

FRANCIS J. MURRAY, JR COMMISSIONER



(59FR4868)

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Samuel J. Chilk, Secretary of the Commission US Nuclear Regulatory Commission Washington, DC 20555

ATTN: Docketing and Services Branch

Dear Secretary Chilk,

This letter is submitted in response to the Federal Register notice of February 2, 1994 (59FR4868) regarding 10 CRF Part 20: Radiological Criteria for Decommissioning of NRC - Licensed Facilities; Enhanced Participatory Rulemaking, Availability of the Staff's Draft of the Rule.

New York State recognizes the significant effort expended by the NRC staff in the rulemaking to date. We appreciate the enhanced participatory process that was developed to facilitate this project. New York's interest in this rulemaking is twofold: as a co-regulator under the Agreement State Program and as the title bearer to a formerly NRC - licensed facility located in West Valley, New York.

In New York, the Department of Environmental Conservation is the lead agency in developing clean-up standards. The other Agreement State agencies responsibilities lie primarily in the areas of public health and worker protection. Also, it is important to note that New York's comments are based only on the information presented in the staff draft of the rule. We have yet to see the draft generic environmental impact statement (DGEIS) which the NRC staff is preparing in support of the decommissioning rule. Our review of the DGEIS may effect some comments and conclusions.

New York also feels the issue of compatibility must be comprehensively addressed in the proposed rule. The significance of this cannot be overstated. As with other Agreement States, New York is completing a rulemaking to adopt regulations compatible with the NRC's new 10 CFR Part 20, a subpart of which is being proposed as an addition by this very rulemaking. Adopting compatible regulations has been complicated by the NRC's failure, to date, to define the compatibility divisions for the new 10 CFR Part 20. We feel it is vital that the NRC publish in the Notice of Proposed Rulemaking on Decommissioning Criteria the compatibility divisions it proposes for each section of this proposed rule. This will give Agreement States advance notice of which sections will be matters of strict compatibility, as

TWO ROCKEFELLER PLAZA . ALBANY, NEW YORK 12223

518-473-4375



well as provide an opportunity to comment on those designations before they become effective.

More detailed comments on the NRC staff's draft of the rule are attached. The comments represent the efforts and views of the New York State Departments of Environmental Conservation and Labor, as well as the New York State Energy Research and Development Authority.

Eugen & Fleson

Eugene J. Gleason Deputy Commissioner

of Operations

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233



New York State Department of Environmental Conservation Division of Hazardous Substances Regulation

Comments on United States Nuclear Regulatory Commission's

January 27, 1994 "Staff Draft"

Radiological Criteria for Decom issioning

February 17, 1994

Comments on the Summary and Discussion of Comments (pp. 14-38)

1. Need for and Scope of Rule (pp. 14-15)

We agree with the NRC that this rule should focus on radiological issues. The question of mixed waste will need to be addressed, but it is appropriate to wait until after some consensus about radiological hazards can be achieved.

2. Basis for Radiological Criteria (pp. 15-18)

The distinction between goals and limits has little practical value, and can unnecessarily complicate the decision process for applying the cleanup guidelines at specific sites.

The NRC proposes a dose of 3 mrem/year to the average member of the critical group as a goal. NRC uses as justification that it is barely distinguishable from the background radiation dose and is within the variations observed seasonally. We suggest that a dose of 10 mrem/year to the maximum exposed member of the general pubic is equally as conservative and easier to comprehend and assess.

It is not clear why the NRC has chosen to apply the TEDE to the "average member of the critical group." The public interest is better served if the best possible determination of a realistic dose to the maximum exposed individual is used to set cleanup requirements. (See also the following paragraph.)

3. Individual vs Collective Doses (pp. 18-19)

We agree with the NRC that estimating individual doses is the preferred approach. However, use of some averaging technique over some arbitrarily defined critical group can easily mask the results of dose estimates. We suggest simply referring to the maximum exposed individual in the general public. Limiting residual doses to the maximum exposed individual can address all

health concerns. If NRC retains the concept of average member of the critical group, the term "average member" should be clearly defined.

4. Statement of Radiological Criteria (pp. 19-20)

We agree with the NRC that best available technology and return to background are not useful concepts in establishing radiological cleanup quidance.

It is not clear to us why the NRC has chosen to use separate concepts of goal and limit. If the limit chosen by the NRC will adequately protect the maximum exposed individual, why is another number needed? The concept of ALARA still exists and should be applied. However, it is not appropriate to quantify what ALARA means in the absence of site-specific data. A properly set cleanup limit should ensure that health and environmental considerations have been addressed. DEC's experience in setting cleanup guidance has shown us that if a cleanup limit as low as 10 mrem/year to the maximum exposed member of the general public is used, the intent of the ALARA concept will almost always be realized. The mere existence of 3 mrem/year to the average member of the critical group will cause some to use it as a cleanup limit. Given the considerable uncertainty in estimating doses, it might seem we are making too fine a point of distinguishing between 3 mrem/year to the average member of the critical group and 10 mrem/year to the maximum exposed member of the general public (New York State guidance), or 15 mrem/year to the average member of the critical group (NRC limit). Our experience is that the only consequence of going below 10 mrem/year to the maximum exposed member of the general public is the potential creation of substantially more waste requiring disposal.

We have found 10 mrem/year to the maximum exposed member of the general public to be a very workable limit.

5. Consistency and Compatibility (pp. 21-22)

It is very important that the NRC and the EPA have the same cleanup guidance for radiologically contaminated sites. It is also very important that NRC identify the compatibility division of each of their cleanup regulations.

6. Finality (pp. 22-23)

There must be confidence that the procedures used to determine cleanup requirements will lead to a final resolution. The issue is not that the dose limit (15 mrem/year to the average member of the critical group proposed here or 10 mrem/year to the

maximum exposed member of the general public now in use in New York State) might be too high to ensure adequate protection -- that is extremely doubtful. Rather, if additional radioactive material was found at a later date, or if a significant change should be made in some critical input parameter used to estimate doses, the NRC will need the authority to revisit the site. However, if the site characterization, sample analyses, and the modeling are done well, the chance of this happening is very remote. As long as it can be demonstrated that the dose limit will be met with the technologies available today, that other involved governmental agencies agree with the procedures used to estimate residual contaminant doses, and that the terms of release (restricted or unrestricted) are complied with, the responsible party can, and should, be assured that no further remediation will be required.

7. Community Involvement (pp. 23-25)

In all decommissioning and cleanup projects, the public should be involved in the process, not just informed about it at the end. It is possible that their involvement can significantly improve the outcome of a project. Because of their direct involvement with activities at or near the site and their knowledge of unique historical or environmental aspects of the area, they can help define some of the constraints on cleanup choices.

Since the membership of the site-specific advisory board (SSAB) is drawn primarily from public interest groups, it is not clear why the NRC wants to assign to the SSAB in the proposed regulation much of the responsibility usually given to technical review panels. For example: how would thi ;roup provide reasonable assurance that the TEDE from res. rual radioactivity. . . not exceed 15 mrem/year to the average member of the critical group without having an entirely independent assessment capability? While we concur with the NRC that community involvement is needed, we believe that the NRC should not try to overly specify its tasks in the proposed regulation.

8. Stability and Flexibility (pp. 26-28)

We agree with the proposed generally applicable dose limit, as long as sufficient flexibility remains so that site-dependent characteristics can be intelligently accommodated. However, the key to this is likely to be in the forthcoming regulatory guide.

9. ALARA Considerations (pp. 28-31)

In its response, the NRC states that all significant public and environmental risks should be evaluated. We agree. This should include comparing the impacts of waste transportation and disposal with the impacts of leaving the material on site.

We recommend that the goal of 3 mrem/year to the average member of the critical group not be used as a quantification of ALARA.

Rather, the dose limit should be used for all activities associated with the cleanup: residual activity, dose to the workers, or transportation and disposal. If a compelling case can be made that other issues (e.g., worker safety or environmental damage) can pose serious problems, then the alternatives to unrestricted release may be needed.

We agree with the NRC that issues of cost, practicality, even common sense can dictate that alternatives to unrestricted release be used at specific sites. In addition to continued licensee responsibility, deed restrictions for sites contaminated with relatively short-lived radionuclides can be a viable option.

In its response, NRC states that the radiation protection standards do not warrant treatment different from those for other health issues. This seems to imply that the decommissioning criteria should apply to all NORM contaminated sites (e.g., mine tailings, phosphogypsum). Does EPA also agree? This implication seems to be contradicted by Section 20.1401 of the proposed rule, where mine tailings are specifically excluded.

At the bottom of page 30, the NRC refers to sites that are so contaminated with naturally occurring radionuclides that the license must be maintained indefinitely. The NRC should distinguish between naturally occurring radionuclides and NORM that has been enhanced by processing.

10. Site Remediation (pp. 31-32)

We agree with the NRC's position.

11. Demonstrating Compliance (pp. 32-33)

We agree that a set of default criteria would be helpful for the more simple decommissioning projects -- for example, a site with fairly uniform contamination involving only one or two radionuclides. The danger in setting these default criteria, even if only in a guidance document, is that they will become the de facto limits, and no other criteria will be accepted. NRC

should take care to limit the applicability of the default criteria to those uncomplicated situations where deriving site-specific criteria to meet the dose limits would waste time and effort.

12. Sites which Cannot be Released for Unrestricted Use (pp. 33-34)

NRC should assure that its license fees are not so prohibitive as to preclude this option.

13. Waste Disposal (pp. 34-35)

NRC acknowledges that decommissioning to radiation levels approaching background may produce large volumes of low-level waste that could affect the availability of regional disposal capacity. This must be addressed in the generic environmental impact statement for this rulemaking. The NRC states that the impacts associated with the types of radioactive waste generated during decommissioning were considered in NRC's environmental impact statement in support of 10 CFR Part 61. However, that EIS was written over ten years ago and did not anticipate decommissioning to the goals now being proposed. In addition, the EIS did not address the volumes of waste that this proposal would produce. A decommissioning goal of "indistinguishable from background" will change the type of waste produced and increase the volume. The NRC should not postpone assessing the impacts of this goal until the decommissioning criteria are applied to specific sites. This issue must be addressed in the EIS for the decommissioning rulemaking. Regional impacts will also need to be assessed in light of the fact that access to waste disposal sites, and the costs thereof, vary significantly from state to state.

Release of sites for restricted use could reduce the amount waste to be sent to disposal facilities.

14. Minimizing Generation of Waste (pp. 35-36)

The NRC response deals with the future and is appropriate. The same goal should apply to sites that are already contaminated. The rule should also recommend that radioactively contaminated waste that requires disposal at a LLRW site be kept to a minimum. This is done by careful excavation and/or demolition so that the volume of material removed and requiring disposal is kept to a minimum.

An interesting situation can arise here. Suppose that the site has been properly characterized. The contaminated volume and the site-specific concentration limits that will achieve the residual dose limit have been developed. Then the contaminated volume has been removed. For practical reasons, the heavy equipment also removed more soil than just the contaminated part. On analysis, because of dilution with the clean soil removed along with the contaminated soil, the removed soil could meet the dose limit if it were simply returned to the hole. For small sites, this situation can easily occur. In New York State, we work with the responsible party to determine the best approach to limit the removal to the contaminated volume so far as is possible.

15. Radon (p. 36)

We agree with the NRC with one small addition; restricted uses should also be an option.

16. Environmental and Social Considerations (pp. 36-37)

Historically and environmentally unique areas deserve special consideration. We concur that environmental and cultural issues associated with a particular decommissioning action may require special attention. For example, to destroy a critical habitat in order to meet the cleanup guidance may not be the best overall solution to a site decommissioning.

17. Recycle (p. 38)

We defer to the New York State Departments of Health and Labor on this issue.

Comments on the Proposed Rule

Subpart A

Section 20.1003 Definitions (pp. 68-69)

The term "critical group" needs a discussion of the timeframe to be considered. For example, how will "critical group" be defined for sites contaminated with extremely long-lived radionuclides.

The phrase "average member of the critical group" should be defined (if it is used instead of our recommended "maximum exposed member of the general public").

The term "unrestricted use" should be defined.

Subpart E - Radiological Criteria for Decommissioning

Section 20.1401 Scope

Paragraph (c) describes the condition under which the Commission would require additional cleanup as a determination "that residual radioactivity remaining at the site could result in significant public or environmental harm." The term "significant" should be defined in a manner similar to the definition of "significantly" in the Council on Environmental Quality's regulations, 40 CFR 1508.27.

NRC could also consider adding more detailed criteria in the regulation, to provide a better indication of the future conditions that could lead the NRC to order further decontamination. These conditions could include the discovery of new information regarding site characteristics or changes in site characteristics that could result in doses greater than the dose limit. There should also be a provision for requiring additional decontamination at sites released for restricted use where the restrictions have proven to be ineffective.

Section 20.1402 Concepts

This section establishes the goal for decommissioning as "a level which is indistinguishable from background." The proposed rule then acknowledges that this goal may not be able to be met and establishes a secondary goal of 3 mrem per year to the "average member of the critical group." This goal, too, may not be met, and the proposed rule would allow decommissioning where "the residual radioactivity at the site has been reduced to as close to the goal as reasonably achievable." Thus, ALARA only enters the evaluation if the goal cannot be met.

In requiring an ALARA evaluation only if the 3 mrem/year to the average member of the critical group goal cannot be met, the proposed rule is a significant change in radiation protection philosophy. Where ALARA is now used to reduce doses below dose limits, in the proposed rule it would be used to justify exceeding the goal of 3 mrem/year to the average member of the critical group goal. If ALARA considerations were incorporated into deriving the 3 mrem/year to the average member of the critical group goal, this should be explained in the generic environmental impact statement.

We question both the need for and the wisdom of including the goal (indistinguishable from background) and its corollary (3 mrem/year to the average member of the critical group) in the regulations. During DEC's rulemaking for LLRW facilities (6 NYCRR Parts 382 and 383), some parties recommended the adoption of zero release as a goal -- in the sense of a result that may be unattainable, but should nevertheless be striven for and approached as nearly as possible. In response, DEC acknowledged that some goals are never attained and that there can be value in striving toward high, unobtainable goals. However, such efforts cannot be required by regulations because there is no objective measure or indicator of compliance. We find the same problem with adopting in regulation a goal of radioactivity "indistinguishable from background," particularly when the regulations acknowledge that a licensee may not be able to demonstrate compliance with that goal (hence, the 3 mrem/year to the average member of the critical group alternative).

The practice of setting a dose limit and requiring doses to be as low as reasonably achievable has worked well in keeping radiation doses below regulatory limits. DEC recommends that the NRC retain that approach for site decommissioning.



STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
GOV. W. AVERELL HARRIMAN
STATE OFFICE BUILDING CAMPUS
ALBANY, N.Y. 12240

NEW YORK STATE DEPARTMENT OF LABOR

COMMENTS ON THE U.S. NUCLEAR REGULATORY COMMISSION'S

STAFF DRAFT

RADIOLOGICAL CRITERIA FOR DECOMMISSIONING

MARCH 9, 1994

As stated in the draft. NRC presently allows decommissioning on a site-specific basis using existing guidance and "negotiates" contamination limits for which no consistent guidance exists. This has resulted in some dichotomies which are a severe burden to some industries. For example a soil contamination limit of 15 pCi/g for cesium 137 was acceptable for recent decommissioning at Nuclear Lake in Pawling, NY, while baghouse dust accidentally contaminated with cesium 137 at a NYS steel mill is being held to a 2 pCi/g limit. Since the latter is normally treated as a hazardous material when uncontaminated and therefore is easily controllable as a waste stream, while the future use of soil is more problematic, there seems to be no logical reason for such a difference in criteria. However, the economic impact on the steel mill is onerous. Another example of a volumetric material for which a release limit does not exist is the cobalt 60 contaminated material for use in steel making which recently entered this country from eastern Europe. A common standard against which to make decisions on these varied materials is desperately needed.

However, as the staff paper also states, the USEPA is in the process of developing standards and guidance for decommissioning at this time. The NRC and EPA actions in this area are referred to as "cooperative efforts" towards the goal that "the NRC standards" will be considered "sufficient to provide adequate protection to the public health and safety for NRC-licensed sites." While it is true that this would be consistent with a recent MOU between the two agencies, it should be noted that the MOU's first test, NESHAPS, did not result in a finding of sufficient protection for NRC and Agreement State licensees. It should also be noted that the NRC and EPA rulemaking processes are expensive. There may have been justification for NRC's rulemaking when it began this process, since EPA was not moving forward; however, now that EPA is actively pursuing development of decommissioning standards, it will be preferable for NRC to defer to EPA, suspend its process and cooperate with EPA in developing its rule. Nothing would be lost except a small amount of time which will be insignificant compared to the length of time we have waited for Federal action in this area. On the other hand, we would save the cost of a redundant rulemaking; avoid the specter of an NRC rule that may not be regarded as sufficiently protective if it differs from the final EPA standard; and very likely accelerate Eras process.

Specific Comments:

1. The "goal" for decommissioning is described as reducing residual radioactivity to a level indistinguishable from background. In relation to this, the draft states that demonstrating that levels are indistinguishable from background can be very difficult, and that "therefore the Commission is proposing that the cumulative TEDE" from radionuclides distinguishable from background should not exceed 3 millirem per year.

This has the appearance of deception, and is supported by the questionable statement that it might not be possible to demonstrate reduction to background "due, for example, to instrument capabilities;" but that it will be considered that the goal of background has been met if the TEDE does not exceed 3 millirem. Since the 3 millirem results from consideration of residual radionuclides which are distinguishable from background, using appropriate instrumentation, this makes no sense. It also creates the impression that having set a "goal" we should require licensees to achieve it, and it would be reasonable for the public to interpret higher doses resulting from residual contamination as a failure to meet the goal. The concept of the "goal" (and the 3 millirem criterion) should be eliminated.

2. The "limit" for release of a decommissioned site (as opposed to the "goal") is proposed to be 15 millirem per year TEDE, but it must be as close to the decommissioning "goal" as reasonably achievable (ALARA).

The 15 millirem per year limit is a reasonable criterion, and the requirement to demonstrate that residual contamination has been reduced to a level as low as reasonably achievable (ALARA) below the 15 millirem limit is also reasonable. There is no need to establish an arbitrary second "limit" or "goal" below the 15 millirem limit when ALARA considerations are required. As stated in comment 1 above, this creates the impression that the 15 millirem criterion is permissive and not sufficiently protective (after all, it is 5 times as high as the "goal").

3. The Commission has concluded that the public should be able to "effectively participate in site decommissioning decisions" and will give public notice of, and solicit public comment on the proposed decommissioning action, even though the licensee proposes to meet the public dose limits in this draft. However, the decommissioning dose limit is being set in this rule; which has been, and will be, subject to public comment.

There is no indication of how public comments will be factored into NRC's decision on the licensee's decommissioning plan; which should be a technical decision. Will the public decide whether the ALARA criterion is being met? We are not aware that NRC solicits public comment on original applications to use radioactive materials in forms which may result in contamination, or release to the environment - except in the case of major facilities such as nuclear power plants. Why then is this being proposed for the termination of the process? If NRC were to consult with any entity on the acceptability of a licensee's decommissioning plan, it would seem most appropriate that it would be the state within which the licensed facility is located, not individual members of the public. In the current draft "local and state governments in the vicinity of the site and Indian Nation or other indigenous people" would be notified, but NRC would "solicit public comment" (emphasis added) on the proposed decommissioning plan. Since NRC directly regulates and licenses all use of Atomic Energy Act (AEA) radioactive materials in non-agreement states, and since almost all of those states have organized radiation control programs for non-AEA materials, the direct input of the host state should be invited. The state does after all represent the interests of all of its citizenry, and in almost all cases has a radiation control

agency capable of providing it with professional input on the proposed plan. In the case of NRC licensees located within Agreement States it is even more important for NRC to coordinate with the host state. Indeed, during an ongoing decommissioning project in NYS, NRC has been diligent in doing this and the results have been most satisfactory. No reason is given in the draft for not continuing to coordinate with the states in this manner.

The draft should be modified to state that NRC will notify the government of the state within which the particular facility is located, and solicit its input on the proposed decommissioning plan. The individual state may then perform public outreach as it deems appropriate and in accordance with any public notification or outreach procedures it normally follows in similar circumstances.

4. When a licensee proposes a decommissioning plan that does not meet the draft public dose criteria, NRC would require the licensee to convene a Site Specific Advisory Board (SSAB) "for the purpose of obtaining advice from affected parties" on the decommissioning plan. This Board is to reflect the "range of interest in the affected community and region" and is to include representatives of local and state government, local residents, public interest groups and Indian Nation or other indigenous people.

As stated in comment 3, NRC should seek its input through the government of the impacted state, which should be regarded as a partner in the important decisions to be made when a radiation facility proposes residual contamination levels that exceed proposed standards and which may involve long-term institutional controls over the site.



New York State Energy Research and Development Authority

Two Rockefeller Plaza • Albany, New York 12223-9998 (518) 465-6251 FAX: (518) 432-4630

FRANCIS J. MURRAY, JR. Chairman

F. WILLIAM VALENTINO President

March 10, 1994

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY COMMENTS ON THE NUCLEAR REGULATORY COMMISSION STAFF DRAFT RADIOLOGICAL CRITERIA FOR DECOMMISSIONING

The New York State Energy Research and Development Authority (Energy Authority) would again like to thank the Nuclear Regulatory Commission (NRC) for the opportunity to participate in the process of developing this rule. We believe that the enhanced public participation has assisted the NRC in formulating a fair and sound approach to setting the decommissioning criteria.

As we indicated in the comments we submitted as part of the workshops conducted by NRC, the Energy Authority's interest in this rulemaking stems primarily from its title to the Western New York Nuclear Service Center (Center) near the hamlet of West Valley, New York. (In this regard, we note that the list of nuclear fuel cycle facilities that will require decommissioning, set forth on page 8 of the proposed Federal Register Notice, should be revised to include one spent fuel reprocessing facility.) The environmental impact studies that we referred to in our earlier comments, which are analyzing various alternatives for closing the facilities at the site, are continuing. Those studies should reveal whether unrestricted use is a sensible alternative for the Center. We indicated previously and still believe that not releasing the site for unrestricted use is an alternative that must be seriously explored and should be permissible under the regulations.

In response to the many comments NRC received on this subject, the Commission is proposing to set standards for restricted release. The Energy Authority believes that this is a positive step. With respect to the residual radioactivity goals and limits for unrestricted release and restricted release, the Energy Authority takes no position and defers to the expertise of New York's "Agreement State" regulatory agencies. With respect to criteria for determining when restricted release is appropriate, NRC has required that the licensee demonstrate that in the absence of institutional controls, the dose to the average member of the critical group would not exceed 100 millirem per year. This standard does not credit the effectiveness of institutional controls for any period of time.

We recognize that the regulatory regime applicable to facility decommissioning in general is somewhat different from that established in 10 CFR Part 61 for low-level radioactive waste disposal facilities. Nonetheless, the Energy Authority suggests that NRC consider whether and to what extent this proposal should be revised to allow a licensee to take credit for the effectiveness of institutional controls for a period of up to 100 years, as Part 61 does. The Energy Authority specifically commends the idea of convening a Site Specific Advisory Board where the decommissioning plan calls for release with restrictions.

As the Commission has recognized, however, there may be sites that will not reasonably be able to attain even the restricted release criteria. Page 34 of the Supplementary Information for the draft states that in such cases the license would remain in effect indefinitely until technology or resources become available to achieve compliance with the criteria and that in the interim NRC would ensure appropriate control of the licensed site on a site-specific basis.

The Energy Authority agrees that this may be an appropriate alternative for certain sites. Existing regulations, even with the proposed amendments, however, appear still to require decommissioning (at least for all facilities licensed under Part 50) in the absence of a waiver or exemption. Section 50.82(a), which is not changed by the proposed rule, requires submission of an application for license termination and decommissioning within two years of permanent cessation of operations. The Energy Authority suggests that the concept described on page 34 of the Supplementary Information be explicitly incorporated into the regulations. The criteria for determining when such continued licensing is appropriate could be similar to those proposed in section 20.1405(a) for determining when release for restricted use is appropriate. We also believe that the convening of a Site Specific Advisory Board may be appropriate in such instances.

The Energy Authority also suggests that Parts 30, 40, 50, etc. be amended to cross-reference explicitly the criteria and procedures proposed in Part 20. Otherwise the applicability, particularly of the procedural requirements, may be unclear.