

INTERIM REPORT

ACCESSION NO. _____
ORNL/HASRD-68 _____

Contract Program or Project Title: Safeguards Analysis for Byproduct Materials and Small Quantities of SNM

Subject of this Document: Technical Progress

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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.

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operated by
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for the
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INTERIM REPORT

NRC Research and Technical
Assistance Report

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MONTHLY PROGRESS REPORT
FOR JANUARY 1980

SAFEGUARDS ANALYSIS FOR BYPRODUCT MATERIALS
AND SMALL QUANTITIES OF SNM

Health and Safety Research Division
Oak Ridge National Laboratory

PRINCIPAL SCIENTIST: R. O. Chester

OBJECTIVE:

The principal objective of this analysis is to examine the question of whether the risk and consequences of theft or sabotage of facilities or vehicles containing small quantities of special nuclear materials (SNM), and byproduct materials are such that licensees should be required to adopt further measures to safeguard them. Phase 1 of this study was an initial screening of these materials. From this screening, candidates for further consideration were identified. In the course of Phase 2, a detailed examination will be made of the conditions of possession, use, and shipment of the materials identified in Phase 1. The characterization of the conditions of possession, use, or shipment will identify any current conditions of the referenced materials that contribute significantly to either the protection from or vulnerability to potential attempts at theft, diversion, or sabotage.

TECHNICAL PROGRESS:

Subtasks 1a, 1b, 1c, 1d and 1e

These subtasks have been completed. Achievements in the areas described by these subtasks are documented in the deliverables given NRC at the January 8, 1980 meeting in Bethesda.

Subtask 1f (Project status reports, quarterly and final) (Classified and Unclassified Versions)

A summary of 1979 deliverables was given to NRC on January 8, 1980.

Subtask 1g (Develop plan for obtaining information from sources/licensees)

Intensive interaction with NRC staff was continued. During meetings at NRC on January 7-8, the first trials to extract desired information from docket files were made. Results of this trial were reported in a letter to the project officer dated January 11, 1980. Discussions were held on the possibility of the remote interrogation of files now in computer memory using commercial telephone lines and a terminal through the TERA system.

Subtasks 2a through 2e

The scope and scheduling of these tasks is undergoing review at NRC in view of the need to develop a cooperative effort with the Uranium Fuel Licensing Branch of NRC.

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Subtasks 3a and 3b (Identify feasible malevolent deployment; and characterize candidate materials for reconsideration of physical protection)

These subtasks are not scheduled to start yet.

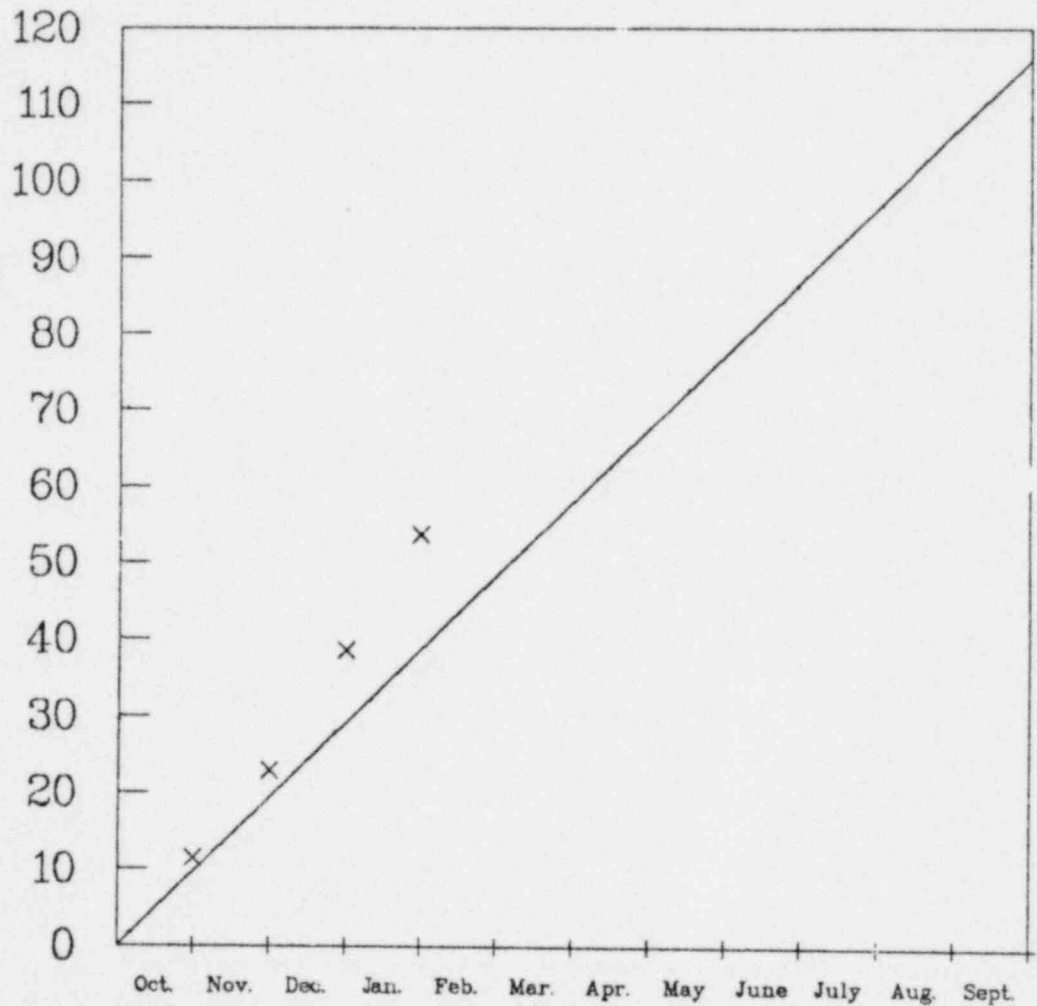
Meetings

Meetings of ORNL staff members (R. O. Chester, K. K. Kanak, and M. L. Randolph) were held at NRC on January 8 and 9. Brief access to their docket files was obtained and contacts made with Frank Lomax and other members of the Uranium Fuel Licensing Branch of NRC.

MONTHLY EXPENDITURES FY 1980 (\$1000)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Monthly Projected:	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
Monthly Actual:	11	11	16	15								

Total Expenditures**
(thousands of dollars)



1979

1980

Months FY 1980

**Solid line represents projected costs; x marks represent actual costs.

BUDGET AND TECHNICAL MANPOWER EXPENDITURES

<u>Reporting Period</u>	<u>Project Costs, \$</u>	<u>Technical Support, Man-months</u>
January 1980	15,181	1.5
Total to Date	53,872	6.0
Estimated Cost to Completion	62,128	12.5

INTERNAL DISTRIBUTION

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