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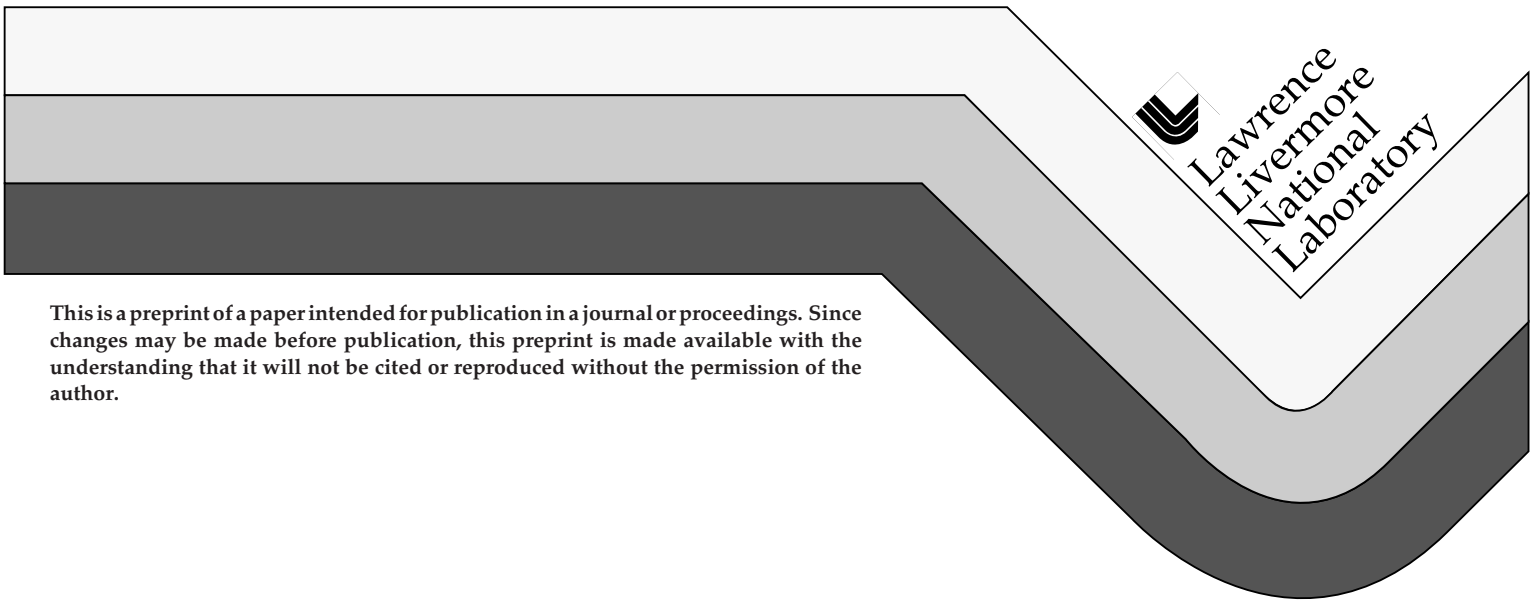

Material Protection Control and Accounting Program Activities at the Electrochemical Plant

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INTRODUCTION

The Electrochemical Plant (ECP) is the one of the Russian Federation's four uranium enrichment plants and one of three sites in Russia blending high enriched uranium (HEU) into commercial grade low enriched uranium. ECP is located approximately 200 km east of Krasnoyarsk in the closed city of Zelenogorsk (formerly Krasnoyarsk-45). DOE's MPC&A program first met with ECP in September of 1996. The six national laboratories participating in DOE's Material Protection Control and Accounting program are cooperating with ECP to enhance the capabilities of the physical protection, access control, and nuclear material control and accounting systems. The MPC&A work at ECP is expected to be completed during fiscal year 2001.

SCOPE OF THE FY 98 ACTIVITIES

Physical Protection - The project team is cooperating to enhance radio communications for the site's security service and to improve the physical protection systems at the HEU storage site and at the flourination facility.

Access Control - ECP has installed on its own an upgraded access control system at the perimeter personnel portals, the U.S. team is working with ECP to add metal and nuclear material detectors to these portals along with video assessment systems. ECP has also requested that the project team purchase two x-ray machines to improve the site's ability to detect unauthorized items being brought into, or withdrawn from, the facility.

Nuclear Material Control and Accounting - ECP has an effective accounting system utilizing ledgers and technical passports. The project team has been asked to provide an initial computerized accounting capability to one of ECP's HEU material balance areas. ECP's goal is to improve the timeliness of the information in their accounting system. This initial capability will be evaluated by the site and requests for an expanded capability will be made after the evaluation. The computerized accounting system will utilize bar codes, non-destructive assay confirmatory measurements and enhanced scales. We expect that all requirements for the site-wide computerized accounting system, the bar code system, and the scales to be determined by early FY 99. The U.S. project team will be purchasing nuclear material detectors to cover the exits of the storage building and the fluorination facility as well. Integration and commisioning of the accounting system will occur during FY 99.

THE ULTIMATE SCOPE OF THE MPC&A ACTIVITIES AT ECP

The physical protection and access control work started in FY 97 will be expanded to include the blending facility. The material control and accounting upgrades will cover all HEU operations including the blending process and those parts of the LEU process which are associated with the blending process

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