

GUIDANCE ON LIMITED STATE AGREEMENTS FOR REGULATION
OF LOW-LEVEL RADIOACTIVE WASTE DISPOSAL

The Low-Level Radioactive Waste Policy Act of 1980, Public Law 96-573, established national policy that each State is responsible for providing for the availability of capacity either within or outside the State for the disposal of low-level radioactive waste generated within its border (except for waste generated as a result of defense activities or Federal research and development activities), and that low-level radioactive waste can be most safely and efficiently managed on a regional basis. The Act sanctioned regional solutions to waste management by way of interstate compacts. The National Governors' Association and the State Planning Council on Radioactive Waste Management have endorsed this policy of State responsibility for providing the capacity for disposal of such wastes and the regional implementation of such facilities.

In conjunction with the current widespread interest and activity in establishing interstate compacts and planning for regional waste disposal facilities, interest has also been expressed that a State which does not now regulate radioactive materials under an agreement with the Nuclear Regulatory Commission may wish to regulate the disposal of low-level radioactive waste as host State for a regional disposal facility.

Section 274b of the Atomic Energy Act provides for the discontinuance of Nuclear Regulatory Commission regulatory authority over certain radioactive materials and the assumption thereof by the States through

agreements. The materials subject to these agreements are source material (natural uranium and thorium which are raw materials of atomic energy), byproduct material (reactor produced radioisotopes) and small quantities of special nuclear (fissionable) materials. Twenty-six of the State Agreements now in effect include authority to regulate disposal of these materials as low-level waste.* Subsection 274.b provides that the Commission shall enter into an agreement with a State if (1) the Governor certifies that the State has a program for control of radiation hazards adequate to protect the public health and safety with respect to the materials covered by the proposed agreement and that the State desires to assume regulatory responsibility for such materials and (2) the Commission finds that the State program is compatible with the Commission's program for regulation of such materials and is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

In January 1981, the Commission updated and republished its criteria for guidance of the States and the Commission in entering into agreements under section 274 of the Atomic Energy Act. On July 21, 1983 the criteria were revised to reflect recent changes in low-level waste regulations (Reference 1). Criterion number 27 now designates low-level radioactive wastes in permanent disposal facilities as a separate category of transferable authority. A State may, if it desires, seek authority for regulating such waste facilities without seeking authority for the other radioactive materials which are customarily included in

*Utah signed an Agreement on March 29, 1984 which did not include the authority to regulate disposal of these materials.

these agreements. An agreement for transfer of authority only for such waste disposal is referred to as a limited agreement. Annotations on applicability of the January 23, 1981 criteria to limited agreements for low-level waste disposal are contained in Appendix 1, and additional guidance applicable to waste disposal to supplement the criteria is contained in Appendix 2.

The Council of State Governments' SUGGESTED STATE LEGISLATION - PROGRAM FOR 1961 included a model State Radiation Control Act which a number of States have used as a framework of legislative authority for developing comprehensive radiation control programs. In 1983 a complete updating of this model act was published (Reference 2). (Copies available from the Office of State Programs.) A further edited revision of the model act (Reference 3) has been prepared for specific applicability to States which desire to enter into limited agreements with the Commission for regulating low-level radioactive waste disposal only.

Parts A, C, D, J and M of the Suggested State Regulations for Control of Radiation* (Reference 4) are applicable to regulating waste disposal while parts B, E, F, G, H and I are not applicable. Particular attention

*Prepared by the Conference of Radiation Control Directors, Inc., the Nuclear Regulatory Commission, the Environmental Protection Agency and the Bureau of Radiological Health of the Department of Health and Human Services.

is invited to section M.9 of these regulations which provides that a license will not be issued to receive radioactive material from other persons for disposal on land not owned by a State or the Federal Government.

The final 10 CFR Part 61 was published in the Federal Register on December 28, 1982 (Reference 5). This regulation prescribes performance objectives for land disposal of waste; technical requirements for site selection, design, operation and closure of a near-surface disposal facility; technical requirements on form for waste to be disposed of by land burial; classification of waste; institutional requirements for State ownership and proprietary responsibilities; financial requirements; requirements for submitting applications for licenses to conduct waste burial activities and procedures which the Commission will follow in the issuance of such licenses.

Criterion 9 of the criteria applies the technical criteria contained in Part 61 in judging the adequacy and compatibility of a State's proposal to regulate low-level waste disposal pursuant to an agreement under section 274.b of the Atomic Energy Act. Certain technical portions of the rule such as waste classification and manifest recordkeeping will not work unless these standards are adopted by the States.

The procedural requirements of Part 61 on how an application will be processed, including the opportunity for public hearings on licensing proceedings and the preparation of written environmental impact analyses

Commission practice in its own licensing of low-level waste disposal and, while encouraged for Agreement States, such provision are not made a matter of compatibility.

Adequate financial arrangements shall be required for decontamination, closure and stabilization of a disposal site. In addition, Section 151(a)(2), Nuclear Waste Policy Act, P.L. 97-425 requires NRC to review and approve financial arrangements for long-term monitoring and maintenance of a site prior to the State relieving the site operator of licensed responsibility.

NRC has developed guides and technical position papers to support implementation of 10 CFR Part 61. A listing of those available through Office of State Programs can be found in Reference 6.

The Office of State Programs is prepared to provide and arrange for consultation and assistance by NRC staff and its contractors to the Agreement States in evaluating waste disposal programs. This assistance can include furnishing computer modeling programs for use by the State, computer analyses of data submitted by the State and assistance in the preparation of environmental analyses. Arrangements for assistance should be made with the State Agreements staff of the Office of State Programs.

For further specific guidance or to discuss a State's interest in considering and preparing for an Agreement for transfer of regulatory authority, contact the Office of State Programs, Nuclear Regulatory

Commission, Washington DC 20555, telephone (301) 492-8170 or the appropriate Regional Administrator of the Commission.

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Appendices

1. Annotations on Applicability of Criteria to Waste Disposal
2. Guidance for States in Regulating the Disposal of LLRW

References

(Copies available from the Office of State Programs)

1. Criteria for NRC State Agreements, January 23, 1981 as amended.
2. Suggested State Legislation 1983 vol. 42 Council of State Governments
3. Model State Legislation Edited for Low-Level Waste Only
4. Suggested State Regulations for Control of Radiation
5. 10 CFR Part 61
6. Listing of Regulatory Guides and Technical Positions

APPENDIX 1
ANNOTATIONS ON CRITERIA FOR NRC-STATE AGREEMENTS FOR
APPLICABILITY TO LOW-LEVEL RADIOACTIVE WASTE DISPOSAL

The Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement which were originally published in 1961 were republished in the Federal Register, with additions, on January 23, 1981. Criterion 27 provides that a State and the Commission may enter into an agreement which is limited to regulation of low-level radioactive wastes in permanent disposal facilities. A revision to Criterion 9, Radioactive Waste Disposal was published July 21, 1983.

Most of the criteria in the January 23, 1981 publication are applicable to a limited agreement for low-level waste disposal as well as to the usual NRC-State agreements for all of the categories of materials listed in section 274.b of the Atomic Energy Act and in Criterion 27. However, a few of the criteria are not applicable to waste disposal, viz., Criterion 15 which applies to medical uses of radioactive materials and Criteria 29 through 36 which apply to the processing of uranium and thorium. In addition, guidance is provided in Appendix 2 on several new considerations pertaining to low-level waste disposal.

Criterion 9 refers to waste disposal by material users and land disposal of waste received from other persons. For a limited agreement criterion 9 requires promulgation of regulations for land disposal of radioactive waste to be compatible with 10 CFR Part 61.

Criterion 24, State Agency Designation, was written to apply to the State agency or agencies which would regulate the uses of radioactive materials. In the case of waste disposal facilities the State may have both proprietary responsibilities for the selection, ownership, and operation or contracting for operation of the facility and regulatory responsibilities for establishment of standards, licensing, inspection and enforcement of regulatory requirements. In order to avoid the possibility of conflict of interest between these proprietary and regulatory functions, it is important that the two different types of responsibilities not be assigned to the same State agency.

Pursuant to Section 150.10 of the Commission's regulations in 10 CFR Part 150, Federal government agencies are not subject to licensing by Agreement States and Criterion 28 provides for the States to grant exemptions from their regulatory requirements for designated classes of contractors of the Commission and the Department of Energy, including prime contracts at government owned sites such as Hanford, Washington and Savannah River, South Carolina which include among their activities the disposal of radioactive wastes. The Low-Level Radioactive Waste Policy Act provides (in section 3(a)) that compacts established under the Act or actions taken under such compacts shall not be applicable to the transportation, management or disposal of low-level radioactive waste from atomic energy defense activities of the Secretary (of the Department of Energy) or Federal research and development activities.

The legislative history of the Act makes it clear that the legislation was thus drawn to insure that States by compact will not be empowered to

restrict from such States the transportation, management or disposal of wastes from the atomic energy defense activities of the Secretary and from the research and development activities of the Secretary and other Federal departments and agencies. Notwithstanding these prohibitions against State regulation of Federal radioactive waste management, it is permissible, and in fact is customary, for facilities such as power and research reactors, laboratories and hospitals of Federal agencies, other than the Department of Energy, to utilize commercial waste disposal services at licensed burial sites in the same manner as non-government generators of similar wastes.

APPENDIX 2

GUIDANCE TO SUPPLEMENT CRITERIA FOR STATES IN REGULATING THE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

Financial Sureties. The State should have procedures to require that an adequate bond, surety or other financial arrangement will be provided by the licensee to assure the completion of all requirements established by the State radiation control agency for the decontamination, closure, decommissioning and reclamation of sites, structures and equipment used in conjunction with the disposal of low-level radioactive wastes and to ensure that sufficient funds will be available to cover the costs of monitoring and long-term care of the facility by the State after operational and closure activities by the licensee are terminated.

Public Participation and Hearings.* In the case of licenses for the disposal of low-level radioactive waste, the State should provide:

(a) An opportunity, after public notice, for written comments and a public hearing with a transcript, and

(b) A written determination of the action to be taken based upon findings included in such determination and upon evidence presented during the public comment period, with an opportunity for judicial review.

*These guidance items conform to Commission practice in its licensing of low-level radioactive waste disposal and their adoption by the Agreement States is recommended and urged by the Commission.

Environmental Impact Analysis.* For each license for disposal of low-level radioactive waste and for each amendment or renewal of such license which has a significant impact on the human environment, the State should prepare a written analysis (which should be available to the public before commencement of any hearing) of the impact on the human environment of such licensed activity. The analysis should include:

- (a) An assessment of the radiological and nonradiological health impacts;
- (b) An assessment of any impact on any body of water and groundwater;
- (c) Consideration of alternatives to the licensed activity;
- (d) Consideration of long-term impacts, including site closure, decommissioning, decontamination and reclamation; and
- (e) A weighing of the costs and benefits of the proposed activity, considering the available alternatives.

Limitation on Construction.* The State should prohibit any major construction activity prior to the issuance of a record of decision in connection with any proposed licensing action for which an environmental impact analysis is required.

*These guidance items conform to Commission practice in its licensing of low-level radioactive waste disposal and their adoption by the Agreement States is recommended and urged by the Commission.

Personnel and Organization. This guideline supplements Criterion 20 which discusses the qualifications of regulatory and inspection personnel for Agreement State programs. In addition to persons qualified by training and experience to regulate the radiation protection aspects of handling and use of radioactive materials, the regulation of radioactive waste disposal requires capability in the fields of geology, hydrology, ecology and climatology to evaluate and regulate the natural characteristics of a proposed disposal site and the effectiveness of design and operational features of a waste disposal facility to isolate and contain the buried radioactive waste. As a minimum, a State radiation control program should have on its staff or through consultants the capability to make an independent technical analysis that the established performance objectives (e.g., Subpart C of 10 CFR Part 61) will be met and to prepare an environmental impact analysis of the licensed activity.

When it is planned to use consultants from other State agencies, universities or other sources, it is necessary that these persons be available when and to the extent needed. This availability should be assured by appropriate memoranda of understanding, consultant contracts and budgeted funds.

In using consultants from other State agencies or State universities, it is important to consider possible problems if the same persons consult with both the State agency having proprietary responsibility for selection and operation of a disposal site and the regulatory agency.

NRC estimates that the professional staff time required for issuance of a license for low-level waste disposal is about 4 man-years; for renewal of a license, about 2 man-years; and for a major amendment, about 1 man-year.

Post-licensing regulatory activities related to the existing waste burial facilities, including resident inspectors at the operating sites and environmental monitoring, are estimated at about one to five person-years per site per year.

In addition to the technical personnel discussed above and in Criterion 20, a State program for regulating radioactive waste disposal needs to have adequate staffing or support for legal, administrative and clerical aspects of the program.

Instrumentation and Laboratory Facilities. The State should have available both field and laboratory instruments and related equipment for verifying the measurements and environmental monitoring of the licensee and to conduct independent measurements and environmental monitoring.

Laboratory facilities should be available in the radiation control agency, in another State agency or through a commercial service to provide qualitative and quantitative analyses of environmental, operational and possible accidental release samples.

The instruments and laboratory facilities should be described, including their availability and the State's related quality assurance program. If laboratory facilities or services outside the radiation control agency are relied on, information on what contract or other commitments assure their availability on a timely basis should be included.