSTRY RESPONSE TO NRC STAFF LETTER OF FEBRUARY 16, 1994

SEVERE ACCIDENT MANAGEMENT

PWR OWNERS GROUP SAMG

Regarding the three programmatic issues raised in the NRC staff letter of February 16, 1994, and the other suggested improvements that impact the acceptability of the PWR Owners Groups SAMG documents, the industry does not believe that it is appropriate for either the Owners Groups or the individual utilities to expend significant additional resources to address these issues. The severe accident management guidance addresses plant conditions which are well beyond design basis conditions. A careful balancing of resource expenditures in relation to the possible benefits of these added requirements indicates that they are not justified. In particular:

- The minimal guidance on translating the severe accident strategies into implementing procedures is intentional. Given the myriad of deteriorated plant conditions under which severe accident management strategies would be required, the detailed steps to most effectively implement the strategy, under any unique set of conditions, cannot be entirely pre-planned. In addition, the severe accident management guideline validation performed by the WOG and B&WOG provides evidence that the ERO staff is extremely knowledgeable in the detailed steps required to implement any particular set of actions, including the interlocks that must be bypassed, etc.

  The time frame for implementation under severe accident conditions is quite different than under conditions covered in Emergency Operating Procedures (EOPs). While some actions specified in the EOPs must be performed in a restricted time frame that dictates that each step is pre-planned in detail, the rate of transient progression for which the actions specified in the SAMG are intended to address is slower, and therefore allows for a longer implementation time frame. It must be remembered that all possible actions to recover core cooling, depressurize the reactor coolant system and establish a heat sink have already been attempted using guidance in EOPs. The entrance into SAMG will not stop these efforts from continuing. Therefore, rapid implementation of these actions in severe accident management would not be required.

- As has been stated in several forums, uncertainties regarding severe accident progression and simulator modeling capabilities make it difficult, if not impossible, to conduct the type of rigorous validation methods that were applied to EOPs. Nevertheless, the Westinghouse and B&W Owners Groups have conducted efforts comparable to a validation program for their SAMG. The CEOG membership is currently considering a proposal to perform such an effort. In any event, since the utilities already use the PWR Owners Group-specific Emergency Response Guidance to develop EOPs, no additional validation-like effort should be required of individual utilities to ensure a proper interface between their EOPs and SAMG.

- NEI is organizing a severe accident management implementation workshop. This workshop will serve to transfer information necessary to efficiently establish the appropriate level of plant-specific severe accident management materials, based on the generic Owners Group guidance. Based on the information to be provided to utilities by NEI and each of the Owners Groups, additional implementation assistance should not be required and is not planned.

The NEI Severe Accident Working Group and each of the PWR Owners Groups have considered the NRC staff/contractor feedback on the PWR Owners Group Guidelines. There is little in the report that would provide a significant enhancement to the usability or technical content of the PWR SAMG material. We agree with the summary statement in the NRC contractor report, namely, "The SAMGs provided by the B&W, CE, and Westinghouse Owners Groups are a major step forward in providing guidance to utilities for managing severe accidents." However, we take exception to the notion that the approaches are widely divergent or substantially different on a technical level. Each reflects the diversity of plant design, operation and EOPs for the given vendor.

While it is very difficult to respond to the extensive commentary provided in the NRC staff contractor report in a summary fashion, each one has been consciously assessed. In turn, the comments have been placed in one of three categories:

- **Difference in philosophy of scope of SAMG** - This category applies to NRC staff feedback on: (a) methods to ensure that new information is incorporated into the generic SAMG in the future, and (b) control room implementation procedures for severe accident management strategies. Regarding the first item, the established Owners Group process for considering new work programs ensures that if significant new information becomes available which impacts an Owners Group product, the corresponding members can request that a new effort be established to incorporate that information. The second item is covered above in the response related to the staff comments on the PWR guidance.

- **Plant specific implementation** - This category applies to NRC staff feedback on prioritization of potential actions/strategies and the assurance that actions recommended are properly communicated and executed. The NRC staff perspectives offered regarding the latter item are not unique to the issue of severe accident management. Rather, it is the typical command and control issues that are appropriate for any portion of the emergency response. Inasmuch as those activities are already the subject of significant utility and NRC staff attention as part of the Emergency Preparedness requirements, and considered by the industry to be well in hand, we see no value in creating additional guidance or commentary on that aspect as part of the severe accident management effort.

- **Included in Owners Group SAMG** -This category applies to NRC staff feedback items, such as: (a) required minimum NPSH for pumps, (b) SAMG actions which conflict with the EOP guidance, (c) support system status in determining equipment availability, (d) role of instrumentation in establishing recovery priorities, and (e) frequency of sampling plant conditions during a severe accident. All of the comments/suggestions were reviewed by each of the PWR Owners Groups, but only very minor changes were felt to be warranted. Final versions of the Owners Group documents will be provided to the NRC staff.

  With respect to item (d), all PWR SAMG documents recommend that primary and confirmatory instrumentation be identified in the plant-specific SAMG. It is not anticipated that the priority of recovery actions will change as a result of instrumentation reliability and/or accuracy.

GUIDANCE VERSUS PROCEDURES

We partly agree with the NRC staff suggestions to expand the directions to licensees regarding strategy implementation (Section 5.3.1), albeit with caution. The staff comment is that "the discussion be expanded to describe expected licensee actions to: (1) perform a systematic assessment to identify the procedures necessary for implementing the severe accident management guidelines, and (2) establish procedures for those situations when effective procedures could not be developed on an ad hoc basis because of time constraints." In further elaboration of this latter point, the NRC staff recommended that Section 5.3.1 be expanded to state that access to equipment and components under severe accident conditions, including radiation levels, temperatures, and lighting, should be considered as part of strategy and procedure development, to ensure its accessibility.

Regarding the first comment, there is little need to provide a systematic process for identifying when procedures are necessary. The value of procedures for implementing SAMG

strategies has been discussed above. Each utility already has multiple sets of procedures for operating systems and equipment in a wide range of different alignments. It is considered counter-productive to develop yet another set of procedures, or supplement existing procedures, for SAM when it is difficult to pre-plan the exact conditions under which they would be used. Each licensee has the requisite operating and management experience to determine when procedures will be of value in response to a given set of conditions or criteria.

Regarding the second comment, as we understood it, the philosophy described by senior NRC staff managers at the December 21 meeting and documented in the NRC staff minutes of that meeting, is the message that needs to be conveyed to licensees in Section 5.3.1. We have added wording similar to what is in the minutes, to convey this point. Section 5.3.1 now states: "What is more important is a clear delineation of the flow of information, identification of the decisions that have to be made, and some up front consideration of the viability of implementing the more significant strategies (e.g., not detailed procedures, but a small number of lists that include a description of system lineups, benefits and negative impacts, interlocks to be overridden, special equipment required, etc.)."

The NRC staff should be aware that when sending investigative or repair teams into the plant from the Operational Support Center during an emergency, it is routine practice to ensure the personnel are properly briefed, equipped, and knowledgeable regarding the environmental conditions they may confront. Nothing additional is warranted in a pre-meditated fashion with respect to temperatures, radiation levels and lighting.

SYSTEMATIC IPE/ACCIDENT MANAGEMENT REVIEW PROCESS

Licensees will consider their IPE insights, in conjunction with the Owners Group SAMG, in developing plant-specific severe accident guidance, to confirm that adequate preparatory measures have been implemented to deal with important accident sequences and equipment/system failures identified in the IPE and IPEEE. However, this objective does not require a licensee to utilize the systematic assessment methodologies developed by NUMARC or NRC. A systematic process has already occurred in developing and summarizing the IPE insights. For the most part, those insights have already been incorporated into the Owners Groups SAMG. Therefore, plant-specific IPE insights only need to be merged by the licensee with the other generic industry products on SAM. Therefore, the formal industry position was not changed.

As you may recall, NUMARC Report 92-01 and NUREG/CR-6009 were written without the expectation that the industry would be creating a SAMG technical basis report, Owners Group-specific SAMG and severe accident training materials. These more recent products have obviated the need for a detailed, step-by-step process for assessing existing accident management capabilities. Nonetheless, the various attributes of the severe accident

elements described in NUMARC 92-01 are still of value and that is why it remains an appropriate reference.

INFORMATION (INSTRUMENTATION) NEEDS ASSESSMENT

We disagree with the general concern regarding the need to be more specific regarding information (instrumentation) needs in the formal industry position. There seems to be a disproportionate emphasis placed on performing studies or assessments on instrumentation availability and survivability. Nevertheless, a proprietary EPRI report, TR-103412, "Assessment of Existing Plant Instrumentation for Severe Accident Management," concluded that only a small number of information needs (six measured parameters in PWRs and seven in BWRs) are possibly weak, and then in only two cases were alternative methods not identified for obtaining the needed information. An independent assessment carried out by the WOG concluded that existing instrumentation, on a generic basis, should be adequate for diagnosing the need to implement severe accident strategies. The evaluation of the instrumentation indications during a severe accident is a topic to be covered in SAMG training.

Additionally, the information needs aspect of severe accident management has been over dramatized by the approach taken in NUREG/CR-5513. Asking industry to cite NUREG/CR-5513 as a resource offers little assistance to utility staff, because it defaults to a "failed instrument" assumption whenever the potential accident environment is beyond the environmental qualification range. We see no value in asking our members to perform assessments that cannot reach a useful end point.

Finally, we disagree with the NRC staff contractor comments raised about the guidance contained in the CE and B&WOG SAMG packages. Their approaches are very similar to that taken by the WOG. Inasmuch as the contractors apparently found the WOG material acceptable, other than the degree of formal documentation in the SAMG material, we see no technical differences. In any event, the WOG is taking the appropriate steps to permit the review and use of their copyrighted materials by the other three owners groups.

UTILITY SELF EVALUATION VERSUS PERFORMANCE-BASED INSPECTION BY NRC STAFF

We heartily endorse the perspective offered in the February 16 letter that states that the NRC staff "intent is to rely on utility self-evaluation using typical EP-type critique practices, rather than to conduct routine staff audits/inspections of accident management capabilities." That statement embodies the thrust of the industry-NRC staff effort to achieve a utility-oriented, performance-based approach to the severe accident management topic. At the same time, it is imperative that this perspective be clearly communicated to NRC Regional and AEOD (e.g., Incident Response Center) offices.

The following specific NRC staff suggestions regarding the Utility Self-Evaluation section of the formal industry position are very constructive and have been reflected in the revised industry position:

- An initial evaluation, prior to implementing severe accident management, should be performed to ensure the Severe Accident Management Guides (SAMGs) can be integrated into the licensee's emergency response capability without adversely affecting emergency response, i.e., SAMGs will not result in a decrease in the effectiveness of the licensee's existing emergency response.

- The periodic table-top and/or inter-facility mini-drills which the licensees intend to perform as part of their self-evaluation program should be utilized to ensure that ERO personnel are familiar with the use of the SAMGs and with the interfaces and delineation of responsibilities between EROs during SAMGs use.

- The need for licensees to assess their performance during accident management drills using a critique process similar to the EP exercise critique process, and perform a technical assessment of any useful preventive and mitigative measures identified during drills as part of long-term follow-up.

The revised formal industry position will not incorporate the suggestion to use SAMGs during graded emergency planning "exercises to extent appropriate for the scope of the exercise scenario." While it may appear to make technical sense, there is a very real danger of mixing a voluntary industry effort on severe accident management with the more formal (in a regulatory context) evaluation of graded emergency preparedness response. It is inherently very difficult, with any degree of certainty, to judge the technical adequacy of the assessments and decisions made in response to the severe accident conditions specified. Such evaluations and identification of any lessons learned is best left to utility self evaluation opportunities.

CONTINUED NEI/OWNERS GROUP SUPPORT DURING IMPLEMENTATION

The staff concerns regarding the need to assure continued owners group/NEI support to the utilities during the SAMG implementation phase is misplaced. As has been practiced on other issues in which NEI (as NUMARC) has been centrally involved, NEI will maintain a role in coordinating/monitoring the industry implementation of the SAM issues.

NEI is organizing an implementation workshop in conjunction with the applicable industry organizations. This aspect of implementation has been discussed previously in this letter. This is an adequate vehicle for utility feedback and dissemination of appropriate information to utilities and owners groups.

In addition, NEI will, as it our practice on any issue for which we have been the coordinator of significant industry-NRC interaction, maintain a longer term monitoring of regulatory activity related to SAMG after utility implementation has been completed. The purpose of this long term monitoring is to assure consistent and fair utility and regulatory activity across the industry.

TRAINING

The NRC staff commented that although fewer changes in training programs are indeed expected for implementers, the discussion should be expanded to indicate that training for implementers (control room personnel) should include, at a minimum, the training necessary for them to effectively respond to information requests and correctly implement the mitigation strategies directed by decision makers. The NRC staff further commented that such training should include fundamental training in the severe accident assessment and response strategies, instrument degradation under severe accident conditions, and alternative instrumentation or methods to verify instrument readings necessary for the implementation of severe accident strategies.

While we appreciate the NRC staff perspective, the thrust of the industry position is that severe accident considerations should be a minor addition to the scope of licensed operator training, commensurate with its frequency, importance and difficulty. The areas of emphasis and level of detail in the implementers training will be different than that provided to the evaluators or decision makers. Section 5.3.2 of the formal industry position has been revised accordingly.

ROLE OF NRC DOCUMENTS

The NRC staff implicitly suggested that the formal industry position heighten licensee recognition and use of NRC staff severe accident management studies. The NRC staff comment specifically stated that the staff is willing to work with industry to identify an appropriate subset of these reports that licensees should be made aware of. This issue does not warrant further attention, because we do not believe that each licensee needs to perform a thorough review of, or use, such documents.

First, references to NRC studies are included in the EPRI Technical Basis Report and owners group-specific SAMG, where appropriate. Second, the purpose of creating the EPRI Technical Basis Report and gaining NRC staff familiarization with the treatment of technical/phenomenological issues contained therein, was to avoid the need for each licensee to view each of these issues independently. Finally, the industry is aware of these reports. The listing provided by the NRC staff was in fact compiled by the industry as part of the reference materials reviewed during creation of the EPRI and Owners Group documents.