A chairwoman for the AEC

AEC's Dixie Lee Ray

Appointment of Dixie Lee Ray to head the Atomic Energy Commission gives her the double honor of being the first woman to hold that position and being the highest ranking woman to head a Government science agency. The 58-year-old marine biologist has already established a reputation at the AEC for her informal life style and determination to establish closer contacts between installations in the field and the Washington bureaucracy.

Her appointment comes at a crucial time for her commission, which is under fire from environmentalists striving to slow down further atomic reactor installation and to remove the AEC's regulatory power to an independent agency. While she has not commented publicly on these issues, the new chairwoman is expected to be active in public education aimed at increasing acceptance of atomic energy.

Meanwhile, she has busied herself with visiting various AEC facilities around the United States, accompanied by her two dogs, Jacques and Ghillie. At one stop on her tour, Ray, an honorary member of the Kwikseutanik Indian tribe, told how the commission will encourage its contractors to hire more women and minorities by hiring promising, but untrained young people and then letting them pursue degrees on the job. More attention should be paid, she said, to "personal abilities and skills of candidates and a little less to formal qualification on paper."

A native of Tacoma, Wash., the new AEC chairman has enjoyed a 24-year association with the University of Washington. She has been particularly interested in public education in science and was director of the Pacific Science Center in Seattle. Despite her informality, she brings to her job a stubborn determination that, colleagues feel, will serve her well in the difficult time ahead.

A new director for the NBS

NBS's Richard W. Roberts

Richard W. Roberts has become the seventh director of the National Bureau of Standards just as that once sleepy agency has gained new importance in the areas of consumer protection, technology coordination and the drive to convert the United States to the metric system of measurement. He succeeds Lewis M. Branscomb, under whose leadership the bureau gained much of its new prominence. Branscomb left last year to become chief scientist at IBM.

Roberts met the problems of metrication head-on during his confirmation hearings before the Senate in late January. He agreed with the concept that converting Government procurement specifications to the metric system should be sufficient to encourage the private sector to convert. In general he said no special loans or grants from the Government are needed to help industries with conversion, but that loans for small businesses "severely affected" might be "an effective way to help them over the hard period." Roberts, who supported General Electric's unilateral decision to go metric while he was manager of the company's Materials Science and Engineering R&D division, said private industry needs only "a little motivation" to go metric.

Roberts received a doctorate in physical chemistry in 1959 from Brown University and served a postdoctoral fellowship at NBS before joining GE's research laboratory. His experience in industry will help him lead NBS in two of its new obligations. Under a law passed last year, the bureau has expanded duties in research related to consumer product safety. The bureau has also just begun to work actively with the National Science Foundation in a new program to speed introduction of new technology into the marketplace. The bureau's chief responsibility is maintaining and improving national standards of measurement.

When the black cloud strikes from the air

Air pollution has been accused of aggravating, triggering or actually causing health problems as diverse as cancer, bronchitis, pneumonia, emphysema, heart disease and psychiatric disturbances. Yet evidence to support these claims has been sketchy. Now more exact findings are coming to light.

Sulfur oxides are one of the major air pollutants. They result from coal and oil being burned as fuel by industries, homes and motor vehicles. High levels of sulfur oxides have been linked with deaths from acute or chronic respiratory illnesses.

Now the Environmental Protection Agency has linked moderate air levels of sulfur oxides, which people are exposed to on an everyday level, with specific respiratory problems, such as asthma and chronic bronchitis. Carl Shy of EPA's Research Triangle Park in North Carolina reported this finding last week at a Washington seminar on the health effects of air pollution. Declared Shy: "Sulfates and sulfides, the breakdown products of sulfur dioxides, appear to be even more critical than sulfur dioxides in triggering respiratory diseases."

Sulfur dioxide and its products provoke respiratory diseases only under the proper meteorological conditions, Shy says. Cold weather serves as a catalyst in winter, humidity in summer. Barometric pressure changes, such as a cold front, appear to have little impact on the ability of air pollutants to set off respiratory attacks.

Sulfur dioxide air levels are drastically down in New York City, Chicago and some other cities, Shy says. However this does not necessarily mean that air levels of sulfates and sulfides are also being reduced. And what is it that really acts on nasal passages and lungs? Is it a certain size sulfate or sulfide compound, or perhaps a metal ion attached to a compound? Such questions, he stresses, are crucial if the effects of SO_2 and other air pollutants on respiratory functions are to be curtailed.

Many smokers wonder how much respiratory distress they suffer is due to smoking and how much to air pollution. The EPA now has what appears to be the first preliminary answer. Respiratory insults are due two-thirds to smoking and one-third to sulfur dioxide in Chicago, New York City and Salt Lake City, and about four-fifths to smoking and one-fifth to sulfur dioxide in Idaho.

A report EPA has not yet published also lists other evidence indicting sulfur as a cause of respiratory problems.