House Reviews EPA's Record on Pesticides

While political shells were bursting in several other offices of the Environmental Protection Agency (EPA), the assistant administrator for pesticides and toxic substances, John A. Todhunter, made his way to Capitol Hill on 22 February for a subdued discussion of his agency's handling of carcinogenic materials. "There has been no radical change in policy," he told the House agricultural subcommittee on departmental organization, research, and foreign agriculture. The subcommittee followed the advice of the chairman, Representative George Brown, Jr. (D–Calif.), and took pains to avoid making these oversight hearings rancorous.

However, the subcommittee did produce a report in December which reached a conclusion just the opposite of Todhunter's. The report found that the Office of Pesticide Programs has been compelled to "make several major changes in its cancer policy," and that the EPA is "ill prepared scientifically or otherwise to defend these decisions." The result, according to the report, is that the public may lose confidence in EPA's integrity, leading to a "sense of panic" and "hastily conceived" efforts to reorganize the pesticide office. The report specifically recommended that EPA not reduce its scientific staff in this area and that it be more forthcoming in releasing pesticide data.

Under questioning by several congressmen, Todhunter insisted that there has been no change in the way EPA handles public health risks, only a "continuing evolution" in the way it reaches a judgment. "The difference is that we are trying to take a case-by-case approach, a more open approach. We are trying to let the scientific community decide," he said.

The government-wide review of cancer policy launched last year by the White House, Todhunter said, has been delayed. The first installment, dealing with the scientific basis for the policy, will not be ready until the summer, at least 4 months behind the original schedule. The portion that sets out the policy itself will not be ready until 1984. Todhunter said that EPA has not adopted a relaxed attitude toward cancer risk, and he disavowed a proposed new method for ranking hazardous substances made last year by EPA's carcinogen assessment group (*Science*, 3 December 1982, p. 975, and 18 February, 1983, pp. 794–798). He told the subcommittee that he never discussed the proposal with subordinates.

John A. Todhunter

On the staffing question, Todhunter reported that the number of employees under his direction has declined from around 635 to 537 since 1981, and that the number of new chemical applications has increased significantly. During this time, he said, the backlog of unfinished work has decreased 97 percent. Brown asked whether this phenomenal speedup had not led to a "fast and dirty treatment" of health safety reviews. Todhunter said that it had not, and that the quality of work had been maintained by making the staff more productive.

Speaking the following day, Edwin Johnson, who serves under Todhunter as director of the Office of Pesticide Programs, mentioned that auditors had come across one case of sloppy work. A toxicology reviewer had lifted portions of an industry publication and made them part of his own commentary. It was a rare case, Johnson said. Nevertheless, he is about to begin an audit of all extramural toxicology research to find out whether there have been other instances of "cut and paste" reviewing and whether any EPA decisions were affected.

Todhunter's testimony was challenged by witnesses from two environmental groups. Karim Ahmed of the Natural Resources Defense Council said: "Despite Dr. Todhunter's assurances to the contrary, EPA as an agency seems to have taken the lead in revising present cancer policy." In regulating pesticides, Ahmed charged, EPA has "raised its acceptance of cancer risks for the U.S. population to at least 100 times the levels which were sanctioned by former administrations." For evidence, he contrasted the statistical risk estimates given in recent decisions on benomyl and permethrin with earlier rulings on DBCP, dieldrin, and heptachlor.

Maureen Hinkle of the National Audubon Society told the subcommittee that her group, like other public lobbies, has been "fenced out" of EPA proceedings. "Rumors circulate that risk calculations are altered from time to time" in private negotiations between EPA and the affected industries. With no way to participate in these meetings, Hinkle said, outsiders must rely on the courts and Congress to obtain detailed data on lab tests and risk estimates. This does not inspire confidence in EPA, she concluded.—**ELIOT MARSHALL**

Landsat, Space Telescope Suffer Setbacks

Even as the National Aeronautics and Space Administration (NASA) struggles with leaky space shuttle engines, embarrassing glitches have appeared in two of the agency's major scientific missions. Failed transmitters on the Landsat 4 satellite have cut off remote sensing data from the advanced Thematic Mapper instrument, while difficulties with the optical system of the Space Telescope have threatened the project with cost overruns and a delay of the scheduled 1985 launch.

The Landsat 4 problem appeared on 20 February, 7 months after the satellite's launch and, ironically, just a few days before scientists were to meet at NASA's Goddard Space Flight Center outside Washington, D.C., for their first review of the Thematic Mapper's scientific output. The mapper, which returns high-resolution images of the earth in seven spectral bands, is considered a major advance over the sensors flown on the first three Landsats in the 1970's. The spacecraft itself is quite sophisticated, with the ability to protect the instruments by going into a "safe mode" at the first sign of an anomaly.

That happened (not for the first

time) on 15 February. The problem was eventually traced to a minor tracking error, and on 20 February the ground controllers at Goddard ordered the spacecraft to turn itself back on. It did—except for the X-band radio transmitter that beams the Thematic Mapper data back to Earth. It has been silent ever since.

No one is panicking yet. Landsat 4's multispectral scanner, a relatively low-resolution instrument identical to the ones carried on previous Landsats, continues to broadcast. Moreover, there is a small chance that the mapper's transmitters can be coaxed back into service from the ground. Failing that, the next flight of the shuttle (now scheduled for March if the engine problems can be fixed) will carry aloft the first Tracking and Data Relay Satellite (TDRS). Landsat 4 has a completely different transmitter for passing data to the ground via TDRS and, in fact, that was always planned as the main route.

On the other hand, if the transmitters cannot be fixed—the reasons for their failure are still unknown—and if the TDRS connection does not work, there will be no replacement for the mapper until 1985 and the launch of the successor, Landsat D′.

Meanwhile, problems with the Space Telescope began to appear last November, as NASA and its contractor Perkin-Elmer reviewed the company's plans for assembling the optical system. Perkin-Elmer finished polishing and silvering the 2.4 meter mirror last year. That mirror is probably the most accurate ever made. But handling it, aligning it with the other optics, and testing the alignment will be a finicky process, requiring the development of unique equipment. The November review turned up the need for more people and more money than had been anticipated. This led NASA to start an extended review of the project after Christmas. It revealed a similar bottleneck in the development of the fine guidance sensor, the device that will keep Space Telescope pointed precisely toward its target. Without that sensor, the precision optics would be useless.

"It's a trade-off," says NASA program manager Marc Bensimon. "We could hire new people—though it's hard to get enough good people—or we could stretch things out, or both. We *will* exceed the congressional cost estimates, although we can't yet say how much. We *may* have trouble meeting the commitment to launch in the first half of 1985." Right now, he says, he does not think that the slippage will be enough to threaten Space Telescope's observations of Comet Halley in early 1986. But it could mean that the instrument will not be up in time to help plan the Voyager encounter with Uranus at the very end of 1985.

—M. MITCHELL WALDROP

Canada Releases Papers on Acid Rain Talks

Canada, irritated by the sluggish pace of talks with the United States on acid rain, decided last week to take the initiative. On 21 February, John Roberts, Canada's minister of the environment, held a press conference in Toronto to release some official papers which American and Canadian scientists have been struggling with for nearly 2 years. They are meant to provide the technical basis for a treaty reducing cross-boundary air pollution, an agreement which both nations pledged to negotiate in a 1980 memorandum.

Roberts published the technical papers as they were written last December, with two different texts on the aquatic environment—one by Canada and one by the United States. This indicates that Canada has given up trying to reach an agreement with the United States on a scientific description of the problem and will operate primarily at the political level.

"The release of these reports has not moved as quickly as I hoped," Roberts told reporters. "The final work group reports are more than a year late. . . . Canada recognizes acid rain as a clear and present danger to the environment." Roberts claimed that despite differences in a couple of sections, most of the data support Canada's view that sulfur dioxide emissions should be reduced by about 50 percent. "We are ready to resume negotiating the abatement measures described in our proposal immediately," he said.

The Canadians believe that after the Reagan Administration came into office, U.S. negotiators began throwing up procedural obstacles to stall the talks. One of these, they believe, has been an excessive demand for proof of assertions made in the technical papers. The Canadians view some of the niceties of this scientific debate as quibbling. The U.S. negotiators, on the other hand, tend to see the Canadians as reckless, made so by the fact that their industries would have to spend less on pollution control.

Despite these differences, scientists writing the technical papers hoped to come up with a description of the problem that would suit everyone. This proved difficult in dealing with the aquatic environment. The authors of this section have been trying since last fall to work out a common text, and they have been disappointed by their failure. Indeed, some U.S. scientists were annoyed by Roberts' decision to release the papers, for they thought there was still a chance of compromise. The U.S. side still refers to these as "draft" documents, although Roberts calls them "final." They are now being sent to separate peer review committees for a last reading.

The key point of disagreement has to do with impacts on aquatic life. The U.S. text says that while "biological changes have occurred in areas receiving acidic deposition," the "cause and effects relationships have often not been clearly established." The Canadian version states that in "regions receiving loadings of sulfate in precipitation of less than 17 kg per hectare per year . . . there have been no observed detrimental chemical or biological effects." In those receiving between 20 and 30 kilograms per hectare, "there is evidence of chemical alteration and acidification," including fish kills. Those receiving more than 30 kilograms suffer long-term losses.

The Canadians thus propose that sulfate precipitations be reduced to less than 20 kilograms per hectare per year, roughly 50 percent lower than present levels. They "recognize that a higher loading rate is acceptable" in areas where there are possibilities for reducing acidity by other means. In short, Canadian officials want to remain flexible, but also would like to keep the 20-kilogram figure as a goal. The U.S. side says that it is impossible to set a goal based on the data.

—ELIOT MARSHALL