Request to the National Academy of Sciences for a Study of Cancer Risk in Populations Living Near Nuclear Facilities

Presentation to the Nuclear and Radiation Studies Board

Dr. Brian Sheron, Director
Office of Nuclear Regulatory Research
April 26, 2010
Agency background and regulatory areas

- An independent agency established by Congress in 1974 to oversee the commercial nuclear industry
- Led by a five member Commission with one serving as chairman
- The current chairman is Dr. Gregory Jaczko

NRC regulates

- Commercial nuclear power plants
- Research, test, and training reactors
- Nuclear fuel cycle facilities
- Medical, academic, and industrial uses of radioactive materials
- The transport, storage, and disposal of radioactive materials and wastes
Request background

- Solely a staff identified and initiated project to develop up-to-date cancer epidemiology information for responding to recurrent stakeholder concerns
- Agency wide interest in performing the new study
- The 1990 National Cancer Institute (NCI) report “Cancer in Populations Living Near Nuclear Facilities” has been a primary resource to answer questions
  - Demographic changes in the last 20 years
  - Limited cancer incidence information
  - Does not include facilities operated after 1982
  - Staff desire to reduce the county size study unit to something smaller
Study Objectives

- Provide an up-to-date review of cancer incidence and mortality risk for populations living near past, present, and proposed NRC-licensed nuclear facilities.

- The study is to be performed in two phases to start in summer 2010

- Provide opportunities for stakeholder input during the study process

- NAS establishes committee to develop a stand alone document recommending a study design and approach
Phase 1 – Scoping Study

Tasks

1. Review off-site doses and population sizes

2. Determine the accessibility and quality of cancer mortality data

3. Determine the accessibility and quality of cancer incidence data

4. Determine the feasibility of reducing the study geographical areas from the county size—as used in the 1990 NCI study—to smaller areas closer to the facility

5. Recommend the best epidemiological study-design to assess cancer mortality and incidence risks considering (1-4)

6. Develop a written report on tasks (1-5)
Phase 2 – Perform the study

Tasks

1. Perform an analysis of radiogenic cancer mortality and total cancer mortality in populations living near past, present, and possible future commercial nuclear facilities for all age groups

2. Perform an analysis of radiogenic cancer incidence and total cancer incidence in the same populations as (1)

3. Develop a written report for (1-2)
Schedule

- Phase 1 - Scoping Study
  - Starts Summer 2010
  - Finish in Summer/Fall 2011

- Phase 2 - Analysis
  - Starts after End of Phase 1
  - Over 2- 3 years