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STATE OF VERMONT
DEPARTMENT OF PUBLIC SERVICE

June 23, 2006

Chief, Rules and Directives Branch
Division of Administrative Services
Office of the Administration
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington D.C. 20555-0001

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RULES AND DIRECTIVES
SECTION

Re: Vermont Yankee, 50-271, License Renewal
Vermont Department of Public Service comments on the Environmental Report

Vermont Department of Public Service comments on the scope of issues to be addressed in the Environmental Impact Statement (EIS) are provided on Attachment A to this letter. These comments are provided in accordance with Federal Register Notice, Vol 71, No. 77, Friday April 21, 2006, pages 20733-20735.

The Department of Public Service appreciates the opportunity to make these comments. Please call if there are questions.

Sincerely,

William Sherman
William Sherman
State Nuclear Engineer

SUNSI Review Complete
Template = ASM-013

E-RIDS = ASM-03
Call = R. E-mail (RLF)

Attachment A
Vermont Department of Public Service Comments
EIS for License Renewal for Vermont Yankee Nuclear Power Station

Category I item - Onsite Land Use

1. 10 C.F.R. §54.23 requires the Applicant to submit an environmental report that complies with Subpart A of 10 C.F.R. Part 51.

2. 10 CFR §51.53(c)(3)(iv) provides that the “[t]he environmental report must contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.”

3. New and significant information exists regarding the time for which onsite land will be removed from other uses, and whether such land use is irretrievable, which was not provided in the ER by the Applicant in accordance with 10 C.F.R. §51.53(c)(3)(iv). The current estimate in the Generic Environment Impact Statement (GEIS) is on-site storage of spent fuel will not last beyond 30 years after the end of the license period (including an extended license period). GEIS, Sections 6.4.6.2, 3.

4. The GEIS evaluates the impacts associated with onsite land use as Category 1, SMALL. The basis for this assessment is the assumption that the land used for storage of nuclear wastes at the reactor site will not exceed 30 years after the end of the license term. GEIS, Section 3.2 (referring to GEIS Chapter 6). That assumption, in turn, relies upon the assumption that a permanent high level waste repository, and perhaps even a second repository, will be in place by that time to receive the reactor wastes. GEIS, Section 6.4.6.2 Based on those assumptions the use of the reactor site for storing spent fuel, in this case for a period ending in 2062, has been deemed to be a small impact. GEIS, Section 3.2.

5. However, as summarized below, these assumptions are flawed. Recent evidence, not evaluated previously in the GEIS, now discloses that: 1) the likelihood that a permanent high level waste repository will be in place by 2062 is slight due to unanticipated technical problems uncovered at the Yucca Mountain site coupled with changes in national policy; 2) the only currently contemplated high level waste repository can accommodate the quantity of spent nuclear fuel expected to be produced by Vermont Yankee through the end of its originally licensed life, but it would not have space for at least a part of the additional spent nuclear fuel generated by VY during extended licensing; 3) no present plans exist for building a second high level waste repository nor has any site been identified for consideration for such a facility; 4) the United States is now embarking upon a changed policy for waste disposal which will make all the current schedules obsolete and for which there is no reliable time frame for its implementation; 5) there is not now nor has there been any reasonable prospect that the federal government or any third party will take title to the license-renewal spent fuel waste and remove it from the site; and 6) it follows that it is reasonable to expect that at least a part of spent fuel to be generated at VY during the period of an extended license will remain at the site for a much longer time than evaluated in the GEIS and perhaps indefinitely.

6. Since this new information, not available at the time of development of the GEIS, demonstrates that the commitment of onsite land for storage/disposal of spent nuclear fuel from license renewal will be substantially longer than assumed in the *GEIS*, and may be indefinite, this results in an irretrievable commitment of onsite land with a MODERATE or LARGE impact.

7. As demonstrated below, Vermont and its communities have firmly established values associated with land use such that the long-term or indefinite use of a portion of the VY site for spent nuclear fuel storage should clearly be evaluated as a MODERATE or LARGE impact in the VY supplement to the GEIS.

8. Entergy identifies in Environmental Report (ER) Section 6.4.2, that the land required to dispose of spent nuclear fuel as a result of operation during an extended license represents a irreversible and irretrievable commitment of resources. Entergy does not qualify the irreversible or irretrievable nature of this land use to a limited time period. Therefore, Entergy is identifying this use as indefinite. This identification is in conflict with the GEIS which does not identify such land use as irreversible and irretrievable. This difference from the GEIS requires should be addressed in the EIS for the impact of onsite land use.

9. In ER Section 4.0, Entergy refers to 10 CFR 51, Appendix B, Table B-1, which identifies onsite land use as Category 1, SMALL impact. But this identification only refers to the portion of land from license renewal as being "a small fraction of any nuclear power plant site," and does not include evaluation of the indefinite removal of the land from any beneficial use.

10. Entergy demonstrates in the Environmental Report (ER) Section 4.0 a flawed application of its obligations to identify new and significant information. Section 4.0 contains the statement,

"Entergy reviewed the NRC findings on these 52 issues and identified no new and significant information that would invalidate the findings for VYNPS."

The flaw is the identification of items in Table 4-2, which are purported to be the Category 1 issues applicable to VYNPS. *Land Use (license renewal period)* is listed in Table 4-2. But the adverse impact is from the land use beyond the license renewal period, caused by the actions during the license renewal period. If Table 4-2 has been stated correctly, then perhaps Entergy would have provided the new and significant information related to onsite land use.

11. The EIS should take into account that the nation's policy with regard to spent fuel management has changed since the GEIS. The current administration and Congress have

announced a major shift in policy called the Global Nuclear Energy Partnership (GNEP). Refer in general to the Administration's GNEP website - <http://www.gnep.energy.gov/> - which contains the announcement and much information regarding this new policy direction. Proponents of this new policy hope this new approach will not separate out plutonium products. However the referenced website shows that this technique has neither been developed nor demonstrated.

12. This shift in policy will remove attention and resources from repository development such that the basis and conclusions that spent fuel will not have to be stored on site beyond 2062 are no longer valid. For example, see the report of comments below from Sen. Pete Domenici:

MOVEMENT OF SPENT FUEL IN THE US COULD BE FURTHER DELAYED, according to Senator Pete Domenici, the New Mexico Republican who chairs the Energy and Natural Resources Committee. Domenici indicated during a status hearing on DOE's repository program at Yucca Mountain, Nevada that it was unrealistic to proceed with a status-quo repository project and later factor in spent fuel reprocessing waste and recycling activities associated with DOE's new fuel-cycle initiative, the Global Nuclear Energy Partnership. It ought to be pretty clear to everyone that spent fuel rods won't be put into Yucca Mountain, Domenici said in an apparent reference to GNEP, which is aimed, in part, at closing the nuclear fuel cycle in the US and abroad. Recycling will determine what kind of repository the US needs, he added. "It's a mess," Domenici said, of the Yucca Mountain program as reporters approached him after the hearing. He said that he believes any legislation on Yucca Mountain would have to include language on spent fuel recycling. Draft legislation DOE sent to Congress last month did not include language on spent fuel reprocessing.

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13. In addition, the EIS should consider that the previous assumption regarding the suitability of Yucca Mountain as a permanent waste disposal site is no longer valid. At Yucca Mountain, contrary to the assumptions underlying the GEIS, it has been discovered that the disposal area is subject to water in-leakage. Therefore the design must be changed from that previously assumed and it is not clear a new design can be developed which will meet dose and integrity requirements. Partially in response to this discovery, DOE has abandoned previous cask designs and now proposes a concept called the TAD (transportation, aging and disposal) standard canister for which there is not presently even a preliminary design.

14. Further, the EIS should stated that these changes have occurred in an increasingly hostile political environment. Senate minority leader Harry Reid (D-NV) strongly opposes development of Yucca Mountain and is able to use his position as minority leader effectively to advance this opposition and would do so even more forcefully as majority leader if the Senate leadership changes parties. And, the Western Governor's Association (WGA) has the following active resolution (03-16):

On December 1, 1989, the Western Governors' Association adopted Resolution 89-024 which stated that spent nuclear fuel should remain at reactor sites until a state has agreed to storage and DOE provides reasonable transportation, safety, and emergency response assurances to the western states. The resolution was readopted in 1992, 1995, 1997, and 1999.

All of the new information identified above provides additional arguments and evidence to bolster the opposition of Senator Reid and the WGA and undercut the assumed completion date for a usable high level waste repository.

15. In addition, the EIS should evaluate, because the GEIS was prepared before September 11, 2001, it does not factor in the impact of viable terrorist threats into an evaluation of the socioeconomic impacts of indefinitely storing spent fuel at the reactor site. The extended long-term or indefinite presence of spent nuclear fuel at Vermont Yankee after permanent shutdown means a defined terrorist target will be present for the long-term or indefinitely. In its news release No. 03-053 (April 29, 2003), NRC stated:

The Commission believes that this DBT [Design Basis Threat] represents the largest reasonable threat against which a regulated private security force *should be expected to defend* under existing law.

(Emphasis added). The phrase, *should be expected to defend*, means there is a limit on the expectation on Entergy, and that state resources will be expected to provide additional security responses beyond Entergy's capability. The very presence of this target creates an effect on that land, contiguous lands, and the surrounding area, creating the need for continuous augmented emergency preparedness plans and security response from the State. The EIS should evaluate this increased, long term burden on state resources. See also the decision of *San Luis Obispo Mothers for Peace V. Nuclear Regulatory Commission*, U.S. Court of Appeals for the Ninth Circuit, No. 03-74628 (June 2, 2006).

16. Entergy has stated that all of the spent fuel projected to be generated by Vermont Yankee through the end of its current operating license (including increases of spent fuel from power uprate) will be within the 70,000 metric tons storage limits of the "first" repository. The

EIS should identify that at least some part of the spent fuel from license renewal will exceed the 70,000 metric ton limit (when all spent fuel being generated nationally is considered) and must go into a second repository, and that this entry of Entergy into the second repository is specifically the result of the license renewal.

17. The Massachusetts Institute of Technology (MIT), in 2003, performed a study: *The Future of Nuclear Power: An Interdisciplinary MIT Study*. Entergy should have identified that it sponsored the co-chair of the study, Dr. Ernest Moniz, Director of Energy Studies, Laboratory for Energy and the Environment, MIT Department of Physics, as a witness in PSB Docket No. 7082, regarding authorization for dry cask storage. In that docket, Dr. Moniz testified:

[T]he MIT Study argues that “interim” storage of spent fuel (which can be carried out either at reactor sites or in consolidated facilities, possibly under federal control) for fifty to seventy years is in any case a preferred approach for design of an integrated spent fuel management system.

The implication of Entergy’s testimony through Dr. Moniz is that the first repository will not be available for “fifty to seventy years.” If the schedule for the first repository is “fifty to seventy years,” a time period greater than evaluated in the GEIS, then the schedule for a second repository is indefinite at best, if such a repository could ever be built. The EIS should take note of this fact.

18. The EIS should identified how Vermont would evaluate the onsite land use which would occur if license renewal were granted. Vermont assigns a high value to land and its use within the state. The values are codified in the form of environmental protections in permitting criteria in 10 V.S.A Chapter 151, State Land Use and Development Plans (see Exhibit Vermont-5).

19. Criteria No. 7 of 10 V.S.A §6086 (a) states:

[Before granting a permit, the district commission shall find that the subdivision or development:]

(7) Will not place an unreasonable burden on the ability of the local governments to provide municipal or governmental services.

The long-term or indefinite storage of license renewal spent fuel at VY would trigger long-term burdens on local governments for emergency management and security services. It is highly likely that long-term or indefinite storage of the spent fuel created by license renewal would not

comply with Criteria No. 7. Therefore, this would suggest the impact of the proposed onsite land use should be determined to be LARGE in the VY supplement to the GEIS.

20. Criteria No. 8 of 10 V.S.A §6086 (a) states:

[Before granting a permit, the district commission shall find that the subdivision or development:]

(8) Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas.

Under this criteria, the District Environmental Commission would evaluate the effect of spent nuclear fuel being left long-term or indefinitely on a riverbank site that would otherwise be fully returned to greenfield condition. It is highly likely the long-term or indefinite presence of spent nuclear fuels following decommissioning of VY would be deemed to create an undue adverse effect. Considering this criteria, the proposed onsite land use should be evaluated as MODERATE or LARGE in the VY supplement to the GEIS.

21. In addition, Vermont's land use law requires a finding that land uses are in conformance with local or regional plans:

(10) Is in conformance with any duly adopted local or regional plan or capital program under chapter 117 of Title 24. In making this finding, if the district commission finds applicable provisions of the town plan to be ambiguous, the district commission, for interpretive purposes, shall consider bylaws, but only to the extent that they implement and are consistent with those provisions, and need not consider any other evidence.

10 V. S.A. §6086 (a)(10).

22. The Windham Regional Plan of October 30, 2001, which is applicable to VY, establishes land use requirements, and has the following provision:

LAND USE POLICIES

Rural Residential Lands

1. Ensure that any development of rural residential lands will be at densities that will serve to contain rural sprawl, and that are compatible with existing land uses and sensitive to the limitations of the land.

Once the bulk of the site is returned to a greenfield condition, it is doubtful that long-term or indefinite presence of spent nuclear fuel from license renewal would be considered "compatible with existing land uses". This provision suggests the onsite land use impact should at least be evaluated as MODERATE in the VY supplement to the GEIS.

23. The Windham Regional Plan also has the following provision:

COMMUNITY RESOURCE POLICIES

High Level Radioactive Waste

1. Encourage a requirement that permanent spent nuclear fuel (SNF) storage be resolved prior to any consideration of extending or reviewing the operating license of Vermont Yankee.

It is highly likely that a land use evaluation under 10 V.S.A. §6086 (a)(10) would find the proposal for long-term or indefinite storage of spent nuclear fuel from license renewal did not conform with the regional plan with regard to the item above. Thus, this provision suggests a LARGE impact from the onsite land use from the proposed license renewal.

24. There is also a Vernon Town Plan, Nov. 3, 2003, which is applicable to VY. This plan contains the following:

Section III: Resource and Economic Development

Recommendations:

- #3 The Town should pursue discussions with appropriate representatives of the Vermont Yankee Nuclear power Company regarding the possible re-use of the power plant site ~~for~~ other commercial and industrial development following decommissioning.

The long-term or indefinite presence of spent nuclear fuel from license renewal has the potential for preventing "other commercial and industrial development following decommissioning." If the spent fuel storage completely prevented the use of the site for other developments, it is highly likely the impact from license-renewal onsite land use would be LARGE. If the spent fuel storage allowed some additional development but hindered other possible commercial and industrial uses, the impact would likely be MODERATE.

25. The extended long-term presence of spent fuel will prevent use of the immediate land

it occupies and will deter other possible uses of larger contiguous areas because of societal and commercial concerns regarding the proximity of radioactive material. From the foregoing, it is shown that the EIS should identify that Vermont has existing land use evaluation criteria, which establish the basis under which the impact from additional long-term or indefinite onsite land use resulting from the spent nuclear fuel generated from license renewal should be evaluated as MODERATE or LARGE in the VY supplement to the GEIS.