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Nuclear Material Information Quality Control for Safeguards Purposes in South Africa

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The State System of Accounting and Control of Nuclear Material (SSAC) in South Africa comprises a State Inspectorate, Technical Support and Safeguards Information Systems (SIS). SIS is responsible for the quality control and assurance of the Nuclear Material Reports, Additional Protocol declarations and submission to the IAEA.

Monthly reports are received from the facilities where inventory changes took place. Reports are prepared according to a Quality Management Document: Instruction for the Completion of Nuclear Material Accounting Reports.

The inventory changes are reported on spreadsheets developed for our system. The Inventory Change Reports (ICR) and General Ledgers (GL) are compared line by line to check for discrepancies, which will be noted on a Control Sheet. The form will be sent to the relevant facility to notify them of corrections needed. The corrected reports will be re-submitted to SIS.

A spreadsheet is used in the verification process with columns for all material categories and inventory change codes. The ICR totals of all inventory changes can be reconciled with the GL values. If all the entries are correct the nuclear material totals should be the same as on the GL.

The facility file is checked by the State Inspector responsible for the specific facility as a second round of quality control. The inspector is required to sign the Control Sheet to confirm the completeness and correctness of the reports.

The Excel data is then converted into a text (.txt) file, encrypted and then submitted electronically to the Agency.

This paper will present all the steps involved in ensuring the correctness of the reports and the quality control measures in detail used by the South Africa SSAC.

Country or International Organization

South Africa

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