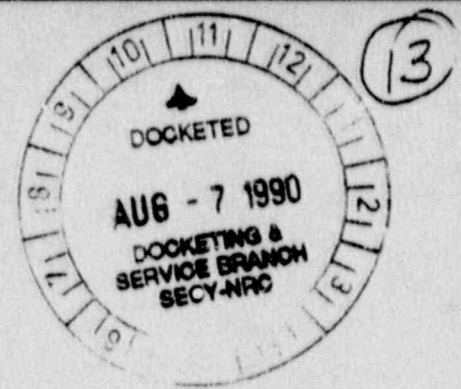


DOCKET NUMBER  
PETITION RULE PRM 61-1  
(55 FR 13797)

Secretary, U.S. Nuclear Regulatory Commission  
Attn Docketing and Service Branch  
Washington D.C. 20555



August 5th 1990

Re: PRM-61-1

Comments on Sierra Club, North Carolina Chapter, Petition for Rulemaking (Low-Level Radioactive Waste)

A. PETITION IS MOOT: Petitioner states that "amended regulations are necessary in order for the General Assembly of North Carolina to consider a waiver of a North Carolina statute which requests (sic) (requires?) that the bottom of a Low-Level Waste facility be at least seven feet above the seasonal high water table."

- 1) The N.C. General Assembly has delegated the siting, choice of technology and operator to the N.C. Low-Level Radioactive Waste Management Authority, a 15-member board appointed not by the N.C. G.A. itself as a whole, but by the Governor, Lt. Governor and Speaker.
- 2) At the time this petition was filed (Jan 17, 1990) and still by the date of these comments (Aug 5, 1990), the NCLLRWMA had not and has not committed to any particular disposal technology or design, nor to insist on a specific design proposal or proposals from its contractor, Chem-Nuclear Systems Inc. (CNSI), nor to define what interpretations it will accept of the "engineered barriers" which are mandated by N.C. statute.
- 3) In its Request for Proposals the NCLLRWMA required prospective applicants to submit facility designs with their proposals, but did not commit to select a contractor (to site, design, construct and operate the facility) based on that design. Apparently the NCLLRWMA also does not now feel it is committed to the design proposed by the operator it did select.
- 4) Sites were announced in November 1989 for "pre-characterization" (four sites) and two sites were recommended by CNSI in February 1990 for characterization, thus narrowing the potential geologic site features which might determine choice of technology. However, N.C. regulations, by incorporation of NRC regulations and guidelines, require that the site itself be capable of isolating the waste regardless of (or in the absence of) disposal technology, so that NCLLRWMA has not been bound by the site selection process to delay selection of disposal technology, should it in fact have any legal basis for selecting a disposal technology different from that described in the proposal of the selected operator.
- 5) Chem-Nuclear has submitted characterization plans for the two preferred sites to the N.C. Division of Radiation Protection (NCDRP) as of June 13, 1990, with no description of site layout alternatives, technology or even depth of the "waste modules." Depth of the

9008210170 900805  
PDR PRM  
61-1

PDR

DS10

"waste modules" is of crucial significance because of the shallow water tables encountered at both sites selected for characterization. At one site (Hamlet) measurements taken during only one season showed water tables at depths of only 20 to 35 feet below land surface; at the other site (Harris Lake) the contractor (CNSI) reported from only three borings taken at the highest elevations on site that ground water was encountered at 16 to 25 feet, with these measurements being taken at only one season, and hampered by perched water tables that caused drill rigs to get stuck in the mud.

6) In its proposal CNSI referenced a French LLRW facility (Centre d'Aube) about which it has since refused to provide further information to the NCDRP which was requested during state agency review of site characterization plans (general). From news stories reprinted from Le Monde (Paris) seen by this commenter, the Centre de L'Aube facility was still under construction in 1987 and so therefore has no performance history that can be referenced.

7) CNSI's proposal design involved below-grade disposal in concrete lined vaults with earth-mounding to retard erosion and redirect runoff from trench covers. The graphic used for this design furnished to local media by NCLLRWMA is of NRC origin and does purport to have some relationship to something in France. However, in a subsequent glossy brochure entitled Proposal Summary CNSI uses a graphic of earth-mounded bunkers which cutaway reveals to involve only above grade disposal, though this method is nowhere described or promised by the text. After a briefing by CNSI, staff in congressman David Price's Washington D.C. office reported that they had been led to believe that the facility would be designed for above grade disposal only. One of the two sites recommended for full characterization is in Congressman Prices' district.

8) In public meetings in the spring, summer and fall of 1989, both before and after the selection by CNSI of particular sites, David Ebenhack (VP) and other CNSI representatives described the facility as employing "thirty to forty foot deep trenches" with engineered barriers such as concrete. However, none of the four sites selected, and neither of the two sites proposed to (and approved by) NCLLRWMA for characterization can provide either 37' or 47' clearance from land surface to known high water tables (let alone actual seasonal high water tables over time).

9) The four sites selected by CNSI were alleged by them to have been selected from 116 sites, the remainder of which had had to be excluded for various reasons. However, reasons given for the exclusion of the only site reviewed by this commenter should have eliminated all four sites recommended, e.g. expansion potential limited by surrounding roads, since all four sites disregard roads which run through the sites. Since there was no preliminary or public presentation of the 116 sites prior to the announcement of four sites, there has never been any comprehensive comparison of the supposedly reviewed/rejected sites with those which were recommended, and no assurance is possible in retrospect that these were the sites (or all the sites) reviewed.

10) One of the sites (Harris Lake) was not selected from one of the candidate areas identified by the NCLLRWMA's preliminary screening contractor, Ebasco, but is one of the finalist sites, and is the site with the reported 16-25' water tables at the highest elevations, perched water tables, etc. Both sites currently proposed for characterization appear to violate a number of technical requirements for licensing, and to also fail the state's selection criteria on other grounds.

11) Petitioner or a representative appears to have approached the NCLLRWMA regarding either this petition or the proposed design, in the period December 1989 to January 1990, after the recommendation of four sites, all in the central region of N.C. where deep water water tables are not usual. NCLLRWMA did not at that time commit to any particular course of action regarding choice of technology nor the use of the design proposed by the Petitioner.

12) If any waiver of N.C. regulations regarding the separation of seasonal high water tables by a vertical distance of seven feet or greater if required from the bottom of the LLRW facility were made necessary by the willingness of both NCLLRWMA and CNSI to utilize the design proposed by the Petitioner, such a waiver would only be necessary under the following conditions, which have yet to be met:

a) LLRWMA dictates a technology and design to CNSI or accepts one proposed by CNSI or by another party such as the Petitioner, which would require a waiver. Currently both NCLLRWMA and CNSI have refused to select a technology or give details of any favored design approach in spite of the need of NCDRP and the sited counties to resolve the question of design depth in relation to the known shallow water tables at both finalist sites.

b) NCDRP approves characterization plans for two sites (i.e. determines that they are licensable up to the point of information to date) but the sites do not provide seven foot separation or greater from the bottom of the facility. At present NCDRP is not scheduled to approve characterization plans by any particular date, and cannot determine whether the two sites will meet the seven foot separation rule if there is no proposed/approved technology and design, or design depth.

c) The design proposed/approved is one which involves disposal of waste in the saturated zone. Even if NCLLRWMA proceeds to select a technology which could involve (or require) disposal of LLRW in the saturated zone, NCDRP would still have to ensure that both the facility design and the site proposed would meet all the other requirements for licensing on this issue alone, as well as all the others. Since the NRC's regulations contain a provision for exception to the prohibition against storage of LLRW in the saturated zone, there is no need for NRC to amend its rules in order for N.C. to change its rules.

13) It is not likely that NCDRP would issue a license or approve further characterization for a design which not meet the NRC's requirements for waste isolation at a site with a shallow water table, and currently only sites with shallow water tables are proposed.

Therefore, pending the choice of a technology/design and depth, the approval of sites for characterization, and the yet to be required need for a waiver of N.C. statutes, the petition is moot on the issue of need, on the grounds of being premature, and is also moot on the grounds of being unnecessary as will be shown below.

B. PETITION IS UNNECESSARY AND INAPPROPRIATE: Petitioner is asking NRC to change its rules when all that is required by the Petitioner's fallacious train of logic is a change in the N.C. statute. Since this N.C. statute is more specific than NRC rules, no rulemaking is required by NRC for this statute to be amended.

- 1) Petitioner could have asked NRC licensing staff to render an opinion on whether his proposed design would meet the NRC's requirements for exception, or requested acceptance of the design as a generic design that would qualify for this exception, or could have persisted in attempting to get NCLLRWMA to adopt the proposed design.
- 2) Petitioner requests an NRC rulemaking activity in order that the N.C. General Assembly may amend its statute, in order that his proposed design may be adopted (or in order that waste disposal may proceed in more traditional manner, i.e. lined trenches, at a site with shallow water table).
- 3) However, if the N.C. General Assembly had any desire to amend its statute it could have done so this last session, which it did not do, without any action by the NRC. If in doubt the N.C. GA could have petitioned the NRC itself, which it did not do, nor has the NCLLRWMA.
- 4) This commenter believes that the Petitioner is responding to a rebuff by the NCLLRWMA and/or others, regarding his proposed design, in the form of statements that such a design cannot be adopted because of the seven foot rule and the seven foot rule cannot be changed because of the NRC's regulations. As is clear this is in fact not the case, and as is also clear, the NCLLRWMA and its contractor do not appear to have any interest in the proposed design, but do have an interest in repealing the seven foot rule because they are proposing for characterization two sites with shallow water tables.
- 5) This use of a red-herring maneuver has precedent in that the majority of members of NCLLRWMA requested its representatives to ask the NC Joint Select Committee on LLRW of the NCGA to recommend revision of relevant statutes regarding capacity of the SE Compact site downward from 32 million cubic feet to 10 million cubic feet based on new projections that it would need only 4 million cubic feet. This change would have enabled LLRWMA to reopen the site search to sites rejected on grounds of size. However this was not adopted as a recommendation by the Committee on the grounds that "it was so hard to get the original legislation through the (compact) states and congress."

6) Had CNSI been willing to adopt and propose the petitioner's design, or had NCLLRWMA wanted to impose it upon the contractor, they could have requested that this Joint Select Committee of the NC General Assembly recommend repeal of the seven foot portion of the relevant statute in either this last short session or the one that will take place early next year. This request is not known to have been made.

7) Petitioner states knowledge of the reasons why siting of the SE Compact facility in N.C. is not meeting public acceptance which he does not have and cannot have. While the petition states that public acceptance of siting is hampered by public perception of the facility as a probably source of leaks, this commenter has to remind NRC of the following facts:

a) This commenter has attended public meetings both large in small in Chatham and Wake Counties since May of 1989, prior to the announcement of actual "potential" sites and afterwards, and one preliminary informational meeting held by LLRWMA in Lee County in February of 1989, numerous meetings of LLRWMA and has reviewed written comments and reports from the two finalist site areas, and the transcripts of public hearings held in four of the five sited counties after announcement of 2 finalist sites.

b) The original petitioning individual (Mr. Jesse Riley) resides in an urban county (Mecklenberg ) which was excluded in preliminary site screening in November 1988. Neither Mr. Riley nor anyone purporting to be a representative of, or even a member of, the N.C. Sierra Club has identified themselves at any of the meetings held in the sited counties which this commenter has attended.

c) The NC. Sierra Club membership, if analyzed would tend to show a greater proportion of members who are urban, professional, higher-income and white than is representative of the state as a whole, and in marked contrast to the populations in the sited areas, who are predominantly rural, manual or agricultural and non-degreed, lower-and moderate-income, and of mixed white, black and in one site area, hispanic populations, with a greater proportion of lower-income and minority race population than for the state as a whole. Therefore the N.C. Sierra Club is not representative of or privy to the concerns of sited populations.

d) Potential for leaks is only one of many concerns that have been raised and documented for both sited and potentially sited areas. In fact, assurances by CNSI and NCLLRWMA representatives have become almost meaningless given repeated instances of both misleading and incorrect statements and information. It is not likely that the adoption of "zero-release design" measures would make any difference at this point, nor would they address all the other concerns of sited residents.

e) These concerns include, but are not limited to:

- i. transportation conditions, road access, accident risks
- ii. associated activities, such as incineration, compaction, the possibility of nuclear fuel reprocessing on or near site

- iii. discouragement of clean industry locating to area, attraction of dirty industry to area
- iv. the taking of land held for generations, loss of valuable farmland or other resources, including recreational areas
- v. the use of state eminent domain powers for the taking of land for sites which do not appear to be the "best" sites
- vi. effect on property values both near the site and in the sited county or region as a whole, loss of future investment
- vii. limitation of overall area development
- viii. impact on endangered species on and off site, loss of habitat
- ix. prospect of loss of unemployment benefits for workers who do not wish to take jobs at the facility
- x. effect of spills and run off from the site affecting local or distant drinking water supplies and wells
- xi. inequality of the disposal of 8 state's worth of waste in one region, inequity of the compact's 160 year rotation when current nuclear power plants will only operate for 20-30 more years
- xii. unliklihood another state will be willing to take the facility or able to site it in 20 years
- xiii. existence of NRC rules allowing emergency access to the site from outside the compact region and push by other sited and non-sited states to reduce the number of sites to three
- xiv. fact that the siting process does not appear to have been fair or open
- xv. arrogance and unresponsiveness of both NCLLRWMA and CNSI
- xvi. payment by NC taxpayers of \$300 million to CNSI for siting and licensing activities for work which is superficial shoddy and unscientific

and so on and so forth... None of these concerns are addressed by particular design features, whether those proposed by the Petitioner or not. In short, the justification that adoption of the proposed design would make siting more publicly acceptable demonstrates that N.C Sierra Club is out of touch with sited populations. While NRC action is not needed for the NCGA to change its seven foot rule, if it were, it would not make siting more publicly acceptable, it would simply give CNSI an excuse to propose a design and site combination which, in the end, could probably not be licensed, not unlike the situation in Illinois where CNSI proposed for characterization one, unlicensable, site.

D. PROPOSED DESIGN IS INADEQUATE: Petition, which is moot, appears to postulate the possibility of a zero-release facility for perpetuity. This commenter had wished that Petitioner had requested NRC to change its 500 year performance period to perpetuity based on the probably source terms for LLRW facilities being proposed under current regulations, and agrees with the petitioner that the 0.6% of waste that will be left after 500 years will be a huge curie inventory, which will be very long-lived, i.e., for perpetuity in meaningful terms. However, there is not enough history for even bitumen coated concrete structures to assure performance over periods equal or greater to 500 years, nor, needless to say, on-site performance models with radioactive contents.

Petitioner also appears to be basing his request for rule-making on a number of other misconceptions besides that of the siting issue and the adequacy of the proposed design.

- 1) Petition assumes that an eight-state LLRW site is intrinsically acceptable and desirable, and that its location in North Carolina with its widespread shallow water tables is a good thing and was a suitable choice by the SouthEast Radioactive Waste Compact Commission, and that its location outside of areas recommended by the consultant (Dames and Moore) that reported to the SERWCC that NC had suitable site areas is a desirable outcome, and so on.
- 2) Petition assumes that a zero-release facility can be designed and that this will in essence resolve the environmental pollution problems associated with the nuclear fuel cycle and that therefore a zero-release LLRW facility is a suitable object of support by a group such as the NC Chapter of the Sierra Club which is noted for its defence of wilderness, if not of the public health.
- 3) Petition if granted (even though not necessary for changes to N.C. statutes) and changes in N.C. statutes, could facilitate a license application (though not necessarily approval) and would encourage characterization activities of a disruptive nature such as road building, drilling, construction etc., at one site which has identified endangered species (Hamlet) and at another site which not only has endangered flora and fauna, and habitat for bald eagles, but which encompasses some designated Wildlife Resource Commission gamelands and which is directly adjacent to a designated wildlife preserve and Red Cockaged Woodpecker Refuge. N.C. Sierra Club has not interested itself formally in these aspects of the siting of the SERWCC LLRW facility, and thus it is obvious that the petitioner in particular (i.e. Mr. Jesse Riley) has prevailed upon the N.C. Chapter of the Sierra Club in general to enter a Petition for Rulemaking on matters of which they are even less informed than he, in which they are equally less interested parties than he (unless of undeclared interest) and which is moot, unnecessary, dangerous and ill-conceived.

NRC should refuse this petition for rulemaking, based on the facts and arguments presented above, as moot for the need stated by the Petitioner. Other states, parties or commenters interested in the referenced design may request any further information available from the NRC or Petitioner. Additional commenters who have supported a request for a rulemaking on this issue on entirely different grounds under the mechanism of commenting on this petition should enter a new petition for rulemaking, in order that public comment can be made by the affected states and parties, since any change in NRC's guidelines or regulations for the disposal of LLRW will affect both those states sited now, those sited for future facilities and those merely in line to be designated as next "host" state for future facilities decades from now. Affected states are also those who either are or perceive themselves to be impacted by the effects of siting and design on ground- and surface-water drinking water and fishery supplies. In addition, these are matters are overall national public policy.

Liz Cullington  
Route 6 Box 1126  
Pittsboro NC 27312