

## RulemakingComments Resource

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**From:** Diane D'Arrigo <dianed@nirs.org>  
**Sent:** Thursday, October 01, 2015 9:48 AM  
**To:** RulemakingComments Resource  
**Subject:** [External\_Sender] NIRS Comments on 2014-0044 NRC 10 CFR 50 AppI Radioactive releases from nucleolar power reactors  
**Attachments:** NRC Docket 2014-0044 NIRS comments on 10 CFR 50 App I 10-01-15.pdf

Attached are NIRS comments on Docket 2014-0044 Radioactive Reactor Effluents

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Comments on  
Nuclear Power Reactor Radioactive Effluents (10 CFR 50 App I)  
Docket ID NRC 2014-0044  
[RIN-3150-AJ38]

Ideally the Nuclear Regulatory Commission (NRC) will make stricter release limits and enforce them. The most important bottom line on any changes to NRC regulations is to not backslide: Don't reduce public protection. Don't increase allowable radioactive releases, emissions, or effluents.

NRC is considering 2 options—keeping the regs as they are or “update” them to be more consistent with changes that have resulted in allowing increased amounts of radioactivity to workers and the public. NRC should also consider an option that would reduce radioactive releases and require real time, radionuclide specific monitoring and reporting of all radioactive effluents and releases. We would support such a 3<sup>rd</sup> option.

One of NRC's stated goals for a change to 10 CFR 50 App. I is to “update” the radiation standards but this unfortunately means that it would allow more radioactivity for many of the radionuclides released from nuclear power reactors. We oppose that.

NIRS is on record since the first 10 CFR 20 proposals to “update” those radiation standards in the late 1980s, and again in recent ANPR on 10 CFR 20 opposing legalizing increases in radioactivity in air, water and the environment. We call on NRC to reject any changes to 10 CFR 50 App I that will increase the radioactivity released from nuclear power, whether or not is more “consistent” with other regulations or international nuclear advocacy organizations such as ICRP.

When NRC adopted the 10 CFR 20 changes in 1991/1992, allowable radioactive concentrations to which workers could be exposed *increased* for over 2/3rds of the radionuclides, even though the occupational dose limits (average 5 rems/year) *stayed the same*. By changing the definitions dose units and dose calculations, from “rems” to the so-called “updated” “rems EDE or TEDE” (effective dose equivalent or total effective dose equivalent), nuclear workers legally could be exposed to higher of levels of most of the radionuclides. Some allowable concentrations went down or stayed the same but over 2/3 went up. For the public, even though the legal number of millirems per year went down from 500 millirems to 100 millirems EDE, the concentrations of allowable radioactivity in air and water increased for many of the radionuclides, because of the same clever calculations.

The calculation of doses is based on many assumptions and is not verifiable or enforceable. Nuclear industries and NRC can claim x or y dose but a person (often dubbed a “dose receptor” by the nuclear establishment) cannot prove what dose they actually receive. In addition each person is affected differently by given amounts of radiation, thus all standards must be adjusted to protect the most vulnerable and to protect the most vulnerable life cycle stage, the reproductive phase. All stages of the life cycle are always present thus the standards must be adjusted to assume exposures to women, children, babies, fetuses and genetic material.

Since much of 10 CFR 50 App I involves dose calculations, usually opaque, black box calculations, the rule change could easily legalize increased radioactive emissions from nuclear power. WE call on NRC to prevent this.

10 CFR 50 is used to set the set point monitors on releases from nuclear power reactors. We oppose changes “updated” or not that justify increasing those set points.

We call on NRC to require licensee-funded real time monitoring and public reporting.

NRC obviously needs to revisit the current assumption regarding the cost benefit criteria of \$1000 per total body man-rem and \$1000 per man-thyroid rem. The terms clearly reflect the flawed assumption that men represent the whole life cycle and whole population. And certainly health costs have changed in the decades since these questionable assumptions were adopted. The public must be involved much more on such moral and ethical valuations and how or if it is acceptable to apply them public protection regulations.

The best update NRC could provide is to reduce allowable releases, to enforce, verify and publicly report in real time both routine and non-routine radioactive releases into air, water and the environment with incentives to reduce and eliminate radioactive effluents.