ington, D.C., area after this information had been released by Ryan's and Nader's associates.

The disclosure prompted both Ryan and Nader to blast the government's handling of the entire fish meal incident as one of the most flagrant examples of misregulation by federal agencies.

In denying that it has lagged on PCB's the FDA points out that since January it has been conducting studies to determine the toxicity of PCB's and their effect on humans. An FDA spokesman said that the test results should be known "within a year." For its part, EPA is doing some research at two field laboratories. Since the beginning of the year USDA, according to Mussman, has conducted a routine surveillance of poultry for PCB's and other related chemicals.

Perhaps some of the difficulties in regulating PCB's can be attributed to the confusing, overlapping jurisdictions of federal agencies. For example, FDA has jurisdiction over PCB's in whole shell eggs and in fish meal, USDA has control over cracked eggs and their products—such as mayonnaise—and poultry, and EPA is in charge of PCB's once they get into the air and water.

In the recent incident, FDA had to recall the contaminated fish meal and locate where it was sold and then, in turn, supply USDA with a list of the fish meal purchasers, so that USDA could check the affected chickens. When associates of Nader raised the possibility of contamination of egg products, they had to go to FDA for testing whole eggs and to USDA for cracked eggs and frozen poultry products.

Such a confusing arrangement makes it almost inevitable that some of the contaminated eggs would slip through this network. As for the eggs that did reach the consumer, an FDA spokesman says there is no immediate danger since "any potential health hazard would come from continued consumption of PCB's over an extended period of time."

PCB's intrusion into the environment is difficult to regulate because of a lack of federal laws and because no one is quite sure how much PCB's have been produced. EPA and FDA officials point out that at present they have no legal authority to halt Monsanto's present uses of PCB's. Last year PCB's in pesticides were banned by USDA's pesticide regulation division, now a part of EPA. According to a spokesman, FDA has, in the past, indicated to Monsanto that it would not allow PCB's to be used in food as an additive.

It is virtually impossible to determine the exact amount of PCB's already present in the environment and where the chemical might be concentrated because no one, except Monsanto, knows what amounts of PCB's have been made. A National Academy of Science panel estimates that, in 1968 alone, 5 billion grams of PCB's were produced in the United States, in addition to those made by PCB's manufacturers in Europe, the Soviet Union, and Japan. Monsanto has refused repeatedly to make available, even to government officials, production and sales figures for PCB's because it regards this information as a "trade secret." Monsanto is backed up by its industrial counterparts and by a law that permits a company in certain situations to withhold information that might seriously jeopardize its competitive advantage. A National Academy of Sciences panel, in disagreeing with Monsanto's refusal to release the important figures, noted "it is not only competitive concerns alone that determine the less than candid posture assumed by industry concerning production figures." A bill now before Congress would give federal agencies the authority to get production figures from companies manufacturing hazardous chemicals.

In a further effort to cut down on PCB's released into the environment, Monsanto recently built a special incineration unit at Sauget, Illinois, to destroy waste PCB's. It has also told government officials that it will not sell PCB's for use in power transformers and cooling systems that will be used near foodstuffs. In the fish meal plant, Monsanto reportedly claims that it was misled by the name—East Coast Terminal, Inc.—into believing that the PCB's sold for cooling purposes would not be used near food products. Monsanto now refuses to comment on PCB's for publication. The reason, a company spokesman told *Science*, is that there are "many investigations under way" of Monsanto and PCB's, and the company does not want "misinterpretations" about Monsanto's production of PCB's.

Associates of Nader and Ryan admit, in part, that their strong criticism of the federal handling of PCB's via the fish meal incident stems from their disagreement with the way federal agencies respond to environmental problems. They dislike what they feel is the slow response of federal agencies to potential hazards like PCB's. The

EPA Moves on Refuse Act

The Environmental Protection Agency (EPA) has told its regional offices to notify laggard industries that they face possible legal action if they fail to explain why they haven't applied for waterway discharge permits under the recently resuscitated Refuse Act of 1899.

The deadline for filing permit applications was 1 July. Detailed follow-up data are required by 1 October. But so far, says EPA administrator William Ruckelshaus, applications received by the Army Corps of Engineers (which administers the program) have leveled off at about 18,000, although at least 40,000 firms are supposed to be affected by the permit program.

The EPA is still conducting the industrial waste studies on which to base the standards it had planned to have ready in early July. Officials explain that this task has taken longer than expected because it was found that laying down specific limitations on effluents for each of the 20 designated industrial categories would be too complex and rigid. Instead, the agency is working on more flexible "guidelines," which will aid regional EPA directors in interpreting federal-state water quality standards and in advising companies on how to conform.

Meanwhile, Ruckelshaus has urged regional offices to proceed with enforcement actions, using the knowledge and equipment already available to them.

Ruckelshaus told *Science* recently that press reports to the effect that EPA was backing down on its standards were wrong. Nevertheless, he said, some industries "read these stories and think we're easing off. Then we have to start all over rattling sabres at them."—C.H.