National Organization of Test, Research, and Training Reactors

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Ar-41 and 10 CFR Part 20
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10 CFR 20.1101 (d)

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To implement the ALARA,…a constraint on air emissions…shall be established by licensees…such that the individual member of the public…will not be expected to receive a total effective dose equivalent in excess of 10 mrem (0.1 mSv) per year from these emissions.

Definitions

- “Constraint” (dose constraint) is defined as a value above which specified licensee actions are required.

- “Limits” (dose limits) is defined as the permissible upper bounds of radiation doses.

FR Vol. 61, No. 238 pg. 65123

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A violation occurs only when a licensee fails to report an exceedance or fails to take appropriate corrective actions. A limit would be appropriate if compliance were needed to ensure adequate protection of public health and safety. In this case, the constraint is needed only to ensure that currently afforded levels of protection are not reduced.

REGULATORY GUIDE 4.20

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…Enforcement action would occur only if a licensee fails to report an exceedance of the constraint or fails to take appropriate and timely corrective actions.

ANSI/ANS-15.1-2007 3.7.2 (3) "Effluents"

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…For the purpose of converting concentrations to dose…Appendix B… represents an annual dose of 50 mrem, except for submersion gases where the gases represent an annual dose of 100 mrem.…

REGULATORY GUIDE 4.20 C2. a

The concentrations of radionuclides limited by the stochastic ALI in Table 2, Column 1, would produce an annual dose of 0.5 mSv (50 mrem) to a reference adult … However, the concentrations of radionuclides limited by submersion dose in Table 2, Column 1 (mostly noble gases), would produce an annual dose of 1.0 mSv (100 mrem).

Conclusion

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- 10 CFR Part 20.1101 (d) is a constraint
- 10 CFR Part 20.1201 (a) is a limit
- 10 CFR Part 20.1301 (a) is a limit

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Questions??