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To Whom It May Concern,

This letter was written in response to an editorial by Ernest Sternglass, PhD published in the Pittsburgh Post-Gazette on Sunday 16 December 2007. The letter sums up my thoughts concerning the Beaver Valley EIS, so I am forwarding it to you to be entered in the docket. Thank you for your consideration.

In his editorial "Trade Nukes for Gas" (PG, Sunday 16 December 2007), Ernest Sternglass, PhD argues that nuclear power is dangerous and that the Beaver Valley reactors operated by First Energy Corp. in Shippingport PA should be shut down and converted to natural gas.

Dr. Sternglass is a dedicated professional in the field of health physics, and has been studying the effects of radiation for over 60 years. While I have the utmost respect for Dr. Sternglass, I must disagree with his position, and I am certainly not alone. I worked as a health physics technician at the Shippingport and Beaver Valley power stations between 1980 and 1985. During that time I joined the Health Physics Society, a group (of which Dr. Sternglass is a member) consisting of professionals from industry, government, and academia world wide representing all disciplines associated in some way with radiation. For 14 years I perused the papers presented in the monthly journals, and it led me to a number of conclusions. The first is that radiation is more thoroughly studied than any other potentially hazardous agent of interest to man. Second, the vast majority of Dr. Sternglass' peers disagree with his views. The overwhelming majority of papers indicated no discernable link between low levels of radiation and cancer or other ill effects. A few actually concluded that low levels of radiation are beneficial or even essential to life. Only substantial exposures i.e., Chernobyl, Hiroshima, or industrial accidents have created an observable, measurable risk to humans.

The fact of matter is that studies can be influenced, deliberately or inadvertently, to give the results the investigator wishes to see. That is the basis of the peer review process. While I would never suggest that Dr. Sternglass would deliberately influence a study, I am certain that at some point over the last 60 years there would be at least some reasonable level of concurrence with Dr. Sternglass' conclusions. In case after case, independent studies have failed to verify or repeat many of his conclusions.

As far as releases of radioactive materials from commercial nuclear plants are concerned, the quantities and type of material released are very carefully documented and the material is either allowed to decay prior to release or heavily diluted during release. The isotopes released generally are low level emitters and of short half life. Contrast this careful monitoring and documentation to hospitals and other medical users of radioactive materials. In a hospital, a patient will receive a dose of a radioactive isotope and subsequently "release" it into a commode where it enters the waste stream without any accounting or monitoring. The amount of radioactive material used for medical purposes is considerable, and once again, its disposition after administration is not considered or controlled in any way. Dr. Sternglass specifically mentions Strontium 90 in his editorial, an

isotope generally not released by an operating power plant. As far as the alleged increased cancer rates found within 50 miles of Beaver County, I would argue that the materials released from 100 years of unregulated industrial pollution from chemical, steel, and heavy metal smelting plants (to name just a few) would be far more likely to cause cancer and other illnesses than radiation.

Concerning the construction and operation of the actual plants, I can speak of my experiences as an operator at the Beaver Valley plant(s) between 1985 and 1991. The original Shippingport power station was jointly operated by the Navy and Duquesne Light Co. As such, its operation fell under the control of the legendary Admiral Rickover, who demanded nothing less than excellence. The conduct of operations instilled in those early days carried over to the Beaver Valley plant, and professionalism and rigid adherence to procedure and protocol was reflected on a daily basis. Believe me, you would never find someone sleeping in the control room at Beaver Valley. The training program was very thorough as well, and there was always a sufficient complement of personnel on site to deal with any situation that might present itself.

As I was present during the construction, start up, and operation of Unit 2, I saw first hand the quality being built in to that plant from the early stages. The reactor containment building, for example, consists of a welded steel pressure vessel encased in 4+ feet of concrete. The reinforcing rods within the concrete were as thick as a linebacker's arm, welded together, and packed in so tightly that you could hardly see through them to the other side. That building was supposedly designed to withstand the impact of a Boeing 707, and as someone who has witnessed first hand the aftermath of a major aircraft accident, I have no doubt that it could. As far as terrorist attacks are concerned, I have been told by commercial pilots that it would take a very experienced pilot indeed to even hit the containment building at high speed, as the dome is only about 110 feet high and the same diameter.

As far as the possibility of a catastrophic accident is concerned, you can forget about the "China Syndrome." We already had a meltdown in a US reactor...Three Mile Island Unit 2. The molten fuel never breached the reactor vessel, let alone the containment building itself. Furthermore, that accident produced a sea change in nuclear power plant design, construction, and operation. Apart from the fact that the TMI Unit 2 reactor was rendered permanently inoperable by the accident, the benefits that resulted from that incident have made the industry safer by many orders of magnitude.

One of the most important challenges we face as a nation is the need for minimally polluting, renewable, efficient energy sources. In this case, we have fallen sadly behind other nations. In the 1970's, the French recognized this challenge and decided to commit to nuclear power in a big way. After evaluating the various vendors, they contracted Westinghouse to build their first plant. This plant was identical to our Beaver Valley 1 plant and is referred to as the "Beaver Valley Prototype." They built a number of these plants under license, and then went on to design and build similar plants of higher output on their own. The French now produce almost 80% of their electricity from nuclear. They also used our technology to build a large scale fuel reprocessing plant, so that they are able to extract usable fuel from the spent fuel rods for reuse. The small amount of high level waste remaining is mixed with molten glass, in a process known as vitrification, so that it is rendered insoluble, and disposed of in extremely deep wells drilled into the ground. In France, there is no controversy over how or where to bury potentially hazardous spent fuel rods. As a result of their foresight, France has an efficient, cost effective electric economy that fuels everything from industry to mass transit with little pollution. That is why France had no problem signing on to the Kyoto Protocol.

Dr. Sternglass wants to convert the Beaver Valley plants to natural gas. Back in the 80's and 90's, many utilities were building natural gas fired plants because they were cheap, had short construction times, and met all pollution regulations. Back then, I observed that this trend would inevitably lead to higher natural gas prices. Have you checked your gas bill lately? The nuclear to gas conversion described in the article involved a rather small, oddball nuclear plant that proved incapable of reliable operation. Converting high output plants such as Beaver Valley is generally not considered to be a cost effective enterprise.

The inescapable fact is that gas fired turbine generators, and to an even larger extent renewable energy sources, simply do not have much output. It would take over 470 large wind turbines to produce the same electrical output as the 2 unit Beaver Valley nuclear plant, and that output is at the mercy of the wind.

In conclusion, I certainly feel that nuclear plants must be designed, built, and operated with safety, quality, and security as the primary goals. Risk to the public must be minimized, and the release of radioactive materials must be kept as low as humanly possible. I am confident that the Beaver Valley plants meet and exceed these criteria. Paranoia about minimal or nonexistent risks is counterproductive to the needs of our nation, and some perspective needs to be introduced. I received a higher radiation dose during a cardiac stress test a few years back than I did from working in nuclear plants for 11 years. My hope for the future is that the public gets to "know nukes," instead of blindly accepting the "no nukes" rhetoric of fear and ignorance.

This concludes my comments. Sincerely,

George Dudash III