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U.S. ATOMIC ENERGY COMMISSION

# REGULATORY GUIDE

DIRECTORATE OF REGULATORY STANDARDS

## REGULATORY GUIDE 8.6

### STANDARD TEST PROCEDURE FOR GEIGER-MÜLLER COUNTERS

#### A. INTRODUCTION

Section 20.201 of 10 CFR Part 20, "Standards for Protection Against Radiation," requires that licensees make such surveys as are necessary to comply with the regulations in 10 CFR Part 20, including appropriate measurements of levels of radiation. Standard test procedures are necessary to ascertain that the instruments used for measuring radiation are operating properly. This guide provides an acceptable procedure for testing the operating characteristics of Geiger-Müller counters prior to making calibrations and measurements required by § 20.201.

#### B. DISCUSSION

The Radiation Detectors Committee of the Institute of Electrical and Electronics Engineers' (IEEE) Nuclear Science Group along with the Electron Tubes Standards Committee of the IEEE Electron Devices Group

produced a standard test procedure for Geiger-Müller counters which was approved as IEEE No. 309 by the IEEE Standards Committee on September 11, 1969. This procedure was subsequently approved as American National Standard N42.3-1969<sup>1</sup> by the American National Standards Institute (ANSI) on December 23, 1969.

#### C. REGULATORY POSITION

The standard test procedures for Geiger-Müller counters specified in ANSI N42.3-1969 (IEEE No. 309), "Test Procedure for Geiger-Müller Counters," are suitable for use in determining whether or not the operating characteristics of Geiger-Müller counters are acceptable.

<sup>1</sup>Copies may be obtained from the Institute of Electrical and Electronic Engineers, 345 East 47th Street, New York, N.Y. 10017.

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