

it on the grounds it was too dangerous. But the question of tighter controls on the truckers and freight companies is a touchy one. At the Los Alamos meeting which Commissioner Larsen addressed, one trucking consultant retorted that making security checks on shipping personnel, for example, was "retrogression, not progression. I was under the impression that the whole program of the AEC was to turn things over to industry. . . . I resent the implication that only the government is capable of doing anything correctively."

Sam Edlow, a transport consultant who has arranged shipments of fissionable materials internationally, said, "The carrier agrees to deliver a specific shipment between two specific points, at a published freight rate within a reasonable period of time. . . . He doesn't promise you that he is going to follow your instructions at the transfer point of connecting carriers. . . . He won't guarantee to do it in a specific period of time. . . . If the Commission is serious—really serious—about establishing a real set of safeguards within the transportation cycle, the answer is probably (in addition to making the shipper act in a professional way) regulation of the transportation industry itself, because only in that way can authority be expressed on the industry."[¶]

But at the same time, the truckers agreed that organized crime could easily obtain nuclear materials if it wanted. "Anything that organized crime wants to lay its hands on, while it's in the transportation cycle, it's going to get."

AEC hired Wright, Long & Co. to make a study of the threat of hijacking by the Mafia and other organized groups. The study itself is classified, but Carmine Bellino of Wright, Long & Co. told the Los Alamos meeting that "on a list of 735 so-called Mafia members, 12 are or were owners of trucking firms, two are truck drivers, and at least nine were union officials." While interviews with police chiefs had revealed that the Mafia appeared more interested in cigarettes and television sets than in uranium and plutonium, he added: "It is possible, however, they would add, that some foreign tyrant might offer a deal of some kind to any racketeer who would divert enriched

uranium or plutonium. . . . In such a situation a truck carrying uranium or plutonium could be easily hi-jacked or the theft could occur at warehouse or dockside." If such a threat exists already, the situation can only grow when, in 1974 and 1975, much greater quantities of plutonium will be shipped and stored.

Information Access

Although the black market problem is recognized by many at AEC as a grave question facing the nuclear reactor program and its plans for the future, to date there has apparently been little effort to make it public.

Naturally, details of losses, such as those at the Arkansas SEFOR reactor, are kept quiet for purposes of security. Congressional hearings dealing with security measures are also, generally, closed to the public. But the basic problem—the security aspect of AEC's future reactor program—is scattered through technical reports and documents, and it has rarely reached the public eye in coherent form.

When the head of the safeguards division first outlined the work of his group to *Science*, the problem of tracking great quantities of plutonium on a vast scale in the future was not even mentioned. (Later, when asked about the problem, he discussed it at some length and described his division's studies on the subject. The studies, however, are not public.)

The hazy line between withholding information on the problem and obfuscating it stretches into Commissioner Larson's speech on safeguards. There he repeated what many others in the field have said: that industry losses of strategic materials can run about 1 percent of the total. But when Larsen's speech was published with the other symposium proceedings, this admission had been reworded to say that "small process losses are unavoidable." The attitude at AEC seems to be to avoid telling the public much about this problem until the agency thinks it has a solution well in hand.

—DEBORAH SHAPLEY

RECENT DEATHS

Charles V. Banks, 52; professor of chemistry, Iowa State University; 26 February.

Albert A. Bennett, 83; professor

emeritus of mathematics, Brown University; 17 February.

Kenneth Berrien, 61; professor of psychology, Rutgers University; 9 February.

Paul W. Boutwell, 83; professor emeritus of chemistry, Beloit College; 22 February.

Robert E. Burns, 61; president, University of the Pacific; 13 February.

Toribio J. Castanera, 45; research radiobiologist, Armed Forces Radiobiology Research Institute, Bethesda, Md.; 27 January.

James R. Costello, 69; former professor of obstetrics and gynecology, Georgetown University; 24 February.

Herbert McL. Evans, 88; professor emeritus of anatomy, University of California's School of Medicine, Berkeley; 6 March.

Stevenson W. Fletcher, 95; former dean, College of Agriculture, Pennsylvania State University; 10 February.

Walter B. Ford, 96; former professor of mathematics, University of Michigan; 24 February.

Robert Getty, 54; chairman, veterinary anatomy department, Iowa State University; 18 February.

Herman Goodman, 76; retired clinical professor of dermatology, New York University Medical School; 9 February.

Amshel Gueft, 85; former clinical professor of prosthetics, College of Dentistry, New York University; 1 March.

William B. Hawkins, 70; professor of pathology, University of Rochester Medical Center; 4 February.

Charlotte Haywood, 74; professor emeritus of physiology, Mount Holyoke College; 6 February.

Arthur J. Heinicke, 78; former director, Cornell University's New York State Agricultural Experiment Station; 2 February.

Donnell F. Hewett, 90; research geologist, U.S. Geological Survey; 5 February.

Frank L. Horsfall, Jr., 64; president and director, Sloan-Kettering Institute for Cancer Research; 19 February.

Kenneth O. Hovet, 66; professor of education, University of Maryland; 1 February.

Donald Q. Kern, 56; chemical engineer and head, D. Q. Kern Associates a consulting firm; 2 March.

Derek J. Prowse, 40; chairman, physics department, University of Wyoming; 11 January.

George H. Roberts, Jr., 76; clinical professor emeritus of medicine, State University of New York; 25 February.

[¶] Los Alamos safeguards conference proceedings WASH 1147, pp. 21-38. See also summary of Oct. 2, 1969, Washington conference on transportation safeguards, AEC.