



## Recommendation No. 107

November 16, 1999

### Fish Consumption Advisories - SCDHEC

#### **Background**

Annually the South Carolina Department of Health and Environmental Control (SCDHEC) issues South Carolina Fish Consumption Advisories (Ref. 1) and last year, in collaboration with the Georgia Department of Natural Resources (DNR) and the Environmental Protection Agency - Region IV (EPA-IV), a fact sheet on eating fish from the Savannah River was issued. Next year, SCDHEC plans to eliminate its fact sheet in favor of an updated booklet (See Ref. 1 for the 1999 booklet) covering all advisories across South Carolina. The main concern of these fish consumption advisories and fish fact sheets is the mercury in fish.

Since February 1998 there have been numerous discussions and correspondence between the public, the Savannah River Site Citizens Advisory Board (CAB), CAB subcommittees and SCDHEC on this subject although no formal CAB recommendations were ever adopted (a motion was drafted in February 1998 and then tabled). The latest such discussion was during a vigorous two-sided meeting of the Risk Management and Future Risk subcommittee of the CAB at Hilton Head, SC on October 16, 1999. One side of the debate favored distributing the document widely and in educating the public to the possible risks. The main point was the concern that many people fishing along the Savannah River were not aware of the fish advisory. It was pointed out by Lynn Waishwell, CRES, that in 50 people along the river surveyed on whether they understood the message after reading the Fish Fact Sheet, only two out of the 50 had previously seen the fact sheet. Twelve had said they saw something with similar content, but weren't specific on what they saw. Ms. Waishwell also noted that most people receive their input first from radio or television and this should be included in the outreach effort. Dr. Mildred McClain suggested publishing a pamphlet in Spanish, placing special emphasis on pamphlets for children, elders and pregnant women, publish a full page ad on the Savannah River with information in general on the SRS and identifying community organizations and including them in outreach efforts. Some suggested tear off post cards and videos for schools. Mr. Marcus suggested posting signs along the river or boating ramps, involving community based organizations for distribution and identifying community people to provide feedback on the best approach. Mr. Minot suggested placing the comment on radionuclides and pregnant women, infants and children in bold type under the Savannah River information.

The main point of the other side of the debate was the lack of perspective on the risk of eating fish containing mercury or radionuclides. There is a recent article in Physics Today that concludes that the effects of radioactivity are overstated by current regulations (Ref. 2). In reply to the question of how many cases of disease from eating radioactively contaminated fish have been reported in the State of South Carolina, Dr. Bob Marino, Director of Health and Hazard Evaluation for SCDHEC, stated that there have been no cases reported. Dr. Marino added that while it is true that "no cases of injury from consuming contaminated fish have been reported, it does not imply that there is no potential threat to health from exposure. There is ample human evidence that at high exposures to chemicals or radiation (e.g., mercury and radionuclides) adverse health effects have occurred (see studies in Japan and Iraq). The question remains, however, at what level of exposure will adverse health effects be expected to occur. Thus, absence of cases does not necessarily imply absence of adverse health effects." Dr. Marino also agreed that the existing mortality rate in the region from cancers were predominately caused by lifestyle behaviors (overeating, abusing alcohol, and smoking cigarettes). By way of comparison, the state's epidemiology statistician, Don Siron, also with SCDHEC, stated in response to a question that if no changes in fish consumption were to occur, after 30 years of eating fish from the Savannah River the total number of new cancers for every 100,000 people who kept eating the fish would total one additional cancer. ). The Centers for Disease Control (CDC) indicates a national mortality cancer rate of about 206 deaths per 100,000 per year for the year 1997 (the cancer incidence rate is about twice the mortality rate) (Ref. 3).

The debate was resolved with a compromise put forward by Dr. Mildred McClain, a former member of the CAB and a current member of the CDC Health Effects Subcommittee. She recommended that the advisory booklet go forward and be distributed widely with statements added that would place the risks to the public in perspective so that the affected public could not only become aware of the risks, but so that they could also make an informed choice. A consensus among the participants supported Dr.

McClain's suggestion.

### **Recommendation**

The SRS Citizens Advisory Board recognizes that the fish consumption advisory for consuming fish contaminated from radioactivity in the Savannah River is controversial; that the radionuclides cesium-137 and strontium-90 do not change the recommendations on consumption of fish as a result of the larger problem of mercury contamination; but that to achieve broad support to distribute the advisories, the public must be provided with the information it needs to make an informed choice. Based on this situation, the board makes the following recommendations:

1. The fish advisory documents include the perspective comments provided by the Chief epidemiologist for SCDHEC and SCDHEC's statistician (see the statements in the background above).
2. SCDHEC provide the draft 2000 fish advisory documents e.g., the "1999 South Carolina Fish Consumption Advisories" and/or "Savannah River Fish Fact Sheet", to the board for review by February 20, 2000.
3. The CAB be given an opportunity to review the draft 2000 fish advisory documents and once finalized, the fish advisory documents be given wide distribution, e.g., including Spanish translations for Spanish speaking communities.
4. SCDHEC continue developing information on salt water fish for the fish advisory documents.

### **References**

1. "1999 South Carolina Fish Consumption Advisories", prepared by the Division of Health Hazard Evaluation, SCDHEC, June 1999.
2. A. Jaworowski, "Radiation Risk and Ethics." "The established worldwide practice of protecting people from radiation costs hundreds of billions of dollars a year to implement and may well determine the world's future energy system. But is it right?" Physics Today, September 1999 pages 24-29.
3. CDC mortality tables; see internet address:  
[www.cdc.gov/nchs/datawh/statab/unpubd/mortabs/gmwk250a.html](http://www.cdc.gov/nchs/datawh/statab/unpubd/mortabs/gmwk250a.html).

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### **Agency Responses**

[\*Department of Health and Environmental Control\*](#)