

**RADIOLOGICAL DATA SUMMARY**  
**FOR THE ST. LUCIE CANCER STUDY**

The attached data is a summary of the analytical results for the St. Lucie study. The homes were surveyed for gamma radiation by a walk-through of the structure and surrounding property with a Ludlum 12S gamma survey meter. Frequent readings were taken and recorded. The purpose was to screen for any high or unusual gamma radiation fields. Additionally, air, water and soil samples were collected and a radon test was performed. The air and water samples were analyzed for gross alpha, gross beta and specific gamma emitting radionuclides. Soil samples were analyzed for gamma emitting radionuclides by the same gamma spectroscopy analysis method used for the air filters and water. A radon detection device was placed in each house and later retrieved for analysis. A review of the data led to the following conclusions.

1. All detected radionuclides except cesium-137 are naturally occurring. The presence of cesium-137 is generally attributed to fallout from the atmospheric nuclear tests conducted by the United States, Russia and later by other countries. It has a 30-year half life and is still present in the environment.
2. No soil, water or air samples exceeded established regulations or guidelines. The EPA 4 picoCurie per liter (pCi/l) guideline for indoor air was exceeded for a single measurement in seven homes. Of the seven homes that exceeded this guideline, six were control homes and one was a case home. It should be noted that the 4 pCi/l guide is based on an annual average for a home. The procedure for obtaining this average is a single test each quarter of the year. The single test performed for the study does not represent the annual average. It is a screening measurement.
3. No indoor gamma radiation survey exceeded the 20 micro-Roentgen per hour (uR/hr) house average EPA and DOH guideline.

The Department of Health radiological laboratory participates in both the U.S. Environmental Protection Agency and Department of Energy quality assurance programs. In summary, radiologically the homes in the study appear no different than a typical home located anywhere else in the state. If compared to certain homes located in the phosphate mining regions of Central Florida, the levels are significantly lower.