

VOGTLE_LR_EIS Resource

From: Odiejoe@aol.com
Sent: Wednesday, July 16, 2008 10:39 AM
To: VOGTLE_LR_EIS Resource
Subject: Comments on Vogtle EIS
Attachments: Vogtle letter to NRC, July 2008.doc

Dear Sir/Madam: Attached please find comments to the Vogtle EIS, due today (July 16). Please acknowledge receipt.

Thank you,
Joseph Mangano MPH MBA
Executive Director
Radiation and Public Health Project

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Washington DC 20055

By Email Vogtle_LR_EIS@nrc.gov

July 16, 2008

Dear Sir/Madam:

On behalf of my colleagues at the Radiation and Public Health Project (RPHP), please accept the following comments on the Environmental Impact Statement for the proposed new nuclear reactors at the Alvin Vogtle plant.

My comments are focused on the health risks of the proposed new reactors that were either not addressed or minimized in the draft EIS statement. Moreover, our statement is unique, as they are based on official data on radioactive contamination and health status.

Based on the following, we believe that new nuclear reactors would pose a serious health risk for local residents around Vogtle:

1. Releases of airborne radioactivity vary, and have greatly exceeded minimal levels. Releases during 2001-2004 from Vogtle 1 are about 10 times greater than from Vogtle 2. Releases in 1992 were over 1000 times greater than in 1987 or 1988 (Tables 1 and 2).

2. From 1987-1990 (as Vogtle began operating) to 1991-2003 (during full operation), average radioactivity levels in drinking water, river water, and sediment downriver or at the Vogtle plant rose (also see Table 3):

Beta in Raw Drinking Water	+ 37.1%
Beta in Finished Drinking Water	+ 17.8%
Beryllium-7 in Sediment	+ 39.5%
Cesium-137 in Sediment	+ 37.4%
Tritium in River Water	+ 44.6%

3. From 1987-1990 to 1991-2003, the cancer death rate for children age 0-24 in Burke County rose 55.5%, vs. a 14.1% decline nationally. The Burke cancer death rate age 25-54 rose 55.1% vs. a 2.9% national decline (Table 4).

4. From 1985-1987 to 1988-1990, as the Vogtle reactors began operating, infant deaths in Burke County rose from 16 to 28, a 70% rise, compared to a 7% U.S. decline (Table 5).

5. From 1979-87 to 1988-2003, the Burke County infant death rate rose 19%, compared to a 30% decline nationally. Thus, the infant death rise in the late 1980s was not a fluke, but the start of a statistically significant change. Increases were significant for all races, blacks, and whites (Table 6).

6. From 1987-1990 to 1991-2003, the cancer death rate in Burke County GA rose 25.1% vs. a 4.2% national decline. Increases were statistically significant for both whites (+17.5%) and blacks (+30.7%), see Table 7.

These data suggest that Vogtle emissions have increased radioactivity levels in the local environment. They also suggest that radioactivity has caused unexplained increases in local mortality rates.

Findings should be considered in the context of Burke County as a high-poverty and high-minority area (Table 8). Populations with inadequate health care coverage have reduced access to needed care; thus, adding a carcinogen to bodies of local residents (through breathing and the food chain) may result in an increased health risk. In addition, the addition of new pollutants (reactors) in a county with a disproportionate percent of African-Americans amounts to environmental injustice.

The fact that the EIS ignores the above data means that it is an incomplete document. Thus, we strongly recommend that the NRC not approve licenses for new reactors at Vogtle, until the above information has been thoroughly examined and the true risks of nuclear power at Vogtle has been understood and related to the public.

Sincerely,

Joseph J. Mangano MPH MBA
Executive Director
Radiation and Public Health Project

Table 1
Annual Airborne Emissions from Vogtle Nuclear Plant, 1987-1993

<u>Year</u>	<u>Microcuries</u>
1987	20
1988	18
1989	1250
1990	85
1991	2080
1992	5870
1993	521

Source: Tichler J, Doty K, Lucadamo K. Radioactive Materials Released from Nuclear Power Plants. NUREG/CR-2907. Upton NY: Brookhaven National Laboratory, prepared for the U.S. Nuclear Regulatory Commission, Annual Report 1993. Represents Iodine-131 and particulates, all airborne releases of particulates with a half life of at least 8 days. (Annual reports that listed all U.S. reactors ceased in 1993).

Table 2
Gaseous Emissions, Fission and Activation Products
From Vogtle Nuclear Plant, 2001-2004, in Curies

<u>Year</u>	<u>Vogtle 1</u>	<u>Vogtle 2</u>
2001	12.13	0.42
2002	23.89	2.36
2003	1.68	0.64
2004	0.64	1.31
TOTAL	38.34	4.73

Source: U.S. Nuclear Regulatory Commission, www.reirs.com/effluent

Table 3

Trends in Environmental Radioactivity Levels Near Vogtle, 1987-1990 to 1991-2003

<u>Type of Radioactivity</u>	<u>Annual Avg. 1987-1990</u>	<u>Annual Avg. 1991-2003</u>	<u>% Ch</u>
Beta in Raw Drinking Water			
- Indicator (downriver) ¹	2.583	3.540	+ 37.1%
- Control (upriver) ²	3.535	3.202	- 9.4%
Beta in Finished Drinking Water			
- Indicator (downriver) ¹	2.205	2.597	+ 17.8%
- Control (upriver) ²	2.113	2.230	+ 5.6%
Beryllium-7 in Sediment			
- Indicator (at Vogtle) ³	930.5	1297.8	+ 39.5%
- Control (off site) ⁴	578.3	1229.8	+112.7%
Cobalt-60 in Sediment			
- Indicator (at Vogtle) ³	51.33	138.3	+169.5%
Cesium-137 in Sediment			
- Indicator (at Vogtle) ³	192.3	264.2	+ 37.4%
- Control (off site) ⁴	137.8	112.5	- 18.3%
Tritium in River Water, avg. 6 sites	744.9	1077.3	+ 44.6%

¹Beaufort/Jasper County Water Treatment Plant, Beaufort SC, 112 mi downriver, plus Cherokee Hill Water Treatment Plant, Port Wentworth SC, 122 mi. downriver. ²Augusta Water Treatment Plant, Augusta GA, 56 mi. upriver. ³Savannah River, 0.8 mi. ENE of Vogtle plant. ⁴Savannah River, 2.5 mi. N of Vogtle plant. Beta and tritium in picocuries per liter, others in picocuries per kilogram dry. Source: Vogtle Electric Generating Plant Annual Radiological Environmental Operating Report for 2005, www.nrc.gov.

Table 4

Change in Cancer Death Rate, Burke County vs. U.S. 1987-1990 to 1991-2003

Age 0-24

<u>County</u>	<u>Cancer Deaths</u>		<u>Population 0-24</u>		<u>Deaths/100000</u>		<u>% Ch</u>
	<u>'87-90</u>	<u>'91-03</u>	<u>'87-90</u>	<u>'91-03</u>	<u>'87-90</u>	<u>'91-03</u>	
Burke GA	1	5	36207	116431	2.76	4.29	+55.5%
United States					4.33	3.72	- 14.1%

Age 25-54

<u>County</u>	<u>Cancer Deaths</u>		<u>Population 25-54</u>		<u>Deaths/100000</u>		<u>% Ch</u>
	<u>'87-90</u>	<u>'91-03</u>	<u>'87-90</u>	<u>'91-03</u>	<u>'87-90</u>	<u>'91-03</u>	
Burke GA	15	84	30919	111666	48.5	75.2	+55.1% p<.01
United States					59.0	57.3	- 2.9%

Source: National Center for Health Statistics, <http://wonder.cdc.gov>, underlying cause of death. Uses codes for all cancers; ICD-9 codes 140.0-239.9 (until 1998), and ICD-10 codes C00-D48.9 (after 1998).

Table 5
Change in Infant Death Rate (under 1 year)
Burke County vs. U.S., 1985-1987 to 1988-1990

<u>County</u>	<u>Rate/100000 (Deaths)</u>		<u>% Ch. Rate</u>	
	<u>1985-87</u>	<u>1988-90</u>		
Burke GA	13.71 (16)	23.31 (28)	+70.1%	p<.06
U.S.	10.36 (117329)	9.66 (116916)	- 6.8%	

Source: National Center for Health Statistics (<http://wonder.cdc.gov>, underlying cause of death).

Table 6
Change in Infant Death Rate (under 1 year), by Race
Burke County vs. U.S., 1979-1987 to 1988-2003

<u>Race</u>	<u>United States</u>	<u>Burke County</u>	
	<u>Rate/100,000 (Deaths)</u>	<u>Rate/100,000 (Deaths)</u>	
All			
1979-1987	1132.9 (374433)	1164.4 (42)	p<.002
1988-2003	799.0 (507571)	1382.2 (86)	
% Change	- 29.5%	+18.7%	
White			
1979-1987	973.7 (260243)	455.9 (6)	p<.03
1988-2003	661.1 (330750)	744.6 (17)	
% Change	- 32.1%	+63.3%	
Black			
1979-1987	2017.9 (104439)	1576.9 (36)	p<.04
1988-2003	1549.9 (159045)	1755.3 (69)	
% Change	- 23.2%	+11.3%	

Source: National Center for Health Statistics (<http://wonder.cdc.gov>, underlying cause of death).

Table 7
Change in Death Rate, All Ages Combined, by Race
Cancer and All Other Causes of Death, 1987-1990 to 1991-2003
Burke County vs. U.S.

Area	Burke Deaths		Burke Rate/1000		US Rate/100000		% Ch Rate	
	'87-90	'91-03	'87-90	'91-03	'87-90	'91-03	Burke	U.S.
Cancer – All	135	570	185.0	231.5	216.6	207.6	+25.1	- 4.2
Cancer - White	73	310	190.3	223.5	212.4	204.5	+17.5	- 3.7
Cancer – Black	62	260	185.0	241.7	277.3	261.6	+30.7	- 5.7
Other Causes – All	701	2317	971.6	929.1	741.5	675.8	- 4.4	- 8.9
Other Causes – White	319	1130	894.3	863.0	717.3	655.7	- 3.5	- 8.6
Other Causes – Black	382	1186	1083.3	1042.1	988.9	894.2	- 3.8	- 9.6

Source: National Center for Health Statistics, <http://wonder.cdc.gov>, underlying cause of death. Uses codes for all cancers; ICD-9 codes 140.0-239.9 (until 1998), and ICD-10 codes C00-D48.9 (after 1998). Burke County cancer rate increases are significant at $p < .00001$ (all), $p < .02$ (white), and $p < .0002$ (black). Rates adjusted to 2000 U.S. standard population.

Table 8
Demographic Characteristics, Burke County vs. U.S.

Category	Burke	U.S.
2005 est. population	23299	296M
2000 population	22243	281M
2003 % below poverty	21.7	12.5
2004 % black	51.1	12.8
2004 % Hispanic	1.6	14.1
2004 % Asian	0.3	4.2
2000 % High School grad	64.9	80.4
2000 % College grad	9.5	24.4

Note: Percent high school and college graduates are for adults over age 25. Source: U.S Bureau of the Census, www.census.gov, your gateway to the 2000 census, state and county quick facts.