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BEST/MATRR
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May 7, 2015

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Re: Nuclear Effluent Release, Refueling, and Online Monitoring Transparency

Dear TVA Directors:

Today we would like to address a readily solvable issue of transparency and nuclear pollution. You may or may not know that our group began a campaign to Make Radiation Visible last year.[1] We presented our proposals to four NRC Commissioners and three EPA Directors, and are currently writing a Petition for Rulemaking. It would certainly speak well for the TVA if you took the lead in implementing these simple safeguards to help ensure the safety and health of people living near nuclear power plants.

TVA has a planned schedule of routine radioactive releases into our environment – nuclear effluents regularly released into both our air and water. We ask that you post on your website the release schedules for each reactor. Connecticut has already implemented a law requiring this posting of radioactive release schedules, and TVA could be a guide for power companies across the nation to protect the public by providing accurate information about nuclear waste release schedules. This would be a simple task, requiring only a page on the TVA website. The Connecticut law reads: "Licensees shall post on their web sites all plans for routine and continuous releases of radiation to the atmosphere, including dates, times and fissile materials, as soon as such releases are scheduled." [2]

We also ask that you post your schedules for refueling, since it is estimated that half of our annual exposures to radionuclides happen during the short periods of refueling every 12 to 18 months. "People near and downwind from nuclear power stations may be exposed to higher exposures during these emission spikes than from releases during the rest of the year: estimates range from 20 to 100 times higher." [3] This also would be a simple posting of refueling dates on the same effluent release schedule website page.

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[1] BEST/MATRR, Make Radiation Visible campaign, 2012-2015. http://www.makeradiationvisible.org

[2] State of Connecticut, House Bill No. 5329, *Public Act 08-20: An Act Concerning Radiation Releases*, approved April 29, 2008. http://www.cga.ct.gov/2008/ACT/PA/2008PA-00020-R00HB-05329-PA.htm

[3] Fairlie, Ian, "A hypothesis to explain childhood cancers near nuclear power plants," *Journal of Environmental Radioactivity*, 133 (2014) 10e17, pg. 13. http://dx.doi.org/10.1016/j.jenvrad.2013.07.024

Our third request today also addresses the lack of transparency about exposures to nuclear waste. We ask that you go online to the public with your real-time plant monitors. Since they are already online to the State Health Departments, it should be a fairly simple task to put them online for the public. This also would not be a breach of security, since it is simply monitoring the plants' existing ambient radiation. Eventually, we would like to see your more extensive, though antiquated, carbon filter monitoring system replaced with modern real-time online radionuclide monitors.[4] These monitors provide cost-effective and accurate means of monitoring plant perimeters and surrounding communities and would provide greater security and instant information.

Currently, the Nuclear Regulatory Commission only requires annual reporting of quarterly averages – so it can be well over a year before the public sees these averaged radiation release figures. This method of averaging is also highly mis-leading. It's like putting one foot in the fire and the other in ice and saying you're just fine on average in the middle.

Government Studies of Childhood Leukemia Near Nuclear Plants

Table 1
Studies of observed (O) and expected (E) leukemia cases within 5 km of NPPs.

Dataset	O	E	SIR = O/E	90%CI	*p*-value
Germany	34	24.1	1.41	1.04–1.88	0.0328
Great Britain	20	15.4	1.30	0.86–1.89	0.1464
Switzerland	11	7.9[a]	1.40	0.78–2.31	0.1711
France[b]	14	10.2	1.37	0.83–2.15	0.1506
Pooled data	79	57.5	1.37	1.13–1.66	0.0042

[a] derived from data in Spycher et al. (2011).
[b] acute leukemia cases.

A significant majority of peer-reviewed studies have found children and pregnant women living near nuclear power plants have increased risks of cancer, birth defects, miscarriages and infant deaths. The table at left shows results from four major government studies, all with similar findings of more childhood leukemia near nuclear power plants. We ask TVA to protect our valley residents with accurate and timely information about radioactive releases into our environment – so families can choose to protect their children simply by keeping them indoors on scheduled nuclear release and refueling days.[5]

We do hope you read our 2013 study (presented to you), which revealed significant health issues in the counties downwind of the Browns Ferry Nuclear Power Plant, only 28 miles from Huntsville's city center where we are now. Data from the National Cancer Institute (NCI - published every five years) and the Centers for Disease Control and Prevention (CDC) showed that the downwind death rate before Browns Ferry began operating was 1.7% above the national average, and the rate has steadily risen to a 2010 rate of 20.5% higher than the national average [6] That is more than a ten-fold increase in local mortality compared to the rest of the country.

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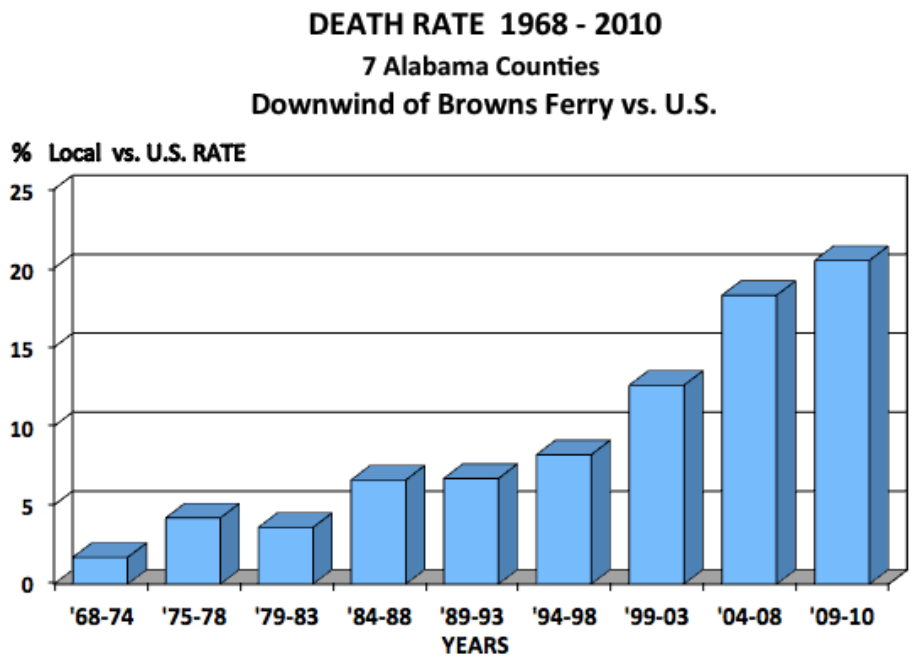
[4] International Medcom, Inc., "Hawk EMS Monitoring System", https://medcom.com/product/hawk-ems-monitoring-system/

[5] Fairlie, Ian, "A hypothesis to explain childhood cancers near nuclear power plants," *Journal of Environmental Radioactivity*, 133 (2014) 10e17, Table 1, p. 11. http://dx.doi.org/10.1016/j.jenvrad.2013.07.024

[6] Joseph Mangano and Gretel Johnston, *Radioactive Emissions and Health Hazards Surrounding Browns Ferry Nuclear Plant in North Alabama, BEST/MATRR,* Candel Publishing, LLC, June 4, 2013, pgs. 30-31. http://best-matrr.org/pdfs/AL_BFN_Report_2013-final-dig2.pdf

Also, since Browns Ferry began operations, the study found an alarming rise in infant mortality to 21.6% above the rate in average U.S. communities – and this excess is even higher for Hispanics at 40.3% and for whites at 32.6% above the national infant death rate in these Browns Ferry downwind counties.[7]

There may be other factors involved here, such as chemical and/or multiple pollutants; but there is clearly a health problem in the Tennessee Valley that needs to be studied and addressed with solid science and public health actions. Because we know that radioactive waste could be a culprit, it makes sense for TVA to act immediately to address this problem by providing accurate and timely information that could help protect valley residents.



Young lives, as well as public trust, are at stake here. If TVA continues to adhere to the current NRC regulations, which distort the figures on actual nuclear waste releases by averaging radioactive effluent releases quarterly and only reporting annually, and if TVA continues treating real-time radiation levels as private information only available to Emergency Services – then the public will be hard-pressed to trust your information or your intent to protect residents from highly toxic nuclear waste.

We ask that you fulfill your mission to benefit the people of the valley by providing accurate and timely information for public health and safety – simply by posting your routine effluent release and nuclear refueling schedules and your real-time monitoring information online for the public.

Thank you for your consideration of our requests and for your service to the people of the valley.

Sincerely,

Gretel Johnston
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Mothers Against Tennessee River Radiation (MATRR)
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[7] Ibid, Mangano and Johnston, pgs. 28-30.