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

APR 27 1978

RC5

MEMORANDUM FOR: Edson G. Case, Acting Director
Office of Nuclear Reactor Regulation

FROM: Saul Levine, Director
Office of Nuclear Regulatory Research

SUBJECT: RESEARCH INFORMATION LETTER - THE IMPACT OF OFFSHORE NUCLEAR GENERATING STATIONS ON RECREATIONAL BEHAVIOR AT ADJACENT COASTAL SITES (RIL #26)

This memorandum transmits the results of completed research on the impact of offshore nuclear generating stations on recreational behavior at adjacent coastal sites. The study was performed by the Florida Resources and Environmental Analysis Center of the Florida State University in response to the request from your office (NRR 76-5). Enclosed with this memo is a document (Impact of Offshore Nuclear Generating Stations on Recreational Behavior at Adjacent Coastal Sites, NUREG-0394) which summarizes this study and draws conclusions based on the analysis.

The purpose of this study was to provide NRC cost-benefit analysts with new and improved information for assessing likely impacts of nuclear generating stations on recreational behavior at adjacent coastal sites. The objective of the project was: (1) to predict whether, and the degree to which tourists and recreationists will avoid a resort area because of the location of a nuclear power station; (2) to isolate the safety impact of a nuclear station from the impact of other factors in the decision process of individuals; (3) to determine the extent to which the level of factual understanding of nuclear power influences the decision process; (4) to distinguish between offshore and coastal sited plants; (5) to deal with the importance of various other factors such as: distance of the recreational site from the plant, region of the country, proximity of other resort areas, size of the resort area, physiography of the immediate vicinity, and density of development; and (6) to determine the degree to which perception and projected behavior of individuals should be associated with factors such as distance traveled, educational level, profession, age, income, number of years visiting the resort area, length of stay, and estimated expenditure at the resort.

An investigation was undertaken to project the impact of offshore nuclear power plants on beach visitation at adjacent beaches.

1. Related literature was reviewed concerning human adjustment to natural hazards, risk-taking behavior, and public attitudes toward

nuclear power.

2. Approximately 2400 people were interviewed at beaches in three states with respect to: (a) intended avoidance of beaches near a hypothetical floating nuclear plant (FNP), (b) relative importance of proximity to a FNP, when compared to other beach attributes, (c) onshore-offshore preference for coastal nuclear plant location, (d) behavioral impact of NRC licensing of FNP's, (e) relative tourism impact of coastal nuclear plants compared to coastal coal-fired plants, (f) public concerns about nuclear safety, (g) public attitudes toward alternative energy sources, (h) public confidence in sources of information about nuclear power, (i) visual impact of a FNP, and (j) knowledge about nuclear power.

3. Four beach areas near currently operating coastal nuclear power plants were studied to assess impacts on tourism resulting from construction.

The research results indicate that: (a) proximity of a FNP is less important than other beach attributes in determining beach attractiveness; (b) probably no more than (and perhaps less than) 5% to 10% of current beach patrons would avoid a beach after FNP siting three miles directly offshore; and (c) impact of a FNP would decrease exponentially as distance away increased.

In summary, the percentage reduction in tourism attributable to siting of nuclear power plants offshore would be small, but not necessarily negligible, at points close by. The stability of those impacts over time, however, depends upon the stability of current attitudes toward and beliefs about nuclear power and its safety.

This study and its results have been reviewed extensively while in progress by the RES project manager and various staff members from NRR, OSD, and EDO at quarterly progress meetings. The research results are offered for user office consideration for application to the identified regulatory need. Technical questions related to these results may be directed to David Barna at 427-4358.

Saul Levine

Saul Levine, Director
Office of Nuclear Regulatory Research

Enclosure:
NUREG-0394