

NRC FDR



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

NOV 05 1980

MEMORANDUM FOR: H. E. Coleman, Chief, Contract Policy Staff  
Division of Contracts, ADMIN

FROM: Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

SUBJECT: UNSOLICITED PROPOSAL FROM SCIENCE APPLICATIONS, INC.  
(SAI), ENTITLED, "DEMONSTRATION OF A REACTOR EMERGENCY  
NOBLE GAS RECOVERY SYSTEM," DOC NUMBER 80-551

The subject proposal has been reviewed by the Effluent Treatment Systems Branch of the Division of Systems Integration. The offeror proposes to develop and demonstrate, via a pilot plant, a portable selective adsorption system which uses inorganic adsorbents and cryogenic technology.

The proposal presents an integrated conceptual system design which is technically feasible and interesting, but cannot be considered unique or innovative since the underlying technology is relatively conventional. The proposed system has merit, both technically and in terms of trying to satisfy a recognized need since the Commission has expressed an interest in emergency gaseous decontamination systems for reactor containments. Science Applications, Inc. appears to have the capabilities and facilities required for such an effort, and the stated participants seem to have the qualifications and related experience necessary to achieve the objectives of this proposal.

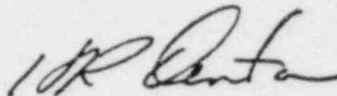
However, despite the positive aspects of this proposal, it is the Staff's opinion that this submittal is premature. In NUREG-0662, "Final Environmental Assessment for Decontamination of the Three Mile Island Unit 2 Reactor Building Atmosphere," the Staff evaluated a number of alternative noble gas processing schemes including selective absorption, charcoal adsorption, gas compression, and cryogenic processing systems. Although none of those alternatives were considered timely for that situation, the Staff, in NUREG-0660, "NRC Action Plan Developed as a Result of the TMI-2 Accident," outlined a program of study dealing with the subject of post-accident noble gas recovery systems to be initiated during fiscal year 1982 or later. The Staff is conducting a preliminary evaluation of a non-cryogenic selective absorption process developed at the Oak Ridge Gaseous Diffusion Plant. This process, however, is considerably further along in development than the proposed SAI system, and it is expected that this evaluation (which should be completed by the end of the year) will provide a basis for comparative evaluation of other technologies.

8011210066

MISC

NOV 05 1980

In view of the above considerations, it is the Staff's opinion that the proposed effort would not make a contribution to the agency's mission at this time and should not be funded. Our copy of the proposal is enclosed.



Harold R. Demery, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Proposal from SAI, Vol. I
2. Proposal from SAI, Vol. II

cc: w/o enclosure

E. Case  
B. Snyder  
B. Grimes  
D. Eisenhut  
R. Vollmer  
D. Ross  
S. Hanauer  
R. Mattson  
F. Schroeder  
H. Thompson  
B. Grenier  
W. Kreger  
W. Gammill  
R. Bangart  
V. Malafeew