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APR 26 1985

ES&T CURRENTS

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APR 22 1985

M. J. JORDAN

FEDERAL

EPA's fiscal year 1986 operating budget will be \$1.367 billion, which is \$40.4 million more than that for fiscal year 1985, if President Reagan has his way with Congress. Under the terms of the administration's budget, Superfund will rise by 45% to \$900 million and no Superfund money will come from general revenues. Rather, taxes on chemical ingredients could be increased, and a waste generation tax could be imposed. Also, Resource Conservation and Recovery Act funding will rise by \$54 million to \$247 million; water pollution control funding will fall from \$248 million to \$239 million. Funding for air pollution control will be \$236.1 million, a \$300,000 increase from fiscal year 1985. Pesticides and toxic substances control funding may rise 2% and 13%, respectively, from the current \$67.6 million for pesticides and \$82.9 million for toxic substances. The research and development outlay will increase by \$19.4 million to \$324.8 million, with a significant increase for the study of acid rain.

The Council on Environmental Quality (CEQ) may be granted a reprieve from the budget axe (*ES&T*, February 1985, p. 103). The administration is asking Congress for \$705,000 for fiscal year 1986, which is the same as the 1985 appropriation. However, this figure could be cut in half for fiscal year 1987. Also, the administration's proposal calls for the Office of Environmental Quality, which oversees an environmental management fund, to give CEQ \$1.06 million. This sum goes to CEQ outside the channel of congressional appropriations. The 13 staff positions at CEQ, the same number provided for in the fiscal year 1985 budget, will be maintained.

Rules for Superfund site cleanup could be waived under certain circumstances. Under the Superfund National Contingency Plan, EPA proposes that federal cleanup standards be waived if a site's location makes it technologically impossible to meet them. Waivers also could be

granted if cleanup is done to stabilize conditions at a site, if achieving standards could cause unacceptable effects on human health or the environment, if the cost is excessive in view of other demands on the fund, or if there are certain "overriding public interest concerns" that call for selecting a noncomplying remedy. EPA also proposes ways to make cleanups easier and decrease the amount of time and money spent on studying solutions to routine site management problems.



Dingell: Sees five-year renewal

Rep. John Dingell (D-Mich.) expects that Superfund will be extended for five years. The law is due to expire Sept. 30. Calling the one-year extension that some have proposed "not for real," Dingell said a five-year extension, "with a proper and equitable tax, would be politically saleable." The \$900 million for Superfund would come from special taxes imposed on the chemical manufacturing, petroleum, and petrochemical industries, rather than from general revenues. "I recognize that the chemical industry cannot be an infinite source of Superfund dollars," Dingell told a Chemical Manufacturers Association forum. He would prefer Superfund money to come from a broader industrial tax base.

EPA has proposed rules for incinerating liquid hazardous wastes at sea. These rules incorporate performance standards for land-based incinerators and call for 99.99% destruction of liquid hazardous wastes. If the wastes consist of polychlorinated biphenyls, dibenzodioxins, or dibenzofurans, destruction

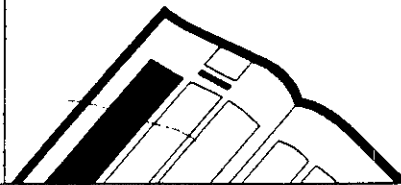
efficiencies of 99.9999% must be demonstrated. Moreover, the proposal sets forth standards to limit acid-forming emissions and requires incinerator emissions to be below marine water quality criteria. Under the rule, permits would be classified for research, operating, and emergency applications.

EPA might not strictly enforce a provision of the Resource Conservation and Recovery Act that requires hazardous waste landfill operators to comply with all groundwater monitoring and financial responsibility requirements by Nov. 8, 1985. Section 3005(e) of the act requires operators to certify that they meet these requirements or close their landfills on that date. EPA fears that a strict interpretation of this "hammer provision" would cause the abrupt closing of up to 70% of existing land disposal facilities. The agency also foresees increases in illegal dumping if a large number of facilities close. The agency would prefer that facilities come into compliance and pay enforcement penalties in the meantime. Vigorous congressional and public opposition to this move is expected.

The concentration of blood lead that is considered poisonous has been lowered by the Centers for Disease Control (CDC, Atlanta, Ga.). CDC has determined that a blood lead level of 35 µg/deciliter (dL) constitutes lead poisoning. The previous level, established by CDC in 1978, was 50 µg/dL. CDC recommends that all children be screened for lead poisoning. The agency reasons that since the original 50-µg/dL level was established, investigators have reported adverse effects from lower levels of lead exposure. CDC also defined an excessive lead burden as 25 µg/dL, as compared with the 1978 definition of 30 µg/dL in whole blood. Lead poisoning is reported to cause disorders of the brain and nervous system.

STATES

States can now receive Superfund money to supervise cleanups con-



In another CPI-related development, ceramics are drawing interest as critical components of the heat exchangers and transfer systems that carry the excess heat (in some cases, up to 3000°F or 1649°C) generated in steel furnaces and aluminum smelters.

Researchers at Corning Glass Works, for example, have developed a specialized silicon carbide heat transfer system that can be used continuously at up to 3100°F (1704°C), exhibits high thermal shock resistance and can dissipate as much as 20 watts of heat per square centimeter per hour. The ceramic, named Celcor Hexaloy SA, was developed by The Carborundum Co., Niagara Falls, NY, and extruded into panels with Corning dies. Heat transfer is effected via laser-drilled holes in the panels.

While ceramics' relatively high costs still pose something of an obstacle to full acceptance in this application, the huge market potential—in excess of \$1 billion a year, by some estimates—is a major incentive to the research drive. Some recent developments, in fact, may help to increase ceramics' share of the heat exchanger market:

- Carborundum has announced a new high-volume extrusion process for manufacturing heat exchanger tubes featuring internal fins and baffles. The innovation, likely to be of particular interest to CPI companies, triples the tubes' surface area, thus permitting the use of smaller, less expensive tubes.

- Carborundum and Coors Porcelain, Golden, CO, reportedly can produce very small-diameter smooth tubes in volume for about \$30 a foot—only about 20 percent of the current price for such heat exchanger tubes.

Electronics comprises yet another potential business area for advanced ceramics. The materials have long been workhorses of the industry in many applications, such as supporting and insulating silicon chips in microcircuits. And Japan's Hitachi has recently announced a new silicon carbide that may be used as a heat-dissipator in high-power electronic systems.

Ceramics' unusual electrical prop-

Selective Sequestrant

The story is that the eyes of cats given chelating agent EDTA lose their ability to glow in semi-darkness. The sequestrant removes the metallic elements that form the reflective pigments. But EDTA is one of the treatments given people suffering from lead poisoning, and the cat tale points up a major problem—EDTA removes too many vital elements, including copper and zinc, while it cleanses the body of lead.

Now, it looks as if a treatment based on 2,3-dimercaptosuccinic acid zeros in on the lead with far lesser effect on other metallics. Mercaptosuccinic acid is not a patentable compound, says pharmacologist Joseph Graziano, PhD, of Columbia University's College of Physicians & Surgeons, who has been working with material supplied by Johnson & Johnson. Commercial medications "will probably be marketed by a new firm," says Graziano.

The Sin of Wages

John Harvey-Jones, no favorite of Margaret Thatcher's, has gotten himself deeper in the British Prime Minister's doghouse. The Imperial Chemical Industries chairman does not like the Thatcher government's economic policies, and recently he told a House of Lords committee so. Number 10 Downing Street reacted sharply, as might be expected; over-reacted, some say. For a man who got a 68 percent pay hike this year, a Whitehall staffer noted sourly, the ICI chief is hardly in a position to criticize. Mrs. Thatcher contends that such large pay raises make it difficult for the government to encourage wage restraint.

Personal Touch

Stauffer Chemical broke new ground in magazine advertising recently—Stauffer's ads in Farm Industry magazine were individually personalized. Each subscriber, in his particular copy of FI, found the ad for Dyfonate insecticide mentioned his name.

The printing trick calls for putting the name onto completely bound and addressed copies by a system worked out by Video Jet Co., Chicago. Video Jet's equipment opens a magazine to the Stauffer page, zaps in the subscriber name and then moves the magazine onto

the mailing stage. "It's not 'prohibitively costly,'" says Steve Venarchick of Webb Co., the printers of Farm Industry. "But it doubles the time needed to get an issue in the mail."

Leapfrog Breakthrough?

Had enough breakthroughs? Bill Harris, senior vice-president of PPG Industries, offers relief. In his remarks at this year's Pittsburgh Chemical Day, he called for "leapfrog" R&D projects to revitalize the US chemical industry. But, he warns, leapfrog projects are "larger, more expensive and riskier" than incremental developments. In short, you can kiss your money goodbye if your leapfrog does not turn into a prince.

Against the Grain

Brucine has long been used to denature alcohol, and now it seems that a variant on that idea has surfaced in Europe, where grain production is a hotly contested issue. The Common Market Commission, eager to keep some 3 million metric tons of British wheat out of milling markets, is thinking of coloring the UK grains with dyes. The wheat, of bread-making quality, would thus be downgraded, knocking about \$20 to \$30 a ton off the world price and making it suitable for use only in animal feeds—presumably, for color-blind livestock.

The Price of Color

Seems the hue of the ancient and expensive royal purple dye (reserved for the aristocracy, hence "born to the purple"), can be altered by varying the species of snail used, and by the process used to extract the dibromo indigotin dye precursor from the mollusk's gland. It takes about 60,000 shelled snails to make a pound of dye.

Like many of the dye extraction processes of early times, purple dye production created environmental problems. First was the emission problem of rotting snail bodies. And then, points out Patrick McGovern, an archeochemist at the University Museum of the University of Pennsylvania, the "crude alkaline solution of ammonia [usually urine] was used to reduce the dye." To fix the color, the treated fabric was then oxidized. "Altogether, a very smelly process."

NOTICE

December 21, 1984

R. Johnson
L. Maye

C. Hawkins
A. Howard
E. Maye
R. Thompson

IMPORTANT AND CRITICAL

Our blood leads are increasing rather dramatically and are now at dangerous levels.

Three people at 50 or above.
Plant average up from 37 to 42.
Fourteen employees above 40.

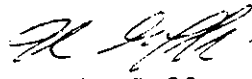
Each of you should plan to take positive action to assure we reduce plant blood lead levels immediately. Please include the following in your program:

- A. Implementation of red hat program.
- B. Increased usage of breath air from compressor.
- C. Use of the green rubber respirators.
- D. Constant check of seal using the 3M nebulizer.
- E. Observation to assure each employee follows all Industrial Hygiene rules.

eg: Finger nail brush
Showering
Clothes vacuuming
Clean lockers
rinsing mouth

Please be prepared to discuss this with me the week of December 24th.

HCG:ck


H. C. Gaffney

CYWI 3-000871

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