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AN INDEX TO THE AEC/ERDA/DOE AIR CLEANING CONFERENCES*

CONF - 801038 - -3

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Today begins the 16th AEC/ERDA/DOE Nuclear Air Cleaning Conference. These conferences span a period of nearly 30 years; have outlived two sponsoring agencies, the Atomic Energy Commission and the Energy Research and Development Administration; and are now in a third, the Department of Energy. The term "energy" in each of these agency titles is significant, because air cleaning is an integral part of our nation's nuclear energy program. It is, in fact, one of the factors that makes that program possible. Somewhere in every nuclear energy facility, be it reactor, radiochemical operation, or laboratory, there is an air or gas cleaning system which is at the heart of the dynamic containment of that facility; the final barrier between it and the operating personnel, between it and the great outdoors. Our efforts, the efforts of the researchers, designers, and operators of air and gas treatment systems in this room today and in similar rooms over the past 30 years, have played a major role in developing the exceptional safety record of the nuclear energy program.

The history, developments, and experience of the nuclear air cleaning technology are summarized, and in fact detailed, in the *Proceedings* of these 15 conferences. The first meeting was held at the Harvard School of Public Health in Boston, Massachusetts, in 1951. To paraphrase Dade Moeller¹, the volumes which have resulted from the publication of the *Proceedings* of the 15 subsequent conferences held during the intervening years represent a veritable encyclopedia on nuclear air cleaning. A major problem with this encyclopedia, however, is that we have no mechanism for searching it to find what is available in it. The main purpose of this paper today, therefore, is to provide that mechanism, to introduce a comprehensive index to the papers given at the 2nd through 16th Conferences which will enable you to find those specific papers on topics of interest. Again paraphrasing Dr. Moeller¹, the published *Proceedings* of these conferences range from the 248-typewritten-page

*Research sponsored by the Office of Safety, Quality Assurance, Standards and Safeguards, U.S. Department of Energy under contract W-7405-eng-26 with the Union Carbide Corporation.

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document covering the 2nd Air Cleaning Seminar at Ames, Iowa in 1952 to the two-volume, probably 1250-plus page treatise that will be published on this 16th Conference. Back copies of these *Proceedings* are hard to come by, and those of the 2nd through 7th Conferences are virtually unobtainable. To remedy this situation, microfiche copies of all conferences are being made available through the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, Virginia 22161 (Telephone: 703-557-4650).

The index will be published as Vol. 3 of the *Proceedings* of this Conference. It will include the papers being given at this Conference and will probably be available early next year. The index has three parts, (1) a straight numeric tabulation, (2) an author index, and (3) a Key Word In Context (KWIC) index. The numeric index, Fig. 1, lists each paper of each conference by a two part number consisting of the conference number followed by a sequential number identifying the individual paper. This number is used in both of the other indexes for identifying the paper.

The author index, Fig. 2, lists each author who has participated in the air cleaning conferences over the years, together with the number(s) of the paper(s) to which each person contributed. Where there were multiple authors, each author is listed separately.

The KWIC index, Fig. 3 is, in effect, a cross-indexed key to all papers that have been presented in these conferences over the past 29 years. Each paper is listed once for each significant key word of its title. This multiple listing has resulted in a rather lengthy tabulation, but does provide a rather deep indexing of the title. Although a sincere effort was made to eliminate as many inconsequential index terms as possible, some anomalous terms still remain. We ask your indulgence of these, and point out that the indexing can be no better than the titles provided by the authors. Consideration was given to developing a permuted index, but this proved impracticable.

In ordering microfiche of the *Proceedings* from NTIS it will be necessary to use the document number. These are:

Conference Number	Conference Year	Conference Location	Document Number
1	1951	Boston	(To be assigned)
2	1952	Ames	WASH-149
3	1953	Los Alamos	WASH-170
4	1955	Argonne	TID-7513
5	1957	Boston	TID-7751
6	1959	Idaho Falls	TID-7593
7	1961	Brookhaven	TID-7627
8	1963	Oak Ridge	TID-7677
9	1966	Boston	CONF-660904
10	1968	New York	CONF-680821
IAEA	1968	New York	Ref. 2
11	1970	Hanford	CONF-700816
12	1972	Oak Ridge	CONF-720823
13	1974	San Francisco	CONF-740807
14	1976	Sun Valley	CONF-760822
15	1978	Boston	CONF-780819
16	1980	San Diego	(To be assigned)

Dade Moeller outlines the progression of Air Cleaning Conferences through the 11th at Hanford, noting for each Conference events or conditions which made it outstanding from the foregoing Conferences. I would like to continue that progression:

12th Conference (1972). The first Conference to which architect engineers and utilities were invited and, correspondingly, the first Conference at which attendance "broke" 300. It was noted that the Conference severely strained the facilities available at Oak Ridge, and that the banquet served a greater number of persons at the Country Club than had ever before been served at a single event. Also the first Conference to highlight, in the form of a special session, the growing importance of plutonium. A session on the special problems of uranium mining was also held at this Conference.

13th Conference (1974). The first Conference to stress the problems and experience of commercial power reactors, and to specifically invite papers from the commercial nuclear power industry. The first at which a formal meeting of the Government-Industry Working Group on Radioiodine was held; like the Government-Industry Working Group on Filters and Filtration, this had started out as a group of interested parties meeting in a smoke-filled hotel room and "graduated" to a full-fledged adjunct to the Air Cleaning Conferences.

14th Conference (1976). The first Conference to highlight the special air cleaning needs and problems of radioactive waste handling and treatment facilities. A greater emphasis on sand filters occurred at this Conference, as compared to the several previous Conferences; some of these papers were remarkably similar to, and repetitious of, papers on the same subject given during the very early Conferences. First to report on standards activities.

15th Conference (1978). The papers of this Conference concerned experience and problems of operational systems rather than new developments, more than in previous Conferences. A special session was held on new air cleaning technology from Europe, and this emphasis on overseas developments and experience is being continued in the 16th Conference.

If one includes the proceedings of the IAEA symposium on TREATMENT OF AIRBORNE RADIOACTIVE WASTES², the conference held jointly with the 10th AEC Air Cleaning Conference in New York in August of 1968, there are now 21 volumes available which cover the entire field of air and gas treatment for nuclear applications. These represent the most comprehensive, the most authoritative, and the most up to date literature in the field. With the new index to aid you in searching this reservoir of material, it should be of even greater value than in the past. We hope you find the index useful.

In closing, I want to acknowledge two members of my staff who made this project possible, Susan Carr and Mary Phillips. I merely had the idea and described what was needed; they developed a plan for putting the index together and implemented it. I also want to acknowledge the work of our ETD Reports Office at ORNL, which converted the raw computer outputs to the form you will find in the finished index.

REFERENCES

1. WELCOME by Dade W. Moeller, Harvard Air Cleaning Laboratory, *Proceedings of the Eleventh AEC Air Cleaning Conference*, USAEC report CONF-700816, December 1970.
2. Proceedings of a Symposium New York, 26-30, 1968, *Treatment of Airborne Radioactive Wastes*, International Atomic Energy Agency, Vienna, 1968.