

From: Eleanor Gavin <elliegavin@comcast.net>
To: <VermontYankeeEIS@nrc.gov>
Date: Tue, Mar 13, 2007 6:37 PM
Subject: Fwd: comment on draft SEIS report, Mailstop T-6D59

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>To: VermontYankeeEIS@nrc.gov
>From: Eleanor Gavin <elliegavin@comcast.net>
>Subject: comment on draft SEIS report, Mailstop T-6D59

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>
>PO Box 215, East Charleston, VT 05833
>
>1-802-723-6621
>
>March 8, 2007
>

>Chief, Rules and Directives Branch
>Division of Administrative Services
>Mailstop T-6D59
>U.S. Nuclear Regulatory Commission
>Washington DC 20555
>

>I found time to reread this amended comment and made some changes
>which are highlighted in green. I keep learning more and more on
>the web. I found out that the highly respected Harvard Professor,
>Stephen J. Gould wrote along with Golding in the 1990s a book called
>Deadly Deceit. This proved beyond a shadow of doubt that
>radioactive, beta emitting isotopes that lodge in the body over a
>long time are, by far, the most powerful source of cancer causing
>radiation coming out of a reactor. That a short but high
>release, is less dangerous than a long term release such as we have
>with the huge quantities of tritiated water that have been released
>from the Illinois reactor and which was brought to the attention of
>the Atty. General of Illinois last summer (2006). It was said in
>papers I read that these releases of Tritiated water can well be
>frequent for many reactors and that it is a real problem that has to
>be addressed somehow. Does the VERmont Yankee have released of
>tritiated water?

>
>Design, Construction and Installation of the First
>U.S. BWR Off Gas System,
>Vermont Yankee
>

>As a consultant for the Yankee Atomic organization, NUCON evaluated
>processes for a permanent off gas system for the Vermont Yankee
>plant. The NUCON recommended system was chosen for permanent
>installation. However, before the system could be completed, it was
>necessary to install and operate an interim system in order to
>satisfy USNRC licensing requirements. NUCON was given the contract
>to design, site fabricate and install the interim system. The entire
>activity from project initiation to successful operation required
>only six months. NUCON also supplied the hardware and
>instrumentation for this project and performed startup services.
>This NUCON system withstood an earthquake, lightning strike and flood
>without significant damage.

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RULES AND DIRECTIVES
BRANCH
USNRC

6035E Review Complete
Template = ADM-013

E-RFDS = ADM-03
Add = R. Emsh (RLF)

>
>
>Dear Monsieur, le chef of Rules and Directives Branch,
>Dear Mr. Richard L Emch, Jr. , Senior Project Manager, Office of NRR,
>Dear Mr. Rani L. Franovich, Chief, Environmental Branch B, Division
>of License Renewal, Office of NRR,
>
>1. For your convenience, I attach my statement which was sent to
>you by overnight mail from Northern Vermont at noon, March 5,
>2007. I hope it got in on time. I have since done more research on
>the web and found a report about the levels in strontium 90 in
>teeth. If you would like to hear a synopsis of this and more recent
>reports, please go
>to: www.traprockpeace.org/tooth_fairy_project.html You will see a sentence:
>
>"Hear the interview, ready for radio use:
><http://www.traprockpeace.org/audio/mangano_radiation.mp3>MP3 audio
>- 18:56 minutes; 3.3 mb; or for dialup connections: Real Auto
>. Then click on Real Auto:
>
>2. Mr. Franovich, I gave my copy of the Institute for Energy and
>Environmental Research most recent newsletter entitled "Science for
>Democratic Action" If you want to read it on line, please to to:
>
><http://www.ieer.org/sdfiles/index.html>Volume 14, Number 4 (February 2007)
>
>Special Issue: Healthy from the Start: Building Better Environmental
>Health Standards [PDF 700kB] and especially see the excellent
>article on Tritium
>
> I am more and more convinced, the more time I spend
> googling, that all the reactors in the world must find ways to
> prevent tritium from escaping. Since the escapes were uncovered in
> Illinois last summer, it is evident that this is a weak point that
> an agency (the NRC) with mission to assure the safety and security
> of nuclear power plants, must pursue vigorously. If there is no
> adequate solution, these plants must not be relicensed and they
> should all decommission as soon as the grid they support has found
> through efficiency and alternative energies, ways to assure
> adequate supply to the customers.
>
> Tritium is hard to remove from emissions. There must be
> invented a cost effective way to remove it and isolate it from the
> environment for the 12.3 half life and double that. In fact it
> should be isolated from the environment for 250 years, or 20 half-lives.
>
> Women, embryos, fetuses, babies, toddlers and young
> children have more water per mass unit in their bodies than the
> 30 year old Caucasian male. Up until recently, since Tritium is a
> type of water, it was assumed that it would spread out equally in
> the body and thus the targeted ionization of cells in any specific
> organ of the body would be low. But it turns out that Tritium goes
> to areas where the percent of water that fills any given space is
> the highest. All human life evolved from the sea. The ova and
> embryo are filled with water, the fetus floats in water. The
> Tritium passes the placenta and enters these structures at one time

> or another of their development. Tritium isotopes have an affinity
> for the nuclei of cells and they lodge right near them,
> irradiating the DNA inside the nuclei. The DNA is
> damaged. Later, up to five to ten years later, the child can
> develop leukemia.

>

> As for the Strontium 90, that too is rising around
> reactors as statistics show. It lodges in teeth and near
> bones. The marrow of bones produces the cells (T cells, etc) that
> form the immune system. The immune system is the body's defense
> against colds, the flu, asthma, cancer, etc. If it is weakened,
> these diseases may be expressed, or in the case of colds and the
> flu.. there is less defense and once contracted less T cells to
> fight the infection. If the T Cell's DNA is affected, it is
> possible that these cells would attack functioning tissues as if
> they were the enemy, and this would manifest itself as one of the
> many horrible, chronic auto-immune diseases such as Multiple
> Sclerosis. I have not read the latter anywhere but it stands to reason.

>

> This opens the field very wide. Reactors are amazing
> things but unfortunately they are not cost effective and Wall
> Street knows this. They are being forced to operate longer to pay
> for their decommissioning and/or the safe storage of waste,
> etc. It seems right perhaps to have them run a bit longer, but
> only if you can be 100 percent sure that the emissions of Tritium,
> Strontium 90, radioactive Cesium and Iodine, etc. are prevented
> from being exhaled from the emission stacks. Is there a way this
> can be done?

>

>3. When reactors shut down the amount of leukemia in young children
> goes down.

>

>4. Here is the part that could well pertain to the Vermont Yankee
> and Strontium 90. even though it is based on other reactors. (
> Joseph Mangano and associates have had 21 peer reviewed articles
> accepted in scientific journals including Lancet.)

>

> I took the following from:

> International Journal of Health
> Services March, 2006

>

> A SHORT LATENCY BETWEEN RADIATION EXPOSURE FROM NUCLEAR PLANTS AND
> CANCER IN YOUNG CHILDREN

> Joseph J. Mangano, MPH, MBA

>

> I tried but could not cut and paste the graphs that went along with it.

>

> "The second part of this report examines the effects of radioactive
> emissions, as detected in the bodies of children. The average
> Strontium-90 concentration in baby teeth was measured for over 4,000
> American children, most residing near nuclear power plants. The
> ratio of Sr-90 per gram of calcium at birth in each baby tooth was
> measured in a radiochemistry laboratory, using a scintillation
> counting technique.

>

> Average Sr-90 concentrations were analyzed by the birth year of the

>tooth donor, since much of the Sr-90 uptake in deciduous teeth
 >occurs during pregnancy and early infancy. Temporal trends in Sr-90
 >averages were compared with trends in cancer incidence for children
 >under age ten in counties near nuclear plants with the largest
 >numbers of teeth. These plants include Suffolk County NY (near the
 >Brookhaven National Laboratories); Monmouth and Ocean Counties NJ
 >(near the Oyster Creek plant); and Putnam, Rockland, and Westchester
 >NY Counties (near the Indian Point plant). The correlation between
 >these two trends will be assessed using a Poisson regression
 >analysis testing the hypothesis that they are related. Linear and
 >quadratic correlations will be tested, using the actual value,
 >square root, and fourth root of Sr-90 averages.

>
 >The specific methodology to calculate Sr-90 concentrations for each
 >tooth has been described previously (66) (67). Teeth from Suffolk
 >County were analyzed using a Wallac WDY 1220X Quantulus low-level
 >scintillation spectrometer, while a Perkin-Elmer 1220-003 Quantulus
 >Ultra Low-Level Liquid Scintillation Spectrometer was used for other
 >teeth. In addition, the method used to clean teeth before testing
 >differed between Suffolk and other teeth; a more sophisticated
 >preparation for non-Suffolk teeth, plus use of a different counter,
 >allowed more Sr-90 to be detected. However, results for each area
 >are internally consistent, allowing Sr-90 patterns and trends to be analyzed.

>
 >Sr-90 results are compared with cancer incidence diagnosed in
 >children age 0-9 who resided in counties near nuclear plants at the
 >time of diagnosis. Cancer registries from the states of New Jersey
 >and New York provided counts of incident cases, while the U.S.
 >Census Bureau counts and inter-censal estimates for resident
 >population were used. Three-year moving averages, rather than
 >individual years, are used for both Sr-90 and cancer rates, to
 >increase statistical power of the comparison.

>
 >RESULTS

>
 >1. Three Mile Island

>
 >In the 34 downwind (north and northeast) counties closest to of
 >Three Mile Island, the SMR for cancer in children age 0-9 rose 23.8%
 >(0.87 to 1.08) from 1979-1983 to 1984-1988, the periods 1-5 years
 >and 6-10 years after the accident. The crude cancer mortality rate
 >age 0-9 in the 34 counties increased 3.6%, compared to a national
 >decline of 16.4%. Because the number of local deaths in each
 >five-year period (127 and 135) was relatively small, the rise in SMR
 >is of borderline significance at $p < .09$. (Table 4) While the SMR for
 >leukemia fell from 0.95 to 0.88, the ratio for all other cancers
 >combined rose from 0.83 to 1.17, statistically significant at $p < .03$.

>
 >Table 4

>
 >Change in Standard Mortality Ratio (SMR), Children Age 0-9
 >After the 1979 Accident, 1979-1983 vs. 1984-1988
 >34 Counties North/Northeast and Closest to Three Mile Island

>
 >SMR (Deaths)
 >Type of Cancer 1979-1983 1984-1988

>% Change SMR

>All Cancers Combined 0.87 (127) 1.08 (135) +23.8 p<.09

>Leukemia 0.95 (48) 0.88 (35) -6.8 p<.90

>All Other Cancers 0.83 (79) 1.17 (100) +41.0 p<.03

>Source: U.S. Centers for Disease Control and Prevention,

><http://wonder.cdc.gov>, underlying cause of death. Uses ICD-9 codes 140.0-239.9.

>

>2. Chernobyl

>

> From 1986-1990 to 1991-1995 (1-5 years and 6-10 years after the

> accident, the SMR for cancers age 0-9 in the 18 states with the

> most fallout from the Chernobyl accident rose from 0.97 to 1.06, a

> significant increase (p<.02). The crude cancer death rate age 0-9

> declined 6.6% in the 18 states, compared to a reduction of 14.0%

> elsewhere in the U.S. The SMR rise for leukemia (0.90 to 1.01)

> exceeded that for all other cancers (1.00 to 1.07). Neither

> increase achieved statistical significance (p<.10 and p<.13). (Table 5)

>

>

>Table 5

>

>Change in Standard Mortality Ratio, Children Age 0-9

>After the Chernobyl Accident (May/June 1986), 1986-1990 vs. 1991-1995

>18 States With Sites With Highest Average I-131 Measurements

>

>SMR (Deaths)

>Type of Cancer 1986-1990 1991-1995 % Change SMR

>All Cancers Combined 0.97 (1501) 1.06 (1466) +8.7 p<.02

>Leukemia 0.90 (434) 1.01 (422) +11.5 p<.10

>All Other Cancers 1.00 (1067) 1.07 (1040) +7.0 p<.13

>Source: U.S. Centers for Disease Control and Prevention,

><http://wonder.cdc.gov>, underlying cause of death. Uses ICD-9 codes 140.0-239.9.

>

>3. Counties Near Nuclear Plants (startup before 1982)

>

>The SMR for all cancers in children dying before their 10th birthday

>in the most populated 20 areas near nuclear power plants cited in

>the 1990 National Cancer Institute report increased, for 17 of the

>20 areas, from 1-5 to 6-10 years after plant startup. Table 6 shows

>the total Standard Mortality Ratio rose from 0.99 to 1.18.

>

>Because of the large number of deaths in each period (587 and 590),

>the change was statistically significant at p<.003. Only one of the

>20 changes near individual plants (Shippingport) was statistically

>significant. The increase in SMR for leukemia (1.00 to 1.22)

>exceeded that for all other cancers (0.98 to 1.15). Both increases

>achieved statistical significance (p<.03 and p<.05, respectively).

>

>Thank you for adding this comment to the one you received by mail.

>I thank you for all you do to keep the nuclear plants as safe as

>possible, and where found impossible, to decommission them and

>provide for the long term isolation from the environment, which

>basically means all contact with water and even in some instances air.

>

>Sincerely,

>

>Eleanor I. Gavin
>RN retired,
>
>PS..I am a mother and grandmother. I am the wife of Dr. Paul H.
>Gavin, retired nuclear engineer for
>Combustion Engineering/AseaBrownBoveri/Westinghouse, in Windsor,
>Connecticut.
>
>PPS We are the parents of three Professors: civil and environmental
>engineering at Duke; researcher, in molecular biology in the field
>of immunology, specifically Rheumatoid Arthritis, at AmGen, in
>Seattle; and paleo-ecologist at the Univ. of Oregon in Eugene,
>OR. Our second son has Ryder's Syndrome, an auto immune disease and
>our third son's wife has cherubism, a genetic disease of the jaw
>bone which continues to grow and may need an operation if it presses
>on veins and nerves. Both these diseases, as far as we can find
>out, never existed in the parents or ancestors of these, our
>children. The couple with Cherubism will not have children because
>it was so hard for our daughter in law growing up and they do not
>want to inflict this on any human being. She is now an OB - GYN and
>enjoying caring for mothers and delivering babies. All three sons
>and their wives are interested in seeing the reactors being
>decommissioned unless the statistics can be ameliorated and unless
>they are allowed to have independent assessments of their
>engineering, their safety and their security on a regular
>basis. They and we understand that an Agency, must have guide
>lines, but this is a Democracy and people have a right to demand
>independent oversight, hear both sides and decide on their own if
>they want to see these old reactors to be pushed to 120% more power
>and to be pushed beyond their original licensing period.
>
>PPPS That reminds me. Both Paul and I are curious what you mean
>when you said at the meeting in the Montpelier Pavillion Bldg. that
>the original licensing was made "short" i.e. 40 years for economic
>and anti-trust reasons, that they are really constructed to run for
>60 years, on average.
>
> PPPPS Our whole family is grateful for Paul's gainful employment
> in this area, which would not have been possible without the
> devotion and indefatigable efforts by nuclear engineers to exploit
> this type of energy, as responsibly as they could. But now we
> would like them to be put to bed as soon as possible. Maybe in a
> century or so there will be new way of handling ionizing
> radiation. Adult males do tolerate well a certain background
> level, but we are finding for -- women, ova, embryos, fetuses,
> babies, toddlers and children -- that going beyond that in a
> targeted area of the body, i.e. receiving low level beta radiation
> over a period of time is extremely dangerous and should be avoided
> at all costs. Women now have a 58% greater chance of coming down
> with cancer.. One of 8 women contract breast cancer.. both of these
> are very substantial increases and they happened in a time span of
> a few decades, I believe. I think it is only over the past 4
> decades that this kind of epidemiology has been done so assiduously.
>
>I realize there are other factors, mainly hazardous substances, some
>are even natural, that depress the immune system and make a body

>more sensitive to cancer. I realize that people are getting
>radiation if they fly a lot. But all those areas have to be addressed too.
>

Mail Envelope Properties (45F7278C.74C : 10 : 34636)

Subject: Fwd: comment on draft SEIS report, Mailstop T-6D59
Creation Date Tue, Mar 13, 2007 7:36 PM
From: Eleanor Gavin <elliegavin@comcast.net>

Created By: elliegavin@comcast.net

Recipients

nrc.gov
TWGWPO03.HQGWDO01
VermontYankeeEIS

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nrc.gov

Files	Size	Date & Time
MESSAGE	17074	Tuesday, March 13, 2007 7:36 PM
TEXT.htm	22658	
Illinois TRITIUM SUIT.doc	34816	
Mime.822	89752	

Options

Expiration Date: None
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard

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Junk Mail settings when this message was delivered

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Junk Mail handling disabled by Administrator
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Junk Mail using personal address books is not enabled
Block List is not enabled