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NRC APPROVES MAXIMUM PERMISSIBLE RADIATION LEVELS  
FOR LICENSE TERMINATION

The Nuclear Regulatory Commission has approved an amendment to its regulations to establish maximum permissible radiation levels when a nuclear facility permanently shuts down, is released for other uses, and the license is terminated.

The new rules will require licensees of permanently shutdown facilities to reduce remaining radioactivity to sufficiently low levels to permit the license to be terminated safely. Release of the property may be either:

- Unrestricted, in which case it could be used for any purpose, or
- Restricted, so that it could not be used for certain purposes, such as residential housing.

The Commission believes that the new standards are consistent with specific recommendations of both national and international bodies tasked with the development of guidance for radiation protection; are appropriately based on risk, cost-benefit, and socio-economic standards; provide the needed flexibility to accommodate site-specific conditions; and are sufficiently conservative to ensure protection of public health and safety and the environment.

Unrestricted Release

Under the new regulations, a site may be released for unrestricted use if the radiation dose from contamination remaining on the property will be as far below 25 millirems per year as is reasonably achievable. (Twenty-five millirems may be compared to a dose of about 5 millirems of background radiation from one round-trip cross-country airline flight; 50 millirems average per year from medical examinations; and 300 millirems per year average in the United States from natural background radiation.)

## Restricted Release

The new regulations permit release of a site for restricted use provided that the dose from contamination remaining on site is as low as is reasonably achievable and that legally enforceable institutional controls (such as deed restrictions) will ensure that the dose does not exceed 25 millirems per year.

In addition, if a site is released for restricted use, the licensee must provide financial arrangements to allow an independent third party to assume and carry out responsibilities for any necessary control and maintenance of the site.

Further, a licensee that intends to decommission by restricting use of the site must seek advice--from individuals and institutions in the community who may be affected by the decommissioning--on whether the provisions for institutional controls proposed by the licensee (1) will provide reasonable assurance that the radiation dose from contamination remaining on site will not exceed 25 millirems per year, (2) will be enforceable, and (3) will not impose undue burdens on the local community or other affected parties.

In obtaining this advice, the licensee must provide for participation by a broad cross-section of community interests, provide an opportunity for a comprehensive discussion on the issues by participants, and make public a summary of the results of such discussions.

The Commission expects that institutional controls will be very effective in keeping doses to levels below 25 millirems per year. Nevertheless the Commission has included an additional level of protection in the rule to protect against the situation where the 25-millirems-per-year level could be exceeded by requiring that licensees provide reasonable assurance that, if the institutional controls were no longer in effect, the maximum yearly radiation dose from contamination remaining on site would not exceed 100 millirems per year, and be as low as is reasonably achievable.

Licensees in rare circumstances could also propose that, in the event institutional controls were no longer in effect, the residual radioactivity could be as high as 500 millirems per year. However, licensees who propose to use the 500-millirem criterion must (1) demonstrate that further reductions in remaining radioactivity are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm; (2) make provision for durable institutional controls, such as engineered barriers or government control or ownership; and (3) provide sufficient financial resources to enable an independent third party to carry out periodic rechecks

of the site at least every 5 years to make sure that the institutional controls remain in place, and to assume and carry out responsibilities for any necessary controls and maintenance of those controls.

#### Alternate Criteria for License Termination

The Commission expects the vast preponderance of licensees to reduce residual radioactivity to levels that meet the new criteria for unrestricted or restricted release. However, the Commission is concerned about the possible presence of certain difficult sites that could present unique decommissioning problems.

Because it is preferable to have provisions in the rule to deal with these sites rather than have licensees seek an exemption process outside the rule, the rule contains provisions under which the Commission may terminate a license using alternate criteria, greater than 25 millirems per year, if the licensee provides assurance that public health and safety would continue to be protected, and that it was unlikely that the radiation dose from all potential man-made sources combined would be more than 100 millirems per year. The licensee must also place restrictions on site use to the extent practical and reduce the radiation dose to levels that are as low as reasonably achievable.

The Commission expects the use of alternate criteria to be confined to rare situations. To ensure that this is the case, the Commission is requiring that licensees who propose to use alternate criteria must seek advice or comment from affected parties and, as in the case where restricted release is sought, provide for participation by representatives of a broad cross-section of community interests who may be affected by the decommissioning, an opportunity for a comprehensive, collective discussion on the issues, and a publicly available summary of the results of all such discussions.

In addition, the use of alternate criteria to terminate a license will require the approval of the Commission, after consideration of NRC staff recommendations that address any comments provided by the Environmental Protection Agency and by the public.

#### Public Input

To provide ample opportunities for public comment, when the Commission receives a license termination or decommissioning plan, or a proposal for restricted release of a site or release using alternate criteria, the agency will publish a notice in the Federal Register. In addition, it will provide local

notification via a notice in local newspapers, letters to state or local organizations, or other appropriate means. It will also notify the Environmental Protection Agency, appropriate local and state governments and Indian Nations and solicit their comments.

Specific additional requirements for public input are described above for the restricted use and alternate criteria cases.

### Proposed and Final Rule

A proposed rule on this subject was published for public comment on August 22, 1994. The full text of the final rule and a description of specific changes made as a result of the comments received on the proposed rule, and additional NRC analysis, will be contained in a Federal Register notice to be published soon.

The Commission did not adopt a separate groundwater protection standard, as recommended by the Environmental Protection Agency. NRC agrees with the need to control exposures from drinking groundwater that is potentially contaminated and agrees that the environmental integrity of the nation's groundwater needs to be protected. However, NRC has concluded that protection of public health and safety in the use of this valuable resource is achieved by limiting exposure to persons from all potential pathways of exposure (i.e., radiation from the ground, eating food from soil or fish from surface water, inhalation of dust, etc.), including the groundwater pathway, to as far below 25 millirems per year as is reasonably achievable and that imposition of a separate standard for groundwater would not provide any significant enhancement of public health and safety and is therefore unnecessary.

Yesterday Shirley Ann Jackson, Chairman of the NRC, met with Fred Hansen, Deputy Administrator of the Environmental Protection Agency (EPA), to discuss the proposed final rule. At that meeting, she discussed the features of the rule, and NRC's position on the adequacy of the 25-millirems-per-year all pathways standard, the concept of "as low as is reasonably achievable" (ALARA) included in the NRC's rule, and the NRC's position that, in light of the all pathways standard and ALARA, there is no need for a separate groundwater standard. Hansen expressed EPA's interest in continuing discussions with NRC regarding timely notice to EPA of proposed NRC license termination in some specific categories of cases. The Commission has agreed to continue a dialogue with EPA following finalization of the rule.

The new cleanup criteria for decommissioning will not apply to sites already covered by a license termination or

decommissioning plan approved previously by the Commission or approved within 24 months of the effective date of the rule (which will be announced in the Federal Register).

The final rules that the Commission has promulgated will generally apply to most NRC licensees and to most licensees regulated by Agreement States (which are states that have assumed, by mutual agreement, part of the NRC's regulatory authority). An Agreement State may implement more stringent standards if it finds a need to impose such standards for local conditions.

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