

of the ocean can therefore tell scientists much about the climatic history of the planet.

As with Leg 8 in the fall of 1969 (SN: 12/27/69, p. 590), the Leg 16 scientists hope to find a periodicity in the changes in the sediments that

CONFIDENTIALITY CLAUSE

Autos, emission reports and the public

On Feb. 26, the Environmental Protection Agency's Administrator, William D. Ruckelshaus, asked 28 domestic and foreign automobile companies to report on their progress on emission controls and unconventional power sources. He set a deadline of April 2 so that the information would be available for public hearings on May 6 and 7 and for a report in June to Congress. The latter is required under the 1970 Clean Air Amendments. The purpose of the procedure is to gauge the companies' good faith in working to meet 1975 and 1976 emission goals set under the 1970 amendments. One key question posed by Ruckelshaus was how much money the companies were spending on research and development to meet the goals.

Most of the reports are now in. But according to EPA, most of the auto manufacturers, including Detroit's Big Four, invoked a provision of the 1970 amendments that allows them to ask that portions of the reports be kept confidential. The portions they do not want revealed: how much they are spending.

The provision of the act invoked states that confidentiality will be granted only "upon a showing satisfactory to the Administrator [that public revelation] would divulge methods or processes entitled to protection as trade secrets. . . ."

EPA is now reviewing the reports to determine if the money figures should be declassified, and officials hope there will be a decision before the May 6-7 hearings in Washington. But they admit they do not yet know whether EPA can make the decision unilaterally. "It will be up to our legal department," says Joseph Merenda, staff assistant in EPA's Bureau of Mobile Source Pollution Control.

Some companies (General Motors, for instance) have publicly released gross figures that they say represent amounts actually spent on emission control and unconventional propulsion research and development. But Merenda says the figures are less than definitive without a detailed breakdown. "The public is not willing," he said this week, "to take such claims on faith from anyone." And environmentalists say the figures mean little

would help predict future climate. Leg 16 ended March 30 and the data have not been fully analyzed, but, says Dr. Heath, "it looks promising. There are fluctuations in biological activity due to currents that appear to be predictable." □

except when placed in the perspective of what the dollar need actually is to achieve the required technologies. The environmentalists also say public revelation of amounts spent for annual style changes and advertising would provide a good index of the companies' priorities.

But Dr. Fred W. Bowditch of GM said this week: "We are applying all we know how to apply." Environmentalists' arguments about annual style changes and advertising are invalid, he says, because GM's emission control effort is already getting all the money it can use. Detailed figures cannot be released for "competitive" reasons, he says.

Apart from this, the auto manufacturers' reports show some apparent significant progress toward meeting the emission goals. Ford, for instance, says it is "moderately optimistic" that the 1975 standards for carbon monoxide and hydrocarbon emissions can be met but less optimistic about the 1976 nitrogen oxide goals. And Ford displays moderate enthusiasm for a 120-mile-range electric automobile powered by sodium-sulfur batteries for urban use.

GM revealed in its report the development of a prototype system for flashing fuel into vapor before it enters the cylinder, using a "stove" or heat exchanger to convey exhaust heat to the fuel (unburned liquid fuel being a major source of emissions). Combined with an air pump, exhaust gas recirculation and a catalytic converter, the system is "impressive," says GM. Possible levels of emissions: 0.2 gram per mile of hydrocarbons, 4 grams of carbon monoxide and 0.6 gram of nitrogen oxides. This is well within the 1975 standards for hydrocarbons and CO. The 1976 NO_x standards do not yet exist. But the GM system approaches the expected goal of a 90 percent reduction from 1970 levels.

Most of the manufacturers reporting indicate they will rely on catalytic converters as a major part of their emission control systems, and they add that lead-free fuel will be necessary for success of the converters. Ford says a 91-octane gasoline without lead will be necessary, and that even a tankful of leaded gasoline could poison catalysts. □

HIGH AMOUNTS

Mercury in the air

Scientists have known for some time that at least part of the mercury found in fish probably has its source in air pollution from incinerators and power plants (SN: 1/2/71, p. 7).

A team of scientists at Washington University's Center for the Biology of Natural Systems in St. Louis has pinned down the extent of this source. Using an airborne spectrometer, the scientists conclude that the amount of airborne mercury probably far exceeds that which enters waterways directly.

The air downwind of 12 power plants and city incinerators was measured for mercury content. Then, using a formula for sulfur oxide emissions, the group calculated the estimated total amounts of mercury released from the plants. The 12 plants alone released an estimated 21,470 pounds of mercury each year, contrasted with an estimated 14,600 pounds by the 50 major chemical plants in the nation that release mercury into water.

Mercury in the city incinerators has several sources, including paper treated with sodium hydroxide from chlorine-alkali plants, hospital wastes and gauze from dental offices. Mercury from the power plants is associated with coal.

The scientists said the mercury posed little danger as an air pollutant, but that it undoubtedly contributes to mercury pollution in waterways after it is precipitated in rain and is biologically altered. □

GEOPHYSICS PRIZE

Paleomagnetists honored

The geophysicists' equivalent of the Nobel Prize—the Vetlesen Prize—has been awarded to Drs. S. Keith Runcorn of the University of Newcastle-upon-Tyne in England, Allan Cox of Stanford University and Richard R. Doell of the U.S. Geological Survey for their work on paleomagnetism (SN: 4/10/71, p. 251).

Dr. Runcorn pioneered in the use of remanent magnetism in rocks to determine past positions of the magnetic poles and to reconstruct the movements of continents. Drs. Cox and Doell demonstrated that the earth's magnetic field reverses its polarity. The pattern of strips of normal and reversed polarity on the ocean floor has been one of the strongest confirmations for continental drift.

The Vetlesen Prize was established in 1959 by the G. Unger Vetlesen Foundation to honor leaders in geophysics. The prize is administered by Columbia University.