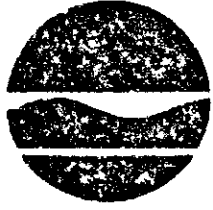


New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-0001

S. Pollock


Henry G. Williams
Commissioner

November 9, 1984

U.S. Department of Energy
Technical Services Division
Oak Ridge Operations
P.O. Box E
Oak Ridge, TN 37830

Attention: E.L. Keller, Director

Subject: Draft Environmental Impact Statement
Long-Term Management of the Existing
Radioactive Wastes and Residues at the
Niagara Falls Storage Site
DOE/EIS-0109D, Dist. Category UC-70A

Gentlemen:

The State of New York has completed its review of the subject Draft Environmental Impact Statement (DEIS) as prepared by the Department of Energy and issued in August 1984. This Draft Environmental Impact Statement was distributed by the Department of Environmental Conservation to cognizant state agencies for review and comment. The enclosed comments comprise the coordinated reply for the State of New York.

Alternate Number 1, the no action alternative, continues interim storage at the Niagara Falls Storage Site with a diked and capped containment area. Thus, radioactive material with a half-life of greater than 100,000 years will continue to be stored in a flood plain that will experience floods on a 200 year basis. This "Alternative" does not appear to be acceptable since it is contrary to federal criteria concerning shallow land burial within a flood plain.

On a related issue, the DEIS fails to identify the preferred alternative. Since the Impact Statement process under NEPA is intended to open federal decisions affecting the environment to public review and since the DEIS should be written such that it is readily understandable by the general public, the preferred alternative should be identified in the DEIS and not circumvented till the final EIS is issued.

A major general concern is whether or not the Department of Energy is embarking on a policy requiring that radioactive wastes, residues, etc. must remain within the boundaries of the particular state in which they are presently stored. Such a policy could impact unfairly against the smaller states. An Environmental Impact Statement pursuant to the National Environmental Policy Act is necessary before such a policy can be implemented since such a major federal action could have a significant impact on the environment.

Previous comments concerning the scoping of the subject Environmental Impact Statement were submitted to the Department of Energy by letter on March 11, 1983. Our comments were only partially addressed in the DEIS since two of the four comments submitted, numbers 2 and 4, do not appear to have been considered in the instant document.

Thank you for the opportunity to review this Statement. We request that you give our comments your utmost attention.

Sincerely,

G. A. Condra, Jr.

Louis M. Condra, Jr.
Director
Division of Regulatory Affairs

PN:djp
cc: Dr. Robert J. Stern

bcc: H. Williams
L. Marsh
W. Romer
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Comments of the

State of New York

on the U.S. Department of Energy

Draft Environmental Impact Statement Related to

Long-Term Management of the Existing Radioactive

Wastes and Residues at the Niagara Falls Storage Site

(DOE/EIS-0109D) Dist. Category UC-70A, Published August 1984

November 9, 1984

1. General Comment

The DEIS does not address what remedial work would be done at the NFSS. Should other storage alternatives be selected? The impact of such remedial work on ambient air levels should be discussed.

2. General Comment

Engineering details of managing the materials on site should be discussed, including provisions for groundwater and air monitoring. The possibility of incorporating an impermeable plastic liner as part of the cap should be examined.

3. General Comment

There should be consideration of whether uncontaminated clay suitable for cap construction can be obtained from within the existing 190 acre site. If suitable fill can be obtained on site, transportation impacts on local roads would be lessened.

4. General Comment

Shallow land burial, and above-ground disposal are the only disposal options seriously considered in the EIS. While ocean disposal is discussed, it is not permitted at this time. The DEIS then compares costs and impacts of these disposal methods at three different sites. Since the wastes and residues are not homogeneous, 99% of the activity is concentrated in 6% of the volume. The DEIS should consider the NFSS wastes in two or three categories and examine various disposal methods for each category independently. Disposal alternatives which provide a higher degree of containment integrity, such as disposal via shale fracturing, should be considered.

5. General Comment

The doses calculated for the resident intruder, 8,000 rem/year to the bronchial epithelium from breathing Rn-222 and up to 5 rem/year whole body equivalent from drinking contaminated water, imply that the shallow land or surface disposal burial options are not acceptable and that alternative disposal methods need to be examined.

6. General Comment

The EIS uses an annual individual dose of 500 mrem/year as a basis for developing decontamination and decommissioning criteria. In view of the fact that criteria under consideration by EPA, NRC and DOE propose dose limits that range from 1 to 25 mrem per year, it appears that the proposed criteria are not consistent with current thinking on this issue. The use of the 500 mrem per year limit will only lead to future need for decontamination of the site (as happened previously in the case of Lake Ontario Ordnance Works excess properties).

7. General Comment

The resident intruder scenario considers the K-65 residues as if they were blended uniformly into the entire volume of contaminated materials. Intrusion into the K-65 residues results in much higher doses to the intruder.

8. General Comment

The DEIS makes reference to the New York's Radioactive Materials Transportation Act". While such legislation was proposed, it has not been enacted.

9. General Comment

The K-65 residues should not be subject to several handlings, but packaged and transported elsewhere for disposal. The recent attempts to transfer these residues from the tower by water mining methods and slurry transfer indicate that this will be harder than originally envisioned. Use of the same techniques to later remove these residues from the mound structure will also be as difficult and further complicated by problems in managing the water flows created within the mound itself. Since the transfer will probably not be completed before winter, DOE should consider packaging and shipping the remaining residues in the tower to a DOE disposal site rather than transfer to the mound.

10. General Comments

The DEIS contains many indications that the Niagara Falls site possesses characteristics that will adversely effect any long-term storage of radioactive wastes.

11. General Comment

It is stated in many places in the DEIS that clay is the material that will contain the wastes. Are these wastes chemically inert with respect to clays?

Mitigating measures for flood plain elevations and surface erosion should be described in the final EIS to address our concerns for this proposed action if the NFSS is adopted as the preferred permanent storage site.

12. Section 1.2

It is stated that the clay layer under the 8.5 acre containment area is not known to be continuous. For use as a long-term storage facility that would indicate that it cannot be considered to act as a containment area.

13. Section 3.1

The description of the Niagara Falls site states that the average elevation of the site is approximately 98 meters. It is also stated in this report that the 100-year flood plain is at 97 meters. This indicates a knowledge that the site will flood during the longer period flood events (i.e. the 500 and 1000 - year floods) as these flood plains are always at a greater elevation. In an area where 90% of the population depends on surface water, a flood will distribute the wastes to the public water supply.

14. Section 4.1.1.3

The dose assessments are performed for only 1000 years as indicated in section 4.1.1.3. Due to the long half-lives of the radionuclides involved, the risk of harm from the residues will continue essentially unabated for more than 100,000 years.

15. Figure 4.2

This graph illustrates that it will be at least 150,000 years before the radioactivity of the wastes and residues decay to background levels. In contrast with this decay period is the 200 year period of proposed institutional control. This period is much too short for waste of this type, particularly when disposed of on the surface at a location which was glaciated only 12,000 years ago.

16. Section 4.2.1.1 Erosion

The evaluation of the long term effect of erosion at the Niagara Falls site is based on predictions calculated by the Universal Soil Loss Equation. This equation does not account for discrete events but only addresses average erosion rates that may be expected assuming predictable land uses. Long-term uniform erosion has never proven to be the major problem with cap integrity. The formation of cracks and gulleys, which the USLE does not address, would probably breach the cap before it is eroded.

17. Section 4.2.1.2 Flooding

Again referring to the comment on Section 3.1 concerning the proximity to the long-period flood plain elevations, the report says "severe events occurring within the 1000-year period of analysis are likely to stress the integrity of the containment systems." If this is already known, why has this site been submitted for consideration? Clearly, the lack of long-term integrity of the containment system should be a disqualifying criteria in siting if it cannot be mitigated.

18. Section 4.2.1.3 Severe Erosion Events and Droughts

It is stated in paragraph two "Unchecked, gully erosion will seriously jeopardize the integrity of the waste/residue pile." After the very short, 200 year duration of institutional control as compared to the waste's radioactive decay period, the wastes will be introduced to the environment by this process. Reanalysis is required.

19. Section 4.2.1.5 Seismic Activity

It is stated "Damage to the subsurface clay cutoff wall at NFSS may not be noticed unless monitoring wells are fortuitously located...". A rigorous and through monitoring program is usually planned and included as a part of the environmental assessment to eliminate the need for reliance on fortune.

20. Page 4-60

On page 4-60, a statement is made that the water table at NFSS approaches the ground surface at certain seasons of the year. The impact of this intrusion by groundwater into the mound and subsequent leaching and transport off site is not adequately addressed.

21. Appendix H

Residual soil and surface contamination limits in Appendix H are not as restrictive as those being used elsewhere in New York by DOE, such as at the NL site in Colonie, where DOE agreed to a limit for U-238 of 35 pCi/gm averaged over the first 5 cm of soil. The same basis should apply in the table on H-2, and all entries should be adjusted to reflect the risks equivalent to those agreed to by DOE for U-238.

22. Table on p. H-3

Residual surface contamination limits proposed in the table on H-3 are higher than those allowed in 10 NYCRR 16. We feel the Part 16 levels should apply.