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JUN 16 1987

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MEMORANDUM FOR: Donald A. Nussbaumer
Assistant Director for
State Agreement Programs
State, Local and Indian Tribe Programs

FROM: Paul H. Lohaus, Acting Chief
Operations Branch
Division of Low-Level Waste Management
and Decommissioning

SUBJECT: REVIEW OF PRELIMINARY DRAFT SITE AND DESIGN CRITERIA FOR
NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The Division of Low-Level Waste Management and Decommissioning (LLWM) staff comments on the New York Department of Environmental Conservation's (DEC) Preliminary Draft of Criteria for LLRW Disposal Facility Site and Technology Selection are enclosed for your use in responding to the June 3, 1987 DEC request for comments.

We are aware of your office's sensitivity in scheduling sufficient time for NRC staff to conduct document reviews similar to this DEC request. However, we request that your office emphasize to the New York DEC our need for sufficient time to schedule and conduct reviews.

Also, we are concerned about providing comments on an incomplete regulation. As you are aware, the preliminary criteria that DEC submitted only contain technical criteria that address siting and facility design criteria. We believe it would be useful for us to also review the technical requirements that will be contained in the complete New York State LLW regulation.

Finally, in the absence of reviewing a complete LLW regulation, we recommend that your office advise the New York DEC of the importance in avoiding the development of a regulation that contains overly prescriptive criteria. A regulation that contains general criteria will provide the licensing authorities greater flexibility in considering applications to operate a LLW disposal facility.

Please contact Larry Saraka at extension 74554 if you have any questions about this review.

Paul H. Lohaus

Paul H. Lohaus, Acting Chief
Operations Branch
Division of Low-Level Waste Management
and Decommissioning

Enclosure: As stated

COMMENTS TO SLITP ON NY STATE DEC PRELIMINARY DRAFT
CRITERIA FOR LLW DISPOSAL

MEMORANDUM

- 1) Page 1, paragraph 2:
Note "performance criteria similar to those in Subpart C of 10 CFR 61."
For purpose of compatibility, do performance objectives have to be identical to those in 10 CFR 61?
- 2) Page 2, paragraph 1:
This last sentence needs clarification. Specifically, how many State agencies are preparing the rulemaking for LLW disposal? How can these agencies ensure that the regulation will: 1) be consistent throughout and; 2) be comprehensive?

SUBPART D SITING CRITERIA FOR LLW DISPOSAL SITES

328.17 SCOPE, PURPOSE AND APPLICABILITY

(a) Scope and Purpose

- 1) See memorandum comment number 1.

328.18 GENERAL SITING CRITERIA

(i) SITING CRITERIA APPLICABLE TO ALL TECHNOLOGIES

(a) General

- 1) Under criterion 3, suggest adding the words "of Subpart C" between "objectives" and "are".
- 2) Criterion 4 emphasizes groundwater and geologic systems that may affect facility performance. The proposed regulation does not indicate that hydrogeologic systems that may be affected by facility performance also need to be characterized, monitored, analyzed and modelled.

(b) Surface Waters and Hydrology

- 1) A third criterion should be included. This criterion should reflect the wording in §61.50 (a) (6) (ie. minimize upstream drainage).

(c) Mineral and Exploitable Resources

- 1) The term "natural resources" as used in this criterion should be defined in order to eliminate any confusion between its meaning in criterion (c) and its meaning as used in criterion (j).

2) Suggest revising this criterion by deleting "past or present."

(e) Groundwater and Hydrogeology

1) Criterion 1 may cause problems because it may direct siting toward very low permeability rocks, which may complicate design of facilities to avoid "bathtubbing" problems. This criterion should be described in more detail or deleted from the document.

(j) Natural Resources

1) See comment (1) under Mineral and Exploitable Resources.

GENERAL COMMENT

1) The 10 CFR 61 site suitability criteria that are addressed under General Siting Criteria are: §61.50 (a) (2)(3)(4)(9) and (11).

(ii) SITING CRITERIA FOR ABOVEGROUND, BELOWGROUND VAULTS ONLY

(a) Surface Waters and Hydrology

1) Criterion 4 is similar to but does not include all of the concepts in §61.50 (a) (6) (ie. minimize upstream drainage). This criterion should be expanded to accommodate all of §61.50 (a) (6).

GENERAL COMMENTS

1) The 10 CFR 61 site suitability requirements that are addressed when considering both Siting Criteria For All Technologies and Siting Criteria For Aboveground and Belowground Vaults are: §61.50 (a) (2)(3)(4)(7)(8)(9)(10) and (11).

2) This document lacks siting criteria for earthmounded concrete bunkers and shafts (boreholes). We consider that these two alternatives along with aboveground and belowground vaults should meet the site suitability requirements in §61.50. Therefore, particular consideration should be given to ensuring that siting criteria for all these alternatives address as a minimum, the site suitability criteria in 10 CFR 61.

(iii) SITE CRITERIA FOR UNDERGROUND MINED REPOSITORY ONLY

1) We are not providing comments on site criteria for underground mined repositories. Although an underground mine could be sited and licensed on a facility-specific basis under existing regulatory provisions in 10 CFR 61, specific requirements for deeper land disposal methods such as mined cavities were not considered in the initial 10 CFR 61 rulemaking effort. See NUREG 1241 for additional staff comments on alternatives.

SUBPART E DISPOSAL TECHNOLOGY CRITERIA

382.19 SCOPE, PURPOSE AND APPLICABILITY

- 1) No specific comments.

GENERAL COMMENT

- 1) Previously (2/10/87 teleconference) NRC staff had provided comments to NY State DEC on its RFP to develop siting and design criteria for a LLW disposal facility. One concern that was presented at that time was that the 7/87 State requirement to prepare regulatory criteria for alternative methods for LLW disposal is premature since NRC technical information on alternatives will not be published until 1/88 (This position should be reiterated). Consequently, the scope of review for the Disposal Technology Criteria sections has been limited. The criteria have been evaluated against §61.51 (ie. Disposal site design) and the concepts of 10 CFR 61. Specific comments on design criteria for alternatives would better be made following NRC's publication of technical information and requirements in January, 1988.

382.20 DISPOSAL TECHNOLOGY CRITERIA AND REQUIREMENTS

(i) TECHNOLOGY CRITERIA APPLICABLE TO ALL TECHNOLOGIES

(a) General

- 1) Criterion 1 should be carefully analyzed for compatibility with 10 CFR 61 by SLITP and OGC.
- 2) Criterion 5, what is contained in Parts 370-374 of the referenced State Title? Also, are there any conflicts between New York's hazardous waste regulations and the proposed LLW regulations that would preclude mixed LLW disposal?

(b) Design

- 1) Criterion 2, suggest deleting "to" and replace with "and."
- 2) Criterion 3 should be expanded. Does DEC intend that this criterion mean that the facility, on its own, comply with the performance objectives in 10 CFR 61 or, does it mean that the design should contribute to demonstrating compliance with the performance objectives of 10 CFR 61?
- 3) Criterion 5 may be inconsistent with the performance objective that addresses long-term stability with minimal maintenance (§61.44). Therefore, it is suggested that criterion 5 be rewritten. It could be stated that the design of the disposal facility should facilitate remedial actions, if necessary.

- 4) Criterion 6, suggest deleting "repository" and replace with "disposal unit and site."
- 5) Criterion 7, should be deleted if criterion 6 is revised as suggested.

GENERAL COMMENT

- 1) The term "active institutional control" should be defined or deleted.
- 2) The 10 CFR 61 disposal site design criteria that are addressed under Technology Criteria Applicable to All Technologies are: §61.51 (a) (1)(2) and (3).
- 3) The criteria in 382.20 appear to use the terms "site", "disposal site", "disposal units", "disposal facility", and "structures" interchangeably even though each term has its specific definition in the context of the proposed regulations. The document should be re-evaluated to ensure that these terms are being used consistently with their definitions.

(ii) TECHNOLOGY CRITERIA APPLICABLE FOR ABOVEGROUND AND BELOWGROUND VAULTS ONLY

(a) Design

- 1) Use of the term "flooding" as used in criterion 4, appears to be inappropriate. Suggest substituting the word "saturating" for "flooding."
- 2) Suggest revising criterion 5 to read: The disposal units shall contain a reliable monitoring system to give early warning of the release of radionuclides from the disposal units before they leave the site boundary.
- 3) Suggest placing criterion 9 before criteria 6-8. Criteria 6-8 can be perceived as sub-criteria that implement criterion 9.

GENERAL COMMENT

- 1) The 10 CFR 61 disposal site design criteria that are addressed when considering Technology Criteria Applicable to All Technologies and Technology Criteria For Aboveground and Belowground Vaults Only are: §61.51 (a) (1)(2)(3)(4)(5) and (6).
- 2) Major natural phenomena, as used in criterion 3, should be defined. Does major natural phenomena imply that probably maximum events should be used as design bases? It may be appropriate to remove this criterion from the proposed regulations and include it as guidance on how to demonstrate compliance with the proposed regulation.

(iii) TECHNOLOGY CRITERIA FOR ABOVEGROUND VAULTS ONLY

(a) Design

- 1) Criterion 1, see General Comment 1 under Technology Criteria Applicable to All Technologies.

Also, suggest deleting "resist" and insert "protect against inadvertent."

- 2) Criterion 2, if class A waste is disposed with class B and C waste it must be stabilized. This would require that class A waste be stable for 300 years, not 100 years as it is suggested in criterion 2.
- 3) Criterion 4, suggest deleting everything after the word "action." This concept is similar to the concept raised in General Comment 1 under Technology Criteria Applicable to All Technologies.

(iv) TECHNOLOGY CRITERIA APPLICABLE FOR BELOWGROUND VAULTS ONLY

(a) Design

- 1) Criterion 1, suggest deleting "resist" and insert "protect against."
- 2) Criterion 2, see comment 2 under Technology Criteria Applicable For Aboveground Vaults Only.

(v) TECHNOLOGY CRITERIA APPLICABLE FOR UNDERGROUND MINED REPOSITORY ONLY

- 1) We are not providing comments on design criteria for underground mined repositories. Although an underground mine could be sited and licensed on a facility-specific basis under existing regulatory provisions in 10 CFR 61, specific requirements for deeper land disposal methods such as mined cavities were not considered in the initial 10 CFR 61 rulemaking effort. See NUREG 1241 for additional staff comments on alternatives.

382.3 DEFINITIONS

It is our understanding that SLITP is reviewing the definitions section.