while they carried on the largest deployment program the Soviet Union could mount. So the MIRV issue brought this phase of the negotiations to an impasse.

Phase III. A 10-year limitation agreement was the aim during this phase, which followed the June summit and Richard Nixon's departure from the White House. The idea of another 5-year limitation was discarded because such an agreement would have interfered with completion of on-going U.S.

Pilots Take Unilateral Action on Flying Hazardous Cargo

In November 1973 a Pan American cargo jet carrying 16,000 pounds of acid and flammable chemicals crashed while approaching Boston, killing all three crew members. Improperly packed nitric acid had leaked and caused a fire.

Such a disaster was bound to occur sooner or later, say members of the Air Line Pilots Association (ALPA), the 32,000-member commercial pilots' union. For 4 years now ALPA members have been intensely concerned over the alleged failure of the Department of Transportation (DOT) and the Federal Aviation Administration (FAA) to enforce regulations concerning the carrying of dangerous materials on both cargo and passenger flights. Air transport of hazardous materials—those on a list of some 2000 radioactive substances, acids, flammable materials, biological agents, and explosives—has risen rapidly over the past 10 years. Yet, say ALPA members, enforcement of rules concerning packaging, labeling, and handling of such materials has been so lax that 90 percent of such material has been transported in violation of some regulation. They say that all pilots have to go on concerning the safety of their cargo is a certificate signed by the shipper; yet such documents are worth little, since shippers and packagers are often unaware of proper procedures and penalties for violating them are weak. In the case of the Pan Am crash, for example, the packager was apparently unaware that nitric acid in glass bottles is supposed to be placed in steel cans surrounded by noncombustible bushing material in a wooden crate with protective cushioning. The bottles were instead packed in sawdust. One bottle leaked, and the change in air pressure produced spontaneous combustion. (Also aboard the same flight were large quantites of sulfuric acid illegally labeled as electrical appliances.)

ALPA, after 3½ years of pleas to DOT, FAA, and Congress, finally decided at a board meeting last fall to take matters into its own hands. On 1 February the organization put project STOP (Safe Transportation of People) into action. ALPA members were instructed to refuse to carry any hazardous materials on passenger flights, with three exceptions; radioactive pharmaceuticals —compounds with short half-lives primarily for diagnosis —Dry Ice and liquid nitrogen for refrigeration of perishable cargo, and magnetic materials. After urgent requests from medical organizations, the pilots later agreed to include biological materials such as short-lived viruses and tissue cultures for treatment and research, and packages of molybdenum-99 generators (the isotope has a 67-hour half-life) used for diagnostic examinations. Freighter pilots have been instructed to refuse to carry any hazardous materials that federal regulations prohibit from passenger planes (a nasty-sounding list of gases and acids), and quantities have been sharply reduced—only 50 pounds of such materials are permitted per compartment (which would amount to about 150 pounds per plane).

ALPA has set up a 24-hour communications center to answer questions concerning STOP, most of which have been coming from bewildered manufacturers, shippers, and packagers. Most hard hit by the embargo, say ALPA people, are chemical manufacturers who are used to flying tons of toxic materials hither and yon. STOP will continue, they say, until the DOT has demonstrated its intention to drastically step up enforcement efforts.

The DOT is responding with two sets of public hearings, to be held by the Office of Hazardous Materials, scheduled for 10 and 20 February. The first addressed the potential hazards of materials presently authorized for transport in passenger and cargo planes, and such matters as proper packaging and labeling and the quantities in which materials should be shipped. The second hearing will explore training requirements for all individuals involved in handling dangerous cargo, documentation needs, what the crew should know about what it is carrying, the question of special registration for shippers and manufacturers of hazardous materials, and emergency gear to deal with in-flight accidents.

There is no telling when ALPA will decide STOP has made its point, but according to an official of the Office of Hazardous Materials, DOT thinks the pilots are overreacting to the situation and is even considering legal action to compel pilots to accept cargoes they are now turning down.

ALPA members, however, are very determined. The ALPA board of directors has drawn up a 10-point program, mostly related to tightening the enforcement of existing regulations. Two points, though, would involve significant changes in the rules. First, in passenger planes, the pilots would like to stick pretty much to their STOP guidelines, with perhaps a few additional exceptions. Second, they want hazardous materials to be carried exclusively in all-cargo aircraft, but limited to those commodities and amounts now acceptable (according to federal regulations) for passenger aircraft. This would involve a radical reduction in the quantity of materials carried and would mean, for example, that a chemical company could send samples by air but would have to use surface transportation for bulk shipment. The change would also cut the list of materials accepted by cargo planes by about half, eliminating such materials as nitric acid and nitroglycerin.

It is clear that DOT and ALPA have some profound disagreements to straighten out, but an ALPA official is confident that the information that comes out in the hearings will be appalling enough to change quite a few minds among the bureaucrats.

—Constance Holden