

The United States Department of Energy (DOE)
and
The European Atomic Energy Community
represented by
The Commission of European Communities (EURATOM)
for
Windows 95/NT Interface to MGA

1. Introduction

Pursuant to Article 3.1 of the Agreement between EURATOM and DOE for Cooperation in Nuclear Material Safeguards Research and Development (hereafter called the «Agreement») signed on January 6, 1996, DOE and EURATOM undertake to carry out a cooperative effort in the development of a Windows 95/NT interface for the «MGA» analysis software and users training on the software.

2. Scope of Work

This Action Sheet provides for LLNL to modify the existing MGA(MGA++) spectrum analysis code to operate in a Windows 95 or Windows NT environment. EURATOM (Luxembourg) staff will evaluate the MGA code with the Windows 95 or Windows NT interface for accuracy and ease of use. LLNL will modify the software to correct identified deficiencies to maintain previous analysis performance. LLNL will work with the EURATOM Safeguards Directorate in planning and conducting a MGA users training class, to be held at JRC, Ispra which will include IAEA inspectors in the framework of the New Partnership Arrangement between IAEA/EURATOM.

The work under this Action Sheet shall be performed at the EURATOM Safeguards Directorate, JRC, and Lawrence Livermore National Laboratory (LLNL) in accordance with the terms and conditions of the agreement.

3. Program Management

LLNL is responsible for making basic modifications to the MGA spectrum analysis software, the SpecView graphics server and developing a graphical user interface for Windows 95/NT tailored to Euratom requirements. EURATOM is responsible for the test and evaluation study of the software, and for providing written requirements for software modifications. EURATOM cannot distribute the upgraded MGA software package (including GUI and graphics server) outside of EURATOM without LLNL consent. EURATOM and the JRC are responsible for providing the facilities for the MGA users training class. Work to be done jointly is identified in Appendix I and is limited to that statement of work for the time being. Appendix II identifies coordinator and key personnel working on this project

DOE and EURATOM shall carry out this work interactively, exchanging information on the training, evaluation, and software modifications as the project progresses. At the conclusion of this work, EURATOM will provide a final report on the activities, and any recommendations for use of the MGA spectrum analysis software.

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4. Fiscal Management

DOE and EURATOM shall bear their own expenses for this work.

5. Duration and Termination

This Action Sheet shall enter into force upon the latter date of signature, and shall continue in force for a two year period, or until mutually agreed by the parties that all activities under this Action Sheet are judged to be completed.

For the United States
Department of Energy

For the European Atomic
Energy Community
Represented by the
Commission of European
Communities

Signature:



Signature :



Printed

Name: Kenneth E. SANDERS

Printed

Name: Winfried KLOECKNER

Title:

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Date: April 16, 1998

Date:

Statement of Work
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1. Background

MGA spectrum analysis software was initially developed for use in non-windows environments, such as VMS, DOS and UNIX, and is an industry standard. The Euratom version of the code is mature and stable, though requires DOS for proper operation of the imbedded graphics routines.

Many organizations that rely on this analysis code have migrated to more sophisticated operating systems, with most implementing Windows 95 or Windows NT as the standard. EURATOM has expressed the need for an MGA enhancement that will allow operation under Windows 95 and NT environments.

Several MGA users workshops have been held in the past, but they have provided limited hands-on training in the use of MGA. LLNL would work with the EURATOM Safeguards Directorate in planning a training class in Europe that would address special measurement situations and the use of MGA.

2. Objective and Scope

The overall objectives of this work are to:

- develop a version of MGA for Euratom operation under Windows 95 or Windows NT.
- test and evaluate the MGA software to determine whether it meets EURATOM requirements.
- determine a list of additional desirable features and capabilities to be added to the MGA code to make it an even more powerful tool.
- prepare a **workplan** and schedule for implementing the improvements identified in the list.
- plan and conduct a MGA users training class that addresses special measurement situations and the use of MGA for EURATOM inspectors.

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3. Schedule and Milestones

Task Id.	Description	Starting Date	Ending Date	Duration (Weeks)
1	LLNL develops new MGA version, user interface, and graphical output for Euratom operation under Windows 95/NT.	98.01.01	98.05.01	16
2	LLNL and EURATOM schedule MGA training class; EURATOM provides requirements for MGA users training	98.01.01	98.02.15	6
3	LLNL and EURATOM develop training plan for MGA users training class	98.02.15	98.03.31	6
4	LLNL provides EURATOM with the updated MGA software, and operating instructions.	98.05.02	98.05.02	-
5	LLNL provides EURATOM with MGA users training plan	98.04.01	98.04.01	-
6	EURATOM comments on training plan	98.04.01	98.04.30	
7	LLNL prepares materials for MGA users training	98.05.01	98.05.31	8
8	EURATOM tests and evaluates MGA and its applicability to EURATOM safeguards activities.	98.05.03	98.07.01	8
9	EURATOM supplies any additional clarification, and / or required technical specifications to LLNL.	98.07.02	98.07.02	-
10	LLNL modifies the MGA software to correct existing deficiencies.	98.07.03	98.09.01	8
11	LLNL provides EURATOM with the updated MGA software, and operating instructions.	98.09.02	98.09.02	-
12	EURATOM verifies accuracy with previous non-Windows versions.	98.09.03	98.11.03	8
13	EURATOM prepares a summary report of the test and evaluation results including a list of additional desirable features and capabilities to be added to the code.	98.11.04	98.11.20	2
14	EURATOM supplies a summary report of the test and evaluation results.	98.11.21	98.11.21	-

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15	LLNL drafts a workplan and schedule for making additional modifications to the MGA code.	98.11.22	98.12.05	2
16	LLNL supplies a workplan and schedule for additional modifications to the MGA code.	98.12.06	98.12.06	-
17	LLNL and JRC conduct MGA users training class	-	-	1
18	LLNL and EURATOM jointly write final report on modification of MGA for Windows 95/NT and MGA users training.	98.12.07	98.12.31	3
19	Final report issued.	98.12.31	98.12.31	-

Appendix I

Statement of Work
for
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Key Personnel
for
Windows 95/NT Interface to MGA

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