conference report

PROGRAMS CONSIDERED IN RADIATION INSTRUMENTS AND LABORATORY SYSTEM

The NBS-hosted Workshop on Radiation Survey Instruments and Calibrations brought together representatives of the public and private sectors to discuss possible future national programs in two related areas. The first program would test the performance of radiation survey instruments and would be based on performance criteria and test methods contained in a standard now under development. The second would establish a system of secondary standards laboratories that could provide instrument calibrations and related services including, for example, instrument performance testing and measurement quality assurance.

Joining with NBS as sponsors of the July 10–12 workshop were the Department of Defense, the Department of Energy, the Center for Devices and Radiological Health in the Food and Drug Administration, the Nuclear Regulatory Commission, the Conference of Radiation Control Program Directors, the Nuclear Suppliers Association, and the Health Physics Society. This represents a balance among interested agencies and organizations in the private, state, and federal sectors. The workshop program was structured to present each of these three perspectives, and the 160 registrants represented a similar wide range of interests and concerns.

Measurement Incentive

To establish the proper perspective for discussions that were to follow, the workshop began with a few papers that emphasized the increasing importance of making accurate measurements of radiation. It was generally agreed that new legislation, and a steady growth in litigation related to personnel exposure, provide strong incentive for improved reliability and defendability of measurement results.

Discussion of the first major topic (survey instrument performance) began with a series of papers that described operational problems with instruments over a broad range of user interests and conditions of use. Possible solutions of these problems were then considered, including a draft American National Standard that would establish detailed instrument performance requirements and would prescribe testing procedures used to determine whether those requirements have been met by a particular instrument. The possibility of a national instrument testing and certification program, based on the draft standard, was discussed by a panel including instrument users and manufacturers. It was generally agreed that development of the standard should continue, but that implementation of a national program would require much additional planning and study of various alternative approaches.

The second major topic (secondary standards laboratories) was introduced by several papers that described a limited number of ongoing programs resulting in secondary laboratories, and the operational criteria for those laboratories. Several representatives of national user sectors then expressed their interest in, and support for, development of a system of secondary laboratories in the private sector. Representatives of national professional societies and organizations participated in a panel discussion that was intended to identify an organization that would coordinate private-sector development, and conceivably accredit secondary laboratories that satisfy established performance criteria in the future. A clear majority of the workshop attendees indicated a preference to have the Health Physics Society perform this function.

National Committee Established

In a final session, speakers described relevant recent technical work relating to either of the two major topics, such as studies of instrument performance and specialized calibration facilities.

The interactions and discussions that began during the workshop will be continued in a national committee for which NBS will serve as the secretariat. This committee will consist of members who will represent all the major interests. It will plan and guide implementation of a national instrument testing program and the establishment of a system of private-sector secondary standards laboratories. After the committee has developed specific plans that represent the consensus of the various interests, a second workshop will be held to present the plans to the general community of instrument users, manufacturers, and other concerned parties.

The proceedings of the workshop are to be published by the Department of Energy.

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