

NEW WORLD

Murky Waters of Pollution Control

by our Washington Correspondent

WHEN Congress overrode President Nixon's veto of the Water Pollution Control Bill just before the election, it clearly won an important battle, but failed to win the war. Last week, the Administration announced that it would spend only 45 per cent of the funds that Congress had earmarked for construction of sewage treatment facilities this year and next. William D. Ruckelshaus, administrator of the Environmental Protection Agency, said that \$2,000 million would be spent this year and \$3,000 million in the 1974 fiscal year, which starts on July 1 next year—Congress had set aside \$5,000 million and \$6,000 million respectively.

The money will go to the states to help finance the building of secondary treatment plants. The water pollution bill specifies that every municipality in the United States must achieve at least secondary treatment by 1978, but Ruckelshaus said last week that no matter how much money is allocated to sewage treatment plants, such a goal is unattainable. The Administration has long maintained that even at the level of expenditure outlined in the bill, secondary treatment could not be made universal at least until 1981, and that the 45 per cent cut in funds will only delay attainment of the goal by about a year.

The Administration's action met with predictably strong words from Senator Edmund S. Muskie and Representative John A. Blatnik, chief sponsors of the water pollution bill. They accused the president of "flagrant disregard of the intent of Congress" and suggested that the Administration has only a "half-hearted commitment to the cause of clean water". But the Administration's critics have not been confined only to the Democratic camp, for there have been mutterings from Republican congressmen and last weekend Joel Broyhill, a colourful, conservative Congressman from Virginia openly wondered whether the reduced funds would be sufficient to meet the problem.

There is a chance, however, that some states will contest in the courts the President's authority to withhold funds allocated in the bill. Ruckelshaus told a news conference last week that the Administration decided that the grants to the states was the "soundest, most legally defensible place" to cut the funds, but he refused to speculate on whether or not some states would sue the government for the full amounts authorized in

the bill. At least the states can take heart from one thing, however; they will almost certainly receive considerably more than the Administration wanted to give them last year, when it proposed its own legislation for water pollution control, which would have led to expenditures of some \$6,000 million over three years.



William D. Ruckelshaus

CONSTANTS

Improving on Galileo

by our Washington Correspondent

THE National Bureau of Standards announced last month that laser beams have been used to measure the speed of light 100 times more accurately than previous techniques have allowed. The new value is given as $299,792.4562 \pm 11 \times 10^{-4} \text{ km s}^{-1}$. The determination is the culmination of some 334 years of attempts to refine the measurements, which started when Galileo tried to measure the speed with which a beam from a lantern crossed from one hilltop to another. His attempt failed. Although the accuracy of the new measurement will have only limited usefulness—chiefly in more accurate long distance measurements with lasers and radar measurements of interplanetary distances—the method by which it was achieved may have important applications in telecommunications.

In short, the new determination of the speed of light consisted of measuring the frequency of a helium-neon laser operating in the infrared, in terms of the caesium frequency standard, and the wavelength of a similar laser in terms of the krypton length standard. The speed of light was then determined by the product of the frequency and wave-

length. The key to the determination is a method, developed by scientists from NBS under the direction of Dr Kenneth M. Evenson, for stabilizing the fre-

President Resigns

by our Washington Correspondent

CLARENCE H. LINDER, president of the National Academy of Engineering, has announced that he will resign at the academy's annual meeting which will be held in May next year. Mr Linder is the first full-time president of the NAE, and he will be resigning after three years of a normal four-year term of office. The reason for his resignation, he says, is "because demands upon my time associated with personal responsibilities preclude continuing in the presidency beyond next spring". Mr Linder in fact made it known before he took office that he might retire before finishing his full presidential term.

Mr Linder's presidency has been marked by a series of negotiations and disagreements between the National Academy of Engineering and its parent body, the National Academy of Sciences. The NAE became an independent body in 1964, and it shares the resources of the National Research Council with the National Academy of Sciences. But the charter of the NAS gives the NAS council responsibility for the affairs of the National Research Council, thereby making the NAE a junior partner in the arrangement. The academy of engineering has always been resentful of its secondary role, and there have been persistent rumours during the past few years that it might set up shop on its own. The next president of the engineering academy will clearly have his work cut out.

Mr Linder's successor will be chosen by a nominating committee under the chairmanship of Mr Earl Cullum Jr. The committee will submit the name of a single nominee to the membership for mail ballot before the next annual meeting. In theory, other names can be proposed by the members at the annual meeting, but the chances of the nominating committee's candidate being turned down are remote.