

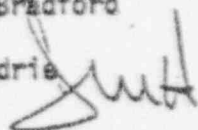


OFFICE OF THE
COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

January 9, 1981

MEMORANDUM FOR: Chairman Ahearne
Commissioner Gilinsky
Commissioner Bradford

FROM: Joseph M. Hendrie 
Commissioner

SUBJECT: SECY-80-474 -- PART 60 CHANGES: BRADFORD ITEMS 2 AND 3

Herewith the Gilinsky-Hendrie compromise language on two of Commissioner Bradford's modification items for draft Part 60. They are:

Item 2 - Minimum number of sites and media for characterization:

The position is three sites representing two geologic media, with at least one of the media being non-salt.

Item 3 - Mandatory at-depth testing:

The position is to require at-depth testing, with recognition that an exemption is appropriate if new techniques make it possible to get the necessary data without sinking shafts, etc.

Pertinent marked-up pages from SECY-80-474 are enclosed. The staff helped with language to implement the Item 3 position.

I presume we can discuss these proposals at our next Part 60 meeting. Staff should come prepared to comment and to present any changes they want.

Enclosures:

As stated

cc w/enclosures:

S. J. Chilk

E. Hanarahan

L. Bickwit

W. Dircks

J. Davis, NMSS

J. Martin/R. Browning, NMSS

H. Shapar

Enclosure 6

8102260 360

(at least one of which is not salt)

sites that are among the best that can reasonably be found. The Commission considers three sites in two geologic media to be the minimum number needed to satisfy NEPA. That is, the Commission can foresee no circumstance that would permit it to conclude, on the basis of a more limited investigation that alternatives have been considered in accordance with the "rule of reason." However, because the "rule of reason" is intrinsically flexible the Commission does not believe that it would be appropriate for ~~[the rule]~~ these regulations to specify ~~[the]~~ in mandatory terms, the precise number of geologic media and sites that DOE must characterize during multiple site characterization. What is important is that there be sufficient information for NRC to be able to evaluate real alternatives, in a timely manner, in accordance with NEPA. (Information on plans for considering alternative sites is to be included in the Site Characterization Report. This provision was questioned by some commenters. This information is needed so that any deficiency may be the subject of a "specific recommendation" by the Director of the NRC's Office of Nuclear Material Safety and Safeguards, (Director) as provided in §60.11(e), with respect to additional information that might be needed by the Commission in reviewing a license application in accordance with NEPA. The NRC also continues to believe that waste form research is an appropriate topic for treatment in the site characterization report, as the discussion may lead to specific recommendations by the Director and, as well, contribute to early examination and broader understanding of possible waste form host rock interactions.) Further, wording of §60.11(a) has been changed from "waste form" to "waste form and packaging" to better convey that the NRC was seeking information relating to the interaction of the waste as emplaced (hence including packaging) with the host rock.

Item 2, Suppl. Info,
p. 1 of 1

There were also suggestions that the distinction between site characterization and screening activities be drawn more sharply. However, because the activities needed prior to characterization may depend on a variety of factors peculiar to the site and geologic medium, the NRC has concluded that greater precision might be unduly restrictive.

The DOE requested clarification of the term "site". A definition of the term site will be set forth in the technical criteria.

b. In Situ Testing at Depth. Several commenters supported the Commission view on in situ testing at depth. Some commenters, noting the importance of in situ testing at depth, suggested that the rule require the DOE to include in situ testing at depth in its site characterization program. Several other commenters objected to the Commission suggestion that in situ testing at depth may be necessary. The possibility of in situ testing at depth after a preferred repository site has been selected was also suggested. ⁹The Commission continues to believe that in situ testing at depth³ is probably an essential technique for DOE to obtain sufficient data to determine whether and to what extent the surrounding geologic medium is suitable for hosting a geologic repository. Moreover, in order for NRC to be able to conclude that the alternatives to DOE's preferred site are in fact reasonable alternatives for the intended purpose, in situ testing at depth is probably essential to characterizing alternative sites as well. The NRC will then be able to determine, after considering all relevant environmental factors as

³The Commission interprets the phrase "in situ testing at depth" to mean the conduct of those geophysical, geochemical, hydrologic, and/or rock mechanics tests performed from a test area at the base of a shaft excavated to the proposed depth of a potential repository in order to determine the suitability of a particular site for a geologic repository.

Item 3, Subl. Info,
p. 1 of 2

In such a case, DOE may request an exemption from the testing-at-depth requirement.

[7590-01]

contemplated by NEPA, whether a construction authorization at DOE's proposed site should be issued.

~~However,~~ ^{True,} the Commission ~~does not categorically require~~ ^{in situ} testing at depth in the rule, ~~since it is conceivable that in some~~ ^{techniques} ~~instances at a particular site the data needed to establish that the site is suitable to host a repository may be obtained~~ without in situ testing at depth. DOE, like any applicant for an NRC license, has the burden of establishing that NRC requirements have been met, and the regulations require DOE to undertake any testing needed to determine the suitability of the site for a geologic repository. Thus, ~~if DOE chose not to explore~~ ^{ation} ~~at depth~~ ^{were not undertaken, DOE would still have} ~~the burden of obtaining~~ ^{same} and supplying to the Commission information needed to establish the suitability of the site.

c. Cost Estimates for Site Characterization. Cost estimates for site characterization cited in the supplementary information accompanying the proposed rule were regarded by some commenters as being too low. Much of the data for the cost estimate of \$20 million per site was derived from the Teknekron Inc. report, "A Cost Optimization Study for Geologic Isolation of Radioactive Wastes," May 1979, prepared under contract with Battelle Pacific Northwest Laboratories. The NRC staff has reexamined its previous estimate and still believes that figure of \$20 million was a realistic estimate for the "at depth" portion of the site characterization program considered at that time. Independent support of this figure has been obtained from the cost summary of \$16 million for a program analogous to site characterization conducted by the Bureau of Mines at its Environmental Research Facility in Colorado during 1978-1979.

Item 3, Suppl. Info,
p. 42

(4) The Director may find the Environmental Report to be not complete and therefore not acceptable for processing if it fails to include site characterization data including the results of appropriate in situ testing at repository depth for each site characterized. If the Director makes such a finding, he shall request the applicant to submit within a specified time such site characterization data as he determines to be necessary. If the applicant fails to provide the requested data within the time specified, the application shall be subject to denial under Section 2.108.

(3) If the Director of Nuclear Material Safety and Safeguards determines that the tendered document is complete and acceptable for docketing, a docket number will be assigned and the applicant will be notified of the determination. If it is determined that all or any part of the tendered document is incomplete and therefore not acceptable for processing, the applicant will be informed of this determination and the respects in which the document is deficient.

5(f) With respect to any tendered document that is acceptable for docketing, the applicant will be requested to (i) submit to the Director of Nuclear Material Safety and Safeguards such additional copies as the regulations in Parts 60 and 51 require, (ii) serve a copy on the chief executive of the municipality in which the geologic repository operations area is to be located or, if the geologic repository operations area is not to be located within a municipality, on the chief executive of the county (or to the Tribal organization, if it is to be located within an Indian reservation), and (iii) make direct distribution of additional copies to Federal, State, Indian Tribe, and local officials in accordance with the requirements of this chapter and written instructions from the Director of Nuclear Material Safety and Safeguards. All such copies shall be completely assembled documents, identified by docket number. Subsequently distributed amendments, however, may include revised pages to previous submittals and, in such cases, the recipients will be responsible for inserting the revised pages.

6(5) The tendered document will be formally docketed upon receipt by the Director of Nuclear Material Safety and Safeguards of the required additional copies. The date of docketing shall be the date when the required copies are received by the Director of Nuclear Material Safety

Item 3, Rule,
#143

and Safeguards. Within ten (10) days after docketing, the applicant shall submit to the Director of Nuclear Material Safety and Safeguards a written statement that distribution of the additional copies to Federal, State, Indian Tribe, and local officials has been completed in accordance with requirements of this chapter and written instructions furnished to the applicant by the Director of Nuclear Material Safety and Safeguards. Distribution of the additional copies shall be deemed to be complete as of the time the copies are deposited in the mail or with a carrier prepaid for delivery to the designated addressees.

7 (f) Amendments to the application and environmental report shall be filed and distributed and a written statement shall be furnished to the Director of Nuclear Material Safety and Safeguards in the same manner as for the initial application and environmental report.

8 (f) The Director of Nuclear Material Safety and Safeguards will cause to be published in the FEDERAL REGISTER a notice of docketing which identifies the State and location at which the proposed geologic repository operations area would be located and will give notice of docketing to the governor of that State.

2. 10 CFR 2.103(a) is revised to read as follows:

§2.103 Action on applications for byproduct, source, special nuclear material, and operator licenses.

(a) If the Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application for a byproduct, source, special nuclear material, or operator license complies with the requirements of the Act, the Energy Reorganization Act, and this chapter, he will issue a license. If the license is

Item 3, Rule,
p. 1 of 3

Such characterization data shall include results of appropriate in situ testing at repository sites unless the Commission finds with respect to a particular site that such testing is not required. [7590-01]

so as to aid the Commission in making a comparative evaluation as a basis for arriving at a reasoned decision under NEPA. [22] The Commission considers the characterization of three sites representing two geologic media ^(at least one of which is not salt) to be the minimum necessary to satisfy the requirements of NEPA. However, in light of the significance of the decision selecting a site for a repository, the Commission fully expects the DOE to submit a wider range of alternatives than the minimum suggested here.

[22:]23. 10 CFR 51.41 is amended to read as follows:

§51.41 Administrative procedures.

Except as the context may otherwise require, procedures and measures similar to those described in §§51.22-51.25 will be followed in proceedings for the issuance of materials licenses and other actions covered by §51.5(a) but not covered by §51.20 or 51.21. The procedures followed with respect to materials licenses will reflect the fact that, unlike the licensing of production and utilization facilities, the licensing of materials does not require separate authorizations for construction and operation. In the case of an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter, however, the environmental impact statement required by §51.5(a) shall be prepared and circulated prior to the issuance of a construction authorization; the environmental impact statement shall be supplemented prior to issuance of a license to

[To satisfy the requirements of NEPA, the Commission anticipates such characterization at a minimum of three sites representing a minimum of two geologic media. However, in light of the significance of the decision selecting a site for a repository, the Commission fully expects the Department to submit a wider range of alternatives than the minimum suggested here.]

Item 3, Rule,
p. 3 of 3

and

Item 2, Rule
p. 1 of 1

29

Enclosure "A"