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Radioactive Waste Management*

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(59FR 4868)

Thursday, March 10, 1994

Mr. Samuel J. Chilk, Secretary
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Docketing and Service Branch

Dear Mr. Chilk:

On February 2, 1994, the Nuclear Regulatory Commission (NRC) published in the Federal Register a notice of availability of, and opportunity to comment on, a draft proposed rulemaking, as part of the NRC's "enhanced participatory rulemaking" to codify uniform radiological criteria for the decommissioning of NRC licensed facilities. 59 Fed. Reg. 4868 (1994).

B. Koh & Associates is a consulting firm that specializes in developing and implementing site decommissioning plans. We have a number of clients who are in various stages of the decommissioning process for their sites. In most cases, the client holds an NRC materials license for use of licensed material in a manufacturing process, or for cleanup of residual contamination from a manufacturing process. Our comments on the Staff draft are as a result of our experience in dealing with these particular facilities and the technical, financial and regulatory issues involved.

We concur with the Staff's approach to establishing radiological criteria for decommissioning in terms of a goal and a limit. We also generally agree with the goal of reducing the residual radioactivity at a site to levels that are indistinguishable from background. However, as discussed below, the Staff's draft contains no details regarding the planned implementation of these criteria. Therefore, to ensure that the overall objectives of the rulemaking are achieved, these criteria must be fleshed out and the detailed implementing guidance issued in final form before the NRC completes the rulemaking.

In order to focus our comments, facilitate your review, and make our input more valuable to you, we have organized them to parallel the presentation in the Staff draft.

Goal

1. We support the goal established by the Commission, but it should be made clear that reducing residual contamination to levels indistinguishable from background does not mean

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returning the facility or site to its condition prior to the introduction of radioactive materials. Returning the site to its "original" condition is sometimes neither practical nor desirable, particularly in the case where substantial improvements have been made to the property.

2. The goal, as stated in proposed paragraph 20.1402, is to "reduce the concentration of each radionuclide which could contribute to residual radioactivity at the site to a level which is indistinguishable from background." In our view, the goal would be more properly stated, "to decommission the site or facility such that the cumulative Total Effective Dose Equivalent (TEDE) to the average member of the critical group from all radionuclides that could contribute to residual radioactivity and are distinguishable from background, does not exceed 3 mrem per year." In this form, the goal does not prescribe a particular decommissioning approach, i.e., reducing the concentration, but leaves open other options such as isolation or shielding. For example, the 1981 Branch Technical Position, SECY-81-576, already provides for license termination and unrestricted use of properties after contaminated materials have been isolated onsite. The Staff should clarify that this flexibility remains under the proposed rule.

3. Another point should be made with regard to reducing the concentration of radionuclides that contribute to residual radioactivity. In our experience, we frequently encounter large volumes of slightly contaminated soils, slags and other solid wastes. Often the average concentrations of the radionuclides are well below levels that would fulfill the proposed criteria. However, the contaminant is not uniformly distributed, and "hot spots" exist. We believe it is consistent with the Commission's goals to consider these contaminated materials as homogeneous. In all but the exceptional cases, identifying and removing the hot spot from the surrounding material will result in a substantial decrease in its concentration, such that the hot spot could have been left in place in the first instance. Attempting to deal with these hot spots separately will result in additional radiation exposure to workers, risk of exposure during transportation, loss of valuable offsite disposal capacity, and expenditures of funds that could be better used elsewhere.

4. We are concerned with the possibility of revisiting a site after the license has been terminated, as provided for in Paragraph 20.1402(c) of the proposed rule. The Commission indicates it would require additional cleanup only if residual radioactivity remaining at the site could result in significant public or environmental harm. For licensees to approach decommissioning with confidence, this part of the rule should be expanded to provide specific criteria or a prescribed process for determining whether the remaining radioactivity will result in significant harm.

5. The Commission indicates, on page 56 of the discussion, that previous onsite burials of radioactive materials, made in accordance with then existing regulations, may have to be removed to achieve the proposed radiological criteria. We consider this unfairly burdensome to licensees, former licensees and present property owners who may now be faced with significant site decommissioning. Previous disposals should be evaluated based strictly on whether or not the public is adequately protected.

Public Involvement

1. On page 24 of the discussion, the Commission indicates it is important for the public to not only be fully informed of the decommissioning actions at a particular site, but also to be a participant in site decommissioning decisions. While we believe that a decommissioning can be successful only if it is supported by the people it affects, we also believe that existing federal, state and local regulations provide ample opportunity for public participation. In particular, the Commission's hearing regulations provide the

incentive for a licensee to satisfy affected parties during the planning phase of the decommissioning. We oppose adding paragraph 20.1406 to the regulation.

2. Paragraph 20.1406 (a) (2) requires that the NRC publish notice of the proposed decommissioning plan in a forum accessible to individuals in the vicinity of the site and solicit comments from affected parties. In reality, such notification will result in comments from those who will use the opportunity to pursue other objectives, as well as those individuals who are affected by the decommissioning. Furthermore, the proposed rule gives no indication as to the Commission's obligation to respond to or resolve the comments. We believe that the existing licensing process provides for a rational and controlled way to deal with the concerns of those affected by the decommissioning. The Commission points to no experience with ongoing decommissioning projects that warrants this new costly process.

3. Since there are already more than enough ways for the public to participate in the decision making process, it is the responsibility of the licensee to satisfy public concerns. The licensee must be cognizant of the issues that affect those people in the vicinity of the site and other issues that are important to local and state governments, and deal with them in the decommissioning plan, if it expects to gain overall approval of the plan.

4. We find paragraph 20.1407 requiring the formation of a Site Specific Advisory Board (SSAB) particularly troubling. In this case, the Commission seems to be setting up a hearing board with none of the rules or protections provided in existing regulations. Under this paragraph, opportunities for conflict between the licensee, the SSAB and the Commission abound, yet there is no mechanism for addressing the disputes, let alone equitably resolving them.

5. We also object to the proposed membership of the SSAB. Since the SSAB is to advise with regard to a specific site, there is no logical reason why citizen, environmental, environmental justice and other public interest groups should be automatically included. Typically, these groups draw on memberships that are much broader than the local area and have agendas that are much different from the affected community. As stated before, we believe it is in a licensee's interest to solicit input from those directly affected by the decommissioning.

6. Paragraph 20.1406(a)(1) requires that the Commission notify local and state government in the vicinity of the site that could be affected by the decommissioning. It has been our experience that conflicts often arise between federal, state and local regulation. We assert that the decommissioning process will be enhanced if the NRC acts forthrightly with regard to its responsibilities. The licensee will bear the burden of obtaining state and local approval. We believe this to be more efficient than the NRC's withholding its approval until all other regulating bodies have agreed with the decommissioning plan.

ALARA

1. While not explicitly set forth in the proposed rule, the Commission's view of licensees' attitudes toward decommissioning is revealed in the discussion of the rule on page 28. It states that a high level of public involvement in the ALARA process "provides for transparent application of the ALARA considerations and safeguards against excessive licensee attention to cutting costs to maintain profit margins." This misstates the long history of ALARA in Commission regulation. It is our understanding from 10 CFR 20.1003 that without cost as one of the considerations, an ALARA analysis would not be useful. Furthermore, we are unaware of any case where such an analysis was deficient

because of excessive attention to cost control. We believe the remark by the Commission to be totally inappropriate.

Demonstrating Compliance

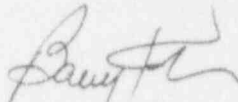
1. On page 32 of the discussion accompanying the proposed rule indicates that the Commission plans to issue specific guidance that includes limits for radiation, contamination and concentration for use by licensees who elect not to use models to demonstrate compliance. We are concerned that such guidance documents will become standards that are applied in addition to the dose models called for in the proposed rule. If that occurs, decommissioning will revert to the present situation, where release is based strictly on contamination limits, and the benefit of the goal and dose limit established in the new rule will be lost. The guidance documents must be prepared, reviewed and adopted before those affected can agree that the criteria proposed by the Staff are appropriate.
2. In paragraph 20.1402 (4), the Commission would permit termination of a license with restrictions, provided the TEDE would not exceed 100 mrem per year even if the restrictions applied in the termination were no longer effective. We are of the view that this concept should be extended to the Staff's consideration of decommissioning that result in termination without restrictions. To illustrate our point, consider the situation of license termination under Option 2 of the 1981 Branch Technical Position. Presently, the Commission requires that the site be analyzed for the case where the cover isolating the contamination is not present, even though it has been designed to last for more than the requisite 1000 years. Since this case assumes that the physical restriction placed on the site is no longer effective, we submit that the same TEDE limit applied in the case of institutional restrictions, 100 mrem per year, be applied.
3. The critical group is defined in the discussion of the rule as those reasonably expected to be the most highly exposed considering all reasonable potential future uses of the site. We are concerned that the Commission will adopt this language to continue its present practice with regard to sites contaminated by long-lived radionuclides and insist that the site be considered for any potential future use, no matter how improbable. For example, the use of the farm family scenario for industrial sites in metropolitan areas cannot be considered a reasonable future use of these sites.
4. The discussion also indicates that the critical group considered in the case of a site released with restrictions would be different from the group considered for a site given unrestricted release. The Commission's rationale for this distinction is that the restrictions would limit those who would be affected by the site. It is our position that physical restrictions such as land use, setting, environment, geology, hydrology, etc., are just as effective as institutional restrictions. Hence, as stated above, the critical group should be selected on the basis of a reasonable future use of the site, whether or not restrictions accompany the license termination.
5. The Commission proposes that the new rule be applicable for all licensees except those already covered by an approved decommissioning plan. We consider this to be unfair to licensees who have submitted plans to the Commission for review but have not yet received approval. To insure implementation of the new rule with the least dislocation of plans already submitted or in preparation, we suggest that the rule be implemented one year after it is adopted.

Mr. Samuel J. Chilk

March 10, 1994

We appreciate the opportunity to comment on these matters of importance to the decommissioning process. We look forward to discussing these matters further as this rulemaking process continues.

Sincerely yours,



Barry Koh, Ph.D.

President

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