

working in a timely manner if criteria setting cannot proceed, which is acceptable to public health officials, industry, local government and the consumer.

Dr. Rene Dubos warned us in prior hearings, and I quote:

We must abandon, in fact, the Utopian hope that regulations can protect us completely from all health dangers in the modern world.

We are aware that objectivity in human health matters is very difficult to maintain. None of us wishes to err in the wrong direction. Recently environmental quality has also generated an emotional response in the public. There is a widespread public opinion that we should no longer sacrifice aesthetic values or threaten the health of living things in the pursuit of technological achievement and economic gain.

I am particularly concerned with impacts on the environment which may be irreversible and very difficult or costly to fix up if waste management is not proper.

Balancing this somewhat intuitive feeling is the knowledge that pollution control means expense and change, even disruption, for a highly technical society. Unnecessary changes stemming from unfounded fears would divert dollars and effort from other vital national programs.

In a sense we want to have our cake and eat it, too. It is up to science to tell us how close we can come to this optimum. We realize that environmental effects cannot be known with the certainty of a surveyor's trajectory to the moon, but confidence can be increased that decisions and pollution control are well justified by the facts.

Today's witness, Dr. John T. Middleton, who is Director of the National Center for Air Pollution Control, Public Health Service, Department of Health, Education, and Welfare, is particularly well qualified to give us advice, to give this committee some basis on which to work in this particular field.

We are happy to have you here, Dr. Middleton. I wish you would come forward with your assistants and, if you would be kind enough to identify them for the record, please.

Dr. MIDDLETON. Thank you.

Mr. DADDARIO. It might also be well if Dr. Walter Hibbard, Director of the Bureau of Mines, comes forward at this time.

Proceed, Dr. Middleton.

(The biographies of Dr. Middleton, Dr. Ludwig, and Dr. Blomquist follow:)

DR. JOHN T. MIDDLETON

John T. Middleton, Director of the National Center for Air Pollution Control, was Professor and Director of the University of California State-wide Air Pollution Research Center at the time of his appointment to the newly-created National Center on January 1, 1967.

Born in Illinois in 1912, he received his education in California, where he was awarded his B. S. degree from the University of California, and Missouri, where he received his Ph. D. from the University of Missouri.

Dr. Middleton has taught and conducted research in mycology and plant pathology at the University of California at Los Angeles and at Riverside. His pioneer studies of the environment as a regulating factor in disease development in agricultural crops enabled him to first recognize photochemical air pollution as an adverse economic factor to California agriculture in the mid-1940's.

Dr. Middleton has served as Chairman and member of the California Motor Vehicle Pollution Control Board since its inception in 1960 as well as on the Gov-