AUG 10 1990

Gordon Kaye, Ph.D.
Chairman
New York State Low-Level Waste Group
The Granite Building, Suite 401
130 East Main Street
Rochester, New York 14604

Dear Dr. Kaye:

Enclosed is a copy of the overhead slides which I used during the presentation of NRC's Below Regulatory Concern Policy Statement on July 10, 1990. I have also taken the liberty to provide a markup of the draft minutes to more accurately reflect the facts in this issue.

Sincerely,

Original Signed By:

Dr. Donald A. Cool, Chief
Radiation Protection and Health Effects
Branch
Office of Regulatory Applications
Division of Nuclear Regulatory Research

Enclosures:
1. BRC Slides
2. Draft Minutes

Distribution: [LETTER TO GORDON KAYE, PH.D.]
RPHEB R/F - DCool
subj-circ-chron
BMorris
JMcCausland - BRC File

Offc: RPHEB:RES
Name: DCool:lb
Date: 08/10/90

OFFICIAL RECORD COPY

6/8

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 10 1990

Gordon Kaye, Ph.D.
Chairman
New York State Low-Level Waste Group
The Granite Building, Suite 401
130 East Main Street
Rochester, New York 14604

Dear Dr. Kaye:

Enclosed is a copy of the overhead slides which I used during the presentation of NRC's Below Regulatory Concern Policy Statement on July 10, 1990. I have also taken the liberty to provide a markup of the draft minutes to more accurately reflect the facts in this issue.

Sincerely,

Donald A. Cool

Dr. Donald A. Cool, Chief
Radiation Protection and Health Effects
Branch
Office of Regulatory Applications
Division of Nuclear Regulatory Research

Enclosures:
1. BRC Slides
2. Draft Minutes

PRESENTATION ON
THE NUCLEAR REGULATORY COMMISSION'S
BELOW REGULATORY CONCERN
POLICY STATEMENT

BELOW REGULATORY CONCERN (BRC) POLICY

- Defines a level of radiation so small that further efforts to reduce exposures below this level are not warranted.
- Establishes a framework for future decisions on whether to exempt certain products and activities from regulatory control.

Congressional Directive

- ✓ Section 10 of the Low-Level Radioactive Waste Policy Amendments Act of 1985 directed the Commission to develop standards and procedures and to act upon petitions to:
  "exempt specific radioactive waste streams from regulation...due to the presence of radionuclides...in sufficiently low concentrations or quantities as to be below regulatory concern"
- ✓ A Commission Policy Statement of August 29, 1986, provided procedures for expeditious resolution of petitions to dispose of such wastes

Below Regulatory Concern

- ✓ The NRC is now publishing a policy statement to set a basis for radiation protection standards and to expand the concept of "below regulatory concern" to a broad range of activities
- ✓ The term "below regulatory concern," as used in the new Policy Statement, means that for certain uses of radioactive materials, the risks are so low that to require expenditure of resources to reduce them further or to impose regulatory controls is not necessary

Past Practices

✓ Past exemptions under the Atomic Energy Act include:
- Release of consumer products such as smoke detectors
- Release of decommissioned sites
- Disposal of waste generated by medical treatment

✓ Past exemption decisions were made on a case-by-case basis

✓ There was no Commission policy which provided a broadly applicable and consistent risk basis for exemption decisions

Objectives

✓ The overriding objective of the Commission continues to be to assure that there is adequate protection of the health and safety of all members of the public

✓ The objectives of the policy are:

- To establish a broadly applicable risk-based framework to ensure consistency in future rulemaking and licensing decisions and for review of existing exemptions

- To allow the NRC, Agreement States, and licensees to focus their resources on reducing the most significant radiological risks under NRC jurisdiction

Framework to Develop Regulations & Guidance on ...

- ✓ Cleanup of contaminated sites
- ✓ Consumer Products containing small amounts of radioactive material
- ✓ Disposal of very low-level radioactive waste
- ✓ Recycle or reuse of equipment and materials

Public Participation

- ✓ Policy itself does not authorize BRC activities
- ✓ Opportunity will be provided for the public to comment on each regulation proposed by the Commission to implement the BRC Policy
- ✓ Licensing actions that implement the BRC policy will be noticed in the Federal Register when they deviate from existing provisions

Conditions for Exemption

- ✓ Adequate protection of public health and safety must be provided.
- ✓ The application or continuation of regulatory controls on the practice does not result in any significant reduction in dose received by individuals within critical groups and by the exposed population.
- ✓ The costs of the regulatory controls that could be imposed for further dose reduction are not balanced by the commensurate reduction in risk that could be realized.

Basis for Dose Criteria

- ✓ Ionizing radiation is a part of our natural environment
- ✓ Significant variations in these exposures are experienced by members of society without apparent concern
- ✓ Ability to measure exposures
- ✓ Commission risk assessments consistent with the National Academy of Sciences (BEIR V)

BRC Dose Criteria

✓ Individual Dose Criteria
- 10 millirem/yr
- 1 millirem/yr interim criterion when widespread distribution of radioactive materials such as consumer products is involved.

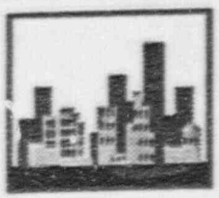
✓ Collective Dose Criterion
- 1000 person-rem/yr
- Doses less than 0.1 millirem/yr excluded

EXAMPLES OF NATURAL RADIATION EXPOSURE

FROM THE SKY - About 30 millirems per year from cosmic radiation.

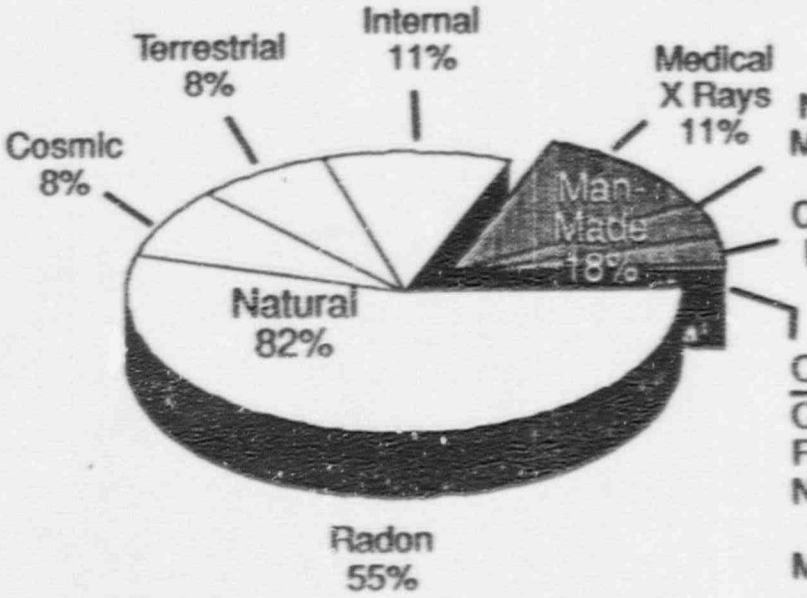
FROM THE AIR THAT WE BREATHE - About 200 millirems per year, including radon.

FROM OUR FOOD AND DRINK - About 40 millirems per year from natural radioactive materials such as potassium-40.



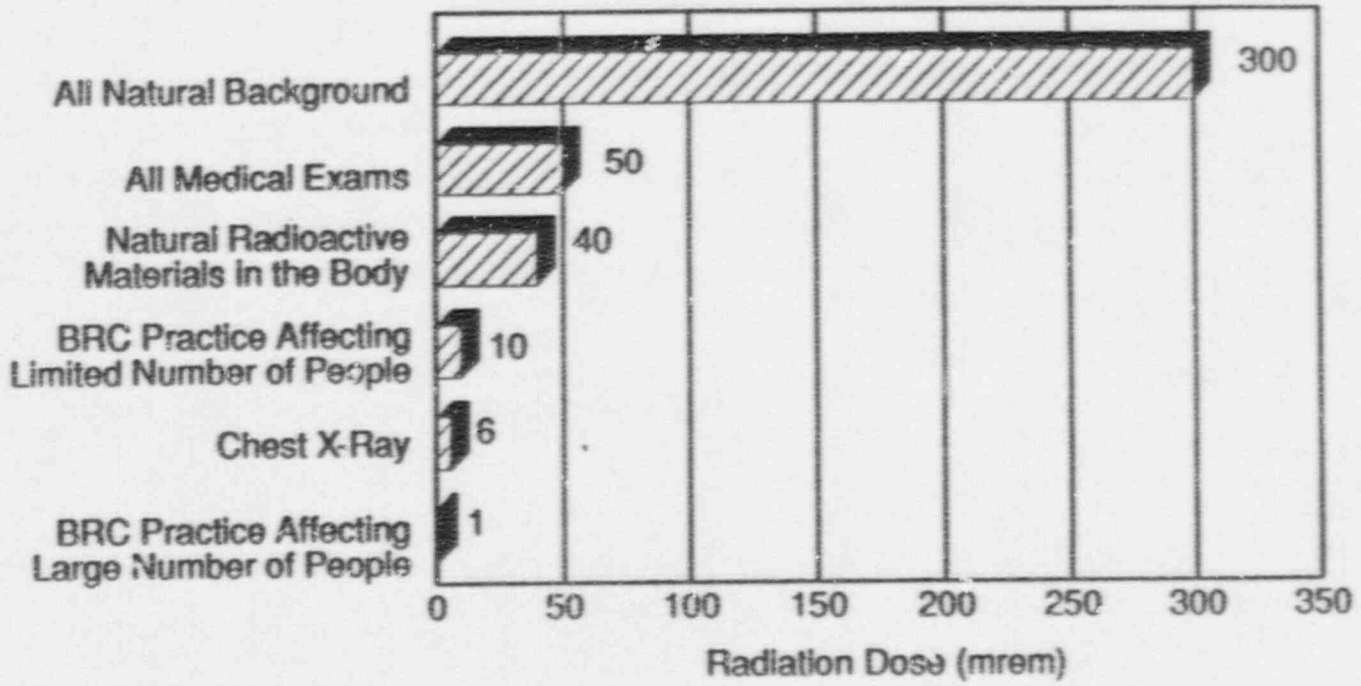
FROM SOILS AND BUILDING MATERIALS - About 30 millirems per year from natural radionuclides such as uranium.

CONTRIBUTION OF VARIOUS RADIATION SOURCES TO THE AVERAGE RADIATION DOSE IN THE U.S. POPULATION*

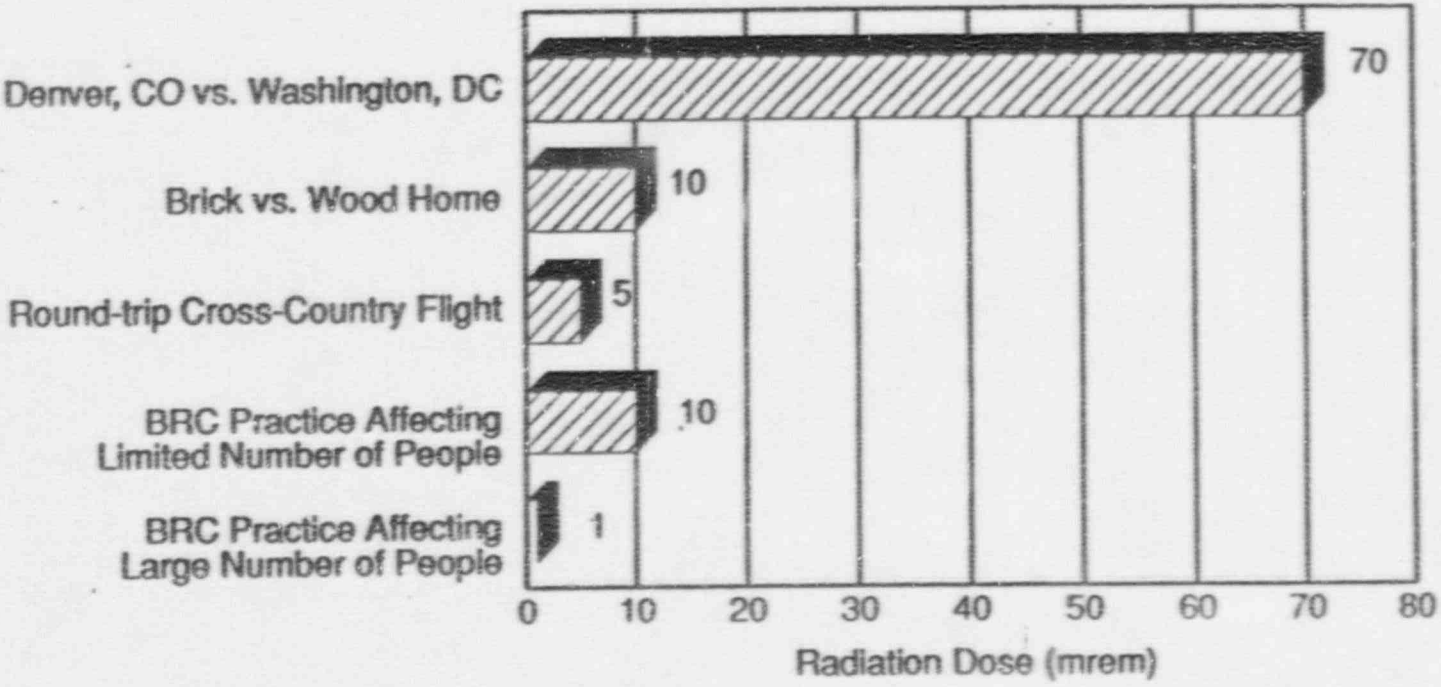


Occupational	0.3%
Fallout	<0.3%
Nuclear Fuel Cycle	0.1%
Miscellaneous	0.1%

COMPARISON OF BELOW REGULATORY CONCERN DOSES TO DOSES FROM NATURAL BACKGROUND AND MEDICAL EXPOSURES



COMPARISON OF BELOW REGULATORY CONCERN DOSES TO DOSES FROM SELECTED OTHER RADIATION SOURCES



Quantitative Risk Perspective

- ✓ The Commission used risk assessments for low-level radiation by the United Nations (UNSCEAR 1988) and by the National Research Council (BEIR V)
- ✓ The 10 millirem annual individual dose criterion corresponds to an annual risk of fatality from cancer for an individual of 1 in 200,000
- ✓ The annual risk from fatal cancer from all causes is about 400 in 200,000
- ✓ Effect is not measurable within the variation of background radiation

Implementation

- ✓ The BRC policy is not self implementing
- ✓ Using the policy as a basis, NRC staff shall:
  - Establish residual radioactivity criteria for decommissioning
  - Reevaluate all existing exemptions
  - Deal with new practices or petitions
  - Ensure substantial public involvement

What will NRC Do Under The Policy

✓ Analyze proposals for exemption

✓ Determine that the risks from the proposal are acceptable

✓ Establish the conditions, constraints, or requirements under which the proposal meets acceptance criteria

✓ Inspect and enforce to verify that the conditions, constraints, or requirements of the exemption are met

✓ Review the exemptions granted to ensure that the public health and safety continue to be protected adequately

Information Required for Rulemaking

✓ A proposal for rulemaking to exempt a practice, either from petitioners or the NRC staff, must be supported by an adequate technical analysis.

✓ On this basis, the Commission will consider whether the basic policy criteria have been satisfied in making its decisions.

✓ Technical basis should include:
- Individual and societal impacts.
- uses of radioactive materials.
- pathways of exposure.
- levels of radioactivity.
- potential for accidents and misuse.
- quality assurance and reporting requirements.
- constraints and conditions necessary to ensure the assumptions used to grant the exemption remain valid.

Interaction With State and Local Governments

- ✓ Consistent with Federal law, there should be uniformity between NRC and Agreement State basic radiation protection standards
- ✓ The NRC will implement the BRC policy by developing regulations, including basic radiation protection standards
- ✓ Agreement States will play an important role in developing and enforcing regulations compatible with NRC's basic radiation protection standards
- ✓ NRC will be assessing future regulations on a case-by-case basis to determine which should be compatible
- ✓ NRC regulations exempting BRC wastes will not affect the authority of State or local agencies to regulate BRC wastes for purposes other than radiation protection

Conclusion

The BRC policy will ...

- Assure that there is adequate protection of the health and safety of all members of the public
- Establish a broadly applicable risk based framework to ensure consistency in future rulemaking and licensing decisions and for review of existing exemptions.
- Allow the NRC, Agreement States and licensees to focus their resources on reducing the most significant radiological risks under NRC jurisdiction

New York State Low-Level Waste Group
(NYSLLWG)
The Granite Building, Suite 401
130 E. Main Street
Rochester, New York 14604

Fax: (716) 282-6926 Telephone: (716) 262-3980

DRAFT MINUTES

ACTIVITY:	Executive Committee Meeting
DATE:	Tuesday, July 10, 1990
PLACE:	SUNY/Binghamton
PARTICIPANTS PRESENT:	Dr. Gordon Kaye, Chairman (Albany Med) Richard Anderson (NYS Electric & Gas) James D. Brownridge (RSO, SUNY/Binghamton) Anthony J. DiRocco (NYPA) Dr. Ben Greenspan (U of R) John Jorgensen, (RG&E) Dr. Christopher Marshall (NYU) Thomas M. Mike (RSO, Imaging & Sensing Tech.) James McGovern (Cintichem) John L. Osinski (NYPA) Peter Pastorelle (NDL) Mary Ann Randles (LILCO) Ken Sibal (NYS Electric & Gas) Nick Spagnoletti (NMPC) Michael J. Spall (ConEd)
CONTRACTOR PRESENT:	Roberta Lovenheim, President, R&LC Jeffrey Nagle, Vice-President for Research, R&LC Edward F. Clark, Vice-President for Governmental Affairs/R&LC, Albany Helen Hoffman, Administrative Assistant, R&LC
GUESTS:	Dr. Donald Cool, Chief, Nuclear Regulatory Research, NRC Brent L. Brandenburg, Legal Counsel, Consolidated Edison Co. of NY LaVon Hausamann, Broome County Chamber of Commerce
OTHERS PRESENT:	Catherine Stanton Michael Stanton

S:\JULYEC.dft

DOCUMENTS
DISTRIBUTED:

(1) Agenda

(2) Draft June 12, 1990 Executive Committee Minutes

(3) Chapter 368 of the Laws of 1990 - "Title" and Governor Cuomo's Approving Memorandum (signed into law July 2, 1990)

(4) A.12080/S.9110 (Program Bill #317) (passed by Legislature; awaiting Governor's signature)

(5) A.10639-A/S.8278 (Utility llrw fees) (Legislation was introduced, but no vote was taken before Legislature recessed.)

(5) Draft Hinchey Bill on "Aid to Local Governments" (A.8532) (Legislation not formally introduced)

(6) Report on the Town of Ashford and Cattaraugus County

(7) League of Women Voters: "A Handbook for Citizens on Low-Level Radioactive Waste in New York State"

(8) Ad in July Empire State Report, "Statement of the Upstate New York Chapter of the American Association of Physicists in Medicine

(9) NRC: ERC Policy Statement and Guide

NEW YORK STATE LOW-LEVEL WASTE GROUP

DRAFT MINUTES OF EXECUTIVE COMMITTEE MEETING

July 10, 1990

Chairman, Dr. Gordon Kaye, called the meeting to order at approximately 10:30 am. Routine NYSLLWG business was conducted and is reported on separately, after which the following topics were discussed with invited guests.

NRC Policy Statement on Below Regulatory Concern

Dr. Kaye welcomed Dr. Donald Cool, Chief of the Office of Nuclear Regulatory Research, NRC. Dr. Cool made an informative presentation about the NRC Policy Statement effective July 3, 1990, regarding "Below Regulatory Concern." [Copies of slides attached.] Dr. Cool noted that the Policy Statement serves four goals: (1) clean up of contaminated sites, (2) consumer protection pertaining to items containing small amounts of ionizing radiation, (3) proper disposal of very low levels of llrw, and (4) recycling or reuse of contaminated equipment.

Dr. Cool emphasized, however, that the "policy statement," in itself, does not authorize BRC activities; each proposed "regulation" will have a public comment period and each licensing action to implement the BRC policy will be noticed in the Federal Register.

In response to an inquiry, Dr. Cool stated he did not know whether EPA will still develop its own BRC standards, but he feels that their jurisdiction is different from those of NRC; i.e., not the general public, but those who are at most risk--truck drivers,

etc.

Dr. Cool noted NRC expects an estimated 30% in llrw volume reduction as a result of this policy (.01% of the radioactivity). He did not know if there would be requirements placed on brokers to identify BRC material when being disposed of in landfills.

Legislative Review

Ed Clark, R&LC/Albany, gave a brief presentation on the Spring 1990 Legislative Session which just ended. Since the computers have not yet caught up with end-of-session business, a printed legislative report was not available and will be attached to the approved minutes.

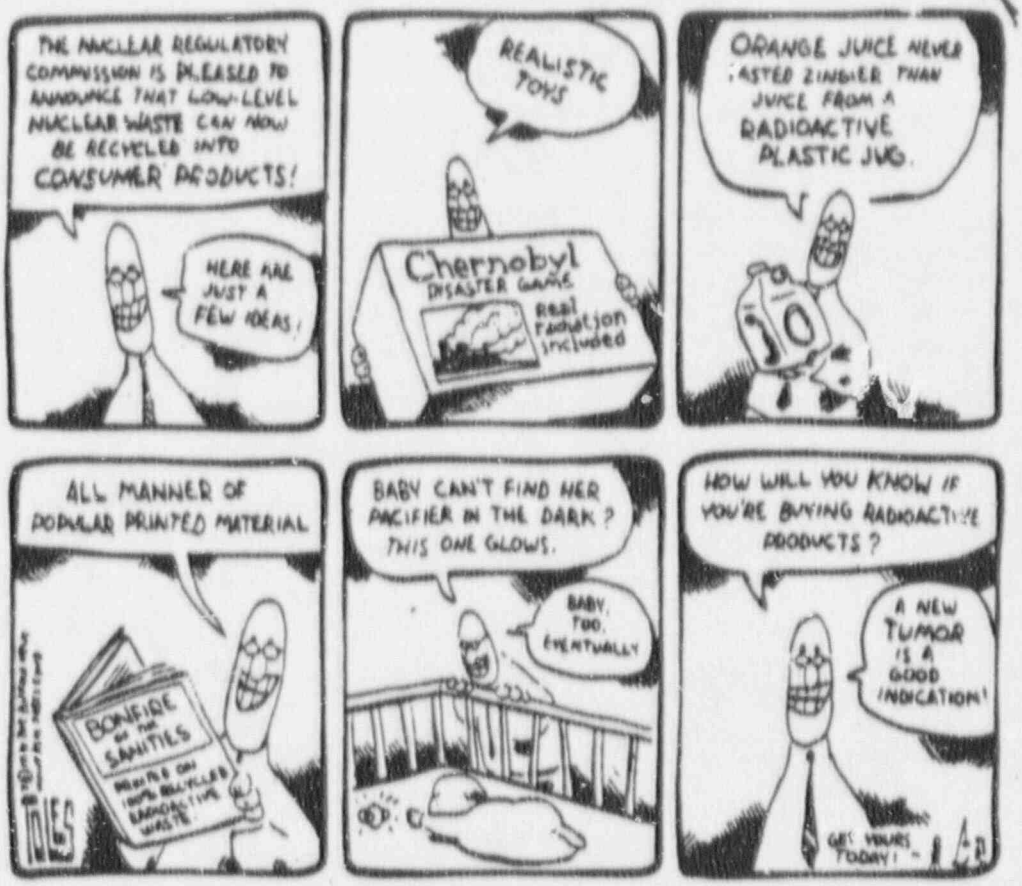
Adjournment

The meeting was adjourned at approximately 4:30 p.m.

5

35

AUG 6 1990



year. Deregulating low-level nuclear waste could increase exposure to radiation by as much as 25% for some people. The NRC argues that the increased exposure is acceptable because it is smaller than the 360 millirems that the average American receives every year from background radiation and radon gas. The NRC neglects to mention that radon exposure alone causes lung cancer in up to 20,000 Americans every year.

Supporters of the NRC policy argue that deregulating nuclear waste would reduce the American nuclear industry's radioactive waste disposal bill by as much as $35 million per year by exempting up to one-third of the radioactive wastes from nuclear plants from current regulation.

But is it rational to turn virtually every landfill in the country into a potential, unregulated radioactive waste dump to save money? And even if there is some level at which radioactive waste is not hazardous, it would be very difficult to ensure that unscrupulous operators do not try to save even more money by putting extremely dangerous waste in the local dump rather than in a licensed repository. The policy is also troublesome because it could exempt a large volume of presently hazardous waste from cleanup at radiation sites, like decommissioned nuclear plants.

Even more disturbing, the NRC deregulation policy would permit higher radiation exposure than similar policies proposed by our Environmental Protection Agency, Great Britain, Canada, Japan and Finland. The NRC policy is also inconsistent with recommendations of the International Atomic Energy Agency and the National Council on Radiation Protection. Furthermore, the NRC is pursuing this policy over the objections of its own experts.

As further justification, the NRC points to similar exemptions allowed for medical technologies, such as X-rays. But the NRC fails to understand that the public supports the use of radiation for medical purposes because it saves lives. There is no such benefit from the deregulation of nuclear waste. In fact, the policy could cause additional cancer deaths.

Already, a number of states and locales have passed laws banning the disposal of radioactive waste in ordinary landfills. It seems likely that more communities will pass such restrictions if the NRC continues to insist on its nuclear-deregulation effort despite the hostility of the public and the skepticism of industry. Unfortunately, under current law, the NRC has the power to force states to accept its policy.

If the NRC continues to pursue this misguided policy, Congress should, at a minimum, remove the NRC's authority to impose it on the states.

Rep. George Miller (D-Martinez) is a senior member of the House Interior Committee.

B/20