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THE ROLE OF QUALITY ASSURANCE IN IMPLEMENTING MEASUREMENTS/MEASUREMENT CONTROL REQUIREMENTS

by

R. S. Dorsett

E. I. du Pont de Nemours and Company
Savannah River Plant
Aiken, SC 29808-0001

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An abstract proposed for presentation and publication at the
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THE ROLE OF QUALITY ASSURANCE IN IMPLEMENTING MEASUREMENT AND MEASUREMENT CONTROL REQUIREMENTS

Robert S. Dorsett

Savannah River Plant, E. I. duPont de Nemours and Company, Inc.
Aiken, South Carolina 29808

Abstract

The need for specific functions/operations to meet specific requirements of multiple DOE orders has a tendency to result in redundant administrative systems. With respect to Quality Assurance (QA), it is not uncommon to determine what must be done to accomplish a specific mission, and then determine what additional actions are necessary to meet QA requirements. To maximize effectiveness, QA must be incorporated into, and become an integral part of, mission methodology. QA should and can be an effective tool in assuring that Measurement and Measurement Control (M&MC) programs are adequate, effective and meet the latest DOE requirements. The M&MC section of DOE Order 5633.3, Control and Accountability of Nuclear Materials, was reviewed with the aim of ascertaining which requirements could be met, in part or in full, by the use of existing or planned programs to achieve compliance with ANSI/ASME NQA-1, QA program requirements for nuclear facilities. Numerous NQA-1 requirements were found to be directly applicable to the following key elements of M&MC: organization, selection and qualification of measurement methods, training and qualification of measurement personnel, measurement systems, and measurement control. A summary of these requirements and their application to M&MC are discussed in the paper.

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E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
ATOMIC ENERGY DIVISION
SAVANNAH RIVER PLANT
AIKEN, SOUTH CAROLINA 29808-0001
(TWX: 810-771-2670, TEL: 803-725-6211, WU: AUGUSTA, GA.)

March 15, 1989

C. M. Pietri
c/o INMM
60 Revere Drive
Suite 500
Northbrook, Illinois 60062

Dear Mr. Pietri:

Three copies of the abstracts **"The Role of Quality Assurance in Implementing Measurements/Measurement Control Requirements"** (DP-MS-89-36X) by R. S. Dorsett, and **"Overview of a Measurements/Measurement Control Symposium Held at the Savannah River Plant"** (DP-MS-89-37X) by J. P. Clark are enclosed.

The abstracts are proposed for presentation and publication at the Institute of Nuclear Material Management Annual Meeting in Orlando, Florida, July 9 through 12, 1989.

Please let us know if we can be of further help to you.

Sincerely,

Jeanne Sellers

Jeanne Sellers
Publications

Encs.

BCC: R. S. Dorsett, 703-2A
J. P. Clark, 703-2A
SRL File, 773-A (DP-MS-89-36X and 37X)

"OVERVIEW OF A MEASUREMENTS/MEASUREMENT CONTROL SYMPOSIUM HELD AT THE SAVANNAH RIVER PLANT"

J. P. Clark

Savannah River Plant, E. I. duPont de Nemours and Company, Inc.
Aiken, South Carolina 29808

Abstract

A symposium on measurements and measurement control (M/MC) for materials control & accountability (MC&A) was held October 25-27, 1989 at the Savannah River Plant (SRP) in conjunction with an INMM Sub Committee 5.1 meeting. Its members (from several nuclear organizations), representatives from the Department of Energy & Nuclear Regulatory Commission and SRP personnel explored M/MC in relation to requirements specified in DOE Order 5633.3 and discussed how the implementation of applicable national standards could satisfy most of the requirements for M/MC. The symposium was divided into three sessions: M/MC Requirements and Applicable National Standards; Overviews of M/MC Activities at NRC and DOE Sites; and Workshops covering M/MC Requirements. Workshop topics included: Analytical Laboratories, Statistical Methods, Process Controls, Nondestructive Analyses, Chemical Analyses, Sampling and Process Measurements, Training and Qualification of Measurement Personnel, Measurement Methods, and Organization & Quality Verification. An overview of the symposium sessions, similarities & differences between facility programs, plus concerns and comments of the participants are discussed in the paper.

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The need for specific functions/operations to meet specific requirements of multiple DOE orders has a tendency to result in redundant administrative systems. With respect to Quality Assurance (QA), it is not uncommon to determine what must be done to accomplish a specific mission, and then determine what additional actions are necessary to meet QA requirements. To maximize effectiveness, QA must be incorporated into, and become an integral part of, mission methodology. QA should and can be an effective tool in assuring that Measurement and Measurement Control (M&MC) programs are adequate, effective and meet the latest DOE requirements. The M&MC section of DOE Order 5633.3, Control and Accountability of Nuclear Materials, was reviewed with the aim of ascertaining which requirements could be met, in part or in full, by the use of existing or planned programs to achieve compliance with ANSI/ASME NQA-1, QA program requirements for nuclear facilities. Numerous NQA-1 requirements were found to be directly applicable to the following key elements of M&MC: organization, selection and qualification of measurement methods, training and qualification of measurement personnel, measurement systems, and measurement control. A summary of these requirements and their application to M&MC are discussed in the paper.