

**ANNEX 1
to
ACTION SHEET 15**

between

The Power Reactor and Nuclear Fuel Development Corporation of Japan (PNC)

and

The Department of Energy (DOE)

for

**Joint Development of Waste Measurement Systems and Development and Application
of Upgraded Glove Box Accounting Systems**

Action Sheet 15 was signed on January 27, 1994. The parties have subsequently jointly agreed to modify the scope-of-work, schedule, and fiscal management sections of Action Sheet 15 to provide for development and application of advanced material accountancy glove box (MAGB) measurement systems for PFPF.

This Annex changes the following parts of Appendix I of Action Sheet 15.

1. Study Outline (modify paragraph A as follows)
 - A. Remote-controlled NDA system for MOX transfer containers.

In the process area of the MOX facility; the MOX is contained in transfer containers that are moved by the robotics system. It is desired to measure the MOX in the transfer containers without taking destructive analysis samples from the transfer container at the sampling stages. An advanced MAGB measurement system will be designed to measure plutonium with higher efficiency than standard MAGB detectors currently in the PFPF/FBR line. The advanced MAGB design will accommodate a high-resolution gamma detector for plutonium measurements. Two advanced MAGB measurement systems will be fabricated, tested and delivered to PNC for installation.

4. Schedule*

<u>Tasks**</u>	CALENDAR YEAR															
	<u>1994</u>				<u>1995</u>				<u>1996</u>				<u>1997</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
A. Transfer Container Systems																
a. Phase I									X	X	X					
b. Phase II									X	X			X	X	X	X
c. Phase III													X	X	X	X
B. Waste Measurement Systems																
a. Phase I	X	X	X	X												
b. Phase II			X	X		X	X									
c. Phase III						X	X	X	X							

* The schedule will be followed on a best-effort basis depending on receipt of funding and availability of parts.

** Phase I: R & D Studies, Conceptual Design, Scale and Prototype Tests
 Phase II: Engineering Design, Fabrication, Installation
 Phase III: Calibration, Performance Testing, Data Evaluation, Reporting

This Annex changes the following part of Action Sheet 15.

4. Fiscal Management (add paragraph e.)

- e. A contribution of \$80,000 in United States dollars shall be due and payable upon receipt of an invoice to be issued in JFY 1996 (Japanese Fiscal Year) after the date of signature of the Action Sheet.

All other provisions of AS 15 remain in effect.

1/8

31 May 96

[Signature]

DOE shall not begin or carry out work related to the scope change of Annex I prior to entry into force of Annex I and receipt of the required payment in advance; and work shall not be continued after funds from PNC have been depleted. Throughout the duration of work under AS-15 as modified by Annex I, PNC shall provide sufficient funds in advance to reimburse DOE for causing LANL to perform the work described in this AS and Annex, and DOE shall have no obligation to perform in the absence of adequate advance funds.

For the Power Reactor and Nuclear Fuel
Development Corporation of Japan

Signature: Masami Katsuragawa

Printed
Name: Masami Katsuragawa

Title: Director
International Division

Date: August 28, 1996

For the United States
Department of Energy

Signature: Kenneth E. Sanders JP

Printed
Name: Kenneth E. Sanders

Title: Division Director

Date: 1 June 1996