

INTERIM REPORT

Accession No. 8012010046

Contract Program or Project Title: NRC-04-77-145

Subject of this Document: Southwest Research Institute Project  
Organization for NRC-04-77-145

Type of Document: Letter

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Project Manager

Date of Document: October 7, 1980  
Doc. No. 17-5023(18)

Responsible NRC Individual and NRC Office or Division: Dr. Joseph Muscara

1980 NOV 24 PM 12 55  
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Prepared for  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

INTERIM REPORT

NRC Research and Technical  
Assistance Report

8012010046

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# SOUTHWEST RESEARCH INSTITUTE

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QUALITY ASSURANCE SYSTEMS  
AND ENGINEERING DIVISION

October 7, 1980  
Doc. No. 17-5023(18)

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Dr. Joseph Muscara  
U.S. Nuclear Regulatory Commission  
Reactor Safety Research Division  
Mail Station 1130SS  
Washington, D.C. 20555

Subject: Southwest Research Institute Project  
Organization for NRC-04-77-145

Dear Dr. Muscara:

In order to satisfy the contractual requirements defined by NRC-04-77-145, Southwest Research Institute (SwRI) has organized the SAFT project into five major tasks. The discussion which follows defines the task, specifies task objectives and lists key personnel responsible for task accomplishment.

## TASK 1. Administration

Objectives: Preparation of monthly status reports.  
Preparation of quarterly progress reports.  
Preparation and presentation of papers at conferences or seminars.  
Performing project coordination and review meetings with the University of Michigan and the NRC.  
Preparation of additional reports as requested.  
Performing general activities associated with project management.

Personnel: J. L. Jackson/D. R. Hamlin with clerical and/or editorial staff as required.

## TASK 2. Software

Objectives: Select and order a color graphics display system. Coordinate implementation of color graphics display software with the University of Michigan so that a comparable viewing format is used. Develop appropriate graphics software, test and evaluate using actual SAFT processed data.  
Evaluate SAFT processing algorithm for establishing preliminary requirements for "real time" processing specifications.



SAN ANTONIO, HOUSTON, TEXAS, AND WASHINGTON, D. C.

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Personnel: D. R. Hamlin/T. A. Mueller with assistance from the University of Michigan software staff.

TASK 3. Scan Mechanism Improvement

Objectives: Accomplish activities required to make the existing SAFT data acquisition subsystem fully operational.  
Develop a data acquisition subsystem capable of being enhanced at some future time with two additional degrees of freedom for transducer "squint" mode operation.

Personnel: J. L. Jackson/H. L. Jacoby/H. L. Grothues/C. L. Cooper with technicians as required.

TASK 4. Laboratory and Field Testing

Objective: Perform SAFT examination of required test specimens including the Duane Arnold safe-end specimen, fabricated weld flaws developed on test specimens during previous contract work, selected field site inspections, and additional specimens as deemed appropriate. Examination activities include test set up, scanning, processing, interpretation of results, testing documentation and, where required, destructive specimen evaluation for data comparison and system evaluation.

Personnel: J. L. Jackson/D. R. Hamlin/H. L. Jacoby and technicians as required.

TASK 5. Signal-to-Noise Ratio Improvement

Objectives: Design, fabricate and/or purchase commercial transducers which provide improved performance for SAFT UT.  
Design and fabricate a transducer test jig capable of permitting the phase front homogeneity to be measured.

Personnel: J. L. Jackson/J. F. Crane/K. F. Briers and technicians as required.

Very truly yours,

*D. R. Hamlin*

D. R. Hamlin  
Project Manager  
Department of Research  
and Development

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Attachment

SAFT PROJECT - PHASE BREAKDOWN AND ASSOCIATED  
KEY PERSONNEL

