

REPORT OF U.S. DELEGATION TO MEETING OF
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

716775

TECHNICAL COMMITTEE ISO/TC 85

NUCLEAR ENERGY

SUB-COMMITTEE 4 "RADIOISOTOPES"

Warsaw, Poland, April 21-22, 1959

To : American Standards Association
Through : Charles R. Russell, Chairman,
ASA Subcommittee N 5.4
From : S. Allan Lough, (Chairman), *S. Allan Lough*
S. Lawroski and L. C. Schwendiman,
American Delegation.

Section I. Report of Formal Meeting of ISO/TC 85/SC 4

The essential points on which the subcommittee took action are reported in the minutes issued by the Secretariat. These minutes are presented in Documents 85 N10, 11, 14 and 15. The Resolutions which were adopted by ISO/TC 85/SC 4 are presented in Documents 85 N12, 13 and the Appendix to Document 85 N15.

Section II. Special Notes on Proceedings

1. The ASA was asked to send to the Polish Secretariat a complete description of the "standard" capsule for teletherapy cobalt 60 sources in use on a voluntary basis in the U.S.A.

REPOSITORY Texas A+M Archives & Special
COLLECTION Paul Aebersold Papers *collections*
BOX No. 4
FOLDER General Correspondence - 1959

1104611

2. Document 85 N14 shows that the U.S.A. was named the Secretariat of the working group on standards for Unsealed Sources, Item 4, et ff. in the program of work. The U.S.A. Secretariat of this working group should:

a. Write to each member country requesting it to name experts in unsealed sources who would be available to participate in the work.

b. Communicate with designated experts in various countries and accomplish by mail as much work as possible.

c. Hold a meeting, if and when it appears profitable, in order to afford opportunity for easy and rapid formulation of a recommendation.

d. Prepare a report and take it to the next meeting of TC 85/SC 4 in Geneva in May 1960. Note: All documents must reach Secretariat of ISO/TC 85/SC 4 (Poland) at least four months before the next meeting.

3. The U. K., which has the Secretariat, hopes to hold a meeting of ISO/TC 85/SC 2 in October 1959.

4. The U.S.A. delegation discovered that, apparently, the Polish Secretariat had not received the ASA comments on the Polish Outline. (Ref. Minutes of ASA Sectional Committee N5.4, Meeting in Washington, D. C., March 4, 1959) As pointed out by Mr. L. C. Schwendiman

in his letter of May 13, 1959, attached, this failure to get the ASA comments to the Polish group left the USA delegation unwilling to press these suggestions at the Warsaw meeting. We were not informed that the comments of ASA SC N5.4 were indeed the accepted and official position of the ASA.

Despite our uncertainty the USA delegation did recommend the addition, as Item 6 in the Program of Work, standardization of facilities for preparing, handling and use of radioactive sources. Some objection to its inclusion was raised by the delegation from India, based partly on the belief that this subject will be treated by another subcommittee of TC 85. Even so, Resolution 1 on scope of the work of SC 4 includes our suggestion.

Section III. General Observations

1. England, France, Hungary and Poland sent to the meeting delegations which included at least one full-time professional on standardization. While the delegations from the other countries represented were active and contributed effectively to the deliberations, it was clear that whenever the matter under consideration involved the nuances of the standardization art per se, the specialists on standardization from the above four countries were more at home in the subject, made the more valuable suggestions, and were accorded the more respectful attention. The other nations, represented by men who

were knowledgeable on radioisotopes from one or many standpoints, were not as adept on standardization itself.

The composition of the U.K. delegation was probably ideal. The Head was G. Weston, Technical Director of the British Standards Institute and the other member was J. S. Burgess from the U.K. Atomic Energy Authority, Radiochemical Centre, Amersham. Mr. Weston lived and breathed standards. Dr. Burgess was thoroughly conversant with radioisotope technology. The U.S.A. delegation lacked the standards specialist; was made up of three radioisotope specialists. It is strongly recommended that hereafter the U.S.A. delegation be better balanced and that an ASA professional be a member. The special knowledge on standardization is needed at the meeting and it is unrealistic to assume that men without such specialized experience, asked to serve on an ad hoc basis will, or even can, bestir themselves to learn the art pro tem.

Section IV. Conclusion

The ASA Sectional Committee N5.4, through the U.S.A. Delegation, has accepted the responsibility to serve as the Secretariat of Working Group II, Unsealed Sources for ISO/TC 85/SC 4. The immediate obligations of this Working Group are outlined above in Section II.2. of this report.

Submitted:
6/2/59

Poland Agenda

APPENDIX

1. PHYSICAL PROPERTIES OF THE ISOTOPES

- 1.1. Type of radiation
- 1.2. Radiation energy
- 1.3. Type and scheme of disintegration
- 1.4. Half-life
- 1.5. Ionization constant ← ?

Look into how current
are NBS values on
routinely used isotopes,
and how critical
Take up with Taylor

2. MEASUREMENTS OF THE PROPERTIES OF RADIATION SOURCES

- 2.1. Activity ← 2.1.1 Methods
- ~~2.2. Radiation energy~~ ← 2.1.2 Primary standards
- ~~2.3. Half-life~~ ← 2.1.3 Secondary standards
- ~~2.4. Purity~~
 - ~~2.4.1. Radiation purity~~
 - ~~2.4.2. Chemical purity~~
- 2.5. Technical specification for attestation

Call Curtiss
Subcommittee
on 34 & Standard

3. SEALED ISOTOPIC SOURCES

- 3.1. Characteristics of a sealed source
- 3.2. Radiography sources
 - 3.2.1. Source activity: normal and nominal
 - 3.2.2. Radiation source construction
 - 3.2.2.1. Source dimensions
 - 3.2.2.2. Dimensions of the source container
 - 3.2.2.3. Dimensions of the source holder
 - 3.2.3. Source marking
 - 3.2.4. Source certificate
- 3.3. Teletherapy sources
 - 3.3.1. Source activity, normal and nominal
 - 3.3.2. Radiation source construction
 - 3.3.2.1. Source dimensions
 - 3.3.2.2. Dimensions of the source container
 - 3.3.2.3. Dimensions of the source holder
 - 3.3.3. Source marking
 - 3.3.4. Source certificate
- 3.4. Irradiation sources
 - 3.4.1. Source activity: normal and nominal
 - 3.4.2. Radiation source construction
 - 3.4.2.1. Source dimensions
 - 3.4.2.2. Dimensions of the source container
 - 3.4.2.3. Dimensions of the source holder
 - 3.4.3. Isodose curves of the source

- 3.4.4. Source marking
- 3.4.5. Source certificate
- 3.5. Therapy sources /teletherapy excluded/
 - 3.5.1. Source activity: normal and nominal
 - 3.5.2. Radiation source construction
 - 3.5.2.1. Source dimensions
 - 3.5.2.2. Dimensions of the source container
 - 3.5.2.3. Dimensions of the source holder
 - 3.5.3. Isodose curves of the source
 - 3.5.4. Source marking
 - 3.5.5. Source certificate
- 3.6. Sources for various applications
 - 3.6.1. Source activity: nominal and normal
 - 3.6.2. Source construction
 - 3.6.2.1. Source dimensions
 - 3.6.2.2. Dimensions of the source container
 - 3.6.2.3. Dimensions of the source holder
 - 3.6.4. Source marking
 - 3.6.5. Source certificate

4. UNSEALED ISOTOPIC SOURCES

- 4.1. Characteristics of an unsealed sources
- 4.2. Radiation source purity
 - 4.2.1. Radiation purity
 - 4.2.1.1. Technical requirements
 - 4.2.1.2. Methods of control
 - 4.2.2. Chemical purity
 - 4.2.2.1. Technical requirements
 - 4.2.2.2. Methods of control
- 4.3. Labelled compounds
 - 4.3.1. Specific activity
 - 4.3.2. Chemical form
 - 4.3.3. Physical form
 - 4.3.4. Compound marking
 - 4.3.5. Source marking
 - 4.3.6. Source certificate
- 4.4. Medical sources for internal applications
 - 4.4.1. Specific activity
 - 4.4.2. Chemical form
 - 4.4.3. Physical form
 - 4.4.4. Source toxicity
 - 4.4.4.1. Technical requirements
 - 4.4.4.2. Methods of control
 - 4.4.5. Source sterility
 - 4.4.5.1. Technical requirements
 - 4.4.5.2. Methods of control
 - 4.4.6. Compound marking

9194011

- 4.4.7. Source marking
- 4.4.8. Source certificate

5. PACKAGING OF RADIATION SOURCES

5.1. Sealed sources

4.1.1. Transport containers

5.1.1.1. Container dimensions

5.1.1.2. Container materials

5.1.1.3. Methods of control

5.2. Unsealed sources

5.2.1. Source ampoules

5.2.1.1. Ampoules for solid materials

5.2.1.2. Ampoules for solutions and liquids

5.2.1.3. Ampoules for gases

5.2.1.4. Ampoules of sterile materials

5.2.1.5. Ampoules for special purpose sources

5.2.1.6. Ampoule marking

5.2.2. Transport containers

5.2.2.1. Container dimensions

5.2.2.2. Container materials

5.2.2.3. Protective paddings

5.2.2.4. Methods of control

5.2.2.5. Container marking