

June 9, 2004

Dr. and Mrs. Joseph R. Sauer
4730 East Minooka Road
Minooka, IL 60447-9440

Dear Dr. and Mrs. Sauer:

I am responding to the several concerns you raised in your letters dated April 18, April 19, May 20, and May 21, 2004. First of all, the U.S. Nuclear Regulatory Commission (NRC) does not conduct the kind of detailed local health studies you have proposed. The Agency for Toxic Substances and Disease Registry (ATSDR) of the Department of Health and Human Services has the charter and capability to perform such studies. My staff contacted Dr. Mark Johnson, the Senior Regional Representative for ATSDR's Region 5 office in Chicago, IL. Dr. Johnson indicated that ATSDR normally refers concerns such as yours to the State public health officials. A few months ago we sent you the fall 2000 Health and Hazardous Substances Registry Newsletter published by the Illinois Department of Public Health. The title of the newsletter was "Pediatric Cancer Incidence and Proximity to Nuclear Facilities in Illinois." The newsletter (available online at www.idph.state.il.us/about/epi/pdf/article.pdf) did not substantiate your concerns. However, we recognize that this does not represent an official agency evaluation and conclusion by ATSDR. Therefore, we will send a formal request to ATSDR to evaluate your concerns and ask ATSDR to respond directly to you.

The NRC's mission is to regulate the Nation's civilian use of byproduct, source, and special nuclear material to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. One of the ways the NRC fulfills this mission is by regularly inspecting the radiological effluent and environmental monitoring programs for nuclear power plants and ensuring that the radiological effluents are maintained within the limits of the regulations. Also, NRC inspectors investigate unanticipated releases of liquids that may have been contaminated with radioactive material from nuclear power plants. Your letter dated May 21, 2004, indicated that you did not receive "an answer regarding the 1994 incident of tritium in the storm sewers." On April 1, 2004, Mr. Louis (Duke) Wheeler, the NRC's environmental project manager for the Dresden license renewal review at the time, sent you copies of the NRC's inspection reports regarding the unanticipated release from Dresden in 1994. The liquid released to the storm sewers contained concentrations of tritium that were within the regulatory limits of Title 10 Code of *Federal Regulations* Part 20 (10 CFR Part 20); the potential dose to members of the public from this release was very small. We have no other information regarding this unanticipated release.

Another way NRC fulfills its mission is by setting and enforcing limits on radiation exposure from nuclear power plants for members of the public. These limits are based on the recommendations of the International Commission on Radiological Protection and the National Council on Radiation Protection and Measurements and the standards set by the Environmental Protection Agency (EPA). The health effects of radiation exposure have been addressed by literally tens of thousands of studies. One very important study, the BEIR Report, periodically evaluates all new information regarding radiation health effects. "The Effects on Populations of Exposure to Low Levels of Ionizing Radiation (BEIR Report)" was first published in

November 1972 by the Advisory Committee on the Biological Effects of Ionizing Radiations under the Division of Medical Sciences of the National Academy of Sciences and the National Research Council. The BEIR Report has been revised a number of times; the most recent revision addressing ionizing radiation was BEIR V, "Health Effects of Exposure to Low Levels of Ionizing Radiation," which was published in 1990 by the Commission on Life Sciences of the National Academy of Sciences (available online at www.nap.edu/books/0309039959/html/). BEIR V concluded that the cancer risks associated with radiation exposure are higher than previously estimated; however, none of the credible studies, including the BEIR V Report, have found health effects at doses below 10 rem. However, radiation safety standards are based on the assumption that any radiation dose, no matter how small, carries with it a corresponding probability of causing a cancer. Therefore, the dose to a member of the public from the entire nuclear fuel cycle including nuclear power plants is conservatively limited by EPA regulations (40 CFR 190) to less than 25 millirem per year (less than 1 percent of 10 rem). The actual dose to anyone living near Dresden is a small percentage of this limit; the actual dose is also a small percentage of the dose received by many people annually from diagnostic dental x-rays and less than 1 percent of the background dose everyone receives from natural sources of radiation. The NRC continues to review information from studies and evaluations of health effects from radiation exposure by international and national radiation protection experts. We have found no information that causes us to question the conclusions of the 1990 National Cancer Institute study. Therefore, we have not requested that the study be repeated even though it is almost 15 years old.

My staff has previously provided you the National Cancer Institute Report, "Cancer in Populations Living Near Nuclear Facilities." Your letters identified a number of what you consider to be flaws in this report. The report acknowledged these limitations, but the NRC does not consider these limitations to be flaws that invalidate the conclusion that there is "no evidence that an excess occurrence of cancer has resulted from living near nuclear facilities."

For license renewal, we evaluate a wide range of environmental impacts. Specifically, environmental impacts that could affect human health, such as radiation exposure and air and water quality, are evaluated. In the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants (GEIS)(NUREG-1437), published in 1996, NRC concluded that many aspects of environmental impact are very similar and small for all the nuclear power plants in the United States. Public radiation exposure is one of those aspects for the reasons discussed above; therefore, in-depth plant-specific evaluation of public radiation exposure is not necessary or required as part of the license renewal review. However, we examined Dresden's effluent and environmental monitoring reports and consulted the NRC personnel responsible for inspecting Dresden's radiation protection programs to ensure that there is no new and significant information.

We also consulted with Mike Sinclair of the Illinois Emergency Management Agency and Dr. Mark Johnson of ATSDR. We also reviewed the Illinois Department of Public Health's Registry Newsletter discussed above. The Illinois State officials concluded that the statistics

did not warrant detailed health and epidemiological studies in the vicinity of Dresden Station. As explained by the Bureau of Environmental Epidemiology in the Florida Department of Health in an assessment of similar concerns by people living near the St. Lucie Nuclear Power Plant, health statistics data are often expressed as units per thousand population; therefore, one has to be careful in interpreting trends. Rates such as infant mortality and cancer by age group fluctuate from year to year, and in some situations, large fluctuations occur with a small number of cases and small underlying county populations. Changes in rates look larger in smaller counties due to the lower population figures. When the changes in rates are expressed as percentages, these changes will appear to be even more magnified. Usually these changes fluctuate around the averages for the larger population health statistics such as those for the State of Illinois in this case. The editorial by the staff of the Chicago Tribune in the February 21, 2004, edition of the newspaper highlights these observations in a discussion of the review by the Illinois Department of Public Health of the Radiation and Public Health Project's assessment of the Grundy County health statistics (available online at www.chicagotribune.com/archives). The article provides information obtained from Tiefu Shen, Chief of the Division of Epidemiological Studies at the Illinois Department of Public Health.

Dresden was on the NRC's "watch list" for a few years during the 1990's, which meant that the plant warranted additional regulatory oversight. However, the plant was never considered unsafe and the plant's appearance on the "watch list" was not because of radiological effluents. The NRC's current assessment of Dresden's performance can be found at www.nrc.gov/NRR/OVERSIGHT/ASSESS.

Your letter dated April 18, 2004, enclosed a copy of a protective order related to a request by the Godley Park District for discovery about releases from the Braidwood Station. NRC was not involved in the legal proceeding; therefore, we had none of the legal documents. Because of your earlier expressed interest, we obtained copies of the consent decree between the Attorney General of the State of Illinois and Exelon, as well as the Godley Park District Complaint and subsequent motion for voluntary dismissal. We appreciate you providing us a copy of the protective order, which enhances our understanding of these proceedings. The protective order merely provided the Court's judgement that the plaintiffs' discovery requests were overly broad without any demonstrable link to any injury. The plaintiffs, Godley Park District and Godley Park Water District, subsequently filed a motion for a voluntary dismissal of the case.

We assessed the information you provided, along with information from the other sources discussed above, and concluded that there was no new and significant information that called into question the generic assessment of public radiation exposure for Dresden Station. The purpose of the public meeting in Dresden, Illinois, on January 14, 2004, was to provide information about our preliminary conclusions regarding the potential environmental impact of license renewal at Dresden and to listen to comments about those conclusions by members of the public who live in the vicinity of Dresden. We were there to listen carefully and obtain information from you and the other people at the meeting that might impact our environmental review for Dresden. Our responses to your comments will be included in the final version of Supplement 17 of the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants: Dresden Nuclear Power Station Units 2 and 3, which is scheduled to be published in July 2004.

Dr. and Mrs. Joseph R. Sauer

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In conclusion, we believe that we have been responsive and adequately addressed your concerns. In addition, as stated above, we will send a formal request to ATSDR to evaluate your concerns and ask ATSDR to respond directly to you.

Sincerely,

/RA/

Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

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