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INTERIM REPORT

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Author(s): Leon D. Chapman

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Richard C. Robinson, Safeguards Research Branch, SAFER:RES

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Prepared by  
Sandia Laboratories  
Albuquerque, New Mexico 87115

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INTERIM REPORT

NRC Research and Technical  
Assistance Report

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PHYSICAL PROTECTION OF NUCLEAR MATERIAL IN-TRANSIT

Quarterly Progress Report -  
October - December 1979

Prepared by  
Dallas W. Sasser  
Safeguards Methodology Development Division 4416  
Sandia Laboratories

21 January 1980

NRC Research and Technical  
Assistance Report

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## IN TRANSIT

Quarterly Progress Report  
October - December 1979

D. W. Sasser

### Evaluation Methodology

Work during this period of Emergency Assistance Request Simulator (EARS) was concentrated on two efforts: 1) increasing the interactive features of EARS and 2) developing a model to simulate a radio telephone communication system.

In the first effort, the following interactive input features have been implemented:

- a) the number of transporters reporting every 30 minutes, 60 minutes and 90 minutes;
- b) jamming present or not;
- c) if jamming present, a single jammer can be located randomly or jammers can be located near any set or all of the 5 relays used in SECOM;
- d) jamming can be done on any set or all of the 4 frequencies used in SECOM;
- e) jammer power;
- f) jammer on-time;
- g) jammer off-time;
- h) time length of simulation.

In addition, a more realistic digital map of the U. S. has been developed.

In the second effort, a Nationwide Service Directory was ordered from Telocator Network of America. This directory lists the locations of over 1000 mobile telephone and paging systems throughout the U.S. From this information, a database, correlated with the digitized map referred to above, was developed. Only those stations offering 24 hour service to transient uses were included. In the radio telephone simulation, transporters will communicate via radio telephone if a station is within range (national average range is 25 miles). If none is in range, commercial telephone will be used. Development of this model is still in progress.