



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

January 20, 1988

TO ALL POWER REACTOR LICENSEES

Gentlemen:

Subject: Integrated Safety Assessment Program II (ISAP II)
(Generic Letter 88-02)

The Integrated Safety Assessment Program (ISAP) was a pilot program initiated in May 1985 for Millstone Unit 1 and Haddam Neck. The program was designed to provide a comprehensive review for operating reactors to address all safety issues and to provide an integrated cost-effective implementation plan using deterministic and probabilistic techniques. ISAP also provided the technical bases to resolve all outstanding licensing actions, established overall plant improvement schedules, and served as a benchmark from which future regulatory actions could be judged on a plant-specific basis. ISAP is described in a policy statement published in the Federal Register on November 15, 1984 (49 FR 45112) and in Generic Letter 85-07.

On November 4, 1987, the staff briefed the Commission on the status and results of ISAP and made recommendations for future activities relating to that program. At that meeting the staff recommended that the benefits of the ISAP approach be made available to all licensees. Identified benefits of the ISAP program include (1) finding common elements in separate review areas and proposing a single integrated action to resolve the concerns, (2) addressing pending requirements on a plant-specific basis, and (3) dropping issues from further consideration because of low safety significance. The Commission deferred action on extending the ISAP concept beyond the pilot program and, among other things, asked the staff to determine the industry's interest in such a program. Accordingly, the staff is issuing this generic letter to describe ISAP II, a derivative of ISAP, and to ascertain utility interest in participating in this proposed program.

ISAP II is a disciplined program to address regulatory issues within an integrated schedule based on two analytical tools: probabilistic risk assessment (PRA) and operating experience review. The operating experience review will determine systematic weaknesses and trends as well as provide actual historical plant operating information against which to judge the reasonableness of PRA findings. An integrated assessment based on the two analytical tools will determine the ranking of issues from which the integrated schedule will be developed. The integrated schedule will allow regulatory issues and utility-initiated items to be prioritized and scheduled within the framework of all scheduled items.

ISAP II is designed to accomplish the same objectives as ISAP with certain programmatic differences. Unlike ISAP, ISAP II would not again review issues against current Standard Review Plan sections. Therefore, incorporating lessons learned from the Systematic Evaluation Program (SEP) would not be a requirement for participants in ISAP II as it was in ISAP. ISAP II would only include current and future items for a plant. In addition, ISAP II participants would not be expected to address unresolved generic issues ahead of the staff's generic resolution. Through the ISAP II process, it may be determined that certain issues

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can be combined and resolved concurrently or that certain issues have a low safety significance, which would make them candidates for a lower priority or for being dropped. Enclosure 1 provides additional details regarding ISAP II.

An important advantage of ISAP II is that its minimum-required Level 1 PRA combined with a containment vulnerability assessment (or a Level 2 or Level 3 PRA) constitutes an acceptable method for a utility to perform its Individual Plant Examination (IPE). This examination is the means of satisfying certain requirements of the Commission's Severe Accident Policy Statement, which was published in the Federal Register on August 9, 1985 (50 FR 32138). Therefore, by performing a PRA for ISAP II, the licensee would have made substantial progress toward completing its IPE.

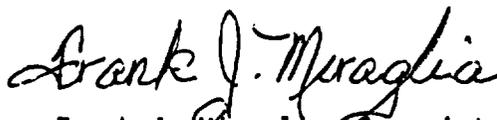
Benefits to those licensees participating in ISAP II include:

- The integrated schedules for the ISAP II implementation of issues will provide a predictable safety basis for the staff and licensee to manage current workloads and to estimate the resources necessary to meet future requirements. Required resources are expected to be reduced in the long run by combining issues and eliminating low safety significant issues.
- Licensing and generic issues are treated on a plant-specific basis and are weighed against all other pending actions. Through the ISAP II process, the licensee will have an opportunity to demonstrate, by using its PRA, that various generic issues are not justified at its facility on the basis of the safety significance of the issue.
- Safety will be enhanced and the safety value for each dollar spent will be increased because issues of highest safety significance will generally be worked on first.
- ISAP II is a process that may form part of the basis to consider plant life extension requests and plant aging issues.
- Bases for optimization of maintenance/surveillance intervals may be derived from ISAP II. For example, a PRA analysis provided a basis for increased surveillance intervals and out-of-service times for Westinghouse reactor trip system maintenance and surveillance frequencies.
- The process will help improve outage planning by providing a longer term outlook of modifications for the upcoming outages. This could reduce outage delays.
- Participation in ISAP II will involve the licensee in a detailed PRA leading to an enhanced understanding of plant capabilities for both it and the NRC. The ISAP II process will improve the interface between licensee engineering and plant operations by fostering communications in areas of mutual responsibility addressed in the performance of a plant-specific PRA.

The staff wants to identify participants for ISAP II starting in 1988. Potential interest will be assessed on the basis of utility response to the survey of Enclosure 2. We request your response, indicating positive or negative interest in participating, within 30 days of the date of this letter so that the staff may meet its commitment to the Commission to evaluate industry interest by March 1988. An expression of interest will not be construed as a licensee commitment to participate. Since the staff is not seeking a particular cross-section of plants or utilities, it will determine the participants through further communication with those utilities expressing interest.

If you have questions regarding the information discussed in this generic letter, contact Melanie Miller at (301) 492-1281.

This request is covered by Office of Management and Budget Clearance Number 3150-0011 which expires December 31, 1989. Comments on burden and duplication may be directed to the Office of Management and Budget, Room 3208, New Executive Office Building, Washington, D. C. 20503.



Frank J. Miraglia, Associate Director
for Projects
Office of Nuclear Reactor Regulation

Enclosures:
As stated

Additional Details on Integrated Safety
Assessment Program II (ISAP II)

A probabilistic risk assessment (PRA), operating experience review, and integrated assessment are the bases of the ISAP II process for determining, ranking, and resolving issues. Licensees may need to perform deterministic evaluations of those plant issues that cannot be evaluated within the context of a PRA. The minimum acceptable PRA would be a Level 1 PRA.* The utility would be expected to periodically update its PRA so that plant configuration and procedural changes are reflected in a timely manner. Periodic updates within 2 months of significant changes would be typical. The process of maintaining a PRA with appropriate management attention would favorably demonstrate management involvement. For multi-unit sites, the utility would need to have PRAs that consider the different features of each unit.

The operating experience review would evaluate total plant operating experience to determine any particular systematic weaknesses and trends. The experience review then would be used as a tool against which to compare the PRA findings and validate their reasonableness. The staff has not yet determined whether it or licensees will evaluate the operating experience review to identify trends. However, as part of the PRA, the staff would anticipate that utilities would make use of plant-specific equipment failure rates and performance data. The review of this type of information would be the first step in an operating experience review.

The Level 1 PRA, along with completion of a containment vulnerability analysis, (or the Level 2 or 3 PRA) would allow a utility to complete its IPE for that particular facility because, as the Severe Accident Policy Statement requires, vulnerabilities would be identified and addressed on a plant-specific basis. For ISAP II participants, these vulnerabilities would be evaluated and ranked for overall safety significance in order to assume their appropriate priority as compared to other issues. ISAP II participants could address these vulnerabilities in the time frame of the IPE response and would not be penalized for participation in ISAP II by the staff requiring participants to address the vulnerabilities ahead of the IPE schedule. Details of how a containment vulnerability analysis should be performed will be provided in the IPE generic letter.

Issues required by regulation, order, or license condition and items committed to by the licensee would be included in ISAP II as a minimum. The utility, at its discretion, also may opt to include its own initiatives in ISAP II. The benefit of expanding the ISAP II list of issues is that licensee-initiated items may have a higher safety significance than some NRC-specified items (and may allow certain items to be deleted from the licensee's schedule) because of their greater contribution to overall plant risk reduction. For instance, a

*The PRA levels are defined as follows: Level 1 is the determination of core melt frequencies based on system and human-factor evaluations; Level 2 is the determination of the physical and chemical phenomena that affect the performance of the containment and other mitigating features and the behavior of the fission products within the plant; and Level 3 is the determination of the offsite transport, deposition, and health effects of fission product releases.

licensee could initiate a trip reduction modification that, although not an NRC requirement, could significantly reduce plant risk and hence could rank higher in priority than some NRC items.

ISAP II also would include future issues that would be incorporated into the process as they arise. Future issues would include new utility and staff issues and newly resolved generic issues. The staff would not require ISAP II participants to address generic issues ahead of the rest of the industry. Instead, as resolution is achieved, these generic issues will be evaluated for the specific facility within the overall context of ISAP II.

A tentative schedule for initiation of ISAP II with a given utility is provided in Table 1. This schedule is subject to change as the program evolves. Once the scope of issues to be included in ISAP II has been determined by the NRC and the licensee, the licensee would evaluate the issues on an integrated basis, propose resolution of the issue, and place each issue into one of three categories based on such criteria as safety significance and contribution to risk reduction, personnel exposure, and ease of implementation. As a general rule, issues that are ranked highest should be resolved in approximately one refueling outage, or two at most; issues ranked in the middle should be resolved in two to four refueling outages; issues ranked lowest may be deferred to four refueling outages and may be considered for dropping from the utility's schedule. The specific ranking criteria would be developed by each utility.

The licensee then submits its evaluation, solution, and ranking of each issue to the NRC for review. Following resolution of staff comments, the staff will issue an Integrated Safety Assessment Report (ISAR) documenting the agreed-upon resolution of each issue. In the pilot ISAP, this document was a draft ISAR that was circulated for peer review and ACRS comments. In ISAP II, the staff will issue only a final ISAR. The draft ISARs for Millstone Unit 1 and Haddam Neck are NUREG-1184 dated April 1987 and NUREG-1185 dated July 1987, respectively. Following issuance of the ISAR, the staff and licensee will negotiate an integrated schedule detailing milestones and completion dates for each issue or decide whether an issue should be dropped.

To instill a certain amount of rigor to the process, the staff would require that the operating license be amended to include ISAP II by, at a minimum, outlining the process for modifying accepted schedules. The staff also may opt to include the schedule for significant items in the license condition. The staff will work closely with the licensee prior to license amendment submittal to develop an acceptable application. The need to revise the integrated schedule would likely be evaluated following each outage as an integral part of the preparation for the subsequent outage. Justification for schedule changes would include newly identified issues by the staff or licensee, changes in NRC regulations, modifications in the scope of scheduled work, and delivery or procurement problems. The staff envisions a certain category of items for which staff approval is not required to change schedules as long as the schedules of significant issues are not negatively impacted. However, if the staff or licensee determines that prompt action is required on an ISAP II issue to protect public health and safety, the action must be taken on an accelerated schedule consistent with the item's newly identified safety significance.

Table 1

Tentative ISAP II Schedule

<u>Elapsed Time</u>	<u>Total Time</u>	
0	0	NRC selects participants, informs utilities, and requests submittal of the licensee's PRA* and the proposed scope of ISAP II for each facility.
6 weeks	6 weeks	Individual utility scope submittals received.
4 weeks	10 weeks	NRC reviews and completes resolution of questions on scope.
12 weeks	22 weeks	Utility evaluation, proposed resolution, and ranking of each issue submitted to NRC.
10 weeks	32 weeks	Resolution of staff comments of utility evaluation and ranking submittal complete; schedule negotiations begin.
12 weeks	44 weeks	Schedule negotiations complete.
2 weeks	46 weeks	Utility submits proposed license condition.
4 weeks	50 weeks	Sholly notice for license condition is issued.
4 weeks	54 weeks	License amendment is issued incorporating ISAP II.

*The submittal time and staff review period for each facility would vary depending on the status of the licensee's PRA and the extent of previous staff review. Therefore, the PRA schedule is not included in the tentative schedule which would have to be modified to include the PRA review on an individual facility basis.

Integrated Safety Assessment Program (ISAP) II

Response Format to Generic Letter 88-02

Facility Name: _____

Utility: _____

Individual Contact Name: _____ Phone Number: _____

An expression of interest will not be considered a commitment to participate on the part of the utility.

1. Would you be interested in participating in ISAP II? If so, in what time frame?

2. Do you believe that an industry/NRC seminar consisting of a brief discussion by NRC followed by a question and answer period would be beneficial prior to making a decision?

3. Would you be interested in a one-on-one meeting with the NPC to discuss your particular facility or facilities?

4. If you remain undecided regarding participation, what additional information do you need in order to make a decision?

5. Do you have any potential concerns about participating in ISAP II?

6. Do you have any suggestions for program improvements or changes?

LIST OF RECENTLY ISSUED GENERIC LETTERS

Generic Letter No.	Subject	Date of Issuance	Issued To
GL 88-01	"NRC POSITION ON IGSCC IN BWR AUSTENITIC STAINLESS STEEL PIPING"	/ /	ALL LICENSEES OF OPERATING BOILING WATER REACTORS AND HOLDERS OF CONSTRUCTION PERMITS FOR BWRS
GL 87-16	NUREG-1262. "ANSWERS TO QUESTIONS AT PUBLIC MEETINGS RE IMPLEMENTATION OF 10 CFR55 ON OPERATORS LICENSES	11/12/87	ALL POWER AND NONPOWER REACTOR LICENSEES AND APPLICANTS FOR LICENSES
GL 87-15	POLICY STATEMENT ON DEFERRED PLANTS	11/04/87	ALL HOLDERS OF CONSTRUCTION PERMITS FOR A NUCLEAR POWER PLANT
GL 87-14	REQUEST FOR OPERATOR LICENSE SCHEDULES	08/04/87	ALL POWER REACTOR LICENSEES
GL 87-13	INTEGRITY OF REQUALIFICATION EXAMINATIONS AT NON-POWER REACTORS	07/10/87	ALL NON-POWER REACTOR LICENSEES
GL 87-12	50.54(f) LETTER RE. LOSS OF RESIDUAL HEAT REMOVAL (RHR) DURING MID-LOOP OPERATION	07/09/87	ALL LICENSEES OF OPERATING PWRs AND HOLDERS OF CONSTRUCTION PERMITS FOR PWRs
GL 87-11	RELAXATION IN ARBITRARY INTERMEDIATE PIPE RUPTURE REQUIREMENTS	06/23/87	ALL OPERATING LICENSEES, CONSTRUCTION PERMIT HOLDERS, AND APPLICANTS FOR CONSTRUCTION PERMITS
GL 87-10	IMPLEMENTATION OF 10 CFR 73.57. REQUIREMENTS FOR FBI CRIMINAL HISTORY CHECKS	06/12/87	ALL POWER REACTOR LICENSEES
GL 87-09	SECTIONS 3.0 AND 4.0 OF THE STANDARD TECHNICAL SPECIFICATIONS ON THE APPLICABILITY OF LCD AND SURVEILLANCE REQUIREMENTS	06/04/87	ALL LIGHT WATER REACTOR LICENSEES AND APPLICANTS