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PETITION RULE PRM 61-1
(55 FR 13797)

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**EDISON ELECTRIC
INSTITUTE** The association of electric companies

1111 19th Street, N.W.
Washington, D.C. 20036-3691
Tel: (202) 778-6400

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OFFICE OF SECRETARY

August 3, 1990

Mr. Samuel J. Chilk
Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Re: Comments of the Edison Electric Institute and the Utility Nuclear Waste and Transportation Program on the Petition for Rulemaking Submitted by the Sierra Club, North Carolina Chapter (55 Fed. Reg. 13797 (April 12, 1990) as Amended 55 Fed. Reg. 23206 (June 7, 1990))

Dear Mr. Chilk:

The following comments are submitted on behalf of the Edison Electric Institute (EEI) and the Utility Nuclear Waste and Transportation Program (EEI/UWASTE) on the rulemaking petition submitted by the North Carolina Chapter of the Sierra Club (55 Fed. Reg. 13797 (April 12, 1990) as amended in 55 Fed. Reg. 23206 (June 7, 1990)). EEI is the national association of investor owned electric utilities; its members generate approximately 75% of the nation's electricity. EEI/UWASTE is comprised of virtually all of the country's electric utilities with nuclear energy programs; it seeks to ensure that radioactive waste management and disposal, and nuclear material transportation systems, are maintained and developed in a safe, environmentally sound, publicly acceptable, cost-effective, and timely manner.

The petition in question requests the NRC to amend 10 CFR Part 61 to include provisions that would explicitly permit the development of a "zero-release low-level radioactive waste disposal facility in a saturated zone." 55 Fed. Reg. at 13797. The petition states that the requested relief is necessary in order to allow the North Carolina General Assembly to consider a waiver of a North Carolina statute which requires that the bottom of a low-level waste disposal facility be at least seven feet above the seasonal high water table.

For the reasons set forth below, EEI and UWASTE believe that the requested relief is technically unfounded and contrary

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to NRC policy. EEI and UWASTE respectfully request that the petition be denied.

Petitioner requests that the NRC establish new regulations which would explicitly authorize the siting of a low-level waste disposal facility in or below a saturated zone. At present, NRC regulations generally prohibit the siting of a disposal facility in a saturated zone (10 CFR § 61.50(a)(7)), and the petition has provided no substantive basis for modifying this aspect of the NRC's program for the safe siting and operation of a low-level waste disposal facility. Indeed, the entire concept of intentionally placing the disposal unit in a saturated zone is contrary to the fundamental principles underlying 10 CFR Part 61, and may only be authorized under unusual circumstances. In fact, the NRC rules specifically require that:

The disposal site must be designed to minimize to the extent practicable the contact of water with waste during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal. 10 CFR § 61.51(a)(6).

Disposal in the saturated zone is therefore counter to general NRC policy.

To the extent that the petitioner requests explicit regulatory authority to site a low-level waste disposal facility below the water table, NRC regulations state:

The disposal site must provide sufficient depth to the water table. . . . The Commission will consider an exception to this requirement to allow disposal below the water table if it can be conclusively shown that disposal site characteristics will result in molecular diffusion being the predominant means of radionuclide movement and the rate of movement will result in the performance objectives of Subpart C of this part being met. 10 CFR § 61.50(a)(7).

Therefore, in order to so locate such a disposal facility, this Section requires a "conclusive" showing that site characteristics will assure compliance with Part 61 performance objectives. The petitioner has failed to provide any basis for departing from

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this requirement. Part 61 (and the siting requirements in particular) were developed based upon extensive NRC technical reviews as reflected in, among other things, the Part 61 Environmental Impact Statement. The petition does not provide any reliable or meaningful technical information that would warrant reevaluation of the NRC's prior judgements. 1/

The petitioner also incorrectly asserts that regulatory changes are needed to permit the North Carolina legislature to consider a waiver of the State statute specifying that disposal facilities must be sited at least seven feet above the seasonal high water table. Petition, p.1. While we are not commenting upon the interpretation or effect of North Carolina State statutory provisions, the NRC regulation quoted above already authorizes consideration of a disposal facility located below the water table. Thus, this provision does permit the North Carolina legislature to consider a waiver of the existing statutory provisions so long as the waiver and any applicable Agreement State regulations are compatible and consistent with Section 61.50(a)(7). Therefore, it is neither necessary nor appropriate for NRC to address this issue at this time.

The petition also discusses the concept of a "zero-release" facility designed for isolation of the waste well beyond 500 years (i.e., in "perpetuity"). Petition, pp. 4,9. As the EIS states, "the technology of waste disposal is not risk-free." 10 CFR 61 FEIS, p. 6-4. The NRC has never concluded that a "zero-release" capability is necessary to adequately protect public health and safety, and the petition has failed to provide evidence to the contrary. The claim that waste isolation for 500 years will not adequately protect the public is also directly contrary to the technical analyses supporting Part 61. In fact, the disposal system is specifically designed such that "a maximum concentration of radionuclides is specified for all wastes so that at the end of the 500 year period, remaining radioactivity will be at a level that does not pose an unacceptable hazard to an intruder or public health and safety." 10 CFR § 61.7(b)(5).

1/ Indeed, it is interesting to note that in its comments on the draft Part 61 regulations, the Sierra Club Radioactive Waste Campaign stated that "there should be no exceptions" to the requirement that sufficient depth be provided between the disposal facility and the water table "regardless of rates of diffusion." 10 CFR Part 61 FEIS, p. B-241. Emphasis in original.

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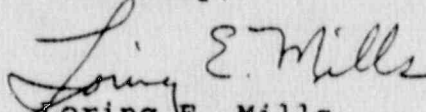
Granting the petition in question would also be inconsistent with existing NRC policies and resource allocations. We believe that introduction of a radically different, unproven and patently non-conservative facility design could add a significant element of delay to the efforts of North Carolina (and possibly other states) to establish new regional disposal facilities in a timely manner. In addition, the NRC Staff has properly chosen to focus its limited resources on those disposal siting options and technologies that are in the mainstream of accepted scientific/technical thought, and that are the most likely to be utilized by states and regions developing new disposal facilities. It would be entirely inappropriate to expend NRC Staff time and resources on radical proposals that have a very low likelihood of public acceptance, and for which there has not even been a suggestion of interest by state authorities.

In the original petition and the subsequent amendment, the petitioner discusses the supposed "benefits" of using polymer concrete (PC) or polymer impregnated concrete (PIC) in the facility design. Regardless of the benefits or adverse impacts associated with the use of PC or PIC, (and the petition admits that these are uncertain) there is nothing in NRC regulations which prohibits the use, or the consideration of use, of these materials in the design of the North Carolina facility. There is therefore no need for any regulatory change.

Finally, the Petitioner recommends that the facility be "well concealed" to avoid inadvertent intrusion. Petition, pp. 4-5, 9; Amendment, pp. 1-5. The idea of avoiding inadvertent intrusion through concealment, rather than positive, identifying features and barriers is foolhardy and contrary to basic principles set forth in Part 61. It also directly contradicts the public comments when Part 61 was first proposed. (See 47 Fed. Reg. 57451).

In short, EEI and UWASTE believe that the petition for rulemaking of the North Carolina Chapter of the Sierra Club is technically unsound and directly contrary to NRC policy. We respectfully request that the petition be denied in its entirety.

Sincerely,


Loring E. Mills
Vice President