

PDR



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

CHAIRMAN

February 7, 1990

The Honorable Philip R. Sharp, Chairman  
Subcommittee on Energy and Power  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

I am responding to your letter of January 24, 1990, in which you requested the Nuclear Regulatory Commission's (NRC's) responses to several questions related to the issue of whether radionuclide emissions, already regulated by the Commission and States under the Atomic Energy Act, should be exempt from regulation by the U.S. Environmental Protection Agency (EPA) under Section 112 of the Clean Air Act (CAA). Specific responses to your questions on this matter are enclosed.

The Commission believes strongly that dual regulation of NRC- and Agreement State-licensed facilities, as would be provided by EPA's CAA regulations for radionuclides, is unnecessary from a health and safety or environmental standpoint and is undesirable as a matter of policy. In this regard, we fully agree with the following statement in the joint EPA and Department of Health and Human Services (HHS) letter to Congressional Committee Chairmen signed by Assistant Administrator Rosenberg and Assistant Secretary for Health and Acting Surgeon General Mason on November 15, 1989:

Further, the Administration was advised by many facilities currently regulated by the NRC, including research and testing reactors, medical facilities, and the National Institutes of Health, that regulatory schemes that involve unnecessary duplication of compliance and implementation needlessly raise costs and divert resources from needed research and other activities. This could adversely affect patient care at some facilities. . . . Therefore, we believe that the pending revisions to the Clean Air Act should contain a provision to eliminate unnecessary and duplicative authority to regulate radionuclide emissions from NRC-licensed facilities.

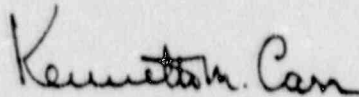
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For these reasons, the Commission strongly supports any measures that would eliminate dual regulation. The current Congressional reexamination of the Clean Air Act offers an ideal opportunity to resolve the problem of dual jurisdiction and duplicative regulation by giving exclusive authority over radionuclide emissions from NRC-licensed facilities and activities to NRC.

We appreciate your interest in this issue. I hope that our comments will provide the information needed by the Subcommittee to consider fully an appropriate amendment to the Clean Air Act to eliminate duplicative regulation should such an amendment be proposed during the Subcommittee's markup session.

Sincerely,

  
Kenneth M. Carr

Enclosure:  
Questions/Answers

cc: Rep. Carlos J. Moorhead

QUESTIONS/RESPONSES REGARDING RADIOACTIVE EMISSIONS

QUESTION 1(a): As I understand it, the emission limit underlying this NRC regulatory program is established by the EPA. How is the EPA limit developed? Does the Commission have any role in this process? By what mechanism did the NRC adopt the EPA standard, and is this statutorily required? Is the Commission required to accept the standard, and if not, what are the Commission's options?

ANSWER:

Under Reorganization Plan No. 3, the Environmental Protection Agency is responsible for setting generally applicable environmental standards for the protection of the general environment from radioactive material pursuant to the Atomic Energy Act. The emission limits underlying the NRC regulatory program at this time are not entirely based on a standard established by the Environmental Protection Agency (EPA) because EPA has not yet promulgated standards that apply to all facilities regulated by NRC. The NRC radiation protection standards were promulgated in the late 1950s, well before EPA was established. Their development reflected the consensus of the radiation protection community at the time and coincided with the development of Federal Guides approved by President Eisenhower in 1960. This 1960 guidance for members of the public is still in effect, although new guidance for occupational exposures has been issued.



To the extent that EPA has promulgated standards applicable to NRC facilities, NRC has incorporated the standards in its regulations. For most licensees, these standards have not significantly improved the level of protection afforded the public beyond that already provided under the Commission's long-standing regulations.

The primary health protection limits governing emissions of radioactive materials from all NRC licensees are the NRC regulations in 10 CFR Part 20, "Standards for Protection Against Radiation." These standards are currently being revised as part of a complete revision of Part 20. A proposed rule containing these revisions was published in January 1986, and a public meeting was held on November 10, 1988. The Commission currently has the final rule under consideration.

The Commission's standards are based on scientific assessments of the risk of radiation exposure, such as reported by the National Research Council's Biological Effects of Ionizing Radiation (BEIR) Committee and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). The conclusions and recommendations of these Committees are then considered in the development of consensus standards both at the national and the international level by organizations such as the National Council on Radiation Protection and Measurements and the International Commission on Radiation Protection. The scientific assessments are based upon all of the radiation risk data available, including epidemiological studies of Japanese atomic bomb survivors, various



occupational and medically exposed populations, as well as cellular and molecular research.

The NRC participates with EPA and other Federal agencies and advisory bodies in the development of radiation protection guidance to Federal agencies, taking into account these studies and consensus standards. The proposed revision of 10 CFR Part 20 would, among other things, implement the "Radiation Protection Guidance to Federal Agencies for Occupational Exposure" signed by the President in January 1987.

In addition to enforcing 10 CFR Part 20, NRC also enforces generally applicable environmental radioactivity standards issued by the EPA under its Atomic Energy Act authorities. Generally applicable standards have been issued by EPA for only a few categories of NRC-licensed activities:

40 CFR Part 190 for Uranium Fuel Cycle Facilities including nuclear power reactors, uranium mills, reactor fuel fabrication facilities, and spent fuel reprocessing plants (none currently in existence);

40 CFR Part 191 for High-Level Radioactive Waste Repositories;

40 CFR Part 192 (issued under the Uranium Mill Tailings Radiation Control Act (UMTRCA) amendments to the Atomic Energy Act) for Uranium Mill Tailings.

For other classes of NRC-licensed activities not covered by any EPA generally applicable radiation standard, such as hospitals, universities, and industrial research laboratories, the applicable emission standards are specified in NRC's 10 CFR Part 20.

There have been several methods used by EPA to arrive at its generally applicable environmental standards. EPA's Uranium Fuel Cycle standard (40 CFR Part 190), for example, is based upon the cost-effectiveness of control technology. The radon emission levels in 40 CFR Part 192 were based on consideration of the costs and effectiveness of methods for mitigating radon releases. In developing the EPA standard for the management and disposal of spent nuclear fuel and high level wastes, 40 CFR Part 191, EPA evaluated the capabilities of mined geologic repositories to isolate the wastes from the environment and arrived at a disposal standard with risks comparable to those if the ore from which the wastes are generated had never been mined.

The NRC staff is generally provided with working drafts of EPA standards before their publication by EPA for public comment, and EPA has been provided with working drafts of NRC rules related to environmental standards. In the past, many NRC staff comments were resolved in the EPA proposed or final

rules. However, there is no mechanism in either the Atomic Energy Act (including UMTRCA) or Reorganization Plan No. 3 of 1970 to require that NRC comments be resolved or otherwise incorporated.

The EPA generally applicable environmental standards are incorporated by rulemaking into NRC's regulations in Title 10 of the Code of Federal Regulations either by reference (as in the case of the citation in 10 CFR Part 20 requiring NRC licensees subject to EPA's 40 CFR Part 190 to comply with it) or by directly incorporating the standards into the NRC rule (as was the case with EPA's radon standards in 40 CFR Part 192 being incorporated into Appendix A to NRC's 10 CFR Part 40). Reorganization Plan No. 3 of 1970 delegates to EPA authority to develop generally applicable environmental radiation standards. The NRC is obligated to implement and enforce them.



QUESTION 1(b): What role, if any, do Agreement States have in reviewing and enforcing the EPA standard? Do Agreement States have the authority to set a more stringent standard than EPA's?

ANSWER:

State agreements are entered into under Section 274 of the Atomic Energy Act of 1954 (AEA), as amended. There is no authorization in the AEA and no specific language in a State's Agreement indicating a role for the State to review or to enforce an EPA standard. However, States do comment on EPA's proposed standards and on rules proposed by NRC to implement EPA's standards. After NRC finalizes these rules, the Agreement States are required under their agreements to adopt compatible requirements. For example, when NRC incorporated 40 CFR Part 190 into 10 CFR Part 20 as an NRC standard, Agreement States promulgated and enforced a like standard as a matter of compatibility under their agreements.

Section 274 of the AEA requires the Commission, as a condition for approving a request from a State for an Agreement, to find the State's program to be compatible with the Commission's program. Commission Policy (46 FR 7540) calls for uniformity in State radiation protection standards, in particular, ". . . uniformity on maximum permissible doses and levels of radioactivity, as fixed by Part 20 of the NRC regulations based on officially approved radiation protection guides." Thus, there is no authority under the AEA for Agreement States to set more stringent standards.

Under the Clean Air Act (CAA) and pursuant to EPA regulations (see, for example, 40 CFR Parts 52, 62, and 67), States may set more stringent standards for air emissions. States may also apply to EPA for delegation of enforcement authorities of CAA National Emission Standards for Hazardous Air Pollutants (NESHAPS). This activity, however, has no legal relationship to a State's status as an Agreement State under the AEA.

QUESTION 1(c): Describe the Commission's "comprehensive regulatory program" for radionuclide emissions, including the type and number of licensees involved and a general description of licensee compliance and Commission enforcement under this program.

ANSWER:

The Commission is responsible for licensing and regulating nuclear facilities and materials and for conducting research in support of the licensing and regulatory process. Authority is derived from the AEA of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and other statutes. Activities must be conducted in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended. NRC responsibilities include protecting the public health and safety, protecting the environment, and safeguarding nuclear materials in the interest of national security. Agency functions are performed through standards-setting and rulemaking; technical reviews and studies; conduct of public hearings; issuance of licenses; inspection, investigation, and enforcement; and research. The NRC is responsible for regulating radiological aspects of safe use and disposal of AEA materials, including radionuclide emissions.

With regard to reactors, NRC regulates emissions of radioactive materials to the environment by placing conditions in licenses that are issued to nuclear power plants, as well as to non-power reactors used for testing, training, and research purposes. Currently, there are 113 nuclear power plants and 51 non-power reactors that are licensed to operate.



Before a license to operate is issued, the NRC staff performs a technical review of the safety analysis report (SAR) that is submitted with the license application to demonstrate compliance with applicable NRC requirements. This review is performed to ensure that, among other things, effluent treatment systems (e.g., filters and charcoal absorbers) are appropriately designed so that radionuclide emissions to the environment are not only within safety limits but are as low as is reasonably achievable (ALARA). The staff also determines that appropriate (in terms of type and range) radiological effluent monitoring instrumentation has been provided. The types of information that applicants and licensees are required to submit and the NRC staff's review procedures are described in a series of comprehensive regulatory guidance documents.

Once the staff is satisfied that the effluent treatment system is appropriately designed and that adequate procedures are in place for use by the licensee to operate this equipment, specific conditions are included in the operating license to ensure that such equipment is used in an appropriate manner. Effluent releases are subject to limitations contained in 10 CFR Part 20 for the protection of the general public. In addition, releases from nuclear power plants are subject to 10 CFR Part 50, Appendix I, which requires that effluents be maintained as low as is reasonably achievable. These regulations effectively limit radiation doses to the general public to less than a few percent of the radiation dose (received by the general public) from natural background radiation sources.

Operating nuclear power plants and non-power reactors are routinely inspected through the NRC's five regional offices. Licensee effluent management and monitoring programs are inspected by qualified radiation protection professionals. These inspections specifically review effluent management practices and procedures, effluent monitoring instrumentation calibration and operation, reporting of non-standard conditions, and records management. Radiological environmental monitoring programs conducted by the licensee are also reviewed during these inspections. Abnormal effluent releases are reported by licensees to the NRC operations center in accordance with pre-approved reporting and emergency procedures. Effluent monitoring programs are also periodically reviewed by the NRC staff as a part of radiological controls considered in Systematic Assessments of Licensee Performance. As an independent check on effluent releases, NRC also monitors radiation levels in the vicinity of power reactors using a comprehensive network of thermoluminescent detectors.

NRC currently regulates about 8,000 specific licensees for possession and use of source, special nuclear, and byproduct materials, and the Agreement States regulate about twice that number. NRC reviews license applications and imposes license requirements that address monitoring, surveillance, and control of radionuclide emissions for materials facilities. The scope of NRC's review and surveillance requirements is proportional to the potential for such emissions.

No person or organization may possess source, special nuclear, or byproduct radioactive material without specific authorization from the NRC or an

Agreement State. This is a fundamental and important difference in the regulatory scheme for materials regulated under the AEA, as opposed to the CAA. Prior to issuing specific licenses, NRC determines whether a person or organization is capable of safely possessing and using the material, protecting its workers, controlling the material, and properly protecting the public from release of the material not only into the air but also from direct radiation, releases to water, and radiological hazards associated with radioactive waste. The CAA does not require such prior permission to obtain any hazardous materials, but only addresses the control of emissions to the air.

The NRC has issued detailed regulations that prospective licensees must agree to follow as a condition of their licenses and regulatory guidance that specifies what NRC expects licensees to follow in conforming to the regulations. This guidance covers many aspects of radiological control, not just air emission controls. Further, the NRC review process for license applications is conducted in accordance with Standard Review Plans to ensure the thoroughness and uniformity of our reviews.

Materials licensees demonstrate compliance with NRC regulations either by direct measurements of effluents or off-site concentrations, or by calculations which are often supported by other types of measurements, such as material balance measurements. Larger licensees measure releases from major release points. Most smaller licensees demonstrate compliance by conservative



estimates of maximum potential concentrations, based on quantities of radioactive materials processed and potential releases. Compliance is verified by review of licensee survey records and calculations during periodic NRC inspections. In addition, nuclear power plants are required to report all effluent releases to NRC on an annual basis. The individual reports as well as an annual compilation are available to the public. Based on these submittals and NRC inspections, the NRC staff believes that in almost all cases potential doses to individual members of the general public from airborne releases are less than a few millirem per year, and that the average dose to affected population groups is much less.

In the event that licensees either report violations of emission limits or are found by NRC to be in violation of effluent release limitations, the NRC conducts a comprehensive review and, depending on the seriousness of the violation, takes appropriate enforcement action in accordance with the NRC enforcement policy and procedures in Appendix C of 10 CFR Part 2. This action may include issuance of a civil penalty or orders that suspend, modify, or revoke the license.

QUESTION 2(a): Please provide some examples of costs or burdens which would be eliminated under the amendment.

ANSWER:

Eliminating dual regulation of radionuclide emissions, which are already adequately regulated by NRC and Agreement States, would relieve licensees and regulatory agencies from a wide range of unnecessary burdens. In developing its Clean Air Act regulations, EPA itself concluded that NRC's existing regulatory framework already provides adequate protection of the public with an ample margin of safety. Therefore, the burden on licensees and regulatory agencies from additional regulation or standards is not justified.

In general, EPA regulation of radionuclide emissions from licensed nuclear facilities would require the establishment of a regulatory framework to implement the standards. Such a framework would duplicate the regulatory review, licensing, inspection, and enforcement functions already performed by NRC and Agreement States. EPA would have to spend considerable resources in developing and maintaining the guidance, procedures, policies, and staff to implement its standards to regulate the same activities that are regulated by NRC. Although the existing EPA-NRC Memorandum of Understanding provides for NRC implementation and enforcement of EPA's Clean Air Act emission standards for radionuclides, the Commission is not prepared to divert its resources from critical safety programs to implement a standard the agencies agree is not necessary to adequately protect the public health and safety. In addition, if EPA proceeds to implement the standards on its own, NRC and Agreement States

would have to spend resources reviewing and approving license amendments for actions to comply with EPA's standards. Further, implementation of such dual regulations could degrade protection of the public by forcing licensees to meet different and possibly inconsistent requirements or to delay necessary corrective actions to bring the facilities into compliance until approved by both agencies.

Specific examples of the types of burdens that would be eliminated under the proposed amendment include:

1. The burden on licensees to prepare and submit applications for prior approval by EPA of construction and modification of facilities under Subpart A of 40 CFR Part 61. EPA and delegated States would have to review such applications and issue permits to approve the modifications or construction. NRC and Agreement States would then have to review the same applications for construction or modification because they may affect licensee radiological safety programs. In addition, NRC and the States may have to review and issue license amendments to incorporate specific compliance requirements imposed by EPA or the delegated States. This may slow down or interrupt work already in progress to enhance protection of the public and environment. For example, prior approval of earthen cover designs for uranium mill tailings may delay construction of covers that have already been approved by NRC as meeting the same standard for radon emissions as in EPA's new radon emissions limit in Subpart T of



40 CFR Part 61 (see example 5 which follows). Further, the requirement for prior approval could potentially delay immediate actions by licensees to correct imminent radiological hazards identified by NRC.

2. The burden of preparing and filing duplicative, but not identical, monitoring reports. EPA's emissions standards require annual or more frequent assessments and reports on emissions that duplicate or overlap with existing NRC requirements for similar assessments and reports. However, the reporting requirements of both agencies are sufficiently different that one report or assessment is not likely to suffice for both agencies. EPA and delegated State agencies would be obliged to review these reports containing the same information that is already reviewed by NRC and Agreement States and inspected during facility visits.
  
3. The burden of collecting, storing, and assessing types of information different from that already required by NRC and Agreement States. The burden of developing new off-site dose calculation methodologies does not appear justified when licensees already are using site-specific methodologies that have been approved by NRC and Agreement States. Licensees that want to use the more sophisticated levels of the COMPLY computer code or site-specific alternative codes to demonstrate compliance with EPA's standards may have to collect different types of information to use the codes. Some licensees will have to expend significant resources to purchase computer equipment, consulting services, data collection

equipment, and other materials to demonstrate compliance with the new standards. These resources would be spent without any indication that existing practices are inadequate to protect the public or that the data will provide benefit in terms of compliance demonstration. In the case of publicly funded hospitals, these requirements could divert resources away from patient care, thus resulting in a net detriment to public health rather than an improvement.

4. The burden of duplicative inspections by EPA and delegated States of the same activities that are already inspected by NRC and Agreement States for the same regulatory purpose. The potential benefit of redundant inspections by two different agencies of the same licensed activity may not be balanced by the potential disruptive effects of redundant inspections. In addition, both agencies would have to hire, train, and retain inspectors and pay the travel costs associated with inspections. These costs do not appear to be commensurate with any potential benefits of duplicative inspections.
  
5. The burden of complex, multiparty negotiations to establish compliance agreements for the timing of compliance activities. With respect to uranium mill tailings, licensees and the Department of Energy are already stabilizing the tailings and reducing radon emissions in a manner consistent with applicable EPA standards as permitted by technical and

fiscal constraints. For example, DOE is proceeding with remedial action at inactive uranium mill tailings sites in accordance with Congressionally-approved schedules and appropriations. Because of these constraints, it is unlikely that licensees and DOE will be able to comply with EPA's new time limits. Therefore, negotiation of compliance agreements between the licensees, DOE, EPA, NRC, and States will be needed and may not contribute to reducing radon emissions in a timely manner. The agencies involved would be required to commit resources to participate in the negotiations and to ensure that agreements comply with all applicable requirements. Such negotiations may actually impede compliance efforts by disrupting work already in progress and approved by NRC and Agreement States to stabilize and cover the tailings.



QUESTION 2(b):

In its comments on the EPA's final rule setting emission standards for radionuclides under the CAA, the National Institutes of Health (NIH) offered an estimate of the cost of demonstrating compliance with the EPA standard. Has the Commission attempted to quantify the anticipated additional costs to its licensees imposed by the EPA standard?

ANSWER:

No, the Commission has not attempted to quantify the costs to its licensees. Estimating impacts and costs is difficult without detailed license-specific information that can only be obtained by a highly resource-intensive effort. In addition, estimates of the impacts of EPA's standards should be considered uncertain until EPA clarifies how the standards will be implemented and enforced. However, we believe that the kinds of impacts industry and other Federal agencies have identified appear to be valid and consistent with those raised in the answer to Question 2(a).

QUESTION 2(c):

Do you anticipate that NRC licensees will have difficulty persuading state public utility commissions to permit utilities to pass through such costs to ratepayers? Are you aware of any estimates of the per household impact of such costs?

ANSWER:

The Commission does not participate in State decisions on matters concerning consumer rates and has no opinion on any anticipated difficulties. However, it is our understanding that state public utility commissions generally permit utilities to pass on costs required to meet Federal regulations to the ratepayers. The Commission is not aware of any estimates of the per-household impact of the costs associated with EPA's standards.

QUESTION 3:

Has the Commission determined whether the National Research Council's recently published report, "Health Effects of Exposure to Low Levels of Ionizing Radiation," or "BEIR V," necessitates a change in the EPA's radionuclide emission standard? If not, when will any pending Commission review of this be completed? How would any difference of opinion between the Commission and the EPA on the significance of BEIR V be resolved?

ANSWER:

The NRC staff has completed only a preliminary analysis of BEIR V and is conducting a more detailed review which should be completed later in February. However, based on the preliminary review of BEIR V, NRC has not identified any new information that would lead to a recommended change to EPA's radionuclide emission standard. At this time no significant differences between the two agencies' interpretations of BEIR V have surfaced. The EPA has used a risk estimate of  $4 \times 10^{-4}$  fatal cancers per rem in developing the radionuclide emission standard (40 CFR Part 61), which is generally consistent with the risk-coefficients estimated in BEIR V. The Commission has been using a risk estimate of  $5 \times 10^{-4}$  per rem, a slightly more conservative estimate, in developing a policy for exemption from regulatory control that started several years prior to publication of BEIR V.



There is no formal mechanism to resolve any differences in the interpretation or the significance of BEIR V that might arise between the two agencies. Differences can be aired at periodic EPA/NRC management meetings and could be resolved by discussions between the staffs of the two agencies. In addition, both the NRC and the EPA are represented on the Committee on Interagency Radiation Research and Policy Coordination, which is examining the information in both BEIR V and the 1988 report of the UNSCEAR and which could provide a forum for the resolution of any such differences. Lastly, either agency may submit formal comments to the other agency on such matters as a part of interagency review of proposed rulemaking proceedings or reviews of technical documents.

QUESTION 4:

Although EPA sets the standards for radionuclide emissions under both the AEA and the CAA, the methodologies EPA uses differ. What is the significance of these differences?

ANSWER:

There are no constraints on the procedures and methodologies to be used by EPA in setting generally applicable environmental radiation standards under EPA's AEA authorities. Under these authorities, EPA can consider the costs of control and cost-effectiveness (or cost-benefit) of control technology, as well as the potential health risks. EPA's Uranium Fuel Cycle standard (40 CFR Part 190), for example, is primarily based upon a cost-effectiveness analysis of effluent control technology.

In establishing the basic level of adequate protection from emissions, the existing CAA does not permit any consideration of costs, economic or technical feasibility, or feasibility of showing compliance (for example, considerations of the sensitivity of existing measurement techniques). However, these considerations may be used in establishing an "ample margin of safety" afforded by the emission standards at or below the basic level of adequate protection.

The primary significance of the differences between the CAA methodology and that employed by EPA under the AEA is that the CAA standards may often require large monetary expenditures to control very low levels of risks if costs or feasibility are not fully considered in the decisionmaking.

QUESTION 5:

In your November 14 letter, you stated "By EPA's own calculations, the total number of potential health effects attributable to air emissions of radionuclides from all NRC licensees combined is less than 0.33 fatalities per year." The position paper states, however, "EPA's own calculations indicate that excess cancer fatalities attributable to routine emissions from NRC-licensed facilities amount, at most, to 0.16 per year..." Please explain why these estimates differ.

ANSWER:

The apparent discrepancy in the references to EPA's estimated annual fatalities resulted from quoting an estimate that included only a part of the NRC/Agreement State licensee population. The 0.16 value was estimated for licensees other than uranium fuel cycle licensees. The 0.33 value includes estimates for all licensed facilities from EPA's final rule notice of December 15, 1989, as follows:

0.16	for nonfuel cycle licensees (54 FR 51666)
0.1	for fuel cycle licensees (54 FR 51668)
0.004	for radon from operating tailings (54 FR 51682)
0.07	for radon from disposed tailings (54 FR 51682)

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0.334 Total estimated annual fatalities

All of the numbers singly or summed indicate the low risk estimated by EPA for NRC and Agreement State licensed facilities. The apparent discrepancy would not alter any conclusions based on the values.



QUESTION 6(a):

What impact, if any, might a more stringent state standard have on NRC licensees? In particular, what impact might a more stringent state standard have on operating nuclear power plants or plants seeking an NRC license? Would the same impact be possible if the EPA revised its Clean Air Act standard in light of new scientific information?

ANSWER:

The direct impact on NRC licensees of a more stringent State standard on radionuclide emissions than existing NRC (and EPA's 40 CFR Part 190) limits would vary as a function of the stringency of the State standard.

NRC licensees must comply with 10 CFR Part 20 effluent release requirements and other applicable dose criteria specified in Title 10 of the Code of Federal Regulations, as well as any specific conditions that may have been incorporated in the license. In response to a lower allowed release limit, and depending upon the magnitude of the reduction, an NRC licensee could be (1) unaffected; (2) forced to modify existing treatment systems or operating procedures; (3) forced to curtail operations; or (4) forced to shut down.

Significantly more stringent State emissions limits might also have a detrimental effect on the public health and safety. For example, requiring the installation of significantly more complex equipment

monitoring and/or control systems to meet very stringent State requirements would result in additional maintenance and operating requirements that could distract a licensee's attention from more important safety indicators. A proliferation of different state limits might also have the undesirable effect of diminishing the extent to which, in the future, we will be able to fully realize the safety benefits of standardized reactor designs. In addition, very stringent state emissions limits could inhibit the timely licensing of new low-level waste disposal facilities under the Low-Level Radioactive Waste Policy Amendments Act of 1985. This could result in more reliance on indefinite interim storage in temporary facilities.

As to the relative impact of EPA's revising its Clean Air Act standard in light of new scientific information, we understand that EPA used risk factors based on the latest scientific data in developing its allowable dose limits (see response to Question #4). Therefore, the BEIR V report should not have an impact on the proposed CAA standards. However, if EPA should issue more stringent standards, the impacts would be dependent on the stringency of the standards as described above.

QUESTION 6(b):

Does the Commission believe that a proliferation of state radionuclide emission standards would impede the objectives of its new standardization and licensing rule?

ANSWER:

Yes, a proliferation of State radionuclide standards could seriously impede the move toward standardization, which aims at maximizing uniformity of plant design in the interest of promoting safety and regulatory efficiency. To the extent that proliferation of varying State standards requires a multitude of designs, the objective of achieving uniformity would clearly be defeated, and the advantage of concentrating resources on more significant safety issues would be lost.

We would also note that the Clean Air Act authorizes EPA, and, therefore, presumably individual States, to establish design standards in lieu of emission standards if the latter prove not to be feasible. If a State should choose to exercise this authority, it could have the potential for significantly undermining the NRC's standardization program.



QUESTION 6(c):

How many States have established radionuclide emissions standards under the Clean Air Act? Are you aware of any other states that have expressed an interest in exercising this authority?

ANSWER:

NRC does not collect or maintain data on State activities under the Clean Air Act. To respond to this question, NRC canvassed the State Radiation Control Program Directors by telephone on January 26, 1990, and collected the following data:

States contacted . . . . .	49
States responding . . . . .	34
States reporting that they have established radionuclide standards under the CAA (Mississippi, Illinois) .	2
States reporting an interest in exercising this authority . . . . .	3

Responsibilities for implementing the CAA at the State level varies from State to State and may be vested in State agencies other than those in which the State radiation control program resides. The foregoing data should be viewed in that context. For that reason, we believe that EPA would be better able to provide definitive data in response to this question.

QUESTION 6 (d):

In light of fact that states are in the early stages of reviewing BEIR V, and might become interested in exercising their Clean Air Act authority over radionuclide emissions as a result of this report, do you still believe this is an appropriate time for Congress to eliminate the state role, and if so why?

ANSWER:

Yes. The Commission supports the Simpson amendment to the Clean Air Act in S.1630 because it would eliminate unnecessary and burdensome dual regulation of radionuclide emissions for licensed facilities which are already adequately regulated under the Atomic Energy Act. This burden is not justified by any significant increases in the protection of the public and the environment. Such a burden may, in fact, result in net reductions in the protection of the public and environment. We do not believe that the States' review of BEIR V will produce conclusions that would warrant varying the regulation of radionuclide emissions from jurisdiction to jurisdiction.