

STATE OF COLORADO

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Colorado Department
of Public Health
and Environment

November 8, 1999

Tom O'Brien
U.S. Nuclear Regulatory Commission
Washington DC 20555-0001

SR: REQUEST FOR INFORMATION SP-990074

Question 42

In regard to question 42 from the Committee on Commerce, attached are all the definitions that Colorado has adopted relating to terms requested.

Question 43

- (a) Is it possible for any agreement state to set a completely different standard for the release of solid material containing byproduct material? Please explain and provide any supporting documentation.

Colorado has not set a completely different standard for the release of radioactive materials. Prior to the 25 mrem/yr standard for unrestricted release, we had used Reg. Guide 1.86. Now we use a use 25 mrem/yr as a maximum dose, with an ALARA requirement. As appropriate, we use MARSSIM and RESRAD to assist in the evaluation. We have, on occasion, asked an applicant to perform a case-specific risk evaluation.

On a case-by-case basis, Colorado has authorized the disposal of items contaminated with or containing radioactive materials - both byproduct material and NORM.

In regard to whether the contamination was surficial or volumetric, if surficial we require that the surface be cleaned ALARA prior to release. In evaluating impacts from any release or disposal, we perform calculations on the total amount of material present.

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- (b) Is it possible for any or all other states to ban the import of MSC nickel released under the Tennessee license from entering their states? Please explain and provide any supporting documentation.**

Colorado has no authority to prevent the importation of the MSC nickel unless it poses a significant risk to public health and safety, and it is our understanding that the MSC nickel does not pose this risk.

- (c) Would such actions by other states in response to Tennessee's setting of a standard for the unrestricted release of byproduct material "create conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis"? If the answer is in the negative, please explain why different state standards for release "create conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis."**

No.

While one could argue that a state might allow the release of material with contamination at such a high level that it would cause concern with other states, experience shows otherwise. Because states regulate radioactive materials, and not just byproduct materials, and because no federal agency has set national standards for the release of NARM, states have always, without NRC or other federal oversight, been responsible for regulating the release by its licensees of equipment, land and buildings that have had small amounts of NARM. In over 30 years of experience, Colorado is not aware of any case where the authorized release of material by one state caused concern, "conflicts, duplications, gaps or other conditions that . . . jeopardized an orderly pattern in the regulation" of radioactive material. Why now, when states have been regulating radioactive

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materials (NORM) longer than they have been Agreement States, when there has not been any problems with materials that have been authorized for release, would a problem suddenly occur over the release of a subset of radioactive material?



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RQ:wj

enclosures: as stated

Terms in use in Colorado related to Questions 42 and 43

Note: RH refers to the State of Colorado Rules and Regulations Pertaining to Radiation Control, 6 CCR 1007-1-1 et seq.

The term...	...means	...according to
activity	rate of disintegration or transformation or decay of radioactive material, in becquerel (Bq) or curie (Ci).	RH 1.4, from 10 CFR 20.1003
byproduct material	(1) 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, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.	RH 1.4, from 10 CFR 20.1003
Criterion 6(6)	that, for release of uranium-related sites, a concentration of radium in land, averaged over areas of 100 square meters, which as a result of byproduct material, does not exceed the background level by more than: (i) 5 picocuries per gram (pci/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pci/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.	RH 18, Appendix A, Criterion 6(6), from 10 CFR 40, Appendix A
contamination	the presence of radioactive materials in or on a material or the human body or other place where they are undesirable or could be harmful.	International Basic Safety Standards
decontaminate	the process of removing radioactive substances causing contamination in order to reduce the residual amount in or on materials, persons or the environment.	International Basic Safety Standards

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The term...	...means	...according to
decommission	to remove a facility or site safely from service and reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use and termination of license; or (2) release of the property under restricted conditions and termination of the license.	RH 1.4, from 10 CFR 20.1003
disposal	the isolation of radioactive wastes from the biosphere inhabited by man and his food chains by emplacement in a land disposal facility with no intention of retrieval.	RH 14.2
disposal	the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters. Note that for State siting purposes applicable to Part II, Title 25, Article 15 C.R.S., "Disposal site" means all contiguous land and, including publicly-owned land, used for hazardous waste disposal under common ownership.	6 CCR 1007-3-260.10, from 40 CFR 260
hazardous waste	those wastes designated as hazardous by the U.S. Environmental Protection Agency in 40 CFR Part 261.	RH 1.4
remediation waste	all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris that contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements. For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing regulatory §§ for releases beyond the facility boundary.	6 CCR 1007-3-260.10, from 40 CFR 260
residual waste	low-level radioactive waste resulting from processing or decontamination activities that cannot be easily separated into distinct batches attributable to specific waste generators. This waste is attributable to the processor or decontamination facility, as applicable.	RH 4, Appendix G

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The term...	... means	... according to
waste	those low-level radioactive wastes that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Radioactive Waste Policy Act, P.L. 96-573, as amended by P.L. 99-240, effective January 15, 1986; that is, radioactive waste (a) not classified as high-level radioactive waste, spent nuclear fuel, or byproduct material as defined in Section 11e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste) and (b) classified as low-level radioactive waste consistent with existing law and in accordance with (a) by the Nuclear Regulatory Commission.	RH 1.4
waste	radioactive waste other than: <ol style="list-style-type: none"> 1. Waste generated as a result of the defense activities of the federal government or federal research and development activities; 2. High-level waste such as irradiated reactor fuel, liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted; 3. Waste materials containing transuranic elements with contamination levels greater than one hundred nanocuries (3700 bq) per gram of material; 4. Byproduct material as defined in Section 11e.(2) of the "Atomic Energy Act of 1954", as amended on November 8, 1978; or 5. Waste from mining, milling, smelting, or similar processing of ores and mineral-bearing material primarily for minerals other than radium. 	RH 14.2, from Colorado Low-Level Radioactive Waste Act, 24-60-2202 Colorado Revised Statutes

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Note: RH refers to the State of Colorado Rules and Regulations Pertaining to Radiation Control, 6 CCR 1007-1-1 et seq.

The term...	...means	...according to
waste type	a waste within a disposal container having a unique physical description (that is, a specific waste descriptor code or description, or a waste sorbed on or solidified in a specifically defined media).	RH 4, Appendix G

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