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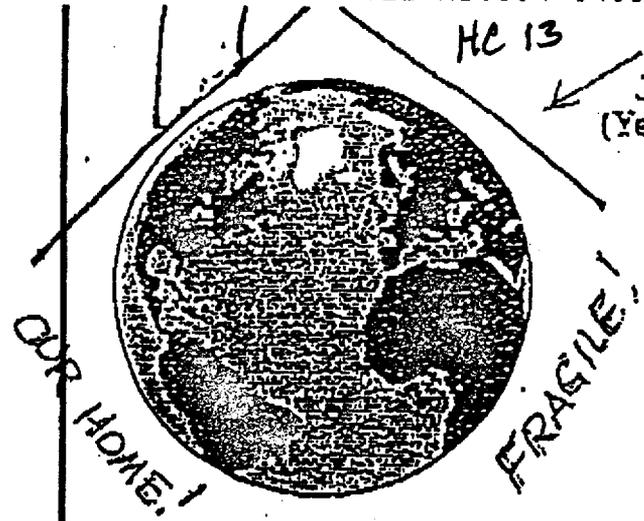
ERIDS - 03

Add Steve Koenick
SSK2

Raj Anand
RKA

ADM03

Template ADM03



Adapted from Boris Rogachevsky's
 Jan 1983 cover of Soviet Life Magazine
 (Year of "evil empire" and nuclear winter)

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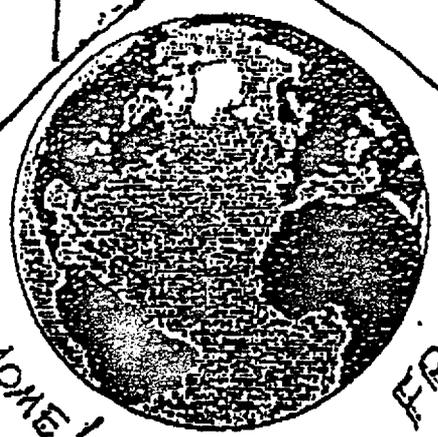
2213 Riverside Drive NE
 Grand Rapids MI 49503
 Email auncnuke@aol.com

#301-415-2234

STOP LICENSE EXTENSION
 OF ALL NUCLEAR PLANTS
 incl. Palisades (70 miles
 upwind of me & mine), which
 are dangerously old and
 embrittled - a scream risk

in pacifism
Corinne Carey
 and for Mike, Megan, Brandon, Lynd

*Pacifism terms dedicated to my 4---and all---grandchildren
 on Megan's first birthday Nov. 18, 1983



Adapted from Boris Rogachevsky's Jan 1983 cover of Soviet Life Magazine (Year of "evil empire" and nuclear winter)

to 1-301-415-2234
from
1-616-
361-7867
2213 Riverside Drive NE
Grand Rapids MI 49505
Email auntmike@aci.com
Oct. 16, 2000

Re: Nuclear license extensions
Please allow this more detailed letter beside my black marker version:

- ① Extend the comment period for wider public information and participation (though experience leads me to question if public is the futility so many cite).
- ② DO NOT extend nuclear plant licenses!! Palisades has been sited since 1981 as embrittled - and obviously aging daily ever since. An emergency scream could shatter crucial machinery & parts. How dare you make us involuntary guinea pigs?!!
- ③ DO comprehensive studies, such as the attached AND DECIDE BY PRECAUTIONAR PRINCIPLES!!
Onward (?!) - adelante / allon in pacism - heivap / pelam / M
Carnne Carey
and for Mike, Megan, Brandon and Lynda

*Pacism terms dedicated to my 4---and all---grandchildren on Megan's first birthday Nov. 18, 1983

reactor closed in 1989, significant decreases in mortality (all causes and from congenital anomalies) and cancer incidence were observed for fetuses, infants, and small children. These trends contrast with a worsening of infant health status after the plant opened in 1974. The data suggest that a relationship between nuclear emissions and adverse health effects exists, especially since fetuses and newborns are most sensitive to radiation. Because Rancho Seco released low levels of radionuclides into the local environment, the issue of health effects of prolonged, low-dose radiation exposure is raised. The matter becomes increasingly important as operators of several dozen aging U.S. reactors must soon decide whether to extend their operating licenses. *Environmental Epidemiology and Toxicology* 2000) 2, 32-36.

Keywords: cancer, infant health, infant mortality, nuclear reactors, radiation.



Introduction

From 1987 to 1998, utilities permanently closed 12 U.S. nuclear power reactors (U.S. Nuclear Regulatory Commission, 1999). No new orders have been placed since 1978, and thus, many units are aging; 36 of them began operations 25-30 years ago. Utilities running these units must soon decide whether to apply to the U.S. Nuclear Regulatory Commission for a new operating license or to close reactors.

To date, the principal issues associated with reactor closings have been waste management and plant decommissioning. Little consideration is given to health status among local residents. After the Partial Test Ban Treaty ended atmospheric atomic bomb testing in Nevada, and dietary levels of long-lived radioactive chemicals from fallout declined after peaking across the U.S. in 1964 (U.S. Public Health Service, 1968), progress in several infant health indicators accelerated. Long-term declines in fetal and infant mortality abruptly slowed during the atmospheric test era, but fell sharply thereafter (Whyte, 1992). The percentage of American babies born less than 2500 g, which rose 2% for whites and 35% for nonwhites from 1950 to 1966, plunged during the next decade (Mangano, 1998). Cancer incidence ages 0-4 in Connecticut, the only state with an established tumor registry, rose 61% from the early 1940s to the early 1960s before falling 24% in the first five years after the test ban (National Cancer Institute, 1986).

The fetus and infant are most susceptible to effects of radiation and other toxic chemicals. The developing fetus undergoes rapid cell growth, self-programmed cell death (apoptosis), and cell re-arrangement. The developing infant is similarly susceptible to cellular and metabolic damage. Unrepaired damage becomes magnified with time, increasing the risk of cancer, congenital malformations, underweight births, and fetal/infant deaths (Sherman, 1994).

Five of the 12 closed reactors are in areas at least 70 miles from any other nuclear power plant. In the first two years after closing, infant mortality rates in the closest counties downwind from the reactors fell 15 to 20% at each site (Appendix 1). The average U.S. two-year decline in infant mortality from 1985 to 1996 was 6.4%.

This report assesses potential health impacts of the closing of the Rancho Seco reactor (one of the five cited) on local fetuses and infants. Rancho Seco is located close to a highly populated area (25 miles southeast of Sacramento, California), making detection of significant trends more feasible. It had a large capacity of over 2700 megawatts (thermal), which could potentially affect the local population's health more than a small unit. No other nuclear reactor lies within 200 miles. It has been closed since June 7, 1989 (initial criticality began on September 16, 1974 and commercial operations on April 17, 1975), permitting a long-term analysis of subsequent health patterns to be made.

The opening of Rancho Seco corresponds with an increase of local *in vivo* radioactivity. Estimates of dietary intake of Strontium-90 in urban west (mostly San Francisco) adults were made from 1961 to 1982, based on

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(skipped 5 pages to shorten)