

INTERIM REPORT

Accession No. _____

Contract Program or Project Title:

Steam Generator Tube Rupture Iodine Transport Mechanisms

Subject of this Document:

Steam Generator Tube Rupture Iodine Transport Mechanisms

Type of Document:

Monthly Progress Report for September, 1980

Author(s):

R. S. Denning

Date of Document:

October 14, 1980

Responsible NRC Individual and NRC Office or Division:

R. Sherry

Division of Reactor Safety Research

This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

BATTELLE
Columbus Laboratories
505 West King Avenue
Columbus, Ohio 43201

Prepared for
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

INTERIM REPORT

NRC Research and Technical
Assistance Report

8011050

583



Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201
Telephone (614) 424-6424
Telex 24-5454

October 14, 1980

Mr. Richard Sherry
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Sherry:

Program Title/Activity Identification

This is the thirteenth monthly report for the project "Steam Generator Tube Rupture Iodine Transport Mechanisms", which is Task 12 of agreement NRC-04-76-293.

Progress and Technical Highlights for
September, 1980

Task I

Submittals of design information and materials specifications were reviewed by the Chief Boiler Inspector of the State of Ohio. As expected, it will be necessary to appear before the State Board of Building Appeals to obtain approval for use of the vessels. In the interim, however, the vessels can be operated pending appeal. The decision of the Board of Building Appeals will probably not affect the SGTR project, but only possible subsequent use of the vessels.

Welding of the vessels was completed. The welds passed radiographic examination. The vessels were taken to the West Jefferson site to be hydrotested. Following successful hydrotesting, the vessels were returned to the King Avenue site and installation was begun.

Task II

Convergence problems which had been encountered in the previous month were resolved by the use of a different integration technique. Sample runs were made with the code and a number of minor problems were corrected. Preliminary results with the code indicate that the transport of water droplets is a very important mechanism for the release of iodine to the environment.

NRC Research and Technical
Assistance Report

Anticipated Activities in OctoberTask I

A meeting with NRC staff was held on October 6 to describe the experimental facility and to discuss the planned test matrix. Shakedown of the facility is to be completed and testing is to be initiated in this month.

Task II

Minor improvements are being made to the code. A set of variables with uncertainty ranges has been identified for the sensitivity studies. These analyses should be begun in October. Writing of the User's Manual will also be initiated.

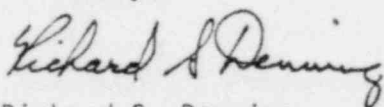
Costs

Costs for September were \$9,060 including a fee of \$677. Monthly expenditures are shown in Figure 1. The cumulative expenditure on the program is \$112,750.

Disclaimer Notice

This informal document contains information of a preliminary nature and was prepared primarily for the interim use in light water reactor programs in the U.S. Thus, it is subject to revision or correction, does not constitute a final report, and should not be cited as a reference in publication.

Sincerely,



Richard S. Denning
Research Leader
Nuclear and Flow Systems Section

RSD:erc

xc: H. Schierling	W. Pasedag	NRC Public Document
L. Soffer	L. Barrett	Room (2)
F. Akstulewicz	W. Johnston	
M. Fleishman	LS Tong	

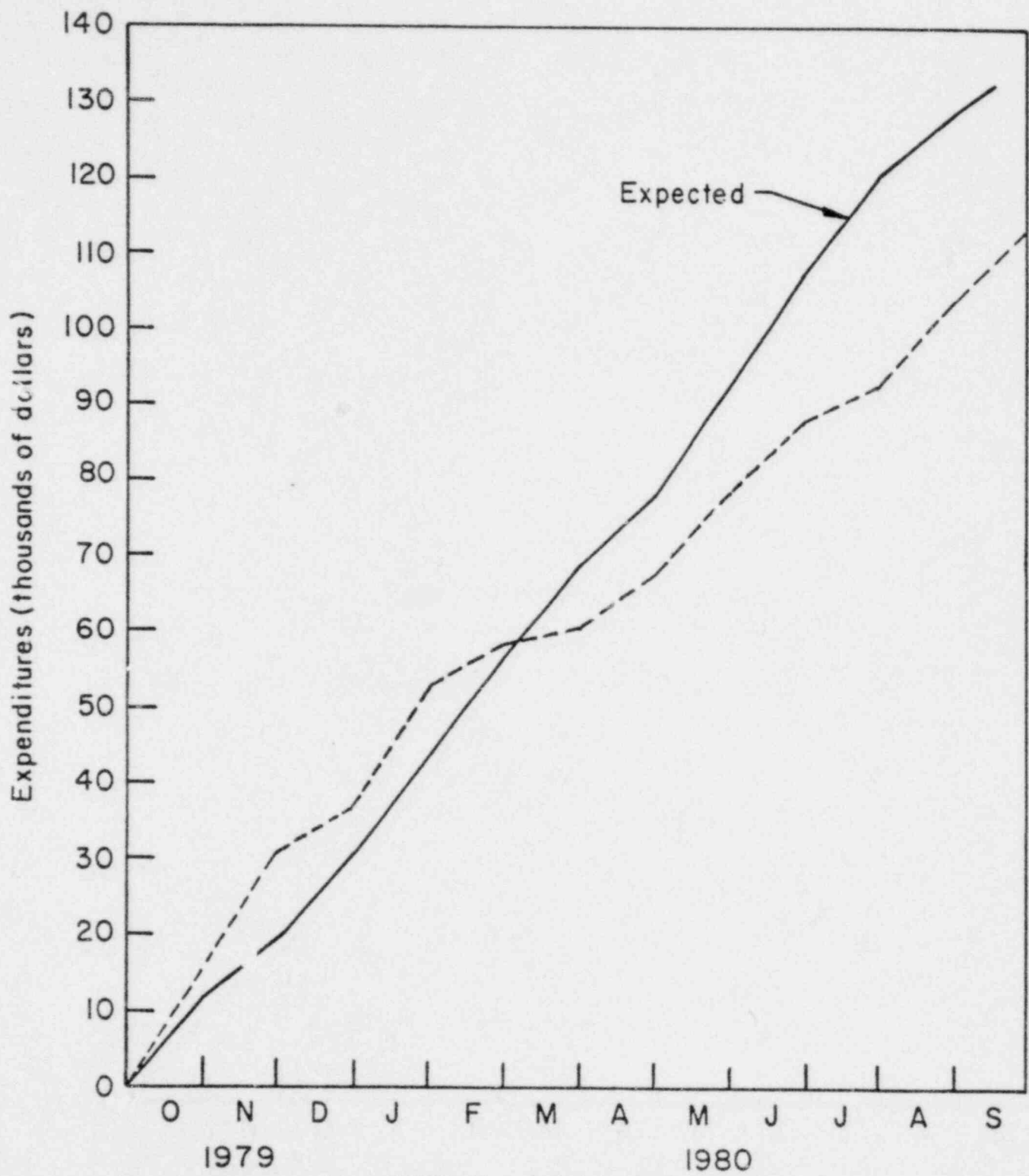


FIGURE 1. EXPENDITURES