



New York State Energy Research and Development Authority

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November 15, 1999

Mr. Tom O'Brien
Office of State Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Reference: Office of State Programs' Request for Technical Information, November 2, 1999 (SP-99-074)

Dear Mr. O'Brien:

I am writing to complete New York's response to the above referenced request.

By letter dated November 8, 1999, I provided you with information from New York's four NRC "agreement" program agencies to assist you in responding to questions raised by members of the House Commerce Committee in a letter to NRC dated October 25, 1999. That information addressed regulatory definitions and release criteria.

Attached is the additional information sought by NRC in the above referenced request regarding release of solid materials. This information was provided by the same New York agencies referenced in my November 8, 1999 letter.

If you have any questions on this matter, please feel free to contact me. I may be reached at 518-862-1090, extension 3302.

Sincerely,

John P. Spath, Director
Radioactive Waste Policy
and Nuclear Coordination

cc: Clayton Bradt/Peter Chiefari
Barbara Youngberg/Paul Merges
Steve Gavitt/ Karim Rimawi
Gene Miskin

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Department of Labor response to NRC's request for information on release of solid materials.

1. *How were your State's radiological criteria derived and to what type of materials (e.g., medical, pipe scale) do they apply? If Regulatory Guide 1.86 was used as a basis please indicate so. If another technical basis was used, please provide that basis.*

Section 38.41, Table 5 is derived from Regulatory Guide 1.86 and applies to all material released from licensed facilities.

2. *How are your State's radiological criteria applied (e.g., through guidance, licensing actions, regulations)?*

Through regulation.

3. *What surveying/monitoring methodologies are used? If NUREG/CR-5849 or MARSSIM are used, please indicate so. If a State developed or another method is used, please provide that method.*

NUREG/CR-5849 and MARSSIM methodologies are used.

4. *What type of instruments (e.g., manual versus automated, hand-held versus stationary, barrel counters versus conveyor systems) and what sensitivity (i.e. lower limit of detection) values are used as selection criteria for instruments used in demonstrating compliance with the radiological criteria provided in response to question 1?*

The instrumentation and required sensitivity are determined on a case-by-case basis as appropriate to the type of contamination expected.

5. *If your release criterion is zero, how do you have your licensees determine that a solid to be released is not radioactive or meets the zero criterion.*

n/a

6. *If any State licensees currently have volumetric release authorization, please identify the licensees and whether the quantities released are tracked, summarize the scope of these authorized activities, and provide the criteria used in granting the authorization.*

n/a

New York State Department of Health

Response to NRC's request for information on release of solid materials.

1. *How were your State's radiological criteria derived and to what type of materials (e.g., medical, pipe scale) do they apply? If Regulatory Guide 1.86 was used as a basis please indicate so. If another technical basis was used, please provide that basis.*

Our radiological criteria for the release of surface contaminated objects is modeled after Regulatory Guide 1.86, however are not identical (see below). Volumetrically contaminated materials are evaluated on a case by case basis.

2. *How are your State's radiological criteria applied (e.g., through guidance, licensing actions, regulations)?*

The surface contamination limits are established in regulation. Volumetric releases are established in license condition.

3. *What surveying/monitoring methodologies are used? If NUREG/CR-5849 or MARSSIM are used, please indicate so. If a State developed or another method is used, please provide that method.*

NUREG/CR-5849 and MARSSIM methodologies are used.

4. *What type of instruments (e.g., manual versus automated, hand-held versus stationary, barrel counters versus conveyor systems) and what sensitivity (i.e. lower limit of detection) values are used as selection criteria for instruments used in demonstrating compliance with the radiological criteria provided in response to question 1?*

The instrumentation and required sensitivity are determined on a case-by-case basis as appropriate to the type of contamination expected.

5. *If your release criterion is zero, how do you have your licensees determine that a solid to be released is not radioactive or meets the zero criterion.*

Release criteria is not zero.

6. *If any State licensees currently have volumetric release authorization, please identify the licensees and whether the quantities released are tracked, summarize the scope of these authorized activities, and provide the criteria used in granting the authorization.*

Other than the release of patients, and animal carcasses containing less than .05uCi/gm of H-3 or C-14, no licensee is currently authorized to release materials volumetrically contaminated with licensed radioactive materials. Please note however, that a licensee has requested authorization to release several tons of copper containing small amounts of radioactive material. This request is currently being evaluated.

APPENDIX 16-A

TABLE 7

RADIOACTIVE SURFACE CONTAMINATION LIMITS

<i>Application</i>	<i>Alpha (dpm/100cm²)</i>		<i>Beta/Gamma₁</i>	
	<i>Total</i>	<i>Removable</i>	<i>Total (mR/hr)</i>	<i>Removable (dpm/100cm²)</i>
<i>Controlled area</i> Basic guide	25,000 Max. 5,000 Av.	500	1.0	5,000
Clean area	1,000	100	0.5	1,000
<i>Non-controlled area</i>				
Skin, personal clothing	500	N.D. ₂	0.1	N.D. ₂
Release of material or facilities	2,500 (Max.) 500 (Av.)	100	0.2	1,000

₁ Measured at 1 cm from the surface.

₂ N.D.—non-detectable.

New York State Department of Environmental Conservation

Division of Solid and Hazardous Materials

Bureau of Radiation & Hazardous Site Management

50 Wolf Road, Albany, New York 12233-7255

Phone: (518) 457-9253 FAX: (518) 4457-9240

Website: www.dec.state.ny.us



John P. Cahill
Commissioner

November 10, 1999

E-mail & Interagency Mail

Mr. Jack Spath

NYSERDA

Corporate Plaza West

286 Washington Avenue Ext.

Albany, NY 12203-6399

Dear Mr. Spath:

Per your recent request, below is our comments on release of solid materials:

1. DEC's *Cleanup Guideline for Soils Contaminated with Radioactive Materials*, Division of Solid & Hazardous Materials Technical Administrative Guidance Memorandum 4003 ("TAGM 4003") applies only to soils at sites that are to be remediated. The criterion to "free release a site" is "The total effective dose equivalent to the maximally exposed individual of the general public, from radioactive material remaining at a site after cleanup, shall be as low as reasonably achievable and less than 10 mrem above that received from background levels of radiation in any one year." At the time we developed this guidance, we were aware of 1) NRC's 10CFR Part 61 Performance Objective of 25/75/25; 2) EPA's 10 mrem one year NESHAPs Subpart I Radionuclide Standard; and 3) the NRC approved the State of Illinois LLRW regulations which included a 1 mrem dose limit, (which we considered unrealistically low.) The 10 mrem dose was selected to be conservative, but feasible to implement. It was not based on Reg Guide 1.86. On guidance recognized that not all sites must be cleaned to a "free release" level.
2. Our criterion is in the form of guidance.
3. TAGM-4003 does not specify particular surveying or monitoring methods to be used to demonstrate compliance.
4. TAGM-4003 does not specify the instruments or instrument sensitivities to be used.
5. Our criterion is not zero.
6. When sites are released for "unrestricted use" under our TAGM-4003, the sites are not tracked and there is no restriction on future use of the site. To date, we have not released a site for restricted use.

Sincerely,

Paul J. Merges, Ph.D. /s/

Paul J. Merges, Ph.D., Director
Bureau Radiation & Hazardous Site Mgt., DSHM

PJM/jab
cc: B. Youngberg



THE CITY OF NEW YORK DEPARTMENT OF HEALTH

Rudolph W. Giuliani
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Bureau of Radiological Health

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MEMORANDUM

DATE: November 12, 1999

TO: Jack Spath
NYSERDA

FROM: Gene Miskin, *GM*
Director

SUBJECT: NRC Information request of November 2, 1999

Question #1. Our radiological criteria are derived from existing NRC regulations- 10 CFR 20.

Question #2. The City's radiological criteria are applied by licensing actions where licensees are required to adopt contamination criteria and action levels in our license guides. They are applied during inspections by testing selected surfaces and objects to see how licensees control contamination and waste. During emergency responses we determine what property and equipment can be released and what affected areas can be reentered.

Question #3. We use methodologies consistent with good health physics practices.

Question #4. Any type of Instruments may be used as long as licensees can demonstrate sufficient sensitivity for compliance with criteria in Appendix B of our Article 175.03 or with the text of Article 175.101.

Question #5. We do not use zero as a release criterion.

Question #6. We have no current specific authority for this issue.