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Joseph M. Sebrosky
Mail Stop 0-11 F1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

Dear Mr. Sebrosky:

Please accept this letter and include it in the public record, regarding the issue of Inspections, Tests, Analyses and Acceptance Criteria, as listed in the Federal Register of June 25, 2001. This pertains to the inclusion of inspections, tests, analyses, and acceptance criteria (ITAAC) into the combined license (COL) requirements for nuclear power facilities under Title 10 of the Code of Federal Regulations Part 52 (10 CFR Part 52). We emphasize that 10 CFR Section 52.79(c) requires that an application for a combined license *must include* inspections, tests, analyses, and their acceptance criteria, including those applicable to emergency planning, necessary and sufficient to provide reasonable assurance that a facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the Commission's regulations.

Public Citizen's Critical Mass Energy and Environment Program supports the public interest in the phase-out of nuclear power and the increased development and deployment of clean, renewable energy sources. The production of nuclear energy is costly. It creates tremendous waste problems and safety risks to the public. We oppose the licensing of new reactors and the nuclear industry's mad rush to license new reactors. The licensing of new reactors flies in the face of timely phaseout of nuclear power. New reactors will only contribute to the expansion of the interminable problem of nuclear waste and nuclear proliferation. Indeed, we believe that the nuclear power industry's persistent attempts to modify and dilute existing license regulation are a course

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of negligence and a great danger to public safety. The idea of defining ITAAC in a combined license according to the nuclear industry's recommendations is a clear step down this path. It would further instill the industry's hegemony over the direction of nuclear power. We request that the Commission reject the recommendations of the NEI as indicated in their letter of May 14, 2001 to Chairman Meserve.

Prima facie, ITAAC is extremely important in the licensing procedure. Under the combined licensing, ITAAC serves as a last-chance control on the safety of a proposed new plant before the fuel is loaded and the plant is put into operation. After a COL is issued, the public has no direct standing to challenge a safety issue unless the NRC grants an optional hearing after the ITAAC is implemented. Thus, the public relies on the NRC to ensure that safety and the ITAAC are completely satisfied. The NRC holds the public trust. The Atomic Energy Act states that if the Commission decides to issue a license, the licensee must be a person equipped to observe and who agrees to observe such safety standards to protect the health and to minimize danger to life or property as the Commission may by rule establish [42 USCS 2133(b)].

We urge that the Commission resist the influence and demands of the nuclear power industry to direct the intent and rules of combined licensing and ITAAC. Acquiescing to the industry's proposals for expeditious licensing rules and diluted standards, in the name of promoting "aggressive construction schedules", is bad public policy. ITAAC is not an isolated criterion. It applies within the combined license, and it involves both construction and operations, as well as their relationship. This relationship is greater than a mere aggregation of the two parts. Thus, ITAAC must address this relationship. The industry, however, would have the Commission believe that operational ITAAC or "programmatic" ITAAC exists in isolation, that it is severable from "hardware" physical construction, and that it need not be addressed in a combined license. This is not the case. Effective emergency planning, for example, inherently involves both construction of a plant and its operation. It is plant-specific over design, site, construction and operational aspects. If an industry applicant wants a separation of ITAAC issues into construction and operations, then the applicant should proceed with a traditional 10 CFR Part 50 two-step license.

It is unconscionable to the public interest that the nuclear industry, particularly the lobbying interest of the Nuclear Energy Institute and its members, promulgates rules, legislation, and policy. We insist that programmatic ITAAC not be such a case. To argue, like the NEI, that programmatic ITAAC is

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redundant is myopic. Programmatic ITAAC is not duplicative of existing processes, especially when one considers that it primarily involves the untrodden ground of new reactors and new licensing procedures, rules, and legislation.

Comments on Specific Items

1. Clarification of Terminology

We believe that ITAAC significantly influences the existence, licensing, and safety of nuclear power facilities. Therefore, ITAAC is absolutely important to the public interest. As such, we believe a vigilant attitude of seriousness and diligence is essential to these criteria. Language, as much as actions, has great public import. "Programmatic", however, is a term coined by the Nuclear Energy Institute (NEI). It connotes an image of casual and routine activity. Licensing of new advanced reactors and emergency planning are two activities that are neither casual nor routine, nor should they be.

We request that the Commission provide a formal definition of what is "programmatic" ITAAC, and not a reference to the descriptions promoted by the NEI. Otherwise, we request the term be avoided. The term comes from section 1 of NEI's letter of September 8, 1998, where NEI made comments to the 1998 version, Attachment 1, Combined License Issues, of SECY-00-0092. Generally speaking, and as described by the NEI, "programmatic" ITAAC is ITAAC for operational programs including security, fitness for duty, training, and emergency planning, although this description is not exclusive. We do not want to legitimate the term "programmatic" and we reject the use of this term until such time as the NRC rules on the term and its scope. Nonetheless, for clarity of our comments here, we will use the term "programmatic" ITAAC temporarily. We respectfully request that the NRC: 1) define ITAAC terminology; 2) clarify the types of ITAAC that are allegedly "programmatic"; 3) preclude the use of the term "programmatic" from the combined licensing language under 10 CFR Part 52; and 4) legitimate the current ITAAC language of Part 52 to incorporate acceptance criteria for security, fitness for duty, emergency planning, financial protection, proliferation resistance, radiation exposure, and training.

2. Combined Licensing

10 CFR Part 52 provides alternative means, at the voluntary discretion of the applicant, to proceed with applying for a license to operate a nuclear power

facility. In sum, there are three procedural parts required for construction and operation of a nuclear power facility: 1) siting and the early site permit process under 10 CFR Part 52 Subpart A; 2) design certification under Subpart B; and 3), combined license under Subpart C. Although the rhetoric of the nuclear industry suggests the only sequence of these three Subparts is in alphabetical order, this is misleading and incorrect. An applicant can proceed in a number of different ways to obtain a license, including obtaining the site permit first, then obtaining a license, and then obtaining a design certification. In fact, Exelon has expressed interest in pursuing its licensing for pebble-bed modular reactors in just this order.

The importance of sequence is extremely significant. Each Subpart has different opportunities for public participation relative to its particular timing for mandatory or optional hearings, and each has different ways that one Subpart references the results of another Subpart. For example, an early site permit can be granted, adjudicated and then incorporated by reference into a combined license without the reactor design being certified yet. The design certification could come later. This scenario raises a concern for the public. One can not make informed input into siting decisions without information about the certified design.

The public will not have a constructive opportunity to make an informed challenge about design safety in a combined license hearing if the design is not certified yet. The pebble-bed modular reactor does not reference a certified design. The Westinghouse IRIS reactor is a new type of reactor as well. In its May 25, 2001 letter to the Commission, Exelon proposed a 20 month construction schedule for the pebble-bed modular reactor. 10 CFR 52.103 requires not less than 180 days before initial loading of fuel to allow for a hearing. This time schedule translates into a hasty construction schedule with an incomplete ITAAC at the time for a hearing. This haste is negligent, excludes democratic input into the licensing process, and is irresponsible public policy.

Moreover, new reactor designs involve new functions. These new functions include some reactors, like the pebble-bed reactor, that are modular and some reactors which involve longer and faster fuel burn-up rates. ITAAC must address these new features. Indeed, the pebble-bed modular reactor does not reference a certified design. Most of the arguments against ITAAC made by the nuclear industry operate on the erroneous presumption that all new reactor designs concern certified designs. The pebble-bed modular reactor is a custom design. This design needs special attention by the NRC, specifically in the

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safety areas of emergency planning, security, proliferation resistance, training, financial protection, and radiation exposure - areas which the industry is attempting to preclude the NRC from evaluating under the industry's "programmatic" ITAAC argument. Indeed, in its pre-application activity of June, 2001 for the pebble-bed modular reactor, Exelon seeks special treatment and changes to top-level regulatory criteria regarding the size of the emergency preparedness zone and applicable radiation tables. Such changes would benefit Exelon, but would provide no benefit to the public.

NEI claims that many of the NRC's concerns about ITAAC will be covered by other NRC rules and procedures. Such claims, however, do not at all agree with facts. For example, the NEI letter to Chairman Meserve states: "The NRC will review all appropriate operational programs prior to granting a COL to ensure their acceptability, which would then be subject to the formal hearing process, and verified through the NRC's ongoing routing inspections during the construction and operations phase after a COL has been issued." Therefore, the NEI contends that ITAAC inclusion in COL is redundant or unnecessary. This logic is faulty. If the design of a reactor is not certified, then the NRC will not be able to review *all operational programs* relevant to ITAAC because the design will not be one of them. Furthermore, formal hearings are not mandatory under the combined license schedule at the time of ITAAC implementation. They are merely optional under 10 CFR 2.206.

A lack of design certification prior to performance of ITAAC, issuance of the COL, and plant construction contradicts claims which the NEI itself took from the Senate Energy and Natural Resources Committee Report: "...the purpose of ITAAC is to enhance certainty for the utility building the plant by spelling out before construction begins what conditions the completed plant must satisfy in order to operate". And again, "ITAAC will provide NRC regulators objective safety standards (i.e. acceptance criteria) with which to measure the constructed plant in deciding whether the plant is safe to operate." Finally, the NEI asserts that the Final Safety and Evaluation Report (FSAR) would cover the type of activities reviewed in "programmatic" ITAAC, therefore "programmatic" ITAAC would not be necessary. The NEI letter states: "Importantly, 10 CFR 52.79(b) requires a COL applicant to include operational program descriptions in its FSAR consistent with the requirements of 10 CFR 50.34." This argument by NEI is useless when there is no certified design to generate an FSAR in the first place.

In effect, the NEI and the nuclear industry are trying to avoid any plant-specific site and design criteria in the combined licensing procedure and they

want the NRC to step aside from asserting them as criteria. Specifically, the nuclear industry does not want these criteria to fall within the scope of ITAAC and this demand is unacceptable. In the case of Exelon and the pebble-bed modular reactor, this demand is more unreasonable since it is foreseeable that Exelon will attempt to incorporate testing and experimental results for its South African prototype pebble-bed reactor into the siting, licensing and design certification for its U.S. based reactors. Per SECY-00-0239 of December 28, 2000, the information report states that the Office of Nuclear Reactor Regulation (NRR) received the licensing requirements document developed by the Regulatory Authority of South Africa for a Chinese developed pebble-bed modular reactor (Exelon could use the design of a Chinese Pebble Bed Modular High Temperature Gas Reactor (PBMR)). NRR will also have the Safety Evaluation Report for the PBMR in China, written for the Chinese Regulatory Authority translated into English. The International Atomic Energy Agency's Nuclear Safety Advisory Board has recommended a full review of the safety aspects of PBMR because it believes the current enthusiasm for this type of reactor could lead to the rushing of a proper safety evaluation.

3. ITAAC Compliance

Complementing the nuclear power industry's effort to expedite licensing and pursue its irrational desire for an "aggressive construction schedule", the industry has pressured the NRC to relax its verification standards, to confirm compliance to licensees over ITAAC, and to transform NRC's role of regulator into one of expediter. In proposed changes to the combined license regulations, the nuclear industry is demanding that the NRC allow licensees to self-report their compliance with ITAAC [see NEI proposed section 10 CFR 52.99 - Inspection During Construction, from June 15, 2001 meeting with NRC].

The NEI proposes and desires that the licensee, not the NRC, will be in charge of performing and demonstrating conformity with the ITAAC before fuel load. The licensee will notify the NRC that it has successfully completed ITAAC. Meanwhile, the licensee can proceed with construction and preparation at its own risk without NRC having completed its verification. License applicants can proceed with design and procurement at their own risk before satisfying ITAAC. Finally, if there is an ITAAC activity that needs corrective action, the licensee can try to remedy the problem or request an exemption under the design certification rule, both before the NRC steps in to investigate the problem. In short, the licensee has control over the ITAAC process of compliance and determination of non-compliance. The licensee is setting the

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need for ITAAC and the range of scoping. This situation is bad policy because there can be industry bias. There is no independent NRC evaluator in the midst of the process. The NRC's role of verification comes at the end of the process. Furthermore, this proposed procedure does not address the NRC revisiting ITAAC if new information arises after verification.

Concerning the issue of industry bias, the use of probabilistic risk assessment (PRA) in construction inspection raises further concerns of industry hegemony over ITAAC. First, if licensees or applicants provide the data for ITAAC through self-reporting, and this information is used for "smart-sampling" or trend analysis, there is an opportunity for bias. Proper, rational decision-making uses random sampling to avoid bias. Unfortunately, ITAAC meeting the industry's desires would mean the licensee selects the compliant and non-compliant data in the determination record. Thus, there will be the potential for an improper establishment of the base rate for any control used in probability assessments. In addition, there is a great need for the probabilistic risk assessment to be plant-specific, and this especially requires plant-specific data such as information about design. It also means that the variables used in the probabilistic risk assessment include plant-specific information.

In sum, the delegation of authority to industry for ITAAC is ludicrous. If the NEI's proposals for ITAAC were accepted by NRC and inserted into the licensing requirements, then the NRC's role would be greatly reduced to essentially rubber-stamping the licensee's compliance with ITAAC. The licensee would control far too many facets of the ITAAC process. The fact that the NEI proposes that the NRC remove itself into a verification or confirmation function is telling. The nuclear power industry wants to reduce the NRC authority in nuclear energy by limiting the scope and need for ITAAC. Furthermore, by simultaneously removing the remaining, diluted scope of ITAAC from the licensing process, as per the request of the NEI, the nuclear power industry reduces the ability for effective input from external sources, particularly the public, into the licensing of new reactors. Consequently, the industry can force new reactors onto the public under its "aggressive construction schedule", when no new reactors should be built and existing reactors should be retired.

Conclusion

We ask that the Commission have the patience and foresight unknown by the nuclear industry. The NRC should not rush a policy decision to acquiesce to the industry's haste to meet construction schedules for new reactor units. This haste and pressure disregards the public interest, particularly those people in

communities affected by the physical existence of a nuclear power plant near their homes.

The full authority and responsibility for the implementation of ITAAC must be placed solely with NRC. Permitting the nuclear industry to be responsible for ITAAC performance and the NRC merely rubber-stamping that performance is an abrogation of the NRC's duty to act as a regulatory agency.

There must be clear, distinct definitions of ITAAC for all phases of siting, licensing, design, construction, and operation of a proposed nuclear facility. Each phase should provide for the re-examination of issues relevant to ITAAC and mandatory public participation on the record, especially when new information pertinent to an application arises during ITAAC implementation or verification. Furthermore, since 10 CFR Part 52 allows timing alternatives for the order in which an applicant can submit its applications for site permit, COL, and design certification, the NRC should make it mandatory that ITAAC is implemented and verified at the last stage, whether it is siting, COL, or design certification, so that ITAAC can evaluate the nuclear facility as a whole before fuel loading and operation. Again, before the fuel loading, public participation for the record should be mandatory.

NRC has an obligation to the public to regulate the nuclear industry. The performance of ITAAC is clearly a way for the NRC to demonstrate that it takes this obligation seriously.

Sincerely,



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