Action and controversy

Cleveland and its Cuyahoga River are major contributors to pollution of Lake Erie, target of a cleanup campaign.

EPA

In the largest single action against water pollution by the Nixon Administration to date, William D. Ruckelshaus, administrator of the new Environmental Protection Agency, last week gave Atlanta, Detroit and Cleveland 180 days to comply with state standards for sewage treatment.

Although the Ruckelshaus action appeared to take a tough new stand against water polluters, key environmentalists, including Sen. Edmund S. Muskie (D-Me.), were critical. And it is still difficult to learn just what the action means.

Officials of the Federal Water Quality Administration explain that the 180-day notice gives officials of the three cities that long to confer with FWQA and arrive at a settlement of issues between them before suits are filed by the Justice Department.

The specific charge is that the cities have lagged from one to seven years in construction of primary and secondary sewage treatment plants. The original schedules were established when states adopted, and FWQA approved, state water quality standards. Since most of the timetables call for completion of the plants at dates not yet reached, actual violations of water quality standards have not yet occurred. But FWQA says they will, unless construction is speeded up.

Although Ruckelshaus made the decision to file the notices, the action was in the works before he was named to the new post. "Workshops we held around Lake Erie last June made it clear Detroit and Cleveland were major violators," says an FWQA official, adding that the Atlanta action also had been previously contemplated.

Although the action against the cities was dramatic, the picture becomes confused when pollution from municipal sewage is weighed against pollution by industry. With the exception of a 180-day notice filed earlier this year against some Cleveland industries, FWQA has not acted against industrial polluters in the three cities. In one instance, the Federal agency is demanding that the city involved, Detroit, construct sewage treatment facilities to handle phenols, a pollutant in oil refinery effluents.

A fair question is whether industries hooked into municipal sewage plants would be required to pay their share of the cost of needed special facilities—or of sewage treatment costs in general. New FWQA regulations now require cities receiving Federal grants to set up cost recovery programs with local industries. But so far only Chicago has acted to establish such a program. Atlanta, Detroit and Cleveland have apparently not resolved the cost-sharing problem. FWQA acknowledges that industries are in the habit of dumping what they want into municipal sewage systems, leaving the responsibility for special treatment up to the cities.

Muskie charges that the Nixon Administration was talking out of both sides of its mouth when it filed the notices to the three cities. "Such an order is meaningless without a commitment on the part of the national Government to assume its share of the cost of halting the discharge of inadequately treated waste," says Muskie. The $900 million the three cities need to spend by 1975 in order to meet schedules is, he points out, between 5 and 10 percent of all the Federal and local funds that would become available under the Nixon sewer program. The program proposes $10 billion in Federal and local funds for sewers in the next four years (SN: 2/14, p. 168).

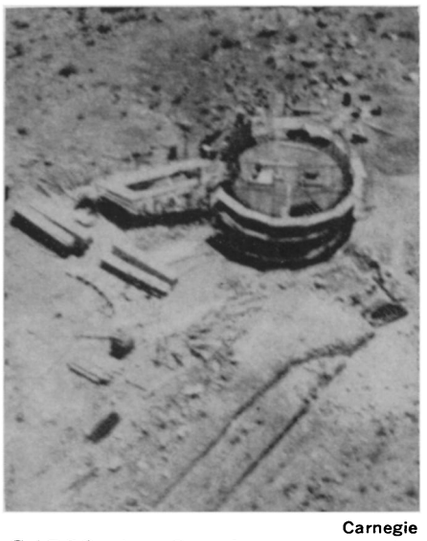
Detroit Mayor Roman Gribbs agrees with Muskie, claiming FWQA had not paid its 55 percent share of the $165 million worth of sewage plants now under construction in Detroit. Mayor Carl Stokes of Cleveland earlier told Muskie's air and water pollution subcommittee that Cleveland had spent $30 million on sewage plants during the past four years. "Not one dime of that has come from the Federal Government," Stokes said.

But Ruckelshaus' duty is primarily to enforce the law. Although there is a question of whether he enforces it equally against cities and industry, there is no doubt the latest action is a major step in the initiative begun under President Nixon to get tough with polluters.

In an unrelated statement, Ruckelshaus indicated he has no particular sympathy with polluters. There is, he said, a distinct conflict of interest when representatives of agriculture, industry and cities sit on state pollution control boards. His advice to the states: Change the boards so that they will better represent the public interest. □

CANADIAN BIG SCIENCE

A piece of the action



Carnegie

CARSO site: Canada may come in.

Big science makes large problems for small countries. In a country with a small population the practitioners of high-energy physics or optical astronomy are likely to be few, but their need for expensive equipment is the same as that of their more numerous colleagues in larger countries.

The small country has three options. It can ignore or discourage the interest

of its citizens in these branches of science. It can spend what many citizens think is a disproportionate amount of money to provide equipment. Or it can band with its neighbors to build international laboratories.

Canada is one nation that is now faced with a number of big-science problems. It has a sizable scientific community, and a number of specialists are coming to the Canadian Government with proposals for equipment and other forms of support.

Rather than continue to deal with such items piecemeal, the Government has appointed a Science Research Council to review the state of the sciences one by one and make general recommendations for policy. The SRC recommendations about astronomy and physics, where much of today's big science lies, have now been presented to the Government and public. Statements on other sciences will follow.

The physics and astronomy recommendations make some general comments on science policy and specific recommendations on two major proposals for international cooperation by Canada: partnership in the Carnegie Southern Observatory, being built in Chile, and the United States National Accelerator Laboratory at Batavia, Ill.

The international proposals are important; if the general advice of the SRC is followed, the future of Canadian big science lies in international projects.

The SRC recommends against large capital expenditures for national facilities because they would mortgage the nation's scientific future to particular specialties. If the country built a big accelerator, it would not have the resources to respond to new proposals in plasma physics. (This is not a hypothetical remark: Such proposals are being prepared and will be presented to the public next month.)

Yet Canadian physicists and astronomers feel a need for equipment in which Canada has some ownership. Up to now they have used foreign equipment, mainly in the United States.

"Canadian astronomers desperately need a large telescope in a good climate," says Dr. Donald McRae, director of the University of Toronto's David Dunlap Observatory. Observatories in the United States have been generous in giving Canadians free time, he says, to the point where "it is embarrassing to us." Canadian particle physicists have felt much the same way; both groups want a piece of the action of their own.

The SRC recommends in favor of the observatory cooperation, but against part ownership of the National Accelerator Laboratory. Its reasons exemplify the problems Canada faces in seeking joint projects with her most likely partner, the United States. Canadian physicists had proposed that Canada provide $20 million in capital for the NAL. Since the total cost of the laboratory will be around $250 million, the Canadian share would be less than 10 percent, and the SRC felt this is too small to be meaningful.

In the case of the observatory, on the other hand, Canada is dealing not with the United States Government, but with a private organization, the Carnegie Institution of Washington. Here the finances are more equal and discussion has proceeded on the idea that each partner would provide half the capital. Canada would thus have an equal position in the administration of the observatory and be able to assign half its observing time. There could be no question of equality in administration or the assignment of a specific portion of time in the NAL case. "CARSO is a joint venture," says Dr. O. M. Solandt, chairman of the SRC. "Batavia is Canada buying a small share."

Canadian particle physicists are dismayed by the advice with regard to Batavia. Astronomers are generally happy with the CARSO advice.

Meanwhile, the Government has taken no action; economic and political crises, including the terrorist activities of French Canadian separatists, have put science policy far down the Cabinet's agenda.

"It is in limbo," Dr. J. L. Locke of the Canadian National Research Council says of the CARSO project. "We live in hope," says Dr. McRae. □

SCIENCE NEWSBRIEFS

Mercury in tuna

Mercury exceeding the Food and Drug Administration's allowed level of 0.5 parts per million has been found in 23 percent of a nationwide sampling of canned tuna, FDA announced this week. The highest level found was 1.12 parts per million.

FDA Commissioner Charles C. Edwards warned against public panic, saying there is a safety factor in the 0.5 limit and that removal of all the affected tuna from the market will assure public safety.

Richard Ronk of FDA's compliance office said spot checking had established that the mercury is of the toxic methylated variety. But he emphasized that the FDA standard had been established with the methylated form in mind. The source of the mercury was not immediately known. □

Horses and phenylbutazone

Dancer's Image is the winner of the 1968 Kentucky Derby, a circuit judge in Frankfort, Ky., ruled last week, thus ending two and a half years of dispute over whether the horse had been given phenylbutazone, an illegal drug for race horses, before the race (SN: 1/11/69, p. 46).

The controversy centered on analytic methods used by a state chemist, with some scientists saying his methods were "19th century." The judge agreed.

Phenylbutazone is an analgesic and anti-inflammatory drug, outlawed for race horses on the theory that, used before a race, it would provide temporary relief and thus disguise possible long-term pathology of the legs. □

Accelerator accord

The U.S. Atomic Energy Commission and the Soviet State Committee for the Utilization of Atomic Energy have signed a protocol that will permit joint experiments by Soviet and American scientists at either the Soviet accelerator laboratory at Serpukhov or the United States' National Accelerator Laboratory at Batavia, Ill. Serpukhov, with an energy of 76 billion electron-volts, is now the world's most powerful proton accelerator. Batavia, which is expected to start operation about a year from now, will eventually have a top energy output of 500 billion electron-volts. □

Geothermal leases

The House and Senate last week reached agreement on provisions of a bill for the leasing of Federal land for geothermal development (SN: 11/28, p. 415) and sent the bill to the White House.

The bill provides for competitive bidding on known geologic structures. It also establishes a 15 percent ceiling on royalties. Some legislators had wanted no ceiling—as is the case for oil leases on Federal land—but proponents said the ceiling would encourage development of a relatively unknown and untested resource.

The Interior Department estimates geothermal resources have a potential for meeting about one percent of the nation's power needs, but others place the figure much higher. □

Radioactive wastes

Disposal of radioactive wastes from nuclear power stations has long been a problem. One solution proposed has been to bury the wastes in Kansas salt mines (SN: 8/8, p. 115). A National Research Council committee on the problem has agreed with the Atomic Energy Commission that salt mine disposal is safe. It bases its conclusion on a demonstration project near Lyons, Kan. The committee says that the radioactive wastes will be safe for 1,000 years if they are properly placed in the mines. □