



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

ENVIRONMENTAL IMPACT APPRAISAL  
SUPPORTING ORDER AUTHORIZING DISMANTLING OF  
FACILITY AND DISPOSITION OF COMPONENT PARTS  
CALIFORNIA POLYTECHNIC STATE UNIVERSITY  
DOCKET NO. 50-394

Introduction

By letter dated April 30, 1981, as revised September 8, 1981, the California Polytechnic State University (CPSU) applied for authorization to dismantle the AGN-201 Training Reactor, dispose of its component parts and terminate the facility license. This evaluation deals with those features and characteristics of reactor dismantling and disposition of component parts which may affect the environment.

Discussion

The AGN-201 Training Reactor is a small research reactor that operated at a maximum of 0.1 watts thermal while at CPSU. Prior to operation at CPSU the reactor operated at the U. S. Naval Postgraduate School in Monterey, California, at a maximum power level of 10 watts thermal. The concurrently issued Safety Evaluation discusses the construction of the reactor and the safety aspects of dismantling.

Environmental Considerations

Radioactive waste material produced during dismantling, such as paper towels, gloves and wipes, will be disposed of at an authorized radioactive waste burial site. The reactor components, other than the reactor core, will be decontaminated and stored at CPSU for future use at other research reactor facilities, use at the University, or disposal as scrap. If some reactor components remain radioactively contaminated or activated, they will be shipped to an authorized burial site. The fuel and radioactive sources will be shipped to a Department of Energy (DOE) facility for reuse in other reactor programs. The reactor components are expected to be essentially free of contamination or activation due to the low power and short durations of reactor operation. Also, CPSU's calculations show that the fuel will have radioactive levels of less than 2 mrem/hr on contact. The CPSU proposes to remove all byproduct materials, radioactive wastes and radioactive components from the reactor facility. Radioactivity will be removed to levels less than that specified in Regulatory Guide 1.86. The University will use the space now occupied by the AGN-201 for other laboratory work following dismantling.

Therefore, dismantling will cause no significant environmental impact because of the low level of residual radioactivity and the small structures involved.

### Alternatives to Dismantling of Reactor and Disposal of Components

The reactor has not been operated for about 3 years and there are no plans or need for future operation at CPSU. The space the reactor occupies is needed by CPSU for mechanical and engineering laboratories. There are no reasonable alternatives to dismantling.

### Costs and Benefits of Dismantling

The costs of dismantling and disposal of components are estimated by CPSU to be about \$5,000. The use of components as spare parts at CPSU or other universities, or disposal as scrap materials is preferable to its remaining in its present status where it serves no useful purpose and takes up valuable laboratory space. No benefits would be served by not dismantling the reactor.

### Long Term Effects of Dismantling and Disposal of Components

Upon removal of reactor components, the reactor facility room will be used for mechanical or engineering laboratory activities by CPSU. The reactor fuel will be reprocessed for reuse at a DOE facility or used at another research reactor. Nonradioactive reactor components will be used by CPSU or other universities for other projects or will be scrapped. If there are any radioactive reactor components, they will be disposed of at an authorized burial site.

### Conclusion

We conclude that there will be no significant environmental impact associated with the dismantling of the AGN-201 facility and disposal of its component parts, and that no environmental impact statement is required to be written for dismantling the facility and disposal of its component parts.

Dated: October 6, 1981