



Commonwealth Edison
 1400 Opus Place
 Downers Grove, Illinois 60515

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March 11, 1994

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Mr. Samuel J. Chilk, Secretary
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

Attention: Docketing and Service Branch

Subject: Preliminary Proposed Rule on Radiological Criteria for
 Decommissioning

Dear Mr. Chilk:

Commonwealth Edison Company ("CECo") appreciates this opportunity to comment on the Nuclear Regulatory Commission's ("NRC") circulating draft of the criteria which will be applicable to the decontamination and decommissioning ("D&D") of nuclear facilities. As the owner of 13 nuclear power plants, approximately 12% of the nation's nuclear power reactors and substantially more than are owned by any other licensee, CECo, will be affected particularly by the NRC's final D&D rule. Accordingly, CECo has participated actively and extensively in the enhanced participatory process, as a member of the panel in Chicago, attendance at the national meeting in Washington, D.C., and submittal of comments on NRC proposals, including the scope of the Generic Environmental Impact Statement ("GEIS"). These comments continue CECo's active participation in this process. In addition, CECo supports the concerns identified by the Nuclear Management and Resources Council ("NUMARC").

CECo supports the NRC's adoption of a practical verifiable exposure limit based on well-accepted radiological health considerations as the standard by which sites should be determined to be decontaminated. Several considerations discussed below support an exposure limit of 100 mrem/y as adequate to protect public health and safety, with a screening limit of 25 mrem/y for the unrestricted release of a site. These same considerations suggest that any reference to lower exposures should be clearly identified as goals in a preamble to the rule so as to avoid any misinterpretation as requirements. The determinations to base regulatory requirements on average exposures to the critical group and not to consider collective doses that do not affect As Low As Reasonably Achievable ("ALARA") analyses are particularly appropriate.

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CECo also supports the NRC's concept of broadening the definition of decommissioning to include a spectrum of realistic alternatives, each of which meets the NRC's statutory obligation of providing adequate protection to the health and safety of the public and to the environment. The specific alternatives suggested, however, would establish a regulatory scheme that may not achieve the goal of minimizing the total impact on public health and safety and on the environment. To realize that goal, CECo suggests that the NRC adopt a rule which is based on the 100 mrem/y adequate protection level and incorporates the following elements:

- Adopt a screening limit of 25 mrem/y as the exposure limit to the average member of the critical group for the unrestricted release of a decontaminated site;
- Require release restrictions where the dose to the average member of the critical group exceeds 25 mrem/y by more than an insignificant amount, but is less than 100 mrem/y;
- Specify that ALARA analyses will begin from an exposure level of 100 mrem/y;
- Limit assumptions realistically, such as the calculation of exposures for one hundred years for ALARA purposes instead of the speculative assumption of one thousand years, as proposed;
- Base financial assurance requirements on realistic assumptions for evaluating alternative site uses and the degradation of any release restrictions;
- Rely on existing regulatory processes to provide ample opportunity for public participation in the choice of restrictions for sites or treat new procedures, such as the proposed SSAB, as an exclusive alternative;
- Consider the minimization of contamination and waste generation in a separate forum that is broad enough to deal with the many non-decontamination related aspects of those proposals; and
- Clarify the finality provision by providing objective reconsideration criteria developed through a rulemaking process.

The bases for these suggestions are discussed in detail below.

Applicable Principles of Radiation Protection

In developing these options, CECO has been guided by the principles which the Health Physics Society believes are essential to any workable regulation on radiation protection:

1-Acceptable levels of radiation must be low enough to assure compliance with the adequate protection level of 10 C.F.R. Part 20;

2-Regulatory radiation levels below those necessary for adequate protection must not be so low as to be impracticable to measure;

3-Regulatory radiation levels below those necessary for adequate protection should be based on an application of the generally recognized principle of ALARA, taking into account economic and social factors; and

4-Economic and social factors for the purposes of ALARA include all health, safety and environmental impacts associated with site decommissioning and decontamination.

Decommissioning Criteria

Protection of the public health and safety and of the environment would be realized in an effective, efficient, practical way through the NRC's application of generally accepted principles of radiation protection to the development of decommissioning criteria. The fundamental basis for the decommissioning criteria should be assurance of compliance with the exposure level of 100 mrem/y, which is codified as the adequate protection exposure level. To achieve that compliance, a small fraction of that value, 15 mrem/y, has been taken as the fundamental exposure limit because the NRC "has also determined that decommissioning activities should not be allowed the entire dose limit of 100 mrem/y for members of the public...consistent with other decisions of both the EPA and NRC for unrestricted access to areas." ALARA would then be applied to determine if an even lower dose can be achieved reasonably.

The NRC suggested the 15 mrem/y limit and a 3 mrem/y goal based on the analysis in the GEIS. That evaluation has not been made public. Therefore, CECO cannot meaningfully comment on the accuracy of the analysis or the completeness of the costs and benefits considered. Also preventing the completeness of these comments is the absence of the implementing regulatory guidance which is essential to evaluating how these requirements will work in practice. Despite these limitations, CECO, for the following reasons, concludes that the exposure limit and goal suggested are inappropriately low.

As a general matter, to reach the appropriate exposure level, the NRC should apply the two-tiered safety philosophy which the NRC and the courts have recognized is basic to the Atomic Energy Act. Under the Atomic Energy Act, adequate protection is the minimal safety standard, independent of costs. More stringent requirements are subject to the backfit rule. Costs may be considered for them.

By setting the base exposure level well below that already recognized by the NRC as necessary for adequate protection, and below levels already adopted for specific sites, the NRC may create a situation in which the total impacts associated with achieving an exposure level more stringent than needed for adequate protection are not balanced against benefits. For example, the public could receive far more exposure from the removal and transportation of contaminated material in order to reach the 15 mrem/y limit than is avoided by reducing exposures to this level at the site. This approach also truncates the subsequent ALARA analysis by failing to incorporate the costs of attaining the 15 mrem/y level. As a result, the NRC creates a situation in which the public could potentially experience a greater adverse impact due to the cleanup of a site to unjustifiably low radiation levels than it would have otherwise experienced had other, perhaps non-radiation impacts been given their full weight.

For these reasons, CECO suggests an alternative which is based on the adequate protection standard but takes into account the reality that the uranium fuel cycle has operated without undue consequences under an exposure limit of 25 mrem/y to the maximally exposed individual, per 40 C.F.R. Part 190. The determination of a decommissioning exposure level for each site should start from the 100 mrem/y adequate protection level. For each site, a realistic ALARA analysis should be performed to determine how far below 100 mrem/y the site can be decontaminated cost-beneficially. If the result is 25 mrem/y or less for the average member of the critical group, then that value will be the required limit for the site. No arbitrarily lower goal such as 3 mrem/y should be set because it would be inconsistent with the

well-established methodology for protecting public health and safety and could not be measured practically. Where the 25 mrem/y limit could not be met, a site could still be released under realistically demonstrable release conditions as discussed below, providing that the 100 mrem/y limit would not be exceeded if realistic situations led to the degradation of those restrictions.

Realistic ALARA calculations are critical to the achievability of practical regulation. Only realistic land uses and foreseeable time periods should be required to be used. For example, scenarios should be limited to a period of one hundred years.

Restricted Release

Restricted release conditions should be tailored to each site. For example, they would take into account radioactive decay which would justify the relaxation of restrictions as doses diminish over time. The scope of restrictions should be limited to avoid the need to consider speculative, unlikely uses which are inconsistent with the location and character of the site. Long-term possibilities should not be considered if they could not be demonstrated to be currently realistic. Speculation about the possible long-term ineffectiveness of restrictions also should not be considered and ineffectiveness over the short term would have to be shown to be highly likely before it should be considered.

Greater specificity is required for the criteria which would permit release under restricted conditions. The terms "technically unachievable", "prohibitively expensive", and "net public or environmental harm" are too imprecise for the purposes of providing the certainty needed for compliance planning. Instead of devoting resources to trying to define these terms, the NRC should delete them and simply require an ALARA analysis from the 100 mrem/y adequate protection level and permit licensees to adopt the alternative of restricted release at the exposure level for which the analysis shows a sharp change in the ratio between costs and benefits.

Institutional controls enforceable by a responsible governmental agency should not be required because it is not clear that such an agency would be willing to accept the responsibility. Even if such an agency were found, its condition for accepting the responsibility could result in license termination being held hostage to the demands of the governmental agency. Reliance for enforcing site restrictions should be placed in the individuals who would be impacted by the degradation of such restrictions.

Financial Assurance Requirements

Financial assurance will be required to be provided by a licensee whenever a license is terminated under restricted conditions. That financial assurance must be sufficient to enable an independent third party to assume and implement the responsibilities for controlling and maintaining the site. Several alternative financial assurance methods already adopted by the NRC in 10 C.F.R. § 30.35(f) would be acceptable.

The sufficiency of financial assurance will depend significantly on the period over which controls will be required. For utility licensees, that period should not extend beyond the period of currently foreseeable activity. Utilities expect to remain in business and to generate revenue sufficient to modify the financial assurances necessary if the uses of a site are modified at a later time.

Finality

Additional site cleanup would be required only if new information showed that residual radioactivity remaining at the site could result in significant public or environmental harm. The measure of "significant" harm appears to be a "substantial" violation of the proposed exposure criteria. Under those circumstances, the NRC will require additional cleanup.

Several aspects of this proposal require clarification in order to meet the NRC's stated goal of providing a "high level of assurance that decommissioning actions conducted under the current criteria will not need to be revisited in the future under potentially more restrictive criteria." A stringent measure needs to be established for determining either when harm is "substantial" or a violation is "significant" in order to avoid the reopening of site cleanup for minor changes in the site situation. That measure should be based on the realistic potential that the site no longer can be used, as restricted, consistent with the adequate protection of public health and safety. In addition, by analogy with the backfit rule, the disturbance of finality should also require a showing that the benefits of the additional actions outweigh their costs. Such a cost-benefit showing would also ensure that any additional actions are the most cost-effective actions available.

Whatever criteria are adopted for requiring additional site cleanup, they should not be adopted unilaterally by the NRC. Rather, they should be the product of a public process just like the process which led to this decommissioning proposal. Consistent use of this public process should enhance public acceptability of all actions related to the decommissioning of sites.

Public Participation

Public participation in the licensee's formulation of a decommissioning plan would be required whenever the licensee proposes not to meet the conditions for the unrestricted release of a site. A Site Specific Advisory Board ("SSAB") would be required to be constituted from a broad cross-section of the local community and would have its activities supported by the licensee. Recommendations by the SSAB and the licensee's disposition of them would be included in the licensee's decommissioning plan.

Public input might be appropriate where a site would be subject to significant restrictions. Opportunities for such input are already available in the current regulatory process. Moreover, several aspects of the proposed SSABs raise difficult questions.

Unless the role of an SSAB is clarified, the NRC could create undue expectations which, if unrealized, would result in public frustration. Experience shows that advisory boards can be substantially disappointed if their advice is not fully adopted. As for funding SSAB activities, licensees would be responsible, perhaps to avoid the NRC budget limitation which precludes it from funding third party (intervenor) participation in licensing proceedings. Such licensee funding could be seen as compromising the independence of an SSAB.

If SSABs are provided for, they should be the sole alternative for public input into the development of release restrictions. In particular, the NRC should preclude the public from using the licensing process to subsequently oppose the release of a site with restrictions after an SSAB has participated in their development. The NRC should make clear that participation in the SSAB is the exclusive vehicle for participation in the regulatory process.

Contamination Minimization

In addition to establishing criteria and procedures for decontaminating and decommissioning a site, the proposal would also require licensees to adopt a two-pronged contamination minimization strategy for currently operating plants. The first prong would apply to applications for substantial license modifications. They would be required to describe: (1) how the proposed change would minimize contamination; (2) facilitate decommissioning; and (3) minimize the generation of radioactive waste. This requirement would clearly be a backfit and should be subjected to a backfit analysis. It is expected that such an analysis would clarify the scope of the term "substantial" as applied to a license amendment request.

More problematically, the NRC has not explained how it would use this information in determining whether to grant a license amendment request. Any factoring of this information into the current safety evaluation process would result in a confusing combination of safety and non-safety factors. A factoring of this information into the environmental review for a license amendment request would constitute a fundamental change in the NRC's understanding of the extent to which an environmental analysis needs to consider speculative consequences and, thus, have ramifications for all NRC determinations which require environmental review.

The second prong of the contamination minimization strategy would be a required modification to the radiation protection program. It would be required to include procedures for minimizing contamination, facilitating eventual decommissioning and minimizing the generation of radioactive wastes. No criteria are provided for the acceptability of such a plan. Nor is any indication given as to the extent of effort which would be acceptable or the trade-offs which would be expected with other activities important to plant operation.

A required minimization strategy also would result in inherent dilemmas for certain activities, such as decontamination of piping for the recirculation of primary coolant water. That activity would minimize facility contamination at the expense of waste volume generation. The decontamination would reduce contamination and, therefore, would reduce exposures in the plant. On the other hand, there would be substantial volumes of radioactive waste that would otherwise not have been generated. Criteria for balancing these kinds of competing interests will take substantial effort to develop and go far beyond the scope of this rulemaking.

These specific concerns and the general concern that this rulemaking is an inappropriately narrow forum for considering the broad implications of this proposal, lead CECO to suggest that this proposal should be considered in a different forum. In conducting that activity, the NRC should ensure that it has informed itself of the actions which licensees already have taken for economic reasons to achieve the apparent goals of this proposal. CECO believes that such a review of licensee actions will show that this proposal would not materially improve the current care taken by licensees to limit the generation of radioactive contamination or waste.

Conclusion

For the reasons discussed above, CECO urges the NRC to modify the circulating draft criteria as suggested.



Martin J. Vonk
Generic Issues Administrator
Nuclear Regulatory Services