Union of Concerned Scientists

July 14, 2000

Mr. Glenn Tracy
Chief, IOLB
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: COMMENTS ON THE SAFEGUARDS PERFORMANCE ASSESSMENT PROGRAM

Dear Mr. Tracy:

I learned a lot from attending the July 12, 2000, public meeting on the Safeguards Performance Assessment (SPA) program. I appreciate the opportunities you provided me and other public stakeholders to provide comments and ask questions during the meeting. I had some comments during the meeting, but opted to wait until I had through NEI's latest draft and some of the earlier SECY/SRM documents before finalizing them. Having completed that bit of homework, I'd like to submit the following comments for the staff's consideration:

1. I fully agree with the comments made by Mr. Ed Lyman of the Nuclear Control Institute and Mr. Paul Gunter of the Nuclear Information and Resource Service relative to the timing of these changes. Mr. Lyman contended that the nuclear industry has not demonstrated via the Operational Safeguards Response Evaluation (OSRE) program that it was earned the right to self-policing this important area. Mr. Gunter observed that the move from the OSRE to the SPA program appeared to be a move from an effective program to something less.

   The history of the OSRE program, including the recent failures at Quad Cities and Oconee, unquestionably shows that nuclear plant security is not as effective as it needs to be. The OSRE program has consistently shown over a period of several years now that there are nuclear plant security problems.

   If the SPA program were to report markedly better performance, there's very few people outside of the nuclear industry that would believe that this result was obtained by improving performance instead of by lowering the acceptance standards.

   If on the other hand, the nuclear industry took over the self-assessments after the OSRe program had consistently demonstrated acceptable nuclear plant security performance, there would be a better foundation for the SPA program.

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2. There was considerable debate about whether the SPA program should be a requirement for the plant owners under 10 CFR Part 73 or a commitment. Much of that debate focused on whether commitments afforded the NRC the same inspection and enforcement abilities that it has for requirements. Totally missing from that debate was the issue of public participation and involvement. There is a huge difference relative to public participation between a requirement and a commitment. Much less information is placed on the docket for commitments than for requirements. Without assuming how the requirement/commitment debate turns out, I respectfully ask the NRC staff to include public involvement as one of the factors in its decision.

3. I agree with the NRC's stated position on operator actions during a security event, with one caveat. The NRC staff indicated that operator actions could be credited prior to neutralization of the intruders as long as the operators were protected. Examples of protection included having an armed security person escort an operator to plant equipment. The concern is that there is not an infinite pool of security staff. The owner of the Millstone nuclear plant in Connecticut recently slashed the facility's security forces nearly in half. It is not apparent that the surviving security staff members can respond to the intruders, protect the target sets, perform emergency planning functions such as notifications and accountability, and traipse around the plants with operators. The OSRE program results strongly suggest that the existing security staff is inadequate to respond to the intruders, yet alone take on escort duties.

4. While the critical safety function concept proposed by the NRC staff has some admirable qualities, its disadvantages outweigh them such that the concept should be abandoned. The success criteria must remain preventing core damage as it has been during the OSRE program. The principle objection to the critical safety function concept is that it is virtually guaranteed to result in resource wasting by both the NRC staff and the plant owners.

   The six critical safety functions are listed on pages 12 of the NRC's slides. They include "containment of radioactive materials," "reactivity control," and "process monitoring necessary to perform and control the above functions." From the discussion, it appears that target sets would be developed for these critical safety functions and the SPA drill would evaluate the ability of the plant's security system to protect these target sets.

   That's significantly different that the OSRE program evaluation of a plant's security system to protect target sets based on core damage. Under the OSRE program, destruction of the target set equipment can be reasonably assumed to result in core damage—an unacceptable conclusion.

   Under the critical safety function approach, the target set equipment for "process monitoring necessary to perform and control" might indeed be destroyed, but that condition may or may not lead to core damage. It would undoubtedly trigger a protracted debate between the NRC staff and the plant owner about the severity level of the test results—efforts that would be better spent fixing the security system and verifying the efficacy of those repairs.

   The critical safety functions concept fails to satisfy two of the NRC's four stated objectives; namely, to improve efficiency and effectiveness and to reduce unnecessary regulatory burden. It should be rejected. Instead, the target sets should continue to be based on preventing reactor core damage.

5. I agree with the concern expressed by Mr. Lyman about segmentation of the security testing. A patchwork collection of discrete tests is not an adequate substitute for an integrated test. Segmentation is known to cause problems. For example, the NRC issued Generic Letter 96-01, "Testing of Safety-Related Circuits," on January 10, 1996, after it learned that some plant owners failed to ensure proper safety system function through a compilation of discrete logic circuit tests.

6. Several panelists commented that the plan at some nuclear plants for responding to an intrusion event is to manually scram the reactor. This point came up in the discussion of the reactivity control critical safety function. In March 2000, several nuclear industry leaders strongly protested against the reactor oversight program because it contained a performance indicator that included manual scrams. Mr. Kingsley of Commonwealth Edison, for example, stated that licensed control room operators might not manually scram the plant when conditions warranted it because they feared how it might impact the color of this performance indicator. Why then would these senior nuclear managers think their control room operators would manually scram the reactor following the report that someone scaled the back fence?

I request that I be added to the NRC's service list for the SPA and OSRE programs.

I would also like to take this opportunity to acknowledge the consideration of Mr. Stephen H. Lewis of the NRC's Office of General Counsel. During the meeting, Mr. Lewis was seated at the innermost ring of tables on your right. He got up early in the meeting and came to where Mr. Gunter and I were seated in the back corner of the large room. He asked if we could hear the discussion and offered to yield his seat at the table to one of us. We declined because we could hear well enough. But I greatly appreciate the fact that Mr. Lewis went out of his way to ensure that we were involved in the meeting. He was very considerate.

Sincerely,

David A. Lochbaum
Nuclear Safety Engineer

cc: Ms. Karen Cyr
Mr. Stephen H. Lewis