

# Blue Ridge Environmental Defense League

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## Why We Oppose the Expansion of Plant Vogtle

Residents living near Plant Vogtle have formed Shell Bluff Concerned Citizens, a chapter of the multi-state Blue Ridge Environmental Defense League. Our members include people who live and work in Burke County and for decades have witnessed the operation of two nuclear reactors at Plant Vogtle. Now Southern Company wants to build two more. Here are some of the reasons we oppose the expansion of Plant Vogtle.

### Plant Vogtle's Radioactive Pollution of the Water and Air

There are routine releases of airborne radioactive pollution from plant Vogtle, and large increases in radioactivity downstream from the plant. Even without an accident, Vogtle emits radioactive pollution during normal operation.

Every year, radioactive water in the form of Tritium is emitted by Plant Vogtle into the river. In 2003, Vogtle's pollution was 1,900 curies; in 2004, 1,200 curies and in 2005, 1860 curies.<sup>1</sup> The discharge of Tritium (Hydrogen-3) in the form of radioactive water pollutes the Savannah River all the way to the ocean. Downstream drinking water wells are also contaminated.

Residents of Beaufort, SC (112 miles downriver) and Port Wentworth, SC (122 miles downriver) have had their public drinking water supplies contaminated with radiation.<sup>2</sup> Other radioactive pollutants, including Cesium-137 and Cobalt-60, have also increased downstream from the Vogtle reactors since they began operation.

The two existing reactors at Plant Vogtle discharge 10,000 gallons of liquid waste per minute into the Savannah River.<sup>3</sup> The everyday discharge of hot water includes nuclear fission products and tritium at over 1,400 curies/year. Two new proposed reactors would increase this radioactive pollution by an additional 2,020 curies per year.

### Radionuclide Emissions Indicates Harm to Public

There is no safe level of radiation. Meeting federal regulations does not make a nuclear plant safe.

Chronic exposure to fairly low-levels of beta radiation can cause cancer. Cesium-137 and Cobalt-60 emit both beta and gamma radiation. Exposure to beta radiation via inhalation or ingestion can cause tissue damage and increase the risk of cancer.

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<sup>1</sup> Westinghouse Savannah River Company Environmental Reports: 2003, 2004, 2005, WSRC-TR-2004-00015, WSRC-TR-2005-00005, WSRC-TR-2006-00007

<sup>2</sup> Beaufort/Jasper County Water Treatment Plant and Cherokee Hill Water Treatment Plant recorded 17% increase in beta radiation in finished drinking water and 37% increase in beta radiation in raw water supply.

<sup>3</sup> Sources: SNOG Vogtle ESP ER Table 2.9-1; Table 3.0-1; Table 3.5-1

Gamma rays travel great distances and can penetrate most barriers. It is considered the primary hazard to the general population during most radiological emergencies.

Local residents depend on the Savannah River for fish to feed their families. Radiological monitoring reveals that Savannah River fish are contaminated with Cesium-137.<sup>4</sup> Tests in the vicinity of Plant Vogtle routinely find Cesium-137 in the edible parts of fish.

Radioactive Cesium-137 is of particular concern because levels actually increase when fish is cooked.<sup>5</sup> One study found that cesium levels increase by 32% when fish are fried with breading, and by 62% when fried without breading.<sup>6</sup>

A study conducted by the University of South Carolina has shown that there is a higher than average instance of cervical cancer in black women, and a higher rate of esophageal cancer in black men, within a fifty mile radius of Plant Vogtle.<sup>7</sup> Some people blame the old atomic bomb plant at Savannah River Site, which lies just across the River from Burke County, but Georgia EPD monitoring indicates much of the radioactive pollution comes from the two nuclear reactors at Plant Vogtle.

Studies of U.S. Centers for disease Control and Prevention data indicate that the death rate per 100,000 population from all cancers in Burke County increased by 24.2% and that infant deaths increased by 70.1% in Burke County after the Plant Vogtle reactors went online.<sup>8</sup>

Irradiated fuel is a waste product of all nuclear reactors. This high-level radioactive waste would have to be stored at the Vogtle site for decades even after the reactors cease to operate, and perhaps indefinitely. There is no place for this radioactive waste to go.

## **This is Why We Oppose the Expansion of Plant Vogtle**

What could be causing the plague in our community? Is it the old bomb plant, which closed its reactors years ago, or is it the Vogtle reactors which continue to operate? Is there some other cause? If so, what is it? It is imperative that before any additional nuclear power plants are constructed, state and federal agencies must determine the cause.

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<sup>4</sup> *Vogtle Electric Generating Plant, Annual Radiological Operating Report for 2005*, Southern Company (2006).

<sup>5</sup> Joanna Burger, et al., *Effects of Cooking on Radiocesium in Fish from the Savannah River: Exposure Differences for the Public*, Arch. Environ. Contam. Toxicol. 46, p. 231, 2004. (Exhibit 2.6).

<sup>6</sup> *Id.* The weight loss during cooking of a breaded fish was 25% and the weight loss of an un-breaded fish was 39%.

<sup>7</sup> 1997 FEB 3, Cancer Weekly via NewsRx.com & NewsRx.net (Exhibit 2.7).

<sup>8</sup> U.S. Centers for Disease Control and Prevention ICD-9 codes 000.1-799.9 (<http://wonder.cdc.gov>)