

ACTION SHEET 5

Automatic Comparison Equipment for Fast Critical Assembly (FCA)

Pursuant to the DOE/JAERI Agreement on R&D in Material Control, Accountancy, Verification, and Physical Protection.

A. Objective.

DOE and JAERI wish to undertake to carry out a cooperative effort to develop a software based automatic comparison system for use with the authentication equipment at the Portal Monitor (P/M) and Penetration Monitor (PN/M) of the Fast Critical Assembly (FCA) facility. The activities in this Action Sheet were originally to be conducted under Action Sheet 4. However, funding was insufficient to complete all the activities under Action Sheet 4, so a new Action Sheet 5 has been written.

B. Current Activities

1. DOE Activities: Sandia National Laboratories (SNL) has developed and delivered to JAERI authentication equipment and computer software that has been installed at the JAERI FCA facility.
2. JAERI Activities: JAERI has developed the Portal/Penetration Monitor system for use by the IAEA at the FCA facility, and has installed authentication equipment developed and delivered by SNL. Presently, JAERI and the IAEA are conducting a three month field test of the authentication equipment using manual comparison techniques.

C. Cooperative Activities

An automatic comparison software program will be developed, documented, and delivered to the JAERI by SNL which will enable the IAEA to compare and verify the authentication equipment record to the record produced by the JAERI Advanced Containment and Surveillance System (AC/S). A provisional schedule of activities is provided at Appendix I.

1. SNL is to design and deliver the automatic comparison software which will be designed to operate on an IAEA personal computer. SNL is also to verify proper installation of the automatic comparison system and to provide manual and program documentation to JAERI.
2. JAERI is to provide details of the AC/S operating system to permit integration of the AC/S data into the automatic comparison software.

3. JAERI will provide DOE funding to carry out the work at the Sandia National Laboratories (SNL). The total funding provided shall be \$50,000 (US). Payment shall be made in the following manner. An initial contribution of \$20,000 (US) shall be due and payable upon receipt of an invoice to be issued upon, or shortly thereafter the date of signature of Action Sheet 5. A second contribution, in the amount of \$30,000 (US), will be due and payable as soon as the JAERI budget of 1992 is authorized for use.

Approvals:

Kisuke Kuroda

JAERI PCG Member

Dr. Kenneth S. Sanders

2/5/92 DOE PCG Member

Koji Ikeda

JAERI PCG Member

DOE PCG Member

5 Feb. 1992
Date

5 Feb. 1992
Date

Appendix I

Provisional Schedule* for Action Sheet 5

Activity	Responsible Party	Completion date
Delivery of Software Information from FCA to SNL	JAERI	April, 1992
Research AC/S Software and Design Comparison Software	SNL	April, 1992
Develop Comparison Software	SNL	May, 1992
Debug and Test Software	SNL	June, 1992
Install and Checkout Comparison Software	SNL, JAERI, IAEA	July, 1992

* This schedule assumes that funding is received at SNL and that the AC/S software information requested from the FCA is provided to SNL by April 1992.