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Policy Statement on Low-Level Waste Volume Reduction

AGENCY: Nuclear Regulatory Commission.

ACTION: Policy statement on low-level waste volume reduction.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has established a policy regarding the volume reduction of low-level radioactive waste. The policy statement addresses: (1) The need for volume reduction policy; and (2) the need for waste generators to minimize the quantity of waste produced. The policy also states that NRC will take expeditious action on requests for licensing of volume reduction systems. (A copy of this notice is bing sent to all licensees and state authorities to advise them of this policy.)

EFFECTIVE DATE: October 16, 1981.

FOR FURTHER INFORMATION CONTACT: Robert E. Browning, Deputy Director, Division of Waste Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; Phone 301/427-4200.

SUPPLEMENTARY INFORMATION:

Policy Statement

The Commission has established the following policy:

The Commission hereby adopts a policy calling on all generators of low-level radioactive waste to reduce the volume of waste for disposal; licensees are encouraged to establish programs commensurate with good volume reduction practices.

The Nuclear Regulatory Commission (NRC) considers it desirable that licensees reduce the volume of low-level radioactive waste generated and shipped to commercial waste disposal sites. Such action would:

1. Extend the operational lifetime of the existing commercial low-level disposal sites;
2. Alleviate concern for adequate storage capacity if there are delays in establishing additional regional sites;
3. Reduce the number of waste shipments.

The Commission acknowledges the active role taken by some nuclear industry groups to encourage volume reduction practices among their membership. The increased awareness of the industry is reflected in stepped-up efforts to reduce the volumes of waste generated and by applications to implement waste processing systems by a growing number of licensees. The Commission believes that a positive statement of policy will add greater impetus and encouragement to the industry efforts already underway.

The Commission is encouraging licensees to adopt procedures that will reduce the volume of waste being transferred to disposal facilities. NRC believes it is in the best interest of licensees and the public that licensees extensively explore means by which waste volume may be reduced. The NRC views volume reduction activities as a two-step system. The first, volume minimization, is capable of immediate implementation, since it requires only a strict system of administrative controls on the part of licensee management to accomplish. The costs for an administrative controls program should be small, and these costs largely should be offset by reductions in shipping and disposal costs. The second step, if needed, would be installation of advanced equipment to achieve even greater reduction in volume than is possible through the use of administrative controls.

There are a number of means by which licensees may reduce volume through application of strict administrative controls. Some of these are: (1) Planning of laboratory and process activities prior to the actual operations; (2) provision of management control over the generation of waste to assure that all operations and plant equipment usage are conducted so as to minimize leakage, spills, and volume of waste generated; (3) improved segregation of radioactive and non-radioactive materials activities; and (4) provision of training programs to assure that personnel are thoroughly knowledgeable with laboratory and plant equipment and maintenance so as to minimize conditions which result in increased waste generation.

Apart from efforts to reduce waste volumes by administrative controls, licensees may benefit further by applying advanced volume reduction equipment to their processes.

A number of volume reduction techniques are in varying stages of development. These include, but are not limited to: (1) Incinerators; (2) evaporator-crystallizers; (3) fluidized bed dryers; (4) thin-film evaporators; (5) extruder evaporators; and (6) compactors. Waste compactors are in general use at many nuclear facilities. Extruder evaporators are being installed in some power plants, while several utilities are looking into incineration as a volume reduction process.

Treatment or disposal of licensed material by incineration requires Commission approval under 10 CFR 20.305. Other modifications required to install volume reduction equipment at reactor plants can be accomplished without prior Commission approval under 10 CFR 50.59, unless the proposed modification involves a change in the technical specifications incorporated in the license or an unreviewed safety question. Non-reactor licensees who wish to apply volume reduction equipment to their wastes should contact the appropriate NRC licensing staff for guidance regarding licensing requirements.

The NRC staff is available to consult with licensees regarding volume reduction practices. NRC staff will cooperate with licensees in assessing the state-of-the-art of methods for achievement of volume reduction, and will take expeditious action on requests for licensing volume reduction systems.

Dated at Washington, D.C., this 12th day of October 1981.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.