Department of Energy
Washington, DC 20585

AUG 3 1992

Samuel L. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(Attn: Docketing and Service Branch)

Dear Mr. Chilk:

We are pleased to provide supplemental Department comments on NRC's proposed rules on low-level waste (LLW) shipment manifest information and reporting, as announced in the Federal Register on April 21, 1992 (57 FR 14500). Previously the Department provided comments on the rulemaking by July 17, 1992, letter.

Although we support the concept of a national LLW data base, we believe that NRC should rethink how it would develop such a data base. Similarly, NRC should rethink its proposals to track and control shipments of LLW.

NRC's proposals are based on the assumption that LLW passes from a generator's hands, through the occasional hands of a collector or processor, and on to a disposal site in a quick and orderly way. Under this assumption, LLW can be readily tracked, and considerab'e information can be aquired about LLW characteristics, by requiring that disposal facilities report LLW information. But increasingly, LLW may be shipped among different licensees several times before disposal, and much LLW may be stored before disposal capacity exists for it. NRC needs to reconsider whether it needs to track every shipment of waste to and from different licensees, and how it will monitor the quantities and characteristics of LLW held in storage.

Otherwise, NRC should address the issue of Agreement State compatibility with respect to the rulemaking and use of the uniform manifest, and discuss NRC's authority to enforce required use of a specific NRC form to implement Department of Transportation regulations.

These and other issues are addressed in the enclosure. If you have questions, the contact in the Office of Environmental Guidance is Mr. G. Roles (202-586-0289).

Raymond F. Pelletier
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Enclosure

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Supplemental DOE Comments on NRC Proposed Rulemaking on LLW Manifest Information and Reporting

General

1. NRC needs to rethink its proposals to establish a national low-level waste (LLW) data base and track and control shipments of LLW. NRC's discussions about a LLW data base, and proposed regulations for tracking and controlling shipments of LLW, are based on conditions that existed in the past but are rapidly changing.

   Disposal capacity currently exists for most LLW. LLW tends to be stored by the generator only to the extent needed to accumulate sufficient material for shipment. LLW usually passes from the hands of the generator, through the occasional hands of a collector or processor, and on to a disposal facility in a relatively quick and orderly way. Under these circumstances, it is straightforward to track the waste back to the generator through any collector and processor, merely by monitoring receipt of waste at the disposal facility. By requiring that the disposal facility operator report information about waste received at the disposal facility, NRC can gain a nearly complete picture of the existing LLW source term as it is being routinely generated. The only major source of waste that is significantly questionable is that expected from decommissioning of nuclear and materials facilities.

   But increasingly, LLW management is becoming much more complicated. LLW may be shipped among different licensees several times before disposal. A generator may ship waste to be processed and then returned, and perhaps reshipped to another licensee other than a disposal facility. Although little routinely-generated LLW is currently being stored, much LLW will probably require storage in the future, and storage for long periods of time pending development of disposal capacity. Such storage could be carried out by generators, collectors, processors, or other licensees.

   This suggests that NRC needs to rethink what it wants to accomplish with its control and tracking requirements, and with the proposed national LLW data base. First, NRC needs to consider whether it needs to track every shipment of LLW to and from different licensees, and if it does, how it will do so without an onerous impact on licensees. Second, NRC needs to consider how it will monitor and track LLW in storage, and whether it wishes licensees to report the quantities and characteristics of LLW in storage. We expect that NRC will need to be aware of the quantities and characteristics of LLW in storage, because NRC will need to

know what the future LLW source term will be. NRC will need to know how the characteristics of LLW are changing to ensure the adequacy of its regulations pertaining to LLW.

We recognize that implementing such a requirement would be difficult for a number of reasons, including NRC's limited regulatory authority in Agreement States, the inevitable fluctuations in the volume, curie content, and physical and chemical characteristics of LLW in storage, and the inertia among waste generators not to characterize LLW in detail until it must be shipped for disposal. Still, NRC should consider it.

2. NRC proposes to require use of NRC Form 540 for all shipments of LLW, both interstate and intrastate. It would be very helpful if NRC explained its authority to enforce the required use of a specific NRC form to implement Department of Transportation (DOT) regulations for shipping papers, particularly since DOT's existing regulations in 49 CFR Part 172 do not specify use of a specific form. Neither do DOT's proposed amendments to its regulations published in the Federal Register on November 14, 1989 (54 FR 47454). Does DOT plan to embark on a rulemaking to require use of the NRC form? Does NRC have a formal agreement with DOT that the proposed NRC manifest form fully implements DOT's regulations?

Statement of Considerations and Proposed Rule

3. Federal Register Notice (FRN) p. 14505, middle column, 1, Subsection A, General Information.

In the middle of the first paragraph, NRC gives the option of providing "...the name and EPA hazardous waste identification number of the person transporting the waste to the land disposal facility." In addition, NRC provides a definition of the EPA hazardous waste identification number in the definitions section of Appendix F, Subpart I, Manifest (FRN p. 14511). However, in both cases the terminology is incorrect. A transporter of hazardous wastes must have an EPA-issued identification number pursuant to 40 CFR 263, which is different from an EPA hazardous waste identification number pursuant to 40 CFR 261.

4. p. 14509, Manifest Number.

NRC discusses the option of assigning unique identification numbers to all generators, processors, and collectors, apparently similar to EPA's Facility Identification Number, which is used to track management of hazardous waste. It seems that without assigning such unique identification numbers, NRC will find it difficult to monitor and track LLW

as NRC has indicated it wishes to do. If NRC does choose to take this route, NRC may be advised to review with EPA the structure of EPA's hazardous waste tracking system, and to identify any its good points as well as any difficulties in implementing it.

However, NRC operates under a different regulatory mandate than does EPA. NRC's relationship with Agreement States under the Atomic Energy Act may be such that NRC cannot easily assign identification numbers to Agreement State licensees. The solution may be for NRC, by rulemaking, to set up a system for assigning facility identification numbers, and to require its use in Agreement States by designating the rulemaking a Division 1 Rule pursuant to NRC's procedures for ensuring compatibility of Agreement State regulations. (Also see below.)

5. p. 14509, Compatibility of Agreement State Regulations.

Nowhere in the discussion does NRC indicate the compatibility status of the proposed rulemaking. Given the expressed need for uniform manifest information, and the effort that has been expended to create uniform manifest forms (at State and Compact request), there seems to be no reason why NRC should not designate the rulemaking a Division 1 Rule. The proposed requirements and manifest forms appear to satisfy NRC's criteria for a Division 1 Rule according to NRC's internal procedures for the State Agreements Program (Policy B.7 - Criteria for Compatibility Determinations). Division 1 Rules include technical and legal definitions and radiation protection standards, and "are so basic to the regulatory programs that their modification by a State would result in numerous and difficult problems including interference in interstate commerce."

It seems that the very reason why NRC chooses to promulgate uniform manifest forms and requirements is to avoid "numerous and difficult" problems and inconsistencies. Certainly there comes a point where an Agreement State could require so much additional information that it would become a severe burden on those that must prepare LLW shipment manifests, as well as operators of LLW disposal facilities. Such a burden could entail "interference in interstate commerce." There comes a point where the information that could be requested by Agreement States may be so varied as to moot the rationale for a uniform manifest.

If NRC chooses to designate the rulemaking as a Division 2 Rule, then for the reasons discussed above, NRC needs to indicate how much additional information may be requested, or how many changes may be made to the uniform manifest

forms, by Agreement States before the changes and additional requirements become matters of incompatibility with NRC regulations.

Finally, designating the rulemaking a Division 1 Rule would moot the question voiced in this section of the FRN about Agreement State regulatory agencies acquiring manifest information in a machine readable medium. We believe it unlikely that any Agreement State regulatory agency having responsibility for a LLW disposal facility would fail to require reporting of manifest information in a machine readable medium. However, unless the manifest information is indeed reported in a machine readible medium by all disposal facilities, and in a medium that is consistent and compatible across all disposal facilities, NRC will probably find it difficult to establish a national system for commercial LLW manifest information.

One of NRC's primary reasons for the rulemaking, and for developing a national system of LLW information, is to ensure the adequacy of the Part 61 regulation. This need goes beyond those associated with monitoring the performance of any individual disposal facility, because only NRC has the authority to promulgate nationally applicable requirements for commercial LLW disposal. The Part 61 regulations were developed based on a number of assumptions about the physical, chemical, and radiological characteristics of LLW, and without monitoring the characteristics of LLW as it is generated or disposed, NRC will have no way of confirming that its regulations remain adequate in the face of changes in technology and licensed activities. For example, in recent years waste has become more concentrated than that when the Part 61 regulation was promulgated, and more waste is being generated from decommissioning activities. In the FRN NRC has also noted other needs for and uses of a national LLW information system.

6. FRN pp. 14512-14513, Appendix F, Section III.

Paragraphs A.7, B.5, and C.8 all indicate that the shipper (who may be a generator, collector, or processor) is to receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540. Some who read the requirements were not clear on NRC's meaning or the time frame within which the requirements are to take place. Perhaps the clarity of the requirements would be improved by adding a phrase such as "In accordance with paragraph D.1" at appropriate points in paragraphs A.7, B.5, and C.8.

7. FRN p. 14511, third column, Appendix F, definition of shipper.

The definition of a shipper implies that the shipper is the generator of the waste, given the words in the definition about the shipper "typically consigning such waste to a licensed waste collector, waste processor, or land disposal facility operator." However, elsewhere in Appendix F NRC indicates that a shipper may be a generator, collector, or processor (e.g., see Section IJI, paragraph D.1).

Within the regulation and manifest instructions and forms, NRC needs to be careful and consistent about use of the term shipper. We suggest that rather than "shipper," NRC use the terms generator, collector, or processor, as appropriate, when specifically referring to one of these types of licensees. If NRC proposes to make a general requirement or statement that would apply equally to all three types of licensees, NRC could use the phrase "generator, collector, or processor." If NRC prefers to use the phrase "shipper," then the definition should be changed to indicate that the shipper may include other licensees than the generator.

The difficulty may be related to the fact that LLW shipment manifests have evolved to serve a variety of needs, including transportation safety as well as disposal safety and waste tracking. Terminology that has evolved for transporation purposes has been loosely applied to other purposes, with occasional confusion. This situation seems to also apply to phrases such as "carrier," which NRC uses interchangeably with "transporter." Another phrase that has evolved from transportation considerations is "consignee," which may apparently refer to a collector, processor, or disposal facility operator (and perhaps storage facility operator).

8. FRN p. 14511, 10 CFR 20.2006.

In proposed paragraph 20.2006, NRC indicates that the manifest is to be used for LLW intended for "ultimate" disposal at a land disposal facility. NRC should clarify its intent, since there will be many occasions where licensees may ship waste to other licensees without having an immediate intent to dispose of the waste. For example, a generator may ship waste to a different licensee to be processed in some way, and then returned. A generator may ship waste to a storage facility. Should the uniform shipment manifest be used in these situations as well?

9. FRN pp. 14512-14513, Appendix F, Section III.

Similarly, and as noted in comment 1, the proposed control and tracking requirements are based on the assumption that the LLW management environment that existed at the time that 10 CFR 20.311 was promulgated exists today. But conditions are rapidly changing. Increasingly, LLW may be shipped among different licensees several times before disposal. LLW may be stored for long periods of times, and such storage could be carried out by licensees other than generators. This suggests that NRC needs to rethink what it wants to accomplish with its control and tracking requirements, and how it will implement its decision.

NRC Form 540: Uniform Low-Level Radioactive Waste Manifest, Shipping Paper

10. p. 3, item 5, Shipper.

The phrase "consignee or the designated disposal facility operator" appears to be redundant. A designated disposal facility operator is a consignee, and all consignees should be designated.

In addition, we note a discussion about a shipper identification number, which NRC describes as a number, if any, assigned to the shipper by the consignee or designated disposal facility operator. However, it seems that this description more closely applies to the "User permit number," which is on NRC Form NRC 540 in addition to a "shipper I.D. number." Which leads to additional questions: What is the purpose of two identification numbers for a single shipper? If there is a purpose for two identification numbers, both should be addressed in the instructions.

Furthermore, although NRC Form 540 refers to identification numbers called "shipper I.D. number" and "user permit number," NRC Forms 541 and 542 refer to identification numbers called "generator I.D. numbers." If two or more of these identification numbers are meant to be the same, then the terminology should be consistent among the instructions and the manifest forms.

In addition, who is to have authority to assign the identification numbers? We can see situations where identification numbers might be assigned by the consignees, the States and Compact organizations, or by NRC or a State regulatory agency. Perhaps NRC should consider a rulemaking to assign identification numbers to all generators, collectors, and processors as discussed in comment 4.

Furthermore, the instructions for NRC Form 540 indicate that identification numbers may be assigned. However, if NRC Form 541 is to function as designed, identification numbers must be assigned.

Finally, although the NRC Uniform Manifest Forms call for provision of identification numbers, Appendix F contains no regulatory authorization for requiring such identification numbers.

11. p. 4, item 10.

Previously we suggested that NRC's instructions for the certification statement were too narrow, in that the instructions seemed to require that a signature should be obtained from the person having the actual responsibility to package or label waste, as opposed to the more appropriate requirement for a signature from someone having authority to certify that the information is correct. As a further comment on this subject, we note that the intent of NRC Form 540 is to implement DOT requirements for shipping papers. Given this, it would be appropriate for NRC's instructions to be consistent with DOT's actual requirements for certification which are given in 49 CFR 172.204. In paragraph 172.204(d)(1), DOT requires a signature from "a principal, officer, partner, or employee of the shipper or his agent."

NRC Form 541: Uniform Low-Level Radioactive Waste Manifest, Container and Waste Description

12. p. 8, item 5, Disposal container identification number/generator ID number(s).

Herein, NRC requires that shippers assign each container a container identification number unique among the individual container identification numbers within the shipment. But for item 18 for NRC Form 540, NRC requires that shippers assign each package a package identification number unique among the individual package identification numbers within the shipment.

Three comments: First, NRC should provide instructions to the effect that whatever identification numbers are used on one form, the same identification numbers for the same containers must be used on the other form. Otherwise, NRC will run into cases where the generator lists the container in one way on one form, and in another way on another form, which will only be confusing.

Second, NRC should always use the word "container" rather than "package" to describe a container of waste. "Package"

has particular connotations and interpretations for purposes of transportation that go beyond the concept of an individual container. For example, for transportation purposes a package might refer to an entire shipment of waste, such as a shielded cask or an enclosed van. But NRC is interested in the individual containers of waste within the cask or van.

Third, NRC might consider a system where identification numbers for individual waste containers are tied to specific manifests. This could provde to be difficult, especially for situations where containers of waste pass through the hands of collectors and processors, and new manifests are created for shipments to disposal facilities or other licensees. However, it may be necessary to ensure that individual containers of waste can be tracked back to specific generators. This may be of particular importance if waste from dozens or hundreds of different generators are stored for several years at a licensed storage facility.

13. p. 10, item 13, Sorbent, solidification, stabilization media.

Some of the sorbent media referenced here, and listed on the manifest form and FRN page 14507, appear to be registered trademarks. NRC should so indicate.

14. p. 11, item 15, Radiological description.

Herein, two alternative methods are permitted for presenting radionuclide data for containers containing multiple types of waste. However, only one method is permitted for containers containing a single type of waste. It is not clear why this restriction is necessary. If not necessary, it should be deleted.