UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
COMMISSIONER

April 11, 1980

Mr. Scott C. Thornburg
1096 Brier Cliff Way
Monterey Park, California 91754

Dear Scott:

It was a great pleasure for me to be seated with you during the Westinghouse Talent Awards dinner. It always is an honor for me to be included in this annual tribute to the efforts and genius of America's young people.

During our talks, you noted that few if any high school students undertook nuclear related research and speculated regulations might preclude such research. While our regulations do not preclude persons under 18 years old from doing research or otherwise working with radioactive materials, their allowable radiation exposure is restricted to 10% of the occupational exposure limit of 5 rems/year for adults. (This limit is specified in 10 CFR Part 20.104.) Because of this limitation, many NRC-licensed facilities have restrictive policies concerning employment of young persons in nuclear areas as an easy way of insuring compliance with §20.104.

The differing limits set for various segments of the population have been arrived at through years of study of the effects of radioactivity on humans at various stages in the life cycle. Unfortunately, these differing limits may restrict work by students of high school age with radioactive materials--but those limits are imposed, of course, to protect individuals when they are most vulnerable to the effects of radioactivity. The age group 16-17 is restricted as I have noted.

While NRC has no regulations which explicitly forbid a student to obtain a materials license for research purposes, such as a small quantity of carbon 14 or tritium for biological tracer experiments, NRC policy has been to license the instructor or professor under whose supervision the student will work.

NRC regulations also specify exempt quantities of radionuclides for which no license is required. Experiments are possible with exempt quantities, assuming the student or teacher is able to purchase the materials from a "vendor" without a license.

In addition, the State of California has assumed responsibility for regulating certain quantities, types and uses of nuclear materials under an agreement with the NRC. As an Agreement State, California's standard for limits of exposures to minors must be and is identical to NRC's §20.104.

Again, it was a pleasure to meet and talk with you. Your initiative and hard work are an inspiration to us all. Mrs. Kennedy joins me in wishing you continued success.

Sincerely,

Richard T. Kennedy