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CONF 700816

Volume 2

PROCEEDINGS
of the
ELEVENTH AEC AIR CLEANING CONFERENCE

held in
The Federal Building
Richland, Washington
31 August – 3 September 1970

Sponsors: The Harvard Air Cleaning Laboratory
Harvard University

and

Division of Reactor Development and Technology
U. S. Atomic Energy Commission

Editors

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December 1970



PREFACE

In the past two years since the first international IAEA Symposium on Airborne Radioactive Wastes and the Tenth Air Cleaning Conference which were jointly held in New York City in August 1968, a major emphasis in the Atomic Energy Commission program has been placed on the development of fast breeder reactor technology. With this in mind, a primary focus of the Eleventh Air Cleaning Conference held in Richland, Washington, from August 31 to September 3, 1970, was a discussion of air-cleaning problems associated with liquid-metal fast breeder reactors (LMFBR's), including the design and development of accident cleanup systems for the Fast Flux Test Facility (FFTF).

The Conference was attended by 229 people, including representatives from industry, universities, AEC and contractor staff, and other Federal agencies, such as the Public Health Service (PHS), National Aeronautics and Space Administration (NASA), and the Naval Research Laboratory (NRL), as well as the United Kingdom and West Germany. Forty-four technical papers were presented during the meeting covering such phases of the air-cleaning field as sodium aerosols from LMFBR's, water reactor fission-product release estimations, removal and behavior of noble gases, iodine characterization and removal, other filtration studies, instrument development and evaluation, effects of airborne radioactive materials, fire safety, and standards development.

Reported progress on the development of engineered systems for the removal of the noble gases, krypton and xenon, from gaseous effluents was a major highlight of the Conference. With the development of LMFBR's, the results of biological effects studies involving inhaled plutonium aerosols, were also of considerable interest.

The meeting was sponsored through the radioactive effluent control research and development program of the Environmental and Sanitary Engineering Branch, Division of Reactor Development and Technology, U. S. Atomic Energy Commission. We are again indebted to Dr. Dade Moeller and his colleagues at Harvard University for assisting in the development of the technical program and making the administrative arrangements for the Conference.

Walter G. Belter

Walter G. Belter, Chief
Environmental & Sanitary Engineering Branch
Division of Reactor Development & Technology
U. S. Atomic Energy Commission



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A concurrent dinner meeting of the Columbia Chapter, Health Physics Society, was held at Hanford House during the Conference at 7:30 P. M., Tuesday evening, September 1. All Conference delegates were invited to attend. The main speaker was Mr. W. E. Johnson, Commissioner, USAEC, who has kindly consented to the publication of his address as part of these Proceedings.

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