handlers and would tend to ensure that dairy farmers would have their milk priced under the order and thereby receive the benefits that accrue from such pricing.

Interested parties are invited to submit comments on the probable regulatory and informational impact of this proposed rule on small entities. Also, parties may suggest modifications of this proposal for the purpose of tailoring their applicability to small businesses.

Notice is hereby given that, pursuant to the provisions of the Agricultural Marketing Agreement Act, the suspension of the following provisions of the order regulating the handling of milk in the Eastern Colorado marketing area is being considered until Federal milk order reform is implemented October 1, 1999:

In § 1137.12(a)(1), the words ''from whom at least three deliveries of milk are received during the month at a distributing pool plant'; and in the second sentence ''30 percent in the months of March, April, May, June, July, and December and 20 percent in other months of'', and the word ''distributing''.

All persons who want to submit written data, views or arguments about the proposed suspension should send two copies of their views to USDA/AMS/Dairy Programs, Order Formulation Branch, Room 2971, South Building, PO Box 96456, Washington, DC 20090–6456, by the 7th day after publication of this notice in the **Federal Register**. The period for filing comments is limited to 7 days because a longer period would not provide the time needed to complete the required procedures before the start of the next marketing period.

All written submissions made pursuant to this notice will be made available for public inspection in Dairy Programs during regular business hours (7 CFR 1.27(b)).

Statement of Consideration

The proposed rule would suspend certain provisions of the Eastern Colorado order until implementation of Federal Order Reform. The proposed suspension would make it easier for a cooperative association to qualify milk for pooling under the order.

Continuation of the suspension that expired on August 31, 1999, was requested by DFA, a cooperative association which represents nearly all of the dairy farmers who supply the Eastern Colorado market. DFA contends that milk from some producers is required every day of the month in order to meet market demands, while milk from some other producers is required most days of the month and milk from a few producers is required only a few days each month to meet market demands. DFA asserts that with the suspension in place the market can be served in the most efficient manner possible because milk required by the market only a few days each month can maintain association with the market without being required to be delivered to pool distributing plants each month. DFA projects that, without the suspension, inefficient and costly movements of milk would have to be made to maintain the pool status of producers who historically have supplied the market.

Accordingly, it may be appropriate to suspend the aforesaid provisions until completion of Federal Order Reform.

List of Subjects in 7 CFR Part 1137

Milk marketing orders.

The authority citation for 7 CFR part 1137 continues to read as follows:

Authority: 7 U.S.C. 601–674.

Dated: September 13, 1999.

Richard M. McKee,

Deputy Administrator, Dairy Programs.

[FR Doc. 99–24435 Filed 9–17–99; 8:45 am]

BILLING CODE 3410–02–P

NUCLEAR REGULATORY COMMISSION

10 CFR Part 61

Proposed Compatibility Designation Change and Draft Emplacement Criticality Guidance for Low-Level Waste

AGENCY: Nuclear Regulatory Commission.

ACTION: Request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is requesting public comment as to whether the compatibility designation of 10 CFR 61.16(b)(2) should be changed. The compatibility designation relates to the extent which an Agreement State's regulations must be compatible with NRC requirements. The section of the Commission's regulations under consideration requires low-level waste (LLW) disposal facility licensees who receive and possess special nuclear material (SNM) to describe proposed procedures to avoid accidental criticality for storage of SNM waste prior to disposal and after disposal in the ground. In addition, NRC also is requesting comment on draft guidance on emplacement criticality at LLW disposal facilities.

DATES: Submit comments by October 20, 1999. Comments received after this date will be considered, if it is practical to do so, but assurance of consideration can only be given to comments received on or before this date.

ADDRESSES: Submit comments to David L. Meyer, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Hand deliver comments to 11545 Rockville Pike, Rockville, MD between 5:15 am and 4:30 pm on Federal workdays.

You may also provide comments via the NRC's interactive rulemaking website through the NRC home page (*http://www.nrc.gov*). From the home page, select ''Rulemaking'' from the tool bar. The interactive rulemaking website can then be accessed by selecting ''New Rulemaking Website.'' This site provides the ability to upload comments as files (any format), if your web browser supports that function. For information about the interactive rulemaking website, contact Ms. Carol Gallagher, (301) 415–5905; e-mail cag@nrc.gov.

A copy of the draft guidance (NUREG/CR–6626, Emplacement Guidance for Criticality Safety in Low-Level Waste Disposal) can be obtained from the Internet at ''http://ruleforum.llnl.gov,'' or contact Mr. Tim Harris (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Tim Harris, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC, 20555, telephone (301) 415–6613, or e-mail at TEH@NRC.GOV.

Background

Section 274 of the Atomic Energy Act of 1954 (AEA), as amended, provides a statutory basis for discontinuance by the NRC, and the assumption by the State, of regulatory authority for byproduct material, source material, and SNM in quantities not sufficient to form a critical mass. As stated in the Commission's Policy Statement on Adequacy and Compatibility of Agreement State Programs (62FR46517, September 3,1997), NRC and Agreement States have the responsibility to ensure that there is adequate protection of public health and safety and that radiation control programs are administered consistent and compatible with NRC's program.

Quantities of SNM not sufficient to form a critical mass are defined in 10 CFR 150.11 as enriched uranium not exceeding 350 grams, uranium-233 not exceeding 200 grams, plutonium not

exceeding 200 grams, or mixtures where the sum of the fractions is less than unity. These quantities of SNM can be regulated by the Agreement States. In both Agreement States and non-Agreement States, an NRC license is required for persons who possess quantities of SNM in excess of the § 150.11 limits. As it pertains to disposal facilities, the possession limits apply to material above-ground. Once the SNM waste is disposed of (i.e., placed in the disposal trench), SNM waste is not restricted by the § 150.11 limits.

Currently 10 CFR 61.16 is not a regulation required for Agreement State adoption; therefore, there is no equivalent Agreement State regulatory requirement for Agreement State licensees of existing or future LLW facilities to follow the equivalent of § 61.16(b)(2) and to evaluate emplacement criticality safety. This section of 10 CFR Part 61 requires LLW disposal facility licensees who receive and possess SNM waste to describe proposed procedures to avoid accidental criticality for storage of SNM waste prior to disposal and after disposal in the ground. Although the SNM mass limits in Part 150 restrict above-ground possession and ensure criticality safety above-ground (during receipt and storage), there is no equivalent mass restriction or other controls which limit the amount of SNM waste that can be placed in a disposal trench; and therefore, the question of criticality safety below-ground after disposal is left open. A technical basis for NRC's concern regarding emplacement criticality safety is presented in the DISCUSSION section of this document.

LLW containing SNM is currently disposed of at three facilities: Barnwell, South Carolina; Hanford, Washington; and Clive, Utah. All of these facilities are licensed by Agreement States. From the 1970's to 1997, NRC licensed the Barnwell and Hanford facilities under 10 CFR Part 70, to receive, possess, store, and dispose of kilogram quantities of SNM waste. In 1997, these facilities requested that the SNM possession limits be reduced to the Section 150.11 limits, and that NRC licenses be transferred to the respective Agreement States. These actions have been taken for both (Barnwell and Hanford).

The State of Washington incorporated NRC criticality controls for emplaced waste in license conditions in its Hanford license. Although not in the license, the State of South Carolina has required the licensee to implement the SNM waste emplacement procedures that address criticality safety. These procedures cannot be changed by the operator without State approval. NRC recently issued an Order to Envirocare that exempts Envirocare from the licensing requirements in 10 CFR Part 70 for possession of SNM waste at concentration limits in the Order, which ensures criticality safety. The conditions of the Order have been incorporated into the State of Utah license.

If NRC changes the compatibility designation for § 61.16(b)(2), then LLW disposal facility licensees would be required to develop procedures for avoiding accidental criticality, during both storage of SNM waste prior to disposal and after disposal in the ground. These procedures would then be reviewed and approved by Agreement State staffs. Given that licensees and Agreement State staffs may not have experience in criticality safety, NRC has developed guidance that could be used by licensees and Agreement State staffs to demonstrate compliance with § 61.16(b)(2). A summary of this draft guidance and how the guidance is envisioned to be used are provided in the DISCUSSION section of this document.

Discussion

This section presents a discussion of the following: (1) the technical basis for requiring emplacement criticality controls; (2) NRC staff's assessment of the compatibility designation for 10 CFR 61.16(b)(2); (3) a summary of the draft guidance; (4) the envisioned implementation if the compatibility of § 61.16(b)(2) is changed; and (5) NRC staff's assessment of potential resource impacts on Agreement States.

Technical Basis

Spontaneous nuclear fission occurs naturally in a very small percent of radioactive decays in some elements. When fission occurs, neutrons are emitted, along with fission fragments (e.g., cesium and strontium). The neutrons that are produced may be absorbed by an atom without causing a fission, may be absorbed by an SNM atom and cause a fission, or may not collide with any atoms. SNM (i.e., uranium-235, uranium-233, and plutonium) is unique from most materials in that a fission, not associated with a radioactive decay, can occur when a neutron collides with its nucleus. In natural materials such as soils containing natural uranium, neutrons produced by spontaneous fission are typically absorbed by uranium-238 atoms and do not collide with a uranium-235 atom possibly resulting in fission. Criticality is a chain reaction where large numbers of neutrons are produced, and can occur when sufficient SNM is present.

For a criticality to occur, special conditions involving a number of factors must occur. Important factors that affect the criticality safety of a LLW disposal site are: (1) the isotope; (2) enrichment; (3) mass; (4) concentration; and (5) presence of neutron moderating and absorbing materials. Each of these is discussed below. (Following this is a discussion of these factors relative to possible scenarios).

(1) Isotope: The SNM isotopes present in LLW are dependent on the waste stream. The vast majority of SNM waste is generated from the production of nuclear fuel for nuclear power plants and from LLW generated by nuclear power plants. Of the SNM isotopes, uranium-235 is the most common. Large quantities of plutonium and uranium-233 (the other SNM isotopes) are not present in the commercial waste. However, these materials are present in Department of Energy (DOE) facility waste, and some DOE waste is being shipped to commercial LLW disposal facilities.

(2) Enrichment: Enrichment is a ratio of the weight of uranium-235 to the weight of the total uranium and is commonly expressed as a percent. Natural uranium, found in most soils, has an average enrichment of 0.71 percent. In order to be used as nuclear fuel, natural uranium must be enriched in uranium-235. Most nuclear fuel is enriched to less than 6 percent, which is considered low-enriched uranium; however, some nuclear fuel for special reactors such as those in naval vessels is enriched to much higher values, which is considered high enriched uranium. At enrichments less than about 0.96 percent, criticality is not possible regardless of the mass or concentration. As enrichment increases, criticality becomes a greater concern. Although most of the SNM waste contains low-enriched uranium, some waste contains high-enriched uranium.

(3) Mass: As discussed above, disposal facilities that are licensed by Agreement States and do not have an NRC license are subject to the SNM possession limits in Part 150 for above ground possession. These limits are based on a fraction of the minimum mass required to achieve a criticality. Under these limits, there is simply not enough SNM to cause a criticality regardless of the enrichment or concentration. However, these limits have been applied to above-ground possession, and SNM waste that has been disposed of is no longer be subject to these limits. Historic records at disposal sites indicate that some

disposal units (trenches) have a mass of uranium-235 in the hundreds of kilogram range. Therefore, it is reasonable to assume that large masses of SNM waste will be disposed of in disposal units in the future.

In some cases, the mass of SNM in individual packages is limited by the requirements in Part 71 (Packaging and Transportation of Radioactive Material). The majority of SNM waste shipped to a LLW disposal facility is transported under 10 CFR 71.53 as ''fissile exempt.'' This means it does not have to comply with the fissile material package standards in §§ 71.55 and 71.59. In order to be ''fissile exempt'', the quantity of unusual moderators (beryllium, graphite, or deuterium) is limited as is either the mass per package, the amount of moderator (water), concentration, enrichment, or mass per consignment. For example, SNM waste can be shipped as fissile exempt, if it contains no more than 15 grams of SNM per package. However, some general licenses in Part 71 allow for SNM waste to be shipped at higher masses per package. For example,10 CFR 71.22 allows up to 500 grams per shipment, which could be in a single container, provided unusual moderators are limited to 0.1 percent of the mass of the fissile material. This general license does not restrict concentration or enrichment. Therefore, mass cannot be eliminated as a factor of concern based solely on packaging and transportation regulations. As mass increases, criticality becomes a greater concern.

(4) Concentration: In some cases, the concentration of SNM received by a LLW disposal facility is limited by the requirements in Part 71. While significant quantities of SNM waste can be shipped under a number of general licenses, the majority of SNM waste shipped to a LLW disposal facility is transported as ''fissile exempt''. As noted above, in order to be ''fissile exempt'', the quantity of unusual moderators (beryllium, graphite, or deuterium) is limited, as is either the mass per package, the amount of moderator (water), the concentration, the enrichment, or the mass per consignment. For example, SNM waste can be shipped as fissile exempt, if it contains no more than 5 grams of SNM in any 10 liter volume. However, some general licenses in Part 71 allow for SNM waste to be shipped at higher concentrations per package. Therefore, concentration cannot be eliminated as a factor of concern based solely on packaging and transportation regulations.

(5) Presence of neutron moderator and absorbers: Neutrons that are produced during a fission have a relatively high energy and are termed ''fast'' neutrons. Moderators are materials that reduce the energy, or slow neutrons. This is important because uranium-235 is much more likely to be fissioned by slow neutrons than by fast neutrons. Therefore, the presence of moderator materials can increase the criticality concern. Elements such as hydrogen and carbon are particularly good moderators. Because water is abundant and is a very efficient moderator, assuming water is present is a common approach in evaluating the criticality significance of situations. However, there are certain materials such as beryllium, graphite, and deuterium that are more efficient moderators than water. These material are commonly termed ''unusual'' moderators.

Absorbers are materials that absorb or capture neutrons. Because capturing neutrons prevents those neutrons from possibly causing a fission, the presence of absorber materials will decrease the criticality concern. Most materials act both as a moderator and an absorber to varying degrees.

In some cases the presence of moderator material is limited by the requirements in Part 71. However, this is not always the case. It is reasonable to assume that moderators, such as water, will be present in the waste. In analyzing the criticality hazard of waste at LLW disposal facilities, it is conservative to assume that moderators will be present in optimal amounts. The presence of absorber materials is not limited by regulations. These materials, such as iron, calcium, etc., are present in LLW and in the waste containers. However, the amount and distribution of absorbers cannot be assured, so they are typically omitted in analyzing criticality hazards. For example, although a steel drum acts as an absorber, the drum will corrode within tens of years and can no longer be depended on to contain the waste and act as an absorber.

Possible Scenarios

In order for a criticality to occur, several of the above factors must be above certain values. For instance, a criticality cannot occur if the mass of the SNM is below a certain value regardless of the enrichment or concentration. A criticality cannot occur if the concentration of the SNM is below a certain value regardless of the enrichment or mass. A criticality cannot occur if the enrichment is below a certain value regardless of the mass or concentration.

Considering what can be controlled by Parts 71 and 150, several scenarios can be postulated. For waste shipped as ''fissile exempt'', concentrations can be limited to 5 grams of SNM per 10 liters. This translates to 104 grams of enriched uranium for a typical waste container (i.e., 55-gallon drum). In addition, under the fissile exemption unusual moderators are limited. Assuming a density of waste of 68 pounds per cubic foot, this concentration (4.6E–4 gram of uranium-235 per gram of waste) is smaller than the allowable operational concentration limit in the draft guidance (NUREG/CR–6626, Emplacement Guidance for Criticality Safety in Low-Level Waste Disposal) and therefore is considered safe. The limits in the draft guidance have been developed considering that absorbers are not present and that moderation with water is optimal to maximize the possibility of fissions.

For waste that does not meet the fissile exemption criteria, concentration, enrichment, and mass are not controlled. Given that disposal facilities licensed by Agreement States can only possess 350 grams, a package containing 350 grams of highly enriched uranium could be shipped to a disposal facility. Using the example of waste shipped in 55-gallon drums with a waste density of 68 pounds per cubic foot, the uranium-235 concentration is 1.5E–3 gram of uranium-235 per gram of waste. This concentration exceeds the limit for high enriched uranium in the draft guidance (8.3E–4 gram U–235/gram of waste for a 10-foot high disposal unit). While a single container would not represent a criticality concern, an array of such drums could represent a criticality concern.

Using the criticality calculations in NUREG/CR–6505 Volumes 1 and 2, ''The Potential for Criticality Following Disposal of Uranium at Low-Level Waste Facilities,'' an array of low-enriched uranium (10 percent enrichment) drums stacked more than 15 feet high could pose a criticality concern. An array of high-enriched uranium (100 percent enrichment) drums stacked more than 11 feet high could pose a criticality concern. Trenches at burial sites are deeper than 15 feet. These calculations assume optimal water moderation and no absorbers. Although there is significant uncertainty associated with a waste facility receiving and disposing of numerous drums containing large amounts of SNM, there are no regulatory limitations to preclude this situation.

NRC Staff Assessment of Compatibility Designation

At the time the compatibility designations were originally selected for Part 61 (1983), the NRC directly regulated SNM at LLW disposal facilities. Becuase the NRC is responsible for SNM in greater than critical mass quantities and regulated SNM at LLW disposal facilities, there was no need for Agreement States to adopt these requirements. These requirements were designated ''Not Required for Compatibility.'' As noted above, LLW disposal facilities reduced their SNM possession limits to those provided in 10 CFR 150.11 (350 grams or less). This authority was assumed by the respective Agreement State; thus, the NRC no longer directly regulates SNM at LLW disposal facilities, including the authority to administer waste emplacement criticality controls. Therefore, the NRC is considering changing the compatibility designation of § 61.16(b)(2) to ensure these safety measures are applied in the disposal of SNM.

NRC staff used the procedures outlined in Management Directive 5.9, ''Adequacy and Compatibility of Agreement State Programs,'' and concluded that the compatibility designation for § 61.16(b)(2) should be revised from category ''Not Required for Compatibility'', to category ''Health and Safety''. ''Health and Safety'' applies to activities that could result directly in an exposure to an individual in excess of basic radiation protection standards, if the essential objectives of the provision were not adopted by an Agreement State. If an inadvertent criticality were to occur at a LLW disposal facility, workers could receive doses in excess of the 10 CFR Part 20 limits. Under the ''Health and Safety'' category, Agreement States that have currently operating LLW disposal facilities and those States which will be establishing LLW disposal facilities in the future, would need to adopt legally binding requirements that encompass the essential objectives of 10 CFR 61.16(b)(2) within three years of the change of designation in compatibility. This requirement would continue to be designated as ''Not Required for Compatibility,'' for other Agreement States.

Summary of Draft Emplacement Criticality Guidance

The draft guidance provides a general approach to emplacement criticality safety. Five different SNM isotopic compositions were studied: uranium-235 at 10 and 100 percent enrichment; uranium-233; plutonium-239; and a mixture of plutonium-239, -240, and -241. Three different graded approaches are presented. The first graded approach is the most conservative, and can be used easily for facilities that dispose of very low levels of SNM, or dispose of material with a low average enrichment. This approach relies on the calculation of average areal density, or grams of SNM per square foot, or on the average enrichment of SNM. The area over which averaging may be performed also is specified, but the emplacement depth and concentration are not limited.

The second graded approach relies on limiting the average concentration by weight of SNM in the waste, and on limiting the depth of the emplacement. This method may be useful for facilities that emplace somewhat higher areal densities of SNM, but which do not use vaults or segmentation in the disposal emplacement.

The third graded approach relies on limiting the average concentration by weight of SNM in the waste, and on the presence of segmenting barriers, such as vaults, that will prevent movement of SNM waste from one side of the barrier to the other. This method may be useful for facilities that use concrete vaults in their disposal areas.

Envisioned Implementation of Guidance and Change in Compatibility

If the compatibility designation of 10 CFR 61.16(b)(2) were changed from ''Not Required for Compatibility'' to ''Health and Safety'', Agreement States would have three years to implement regulations or other legally binding requirements compatible with § 61.16(b)(2). As noted earlier, the States of Washington and South Carolina currently have emplacement criticality controls. The compatibility change will assure that future LLW disposal facilities in Agreement States will have criticality safety controls for emplaced SNM waste.

After these legally binding requirements have been implemented, the Agreement State regulatory program would require their licensees (disposal facility operators) to prepare and submit information demonstrating compliance with their equivalent of 10 CFR 61.16(b)(2).

To assist the States and licensees, NRC has prepared emplacement criticality safety guidance. Licensees would review the types of waste and disposal operations and determine which of the graded approaches in the guidance were appropriate for its facility. For each of the graded approaches, the NRC draft guidance includes criticality safety limits and a description of how to calculate the limits based on readily available information. The draft guidance also indicates the type of procedures that would need to be developed for each of the graded approaches. This guidance would serve as a technical basis for preparing the license amendment requests submitted to the Agreement States.

The Agreement State regulator would then review this amendment request and modify the license as appropriate. Again, the guidance would serve as the technical basis for the State regulator.

NRC Staff Assessment of Potential Resource Impact on Agreement States

NRC staff has estimated the potential resource impacts on Agreement States to implement a change in the compatibility of 10 CFR 61.16(b)(2). As indicated above, the first step would be to modify its regulations or other legally binding requirements to be compatible with § 61.16(b)(2). We consider that only a minor modification would be necessary to the existing Agreement State Part 61 equivalent regulations, or that the compatibility change could be administered through other legally binding requirements. We estimate that this will take four to six-State staff weeks. The next step of an Agreement State would be to review the licensee's amendment request and/or procedure changes. We estimate that this will take two-State staff weeks. Some additional effort would be required for inspection of the facility; however, this effort is not estimated to be significant.

Dated at Rockville, Maryland this 9th day of September, 1999.

For the Nuclear Regulatory Commission.

Daniel M. Gillen,

Acting Chief, Uranium Recovery and Low-Level Waste Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 99–24254 Filed 9–17–99; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NE–21–AD]

RIN 2120–AA64

Airworthiness Directives; Hartzell Propeller Inc. ()HC–()()Y()–() Series Propellers

AGENCY: Federal Aviation Administration, DOT.