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January 30, 2007 (11:59am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

**COMMENTS REGARDING THE BIOLOGICAL EFFECTS OF IONIZING
RADIATION ON THE DETERMINATION OF RELICENSING**

Docket No. **PRM-51-11**

38

Date: January 30, 2007
Subject: Amending 10 CFR Part 51.95

Citizens Awareness Network (CAN) supports the petition for rulemaking filed with the Commission by Sally Shaw, member of CAN and New England Coalition. The petition was published in the Federal Register on November 20, 2006. The petitioner requests that the NRC prepare a rulemaking that will require NRC reconcile its generic environmental impact statement for nuclear power reactors operating license renewal applications with current scientific understanding of the health risks of low-level radiation, including but not limited to those discussed in the National Academy of Sciences Health Risks From Exposure to Low Levels of Ionizing Radiation: Biological Effects of Ionizing Radiation (BEIR) VII Phase 2 Report.

CAN agrees with the petitioner that the NRC is not protecting the most vulnerable and that in doing so it is violating its mandate to protect the public health and safety. Since The National Academy of Science in its BEIR VII report found that no exposure to radiation is safe, it is essential that NRC protect the most vulnerable in the population not just adult, healthy males working in the nuclear industry. This "standard man" leaves large segments of the population unprotected. In fact, NRC ignores the most vulnerable including fetuses, infants and children, the aged, those in poor health, and women. These segments of the population are according to the BEIR VII report, 37- 50% more vulnerable than standard man to the harmful effects of ionizing radiation.

Given that relicensing provides an opportunity to take a "hard look" at the effects that relicensing would have on the environment under NEPA, the inclusion of the BEIR VII findings is essential to protect the public health and safety put at greater risk by an additional 20 years of operation. The applicable NRC regulation, 10 CFR 51.95(c), requires NRC, in determining whether to grant a renewal of a nuclear power reactor operating license, prepare an environmental impact statement (EIS).

BEIR VII found that cancer mortality risks for females are 37.5 percent higher. The risks for all solid tumors, like lung, breast, and kidney, liver, and other solid tumors added together are almost 50 percent greater for women than men, though there are a few specific cancers, including leukemia, for which the risk estimates for men are higher. (Summary estimates are in Table ES-1 on page 28 of the BEIR VII report prepublication copy, on the Web at <http://books.nap.edu/books/030909156X/html/28.html>.)

The report also found that the differential risk for children is even greater. For instance, the same radiation in the first year of life for boys produces three to four times the cancer risk as exposure between the ages of 20 and 50. Female infants have almost double the risk as male infants. (Table 12 D-1 and D-2, on pages 550-551 of the prepublication copy of the report, on the Web starting at <http://books.nap.edu/books/030909156X/html/550.html>)."

In addition CAN agrees with the petitioner that NRC does not consider the effects of internal radiation from ingested or inhaled alpha and beta emitters. NRC must consider radiation damage from inhaling or ingesting radionuclide. It is essential that NRC incorporate the BEIR VII findings into its rules and regulations and recognize that there is no safe dose and that exposure to low dose radiation has consequences, as the BEIR VII panel concluded, since "it is unlikely that a threshold exists for the induction of cancers... Further, there are extensive data on radiation-induced transmissible mutations in mice and other organisms. There is therefore no reason to believe that humans would be immune to this sort of harm."

Therefore CAN supports the petitioner's rulemaking request that NRC protect all members of the public from all types of excess radiation exposure from nuclear power and its fuel cycle, gamma, alpha, beta, neutron, particulate, fission products, noble gases, etc. and that measurement and monitoring should include all forms and pathways, not just gamma at the fence line.

Sincerely,

Deborah Katz
Executive Director
Citizens Awareness Network

From: Deb Katz <deb@nukbusters.org>
To: <SECY@nrc.gov>
Date: Tue, Jan 30, 2007 11:15 AM
Subject: Citizen Awareness Network Comments on PRM- 51-11

*Please find attached Citizens Awareness Network's Comments regarding

**Docket No. **PRM-51-11:*

* THE BIOLOGICAL EFFECTS OF IONIZING RADIATION ON THE DETERMINATION OF
RELICENSING*

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