POLICY ISSUE
(Information)

January 13, 1986 SECY-86-11

For: The Commissioners

From: Victor Stello, Jr.
Acting Executive Director
for Operations

Subject: COMMENTS ON THE DEPARTMENT OF ENERGY'S PROPOSED RULEMAKING INTERPRETING THE DEFINITION OF BYPRODUCT MATERIAL

Purpose: To inform the Commission of the staff's position on the proposed DOE rulemaking.

Background: On November 1, 1985, the Department of Energy (DOE) proposed a rule in the Federal Register to "clarify" the definition of the term "byproduct material" as defined in Section 11(e)(1) of the Atomic Energy Act (Enclosure 1). Staff brought this to the attention of the Commission in a memorandum dated November 13, 1985 (Enclosure 2).

The stated purpose of the rule is to clarify which of the radioactive wastes owned or produced by DOE require regulation under provisions of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, and which radioactive wastes DOE can continue to regulate exclusively under the Atomic Energy Act of 1954 (AEA), as amended. Some DOE radioactive wastes are mixed with substances considered hazardous under RCRA. Section 1004 of RCRA specifically exempts from the requirements for hazardous waste disposal any material defined as source, byproduct, or special nuclear material by the AEA.

Contact:
J. Lambert, NMSS
427-74009

DOE has proposed that for the purpose of determining RCRA's applicability at its facilities, byproduct material wastes should be defined as radioactive wastes that are "either directly yielded in the process of producing or utilizing special nuclear material, or have been made radioactive as a direct and necessary consequence of that process." Thus, under this proposed definition, "any DOE waste substance which is....Byproduct Material, even those that otherwise could qualify as hazardous waste under RCRA, will continue to be regulated under DOE's exclusive AEA authority." (See, in Enclosure 1, Federal Register Vol. 50., No. 212, Friday, November 1, 1985, p. 45736.)

Other wastes, particularly those "primarily incident to.... the process employed by DOE to produce commercial radionuclide products," would be considered "indirect process wastes." While these indirect process wastes "would be said to contain Byproduct Material...., they would not themselves be Byproduct Material, because their contamination with radioactivity is neither a direct nor, strictly speaking, a necessary consequence of the process for producing and utilizing Special Nuclear Material [DOE emphasis]." These wastes "exhibiting hazardous characteristics would be treated as 'mixed' waste, handled in accordance with the requirements of both RCRA and the AEA." (See, in Enclosure 1, FR, p. 45737.)

Discussion:

NRC staff has been having discussions with DOE staff regarding the matters within the proposed rule since August 1984. Staff had both legal and technical concerns with the approach DOE was taking, and informed DOE staff that we believed the proposed rule had implications for NRC's regulatory programs. DOE continues to maintain that the proposed rule is limited in scope to DOE wastes and, therefore, does not affect NRC.

Comments were initially due to DOE on December 2, 1985, but were extended to January 2, 1986. On December 12, 1985, NRC staff requested a 60-day extension for acceptance of comments (Enclosure 3). We have been informed by telephone that DOE has not granted our request. As a result, staff prepared the enclosed response (Enclosure 4) to meet the January 2 deadline. The staff's response recommends that DOE seek clarifying legislation on this matter, which was the approach taken by NRC in its consideration of the Low-Level Radioactive Waste Policy Amendments Act of 1985.

This response has been coordinated with the Office of the General Counsel and the Office of Policy Evaluation.

Victor Stello, Jr.
Acting Executive Director
for Operations

Enclosures:
1. FR Notice dtd 11/1/85
2. Memo to Comm dtd 11/13/85
3. Ltr to DOE dtd 12/12/85
4. Ltr to DOE dtd 1/2/86

federal register

Friday
November 1, 1985

Part VI

Department of Energy

10 CFR Part 962
Byproduct Material; Proposed Rule

Enclosure 1

DEPARTMENT OF ENERGY

10 CFR Part 962

Byproduct Material

AGENCY: Department of Energy (DOE).

ACTION: Notice of proposed rulemaking.

SUMMARY: The Department of Energy proposes to issue regulations under section 161.p. of the Atomic Energy Act of 1954 (42 U.S.C. 2011 *et seq.*; hereinafter the "AEA") for the purpose of clarifying the Department of Energy's obligations under the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*; hereinafter "RCRA"). This regulation will clarify the application of the term Byproduct Material, as defined in section 11e(1) of the AEA (42 U.S.C 2014(e)(1)), to Department of Energy owned or produced radioactive waste substances for the purpose of determining which of these waste substances are Byproduct Material under the AEA and are therefore not "solid waste" as that term is defined in RCRA. This proposed rule does not affect materials that are Byproduct Material under section 11e(2) of the AEA.

The proposed regulations are necessary to clarify which of these radioactive wastes shall continue to be regulated by DOE exclusively under the AEA and which wastes shall be subject to regulation both under RCRA and the AEA.

DATE: Comments must be received on or before December 2, 1985.

ADDRESSES: Comments should be addressed to: Henry K. Garson, Esq., Assistant General Counsel for Environment, Department of Energy, 1000 Independence Ave., SW., GC-11, Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT:

Henry K. Garson, Esq., Assistant General Counsel for Environment, Department of Energy, 1000 Independence Ave., SW., Room 6A-113, Washington, DC 20585, Telephone: (202) 252-6947

Robert J. Stern, Director, Office of Environmental Guidance (EH-23), Department of Energy, 1000 Independence Ave., SW., Washington, DC 20585, Telephone: (202) 252-4600.

SUPPLEMENTARY INFORMATION:

Background

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, establishes a comprehensive regulatory scheme to govern the generation, transportation, treatment, storage and disposal of hazardous waste. Federal agencies are required by section 6001 of RCRA (42 U.S.C. 6961) to comply with that regulatory scheme in the same manner, and to the same extent, as any private person or entity. DOE had interpreted section 1006 of RCRA (42 U.S.C. 6906) as exempting from regulation under RCRA DOE's activities and substances subject to the AEA relating to our Nation's national security programs. In 1984, the United States District Court disagreed with this interpretation and held RCRA to be applicable to the activities of DOE under the Atomic Energy Act. *LEAF v. Hodel*, 586 F.Supp. 1163 (E.D. Tenn. 1984).

By its definitional provisions, however, RCRA excludes from its regulatory scheme "source, special nuclear and byproduct materials," as those terms are defined by the AEA (section 1004(27) of RCRA, 42 U.S.C. 6903(27)). Thus, any DOE waste substance which is Source, Special Nuclear or Byproduct Material, even those that otherwise could qualify as hazardous waste under RCRA, will continue to be regulated under DOE's exclusive AEA regulatory authority.

The AEA provides detailed definitions for Source Material and Special Nuclear Material, but only defines Byproduct Material, in pertinent part, as "any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material," section 11e(1). While in practice, little need has previously arisen to address this definition's applicability to radioactive wastes, the use in RCRA of Byproduct Material as a waste term now requires a clarification of what DOE radioactive waste substances meet the statutory definition of Byproduct Material.

II. Discussion

Unlike the AEA's definitions of the related terms Source Material (section 11z. of the AEA, 42 U.S.C. 2014(z)) and Special Nuclear Material, (section 11aa. of the AEA, 42 U.S.C. 2014(aa)) which mention particular substances by name, the definition of Byproduct Material, for purposes here pertinent, speaks only in terms of a technical process. The legislative history of this definition provides little guidance as to its intended application, and the definition has not been clearly elucidated by judicial interpretation.[1] Because the plain words of the definition are keyed to the process for producing and utilizing Special Nuclear Material, that process itself would appear to be determinative of whether particular radioactive materials are properly within the definition. Thus, while the definition is clear on its face that Byproduct Material must be radioactive, it would appear that radioactivity alone does not suffice to characterize a waste substance as Byproduct Material. The radioactive waste must be either directly yielded in the process of producing or utilizing special nuclear material, or have been made radioactive as a direct and necessary consequence of that process.

Radioactive wastes that are accelerator produced or that are yielded in the process of producing or utilizing Source Material or Byproduct Material are not Byproduct Material, because those wastes do not result from the process of producing and utilizing Special Nuclear Material. If those wastes display any hazardous characteristics, they would, under the regulation proposed today, be subject to regulation under RCRA, despite their radioactivity.

In contrast, high-level radioactive waste emanating from the chemical processing of spent fuel for the production of plutonium, and radioactive waste cutting oil used for the machining of plutonium to a usable configuration, are Byproduct Material as defined in the AEA, and therefore are excluded from regulation under RCRA, because the contained radioactivity in these wastes is a direct, necessary and inherent consequence of the process of producing and utilizing Special Nuclear Material. These wastes, which today's proposed rule would define as Byproduct Material, are perhaps best thought of as production or utilization "direct process wastes."

Intermediate to the examples set forth in the two preceding paragraphs is the case of wastes whose contained radioactivity is an indirect result, rather than direct process waste, from the process of producing and utilizing Special Nuclear Material. For example, some DOE facilities prepare Byproduct radionuclides for use in commerce. While it is clear that the products as radionuclides are themselves Byproduct Material, it would appear less clear that the radioactive residues resulting from

[1] Two early decisions interpreting the Atomic Energy Commission's licensing authority over low level radioactive waste clearly conclude that these wastes are Byproduct Material. The specific issue of whether the wastes, in their entirety, were Byproduct Material was not, however, specifically at issue because the wastes clearly contained Byproduct Material subjecting them to regulation by the AEC. Harris County v. United States, 282 F.2d 370 (5th Cir. 1961); City of New Britain v. Atomic Energy Comm'n, 308 F.2d 648 (D.C. Cir. 1962).

[illegible] contained radioactivity is a direct consequence of the process for producing and utilizing Special Nuclear Material, by no means a direct process waste. Such wastes and wastes made radioactive in a similar manner, may be termed "indirect process wastes." While containing Byproduct Material, these wastes would not, under today's proposed rule, be considered Byproduct Material in their entirety. Rather, if otherwise found to contain hazardous waste, they would be considered "mixed waste", containing both Byproduct Material and other radioactive material and hazardous waste.

While it would appear possible to construe the AEA to include indirect process wastes and other mixed wastes as Byproduct Material because, in the context of DOE's AEA activities, their contained radioactivity is, in the most literal sense, "incident to" the process for producing and utilizing Special Nuclear Material and these wastes clearly contain Byproduct Material, it would seem more accurate to say that these wastes are primarily incident to a different process, the process employed by DOE to produce commercial radionuclide products. Under this line of reasoning, while indirect process wastes would be said to *contain* Byproduct Material (trapped radionuclides, to use the example given in the preceding paragraph), they would not themselves be Byproduct Material, because their contamination with radioactivity is neither a direct nor, strictly speaking, a necessary consequence of the process for producing and utilizing Special Nuclear Material. Because of this distinction, DOE is proposing that these indirect process wastes exhibiting hazardous characteristics be treated as "mixed" waste, handled in accordance with the requirements of both RCRA and the AEA.

Thus, DOE's proposed interpretation of "Byproduct Material" for purposes of clarifying RCRA's applicability to radioactive waste substances at DOE's AEA facilities, would apply only to production or utilization "direct process wastes."

This proposed rule is supported by the fact that virtually all radioactive waste substances yielded in the process for producing or utilizing special nuclear material are contained, dissolved or suspended in a nonradioactive medium, from which their separation is impracticable. High-level radioactive waste and most transuranic waste, for example, exist only in this form; the maximum practicable separation of their radioactive and nonradioactive components has already occurred before the substances are actually disposed of or classified as waste. It seems apparent, then, that unless the term "radioactive material" as used in section 11e(1) of the AEA is taken to include the entirety of a direct contact process waste substance in which radioactive elements are dispersed, the exclusion of Byproduct Material from RCRA's coverage would be reduced to a virtual nullity.

III. Effect of Proposed Rule

DOE has prepared for each of its facilities a report indicating which existing individual waste streams would be considered Byproduct Material under this proposed rule, and which individual waste streams would be considered mixed wastes. (The reports identify some wastes as "candidate" mixed wastes because it is not yet known whether there are in fact hazardous constituents in these waste streams.) These reports are available for inspection at the following locations during normal business hours:

U.S. Department of Energy, Room 1E-190, 1000 Independence Avenue, SW., Washington, DC 20585
Albuquerque Operations Office, National Atomic Museum, Wyoming Blvd., Building 20358, Albuquerque, NM 87115
Chicago Operations Office, 9800 South Cass Avenue, Argonne, IL 60439
Idaho Operations Office, 550 Second Street, Idaho Falls, ID 83401
Nevada Operations Office, Public Reading Room, 2753 South Highland Street, Las Vegas, NV 89109
Oak Ridge Operations Office, Federal Building, 200 Administration Road, Oak Ridge, TN 37830
Richland Operations Office, Hanford Science Center, 825 Jadwin Street, Richland, WA 99352
San Francisco Operations Office, 1333 Broadway, 2nd Floor Oakland, CA 94612
Savannah River Operations Office, FOI Publication/Document Room, University of South Carolina—Aiken, Aiken SC 29801

Should processes change, or should new waste streams not in reports be produced, these wastes would be classified using the definition proposed today, applied in a consistent manner to achieve consistent results. DOE believes that this porposed rule provides a reasonable basis to classify the wastes produced at its AEA facilities consistent with both DOE's AEA authorities and its responsibilities under RCRA.

If the rule proposed here today is adopted by DOE, its application will have the effect of leaving under the exclusive AEA regulatory scheme DOE radioactive wastes currently or in the future to be stored in its High Level Waste Tanks at DOE facilities. These wastes are regulated under a system of DOE Orders which require proper storage and treatment of the wastes. Ultimately, all of these wastes are to be disposed of pursuant to statutory schemes including the Energy Reorganization Act of 1974, the Department of Energy Organization Act and the Nuclear Waste Policy Act. Other DOE radioactive hazardous wastes would either continue to be regulated under the exclusive AEA authority, if they are direct process wastes, or be regulated under both AEA and RCRA authorities, if they are not.

IV. Invitation to Comment and Notice of Public Hearing

Interested persons are invited to submit written comments and recommendations to the address set forth at the beginning of this document. All comments or recommendations received on or before December 2, 1985 will be considered before the issuance of final regulations.

All comments submitted in response to these proposed regulations will be available for public inspection, during and after the comment period in Room 1E-190, 1000 Independence Ave., SW., Washington, DC, 20585 between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday of each week except Federal holidays.

Pursuant to section 501 of the Department of Energy Organization Act, the Department will provide an opportunity for oral presentation of views, data and arguments. Interested persons may request a public hearing by the date set forth above. If any requests for a public hearing are timely received, the Department will conduct a public hearing on November 13, 1985, at 9:00 a.m. in Room 1E-245, 1000 Independence Ave., SW., Washington, DC. If no requests for a hearing are received, the hearing will be cancelled. Procedural rules for the hearing will be announced at the commencement of the hearing.

V. Related Rulemaking

This proposed rule clarifies the jurisdictional basis for the application of RCRA to certain DOE wastes. The Environmental Protection Agency has proposed, or will shortly propose, rules under its RCRA authorities to govern other issues involved in RCRA's application to DOE facilities including issues of national security, state

program consistency, protection of data and access to DOE facilities. Interested persons should also review that rulemaking in order to have an awareness of all of the issues involving RCRA application to DOE facilities.

VI. Procedural Matters

A. Executive Order 12291

These proposed regulations have been reviewed in accordance with Executive Order 12291.

They are not classified major because they do not meet the criteria for major regulations established in that Order.

B. Regulatory Flexibility Act Certification

The regulations will not have a significant impact on a substantial number of small entities.

C. Paperwork Reduction Act of 1980

There are no information collection requirements in the proposed rules.

List of Subjects in 10 CFR Part 962

Nuclear materials, Byproduct material.

Issued in Washington, DC, October 24, 1985.

J. Michael Farrell,

General Counsel.

In consideration of the foregoing, Part 962 of 10 CFR Chapter III is proposed to be added as set forth below.

Part 962 is added to 10 CFR Chapter II to read as follows:

PART 962—BYPRODUCT MATERIAL

Sec.

962.1 Scope.

962.2 Purpose.

962.3 Byproduct material.

Authority: The Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*); Energy Reorganization Act of 1974 (42 U.S.C. 5801 *et seq.*); Department of Energy Organization Act of 1977 (42 U.S.C. 7101 *et seq.*); Nuclear Waste Policy Act of 1982 (Pub. L. 97-425, 96 Stat. 2201).

§ 962.1 Scope.

This part applies to radioactive waste substances which are owned or produced by the Department of Energy at facilities owned or operated by the Department of Energy under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*).

§ 962.2 Purpose.

The purpose of this Part is to [illegible] the term Byproduct Material [illegible] section 11e(1) of the Atomic Energy [illegible] (42 U.S.C. 2014e(1)) for use in determining the Department of Energy obligations under the Resource Conservation and Recovery Act with regard to radioactive waste substance owned or produced by the Department of Energy pursuant to the exercise of authority under the Atomic Energy Act of 1954, as amended. It does not affect the definition of Byproduct Material contained in section 11e(2) of the Act.

§ 962.3 Byproduct material.

For purposes of this part, the term Byproduct Material means a waste substance containing radioactivity that is either directly yielded in the process of producing or utilizing Special Nuclear Material as that term is defined in the Atomic Energy Act of 1954, as amended, or its being made radioactive is a direct and necessary consequence of that process.

[FR Doc. 85-26312 Filed 10-31-85; 10:53 am]

BILLING CODE 6450-01-M

NOV 13 1985

MEMORANDUM FOR: Chairman Palladino
Commissioner Roberts
Commissioner Asselstine
Commissioner Bernthal
Commissioner Zech

FROM: William J. Dircks
Executive Director for Operations

SUBJECT: DOE'S PROPOSED RULEMAKING ON THE DEFINITION OF BYPRODUCT MATERIAL

On November 1, 1985, the Department of Energy (DOE) proposed a rule intended to clarify the definition of the term "byproduct material" as defined under Section 11e(1) of the Atomic Energy Act. The proposed interpretive rule is an effort by DOE staff to resolve jurisdictional disputes with EPA over the regulation of wastes at DOE facilities which contain both radioactive and hazardous constituents (referred to as "mixed" wastes). The stated purpose of the proposed rule is to determine DOE's obligations under the Resource Conservation and Recovery Act of 1976 (RCRA), and to determine which of the "mixed" wastes produced or owned by DOE should be subject to regulation under that act. While the rule is ostensibly written to specifically resolve only the DOE/EPA mixed waste regulatory questions, it could also impact on NRC licensing activities since it sets out a new approach for determining which substances are to be considered to be byproduct material.

Comments on the proposed rule are due to DOE on December 2, 1985. NRC staff plans to send comments to DOE and will keep the Commission informed.

A copy of the proposed rule as published in the Federal Register is enclosed for your information.

(Signed) Jack R Roe

William J. Dircks
Executive Director for Operations

Enclosure:
FR 45736

cc: SECY
OGC
OPE

Enclosure 2

DEC 12 1985

Henry K. Garson, Esq.
Assistant General Counsel for Environment
U.S. Department of Energy
1000 Independence Avenue, NW
GC-11
Washington, D.C. 20585

Dear Mr. Garson:

On November 1, 1985, the U.S. Department of Energy (DOE) published a notice of proposed rulemaking for 10 CFR Part 962, entitled "Byproduct Material" (50 F.R. 45736). The deadline for comments was originally December 2, 1985, but has subsequently been extended to January 2, 1986. The U.S. Nuclear Regulatory Commission (NRC) requests that DOE extend the comment period for an additional 60 days.

The NRC believes that the proposed rulemaking could be construed to apply also to the regulation of byproduct material by the NRC and NRC Agreement States. It should be further noted that the U.S. Environmental Protection Agency (EPA) stated, in a letter to Eric Fygi, Deputy General Counsel, DOE, dated October 30, 1985 (copy enclosed), that the proposed interpretative rule will be relevant to the waste subject to NRC jurisdiction.

The ramifications of the rule proposed by DOE could be significant to NRC, the approximately 10,000 material licensees regulated directly by NRC, and the approximately 13,000 Agreement State licensees regulated by States under agreement with NRC. Unfortunately the information provided in the proposed rulemaking notice is not sufficient for NRC to fully evaluate the potential impacts on NRC. As a result, we believe that it will take at least an additional 60 days to evaluate the potential problems the proposed DOE definition of byproduct material would have on our regulatory program.

Sincerely,

(Signed) John G. Davis

John G. Davis, Director
Office of Nuclear Material
Safety and Safeguards

Enclosure:
Letter frm EPA to DOE, dtd 10/30/85

Enclosure 3

AN 2 - 1986

- : -

Henry K. Garson, Esq.
Assistant General Counsel for Environment
Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Mr. Garson:

The Nuclear Regulatory Commission (NRC) staff has reviewed the Department of Energy's (DOE's) proposed rule, published in the November 1, 1985 Federal Register, concerning the definition of byproduct material (50 FR No. 212, 45736). This letter and its enclosures provide those NRC staff comments on the proposed rule that we have been able to develop in the time provided.

As the NRC staff indicated in our December 12, 1985 letter requesting a 60-day extension for acceptance of comments (which we understand from a telephone conversation will not be granted), NRC staff has serious reservations about the potential consequences of the proposed rulemaking. We are providing examples of the significant impacts of which we are currently aware on NRC's and the Agreement States' regulatory programs.

Essentially, NRC staff believes that the proposed DOE rulemaking could have a significant and unacceptable impact on the regulatory program of NRC and the Agreement States. If the proposed DOE definition of byproduct material were found to be applicable to NRC, we believe it would effectively remove from NRC and Agreement State jurisdiction the disposal of wastes with significant radiological hazards that have heretofore been under our regulatory control.

NRC has been pursuing a legislative clarification of the jurisdictional uncertainties posed by NRC-regulated wastes mixed with substances considered hazardous under the Resource Conservation and Recovery Act of 1976. We recommend that DOE consider a similar course for the clarification it seeks for DOE-produced wastes. We understand that Congress plans to take up the mixed waste issue in the upcoming legislative session.

Enclosure 4

We appreciate the opportunity to comment on the proposed rulemaking.

Sincerely,

Robert E. Browning, Director
Division of Waste Management

Enclosures:
1. Staff Comments
2. Ltr to DOE dtd 12/12/85

December 31, 1985

NRC STAFF COMMENTS
ON PROPOSED DOE 10 CFR 962
RULEMAKING ON THE DEFINITION OF BYPRODUCT MATERIAL

In proposing the rulemaking, DOE has assumed that the application of the changes suggested to the interpretation of the Atomic Energy Act (AEA) definition of byproduct material will be confined to DOE activities and only to wastes. However, what DOE is proposing is a departure from the statutory definition of byproduct material. As a result, NRC staff believe that if DOE's proposed definition is promulgated as a final rule, it would inevitably have a significant effect on the nature and scope of the NRC's and Agreement States' longstanding regulatory regime for the possession and use of byproduct and special nuclear material.

Potential Major Programmatic Impacts:

A major concern derives from an implication of the proposed rule, if DOE's proposed definition were construed to apply to NRC byproduct material licenses, that the regulatory definition of byproduct material would be significantly narrowed, and radioactive material currently regulated as byproduct material by NRC would no longer fall under NRC jurisdiction.

Under the proposed distinction between "direct" and "indirect process wastes," for example, the partitioning of cesium ^{137} for commercial product irradiation could result in the disposal of megacuries of radioactive cesium under no NRC or Agreement State regulation. Under longstanding Atomic Energy Commission and NRC regulations, radioactive wastes from licensed uses of DOE-produced materials have been considered byproduct material, and have been subject to NRC and Agreement State regulatory control. The proposed DOE definition would not consider such wastes to be byproduct material, because they could not be considered "direct process wastes" from the production or use of special nuclear material. The proposed exclusion of "indirect process wastes" could thus create a new class of orphan radioactive waste from radioactive materials such as cesium ^{137} and similar DOE-produced materials. This new orphan waste would be created just after Congress has completed efforts to reduce orphan wastes by passing H.R. 1083, The Low-Level Radioactive Waste Policy Amendments Act of 1985, which will soon go before the President for signature. [See Section 3(b)(1)(D) of H.R. 1083.]

There are many other DOE-produced materials in commerce that would also become unregulated by NRC and Agreement States under the proposed "direct-indirect"

distinction. The proposed rulemaking allows an interpretation that a materials licensee who uses byproduct material to conduct research and development activities, or processes byproduct material to produce medical isotopes, would produce a waste that is not considered to be byproduct material since it was not produced as a "direct and necessary consequence" of the production or utilization of special nuclear material. Under the NRC's existing regulatory scheme such waste is regulated by NRC as byproduct material because it contains radioactive material that was initially produced incident to the production or utilization of special nuclear material. The proposed DOE definition would no longer classify such wastes as byproduct material, and it thus would no longer fall under NRC's regulatory jurisdiction.

The example of plutonium-contaminated cutting oil used in the proposed DOE rulemaking is also inconsistent with NRC's current regulatory scheme. According to the proposed DOE definition, it would become byproduct material, although such waste would be regulated by NRC as special nuclear material if it were produced from licensed uses. Under the proposed interpretation, it appears that some NRC part 70 licensees would become Part 30 licensees and NRC might lose jurisdiction over some possession and use of special nuclear material as well as byproduct material. This could raise important strategic and safeguards problems.

Legal Basis for Programmatic Impacts:

The proposed DOE definition is not consistent with the definition of byproduct material in Section 11e.(1) of the Atomic Energy Act of 1954, as amended, under which NRC and its predecessor, the Atomic Energy Commission, have conducted their affairs for decades. In the statutory definition, byproduct material is defined in physical terms as radioactive material (underlined for emphasis) that is yielded in or made radioactive incident to the process of utilizing or producing special nuclear material. This has always been considered to refer to: (i) fission products, i.e. the radioactive isotopes that result from the process of fissioning of special nuclear materials in a utilization or production facility; and (ii) activation products, i.e. radioactive isotopes that result from the bombardment of materials with neutrons produced in a utilization or production facility. The statutory definition excludes special nuclear material (i.e. plutonium) that can be produced in the same processes. Once byproduct material is created in the physical manner described in the statutory definition, it and any radioactive decay products remain byproduct material for as long as they are radioactive, and are regulated as byproduct material by the NRC or its Agreement States throughout their commercially useful life, subsequent disposal, and long-term care at a disposal site. This

has been the consistent historical regulatory understanding of byproduct material for the last forty years.

The Department's proposal would depart from the statutory definition, as commonly understood and as applied through NRC regulations, in significant ways. First, it removes the qualification that to be byproduct material, the material must be radioactive. In the DOE proposal, the waste material need only contain radioactive material, apparently without regard to the statutory nature of the radioactive component. For example, plutonium-contaminated waste cutting oil would be called byproduct material notwithstanding the fact that the radioactive component, plutonium, is by law special nuclear material. It is difficult to understand how plutonium-contaminated cutting oil can be byproduct material when under the statutory definition, the only radioactive component is special nuclear material.

Second, the concept of the radioactivity having to be "directly" yielded in the process of producing or utilizing special nuclear material is not a concept within the statutory definition. Under DOE's proposed "directly yielded" concept, decay products in irradiated reactor fuel would not be byproduct material, since the daughter products are not the immediate and direct result of the fission process, but come into being at time intervals dependent on the half-lives of the primary fission products. If this concept were applied to the commercial sector, it would contradict forty years of accepted regulatory understanding and would leave unregulated radioactive materials which are currently regulated by NRC or agreement states as byproduct material.

Third, the proposal advances a concept that waste is byproduct material if it is made radioactive as a "direct and necessary consequence" of the process of producing or using special nuclear material. These terms, "direct and necessary consequence," imply a relationship not to be found in the statutory definition. The latter defines byproduct material as "radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material." The definition is thus framed in physical terms (i.e. "radioactive material (except special nuclear material)") that do not require a judgment as to what is a direct and necessary consequence of the production or utilization of special nuclear material.

The legislative history of the Atomic Energy Act of 1946, in which the term byproduct material was first defined, is inconclusive with regard to Congresssional intent concerning any hazardous chemical materials which might be associated with byproduct material. The record does indicate, however, a concern that the term not be read to include metallurgical process wastes, such as uranium and thorium milling tailings, and that it be restricted to "hot",

i.e. radioactive, materials. (3 Legislative History of the 1946 Atomic Energy Act 2502-03, 2524.) It is our belief that the use of the term "radioactive" in the present statutory definition was deliberate and intended to restrict the application of the term byproduct material so as not to specifically include the hazardous chemical material.

Regulations written to implement a statute such as the Atomic Energy Act of 1954, as amended, cannot exceed or enlarge the scope of the legislative authority granted by the statute. In our opinion, the Department's proposed redefinition of byproduct material is enough at variance with the plain meaning and historical understanding of the statutory definition to call the legality of the proposal into question.

NRC Staff Recommendation:

Rather than proposing to change the AEA definition of byproduct material, the Commission has been pursuing a legislative clarification of the jurisdictional uncertainties posed by NRC-regulated wastes mixed with substances considered hazardous under the Resource Conservation and Recovery Act of 1976. The NRC staff recommends that DOE consider a similar course for the clarification it seeks for DOE-produced wastes. We understand that Congress will be considering legislation to resolve the mixed waste issue in the upcoming Congressional session.

DEC 12 1985

- 1 -

Henry K. Garson, Esq.
Assistant General Counsel for Environment
U.S. Department of Energy
1000 Independence Avenue, NW
GC-11
Washington, D.C. 20585

Dear Mr. Garson:

On November 1, 1985, the U.S. Department of Energy (DOE) published a notice of proposed rulemaking for 10 CFR Part 962, entitled "Byproduct Material" (50 F.R. 45736). The deadline for comments was originally December 2, 1985, but has subsequently been extended to January 2, 1986. The U.S. Nuclear Regulatory Commission (NRC) requests that DOE extend the comment period for an additional 60 days.

The NRC believes that the proposed rulemaking could be construed to apply also to the regulation of byproduct material by the NRC and NRC Agreement States. It should be further noted that the U.S. Environmental Protection Agency (EPA) stated, in a letter to Eric Fygi, Deputy General Counsel, DOE, dated October 30, 1985 (copy enclosed), that the proposed interpretative rule will be relevant to the waste subject to NRC jurisdiction.

The ramifications of the rule proposed by DOE could be significant to NRC, the approximately 20,000 material licensees regulated directly by NRC, and the approximately 13,000 Agreement State licensees regulated by States under agreement with NRC. Unfortunately the information provided in the proposed rulemaking notice is not sufficient for NRC to fully evaluate the potential impacts on NRC. As a result, we believe that it will take at least an additional 60 days to evaluate the potential problems the proposed DOE definition of byproduct material would have on our regulatory program.

Sincerely,

/Signed by John G. Davis

John G. Davis, Director
Office of Nuclear Material
Safety and Safeguards

Enclosure:
Letter from EPA to DOE, dtd 10/30/85

Reference 2

POLICY ISSUE
(Notation Vote)

January 8, 1986 SECY-86-9

For: The Commissioners

From: Victor Stello, Jr., Acting
Executive Director for Operations

Subject: U.S. NUCLEAR REGULATORY COMMISSION (NRC) COMMENTS ON THE U.S. DEPARTMENT OF ENERGY (DOE) PROPOSAL TO THE CONGRESS FOR THE CONSTRUCTION OF A MONITORED RETRIEVABLE STORAGE FACILITY (MRS) FOR HIGH-LEVEL RADIOACTIVE WASTE AND SPENT NUCLEAR FUEL [NUCLEAR WASTE POLICY ACT (NWPA) SECTION 141]

Purpose: To obtain Commission approval of comments on the DOE MRS proposal which will be forwarded to DOE. NRC comments will be submitted to the Congress by DOE with the MRS proposal.

Summary: DOE has submitted for NRC comment a proposal for the storage of spent fuel in an MRS as required by the NWPA. This proposal will be submitted to the Congress in February 1986 along with the NRC's comments and those of the Environmental Protection Agency (EPA). This paper recommends comments on the proposal for the Commission's consideration.

Background: Section 141 of the NWPA requires that DOE "...shall complete a detailed study of the need for and feasibility of, and shall submit to the Congress a proposal for, the construction of one or more monitored retrievable storage facilities for high-level radioactive waste and spent nuclear fuel." [Sec. 141(b)(1)]. The NWPA also specifies that "...in formulating such proposal, the Secretary shall consult with the Commission and the Administrator [EPA], and shall submit their comments on such proposal to the Congress at the time such proposal is submitted" [Sec. 141 (b)(3)]. In accordance with the NWPA, DOE has consulted with the staff on the regulatory aspects of an MRS proposal. NWPA also specifies that an MRS would be subject to licensing by the NRC.

CONTACT:
A. T. Clark, NMSS
74205

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The applicable regulation for the MRS is 10 CFR Part 72, "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation (ISFSI)."

Discussion: DOE's proposal to the Congress for an MRS is included with this paper as the final enclosure (Enclosure D). A synopsis of the proposal contents prepared by the NRC staff is provided as Enclosure A. The staff also has received additional reference information from DOE, as identified in Enclosure A.

Scheduling: The Department of Energy has indicated a 45-day comment period for the NRC and the EPA. The proposal was received on December 24, 1985. Therefore, comments will be due to DOE by February 6, 1986.

Victor Stello, Jr., Acting
Executive Director
for Operations

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Enclosure A

BACKGROUND AND SIGNATURE TAB

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ıbling correspondence.

(USE REVERSE SIDE FOR SIGNATURE TAB)

CONTENTS OF
DEPARTMENT OF ENERGY
PROPOSAL TO THE U.S. CONGRESS FOR A
MONITORED RETRIEVABLE STORAGE FACILITY

Vol. I Proposal

- o Describes the Department's proposal to construct and operate an MRS facility at the Clinch River site in Roane County, Tennessee. The proposed facility would be an integral part of the federal waste management system and would perform most of the high-level waste preparation functions before emplacement in a repository.

Vol. II Environmental Assessment

- o Specified by the Nuclear Waste Policy Act (NWPA) in lieu of an Environmental Impact Statement (EIS)
- o Includes DOE study results of need for, and feasibility of, an MRS as required by NWPA
- o Includes site-specific evaluations for three specific sites and two storage concepts.

Vol. III Program Plan

Contains activities, costs, and schedules as required by NWPA

a. Deployment Plan

Describes how DOE will establish and implement a program for the siting, development, construction and operation of an MRS. It includes a Licensing Plan and a Design Verification Plan. The Licensing Plan outlines the key steps involved in obtaining an NRC license. The Design Verification Plan describes the demonstrations and tests needed to assure safety and efficient operation.

b. Integration Plan

Shows how DOE will integrate MRS with other facilities and systems authorized by NWPA.

Enclosure A

c. Funding Plan

Shows how MRS costs are borne by the waste generators through the Nuclear Waste Fund and what those costs are likely to be.

Reference DOE Information on MRS Held by staff

Conceptual Design Report including:

- Design Description
- Regulatory Assessment Document

  Describes DOE's efforts to comply with NRC regulations (primarily 10 CFR Part 72) to obtain a license.
- Design Drawings
- Cost Estimate Summary
- Design Studies

Functional Design Criteria Report, PNL-5673

- Technical baseline document defining facility design objectives and minimum acceptable requirements.

Conceptual Basis for Design Report

- A control document that establishes the basis for executing the conceptual design.

RULEMAKING ISSUE

January 28, 1986 (NEGATIVE CONSENT) SECY-86-28

For: The Commissioners

From: Victor Stello, Jr.
Acting Executive Director
for Operations

Subject: SECY-85-163/163A - STATION BLACKOUT, UNRESOLVED SAFETY ISSUE (USI) A-44

Purpose: To provide the Commission with the staff's backfit analysis for the proposed rule on Station Blackout.

Discussion: The staff met with the Commission on September 11, and November 14, 1985, to discuss the proposed resolution of USI A-44 (SECY-85-163/163A). A memo from the Secretary of the Commission to the EDO indicated that the Commission, by a vote of 5-0, has approved the proposed rule on station blackout

Contact: A. Rubin, NRR
492-8303

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ENCLOSURE

BACKFIT ANALYSIS

The Commission's existing regulations establish requirements for the design and testing of onsite and offsite electric power systems (10CFR Part 50, Appendix A, General Design Criteria 17 and 18).