



weekly report on environmental pollution: the law, the markets, the technology

AIR/WATER pollution report.

including **air** and **water** news

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SLANTS & TRENDS

WITH AN ELEVENTH-HOUR COMPROMISE on the tax cut extension, Congress adjourned for a month Dec. 19. Before leaving town, however, the House voted to reject President Ford's proposal to defer spending more than \$35-million in funds appropriated for Environmental Protection Agency programs (A/WPR, Dec. 15, 1975, p. 491). Resolutions of disapproval covered \$2-million for air pollution research, \$4.6-million for water quality research, \$3.75-million for state air pollution control agency grants, \$10-million for state water quality agency grants, and \$15-million for the clean lakes program. Also disapproved was deferral of \$50-million in rural water and waste disposal grants.

* * *

RESIGNATION OF REP. JAMES HASTINGS (R.-N.Y.), effective Jan. 1, 1976, to become head of Associated Industries of New York State, Inc., poses serious problems for the fragile House Commerce Committee majority. Throughout subcommittee deliberations on Clean Air Act amendments, Hastings worked to develop several compromise provisions which, while acceptable to Republicans and conservative Democrats, rarely undermined the basic majority position. Holding the proxy of Rep. John Heinz (R.-Pa.), a relatively strong pro-environment Republican preoccupied with a difficult Senate campaign, Hastings gave the subcommittee bill an important bipartisan aspect.

FULL COMMITTEE VOTING ON TWO amendments to reverse subcommittee decisions shows just how important that bipartisan aspect can be. One proposal, weakening EPA's authority to control four potentially carcinogenic pollutants, was defeated 19-17. The other, hedging EPA's mandate to set a one-hour ambient NO₂ standard, was defeated on an 18-18 tie vote. In both cases, all Republicans present joined dissenting Democrats in support of the weakening amendments. Three Republicans - Hastings, Heinz and Carlos Moorhead (R.-Calif.) - did not vote.

IT IS REASONABLE TO ASSUME that Heinz will continue to miss full committee meetings, and Moorhead can be expected to vote to weaken the subcommittee bill. Hastings' replacement will be nominated by Minority Leader John Rhodes (R.-Ariz.), after consultation with key committee Republicans, and, as a newcomer, will probably toe the party line. That should give Rep. David Satterfield (D.-Va.), who has so far spearheaded the conservative effort, enough votes to win some important battles. Even if enough Democrats come back in to the fold, any appearance of bipartisanship will have been lost, leaving the bill wide open to floor fights in the House.

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SENATE UNIT ISSUES NEW CLEAN AIR ACT DRAFT

To expedite action on Clean Air Act amendments when Congress returns from its holiday recess, Senate Public Works Committee staff last week issued a formal Staff Working Print No. 6, dated Dec. 22, which incorporates and clearly distinguishes between amendments reflecting committee decisions and those which have not yet been approved (A/WPR, Dec. 22, 1975, p. 502). Of the print's 41 sections, only 12 have not yet been adopted, at least in principle, by the committee. Many provisions which have been approved, however, appear for the first time in legislative language and will be subject to further revision.

Section 4, for example, which declares that the statutory 0.4 grams per mile standard for automotive oxides of nitrogen emissions shall be a "research objective," requires each manufacturer whose sales represent at least 0.5% of all U.S. sales to build and demonstrate vehicles meeting that objective in model year 1978 and each year thereafter. Another example, in Section 23, authorizes Federal Energy Administration to allocate continuous emission reduction systems so that such systems are "first provided to sources subject to [coal conversion] orders... in air quality control regions in which national primary ambient air quality standards have not been achieved."

Most of the issues related to stationary sources, as well as significant deterioration and transportation control provisions, have not been decided by the committee. Discussion on those issues began last Friday, when the committee approved most of the civil penalty provisions. One change was made in the subcommittee draft to delete the minimum \$15,000 per day fine for certain violations; maximum fine of \$25,000 per day was retained. Still pending is a proposal by Sen. James Buckley (R-N.Y.) permitting successful defendants to recover litigation costs at the court's discretion.

In general, the stationary source provisions under consideration would provide that a state or EPA could issue enforcement orders for the additional time needed to achieve applicable emission limitations. Orders would require compliance at the earliest practicable date, but in no event later than Jan. 1, 1979. State orders would prevail unless Environmental Protection Agency objects in writing within 90 days and proceeds to issue its own enforcement order. If a source intends to comply by closing a facility, replacing a facility, or changing the production process, it may be allowed until Jan. 1, 1979, to attain emission limitations without being required to meet a complete compliance program. Such source would, however, be required to post a bond or other surety.

Extension for Innovative Technology

In the case of a major emitting facility which proposes to comply with emission limitations by replacing existing production capacity with an "innovative production process" or using an "innovative control technique" which could result in emission reductions "significantly greater than required," or with an "innovative system that will have potential for industrywide application at a significantly lower cost than the systems which have been determined by the Administrator to be adequately demonstrated," the committee is considering compliance date extensions to Jan. 1, 1980 or 1981.

Otherwise, enforcement orders would be required to include specific timetables and schedules of compliance and would be conditioned upon an amendment to be added no later than Jan. 1, 1978, setting forth a delayed compliance penalty which would be payable on a monthly basis beginning after Jan. 1, 1979, if the source had not achieved compliance by that date. Source would also be subject to an abatement action by the state or EPA after Jan. 1, 1979.

As noted above, the committee has already agreed to authorize EPA to seek civil penalties against violators in the courts. Penalties would be imposed by the courts and, in general, be limited to \$10,000 per day of violation. Fines may be assessed against corporations and responsible corporate officers. In cases where a person is in knowing violation and (1) where there has been no request for an enforcement order extending the date of compliance, or (2) where a knowing violation of an interim step has occurred after receipt of a delayed compliance date, or (3) if the source fails to pay a delayed compliance penalty, such person shall be subject to a maximum fine of \$25,000 per day of violation.

Definitions applicable to stationary source provisions have not yet been agreed to, but the committee is considering the following language: (1) "emission limitation" means a "requirement established by a state or the Administrator which limits the quantity, rate or concentration of emissions of air pollutants on a continuous basis, including a detailed schedule and timetable of compliance;" (2) "schedule and timetable of compliance" means a "schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an emission limitation, other limitation, prohibition or standard;" and (3) "major emitting facility" means "any stationary source of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any air pollutant."

Other key stationary source-related provisions which have been approved, in addition to coal conversion and civil penalty measures, include the requirement that EPA study a possible NO_x emission penalty system for stationary sources and authorization for EPA to promulgate a hazardous emission standard in terms of design, equipment or operations if found necessary. The Randolph amendment on expansion in air quality control regions is included in the print as undecided.

EPA MOVES TO REGULATE DISCHARGES OF PCBs

Contending that polychlorinated biphenyls "constitute a significant hazard to human health and the environment and must be immediately and effectively controlled with every means at our disposal," Environmental Protection Agency Administrator Russell E. Train announced last week that his agency will establish requirements for the virtual elimination of PCBs from industrial wastewater discharges (A/WPR, Dec. 22, 1975, p. 501). Aim of the agency is zero discharge of PCBs, but where that is not possible, EPA hopes to reduce discharges to two to three ounces, Train explained at a press briefing Dec. 22.

Under a directive from Train, regional officials must complete within 60 days ongoing surveys of the 37 facilities that manufacture transformers and capacitors using PCBs and the single U.S. PCB manufacturing facility of Monsanto Co. These surveys will determine the manner in which PCBs enter the water, air and land and the precise measures that can be undertaken at each facility to eliminate or drastically minimize PCB contamination of the environment.

"I have further directed our regional offices to assure immediately thereafter that all water discharge permits issued to these facilities are revised to require that all those measures affecting water discharges are undertaken expeditiously, and to further assure that such measures are also undertaken by facilities which discharge into municipal treatment works and are not therefore required to procure such permits," Train said. Survey results will also be used to determine whether an air emission standard should be set for PCBs and to develop measures for avoiding further land contamination from PCBs.

Train expressed optimism that in most instances control of PCB discharges can be achieved at a reasonable cost through process changes, substitution and/or installation of control technology. EPA hopes for the cooperation of industry to attain such controls expeditiously, he said, but noted that if such cooperation is not forthcoming, "I am prepared to exercise my authority under Section 504 [emergency powers provision] of the Federal Water Pollution Control Act" to ensure immediate action in individual cases."

In order to ensure the safe handling and disposal of PCBs now in use, Train said he has urged the major electric utility companies and other major users of large capacitors and transformers to assume responsibility for controlling the use and disposal of their PCBs. Train will meet with industry representatives in January to discuss specific programs, and pledged to issue regulations where needed and the authority exists.

Expects Substantial Reduction of Risk

"We would expect these actions to substantially reduce the potential risk from the large quantities of PCBs which are presently in use, and to thereby avoid their eventual addition to the existing environmental burden," Train said. He also announced intention of asking the American National Standards Institute to develop and implement guidelines and a code of good practice for the maintenance, handling, servicing and disposal of existing equipment containing PCBs.

Other actions planned by Train are: (1) meeting with manufacturers of equipment using PCBs to discuss plans for developing environmentally acceptable alternatives; (2) request to state governors to apply their authorities to the PCB problem; (3) request to Federal agencies to inventory their uses of PCBs and PCB-containing materials and develop plans to assure their safe use and disposal; (4) investigation of PCB discharges from major waste recycling plants and development of appropriate effluent guidelines and limitations in discharge permits; (5) investigation of the casting industry to develop appropriate standards and guidelines for its air, water and solid waste discharges; (6) development of guidance for proper disposal of PCBs in municipal and industrial solid wastes; (7) joint program with Corps of Engineers to deal with the difficult problem of PCB-contaminated sediments in rivers, lakes and coastal waters.

EPA estimates that about 300-million pounds of PCBs are in the environment in the U.S., either in landfills, air, water, soil or bottom sediments. Each year, it says, 10,000 pounds are discharged into U.S. waterways from electric equipment manufacturers and the one Monsanto manufacturing facility; 1- to 2-million pounds are spilled or leaked by equipment manufacturers during production, handling and disposal of PCBs and PCB-containing products; and 10-million pounds are introduced by other sources through spills, servicing, handling, recycling and salvaging of PCB-containing equipment and products.

Train stressed that the EPA plan of action "will not lead to a quick and easy reduction of the current levels of PCBs in our environment and particularly in the commercial and sports fish taken from waters most contaminated. Hopefully the control of discharges will arrest the rapid growth of the problem. Ultimately, however, only the reduced use of PCBs will yield a significant and permanent solution." Thus, he concluded, because of the hazards posed by PCBs and the environmental burden that already exists, "it is plain to me that we must, as a society, accept and work toward a goal of totally eliminating the production, importation and use of PCBs as rapidly as possible." But, he noted, until Congress passes a toxic substances control law, EPA has little legal authority to actually restrict the use and distribution of PCBs.

(Continued on following page)

EPA TO PROPOSE HAZARDOUS SPILL RULES (Cont.)

In a general attack on hazardous materials' contamination of the environment, Train told reporters that EPA will propose regulations governing the control of hazardous material spills, including those of PCBs, and will move as rapidly as possible to finalize the rules. Regulations, which will appear in the *Federal Register* shortly, would designate more than 300 chemicals as posing an imminent and substantial danger to public health and welfare when spilled into waterways. If designated as hazardous, a substance is considered to be nonremovable; a harmful quantity is determined, and penalties are assessed for spills in excess of that amount.

Train explained that designation of a substance as hazardous depends on evaluation of both toxicological data and production, distribution and use information. "Substances on the list are therefore those which are hazardous and have a reasonable chance for spillage due to their widespread use." Although the proposed rules state that the substances are nonremovable, Train said, such a determination "does not relieve the discharger from the responsibility to take emergency response action to limit a spill's harmful effects on the environment." He also noted that mitigating actions could reduce the penalties imposed for a spill.

Federal Water Pollution Control Act requires that "harmful quantity" be defined for each designated substance for purposes of spill reporting and enforcement action. To simplify this procedure, EPA has proposed that the substances be grouped into four classifications based on their relative potential hazard to the aquatic environment, with a relative harmful quantity assigned to each classification. Classification system is based on one proposed for use by Intergovernmental Maritime Consultative Organization.

Harmful quantity is determined by the aquatic toxicity of the substances which is measured by the concentration of the substance that is lethal to 50% of test organisms over a 96-hour period (LC50). The most toxic substances would be listed as Category A, having an LC50 of less than 1 part per million and a harmful quantity of 1 pound. Category B would be those substances with LC50 that is greater than or equal to 1 ppm and less than 10 ppm, with harmful quantity set at 10 lb. Category C substances would have LC50 that is greater than or equal to 10 ppm and less than 100 ppm, with harmful quantity set at 100 lb. Category D are those substances with LC50 greater than or equal to 100 ppm and less than or equal to 500 ppm, with harmful quantity set at 500 lb.

In special waters, defined as those which are drinking water reservoirs, part of a designated National Wildlife Refuge System or part of a designated National Forest Wilderness, National Park System or National Wilderness Preserve System, EPA proposes that any quantity of a designated substance be considered a harmful quantity when discharged into such waters.

More Stringent Penalties for Gross Negligence

Under FWPCA, EPA has the discretion to set penalties on the basis of \$500 to \$5,000 per discharge or on the basis of \$100 to \$1,000 per unit of measurement, with a maximum of \$5-million for vessels and \$500,000 for onshore or offshore facilities. EPA proposes that the former system be used "unless the Administrator determines that gross negligence on the part of the owner or operator of the vessel or facility is the cause of the discharge, or that after the discharge has occurred, the owner or operator has displayed gross negligence in minimizing or mitigating effects on the public health or welfare."

When gross negligence is found, penalties will be assessed under the latter system. To set penalties in that manner, EPA has determined the unit of measurement for Category A substances to be 1 lb., Category B to be 10 lb., Category C to be 100 lb., and Category D to be 500 lb., and has assigned a base penalty rate of \$1,000 per unit. But because all substances within a category do not exert their damaging effects equally, agency proposes to further subcategorize the substances within each category according to their physical, chemical and dispersal characteristics and assign adjustment factors for each subcategory.

Subcategories within each category and their adjustment factors are: Insoluble Volatile Floater (0.1), Insoluble Nonvolatile Floater (0.23), Insoluble Sinker (0.36), Soluble Mixer (0.49), Precipitator (0.62), Soluble Sinker (0.75), Soluble Floater (0.88), and Miscible (1). Thus, if a Category A substance is an Insoluble Volatile Floater, the penalty rate would be \$1,000 multiplied by the adjustment factor of 0.1, to equal \$100 per pound. An Insoluble Volatile Floater in Subcategory C would have a penalty rate of \$100 per 500 pounds of spilled material. For discharges of mixtures or solutions, rate of penalty will be the sum of the rates for individual hazardous components if the quantity discharged equals or exceeds the harmful quantity for the mixture.

Comments on the proposed regulations are due within 60 days of their publication and may be sent to EPA, Hazardous Substances Branch, Office of Water Planning and Standards (WH-595), Washington, D.C. 20460

TEN STATES JOIN NRDC BID TO BAN FLUOROCARBON SPRAYS

Ten states -- Colorado, Florida, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Oregon, Vermont and Wisconsin -- joined with Natural Resources Defense Council, Environmental Defense Fund, and Minnesota Public Interest Research Group last week in filing a new petition with the Consumer Product Safety Commission to ban fluorocarbon-propelled spray cans. Petition, the third filed by NRDC on this issue, concludes that the bulk of evidence today, including the results of recent high-altitude tests, overwhelmingly supports predictions that continued use of fluorocarbons will lead to a substantial decrease in stratospheric ozone and corresponding increases in skin cancer.

"Most impressive," according to NRDC scientist Karim Ahmed, "is that in spite of the rigorous scrutiny with which the scientific community has examined the predictions of ozone loss, nothing in the past year and one-half has come close to contradicting any of the original findings." Noting that CPSC has the legal authority to ban the use of a major portion of all aerosol products containing fluorocarbons, NRDC attorney Thomas B. Stoel said the commission's refusal to enact the ban "violates its obligation to protect the public health." According to industry spokesman James P. Lodge, however, "it would be inappropriate to impose restrictions on the use of fluorocarbons without proving the hypothesis, and we have a few years to do that."

NRDC first petitioned CPSC to ban fluorocarbon-propelled sprays in November 1974. In early July 1975, after NRDC sued CPSC for illegally delaying a ruling on the petition, the commission denied the request by a 3-2 vote, maintaining that there was insufficient information linking aerosol products to ozone depletion to justify such a ban. Later that month, NRDC and four states petitioned the Food and Drug Administration to ban aerosol products under its jurisdiction. FDA denied the petition pending a report from the National Academy of Sciences due in April 1976. In a letter to CPSC, NRDC asserted that it is unlikely that NAS will reach conclusions significantly different from those in the NRDC petition in view of the "remarkable unanimity on this issue within the scientific community."

In a related development, National Oceanic and Atmospheric Administration reported last week that a new remote-sensing technique it has developed will permit scientists to calculate the actual rate at which nitrogen oxides destroy the earth's stratospheric ozone shield. New ground-based spectroscopic technique measures the light spectrum produced by such sources as the sun and moon shining through the earth's atmosphere, by isolating that portion of the spectrum interpreted as caused by nitrogen dioxide, the amount of that chemical in the atmosphere can be estimated. Once that is determined, according to NOAA's John F. Noxon, "we can calculate the amount of daytime nitric oxide, which is the real enemy of ozone. And when we know that, we know the rate at which ozone will be removed."

STATE LEGISLATURES SUPPORT HOUSE CLEAN AIR BILL

In a letter to members of the House Commerce Committee, the National Conference of State Legislatures this month offered its support, with some qualifications, for the Clean Air Act amendments now pending before that committee as H.R.10498. "While the bill does not agree with conference policy in all respects, and we still recommend a few amendments, the bill shows a good attempt to accommodate state needs and interests," NCSL said. "This is essential if the nation's air pollution efforts are to be effective," the letter states, suggesting that, subject to three further amendments, H.R.10498 is a good compromise.

First, NCSL said, "It is essential that the 'substantial evidence' test for judicial review of Environmental Protection Agency rules and regulations be deleted from Section 305." This language would require that in order to affirm an EPA rule or regulation, a court must find "substantial evidence in the rulemaking record... taken as a whole." According to NCSL, such language would suggest that Congress intends to impose a more stringent evidentiary requirement than that now imposed on EPA to defend an action against the charge of "arbitrary and capricious."

That, in effect, would "transfer the burden onto EPA to show why its action should be upheld, thus inviting more frequent legal challenges by increasing the odds that an action will be struck down." In addition, NCSL pointed out that since EPA approvals of state clean air implementation plans and program grant applications are specifically included among the actions to which the substantial evidence rule would apply, "it could wreak untold havoc on state efforts. Even if state plan and grant approvals were insulated from the stiffer requirement," the letter says, "state planning and programming could still be disrupted by long delays in the resolution of cases involving important Federal directives."

Other amendments proposed by NCSL would retain current 1978 deadlines for auto emission control improvements, especially for hydrocarbon and carbon monoxide control, and insure that no state with large national parks or wilderness areas would be precluded from further development by significant deterioration provisions of Section 108, so long as best available control technology is applied. "Some states," NCSL pointed out, "such as Vermont and West Virginia, could have substantial areas of

(Continued on following page)

STATES, LOCAL GOVERNMENTS SUPPORT H.R.10498 (Cont.)

non-Federal land in which major emitting facilities needed for economic growth could be effectively prohibited. Suitable language to remove this prospect would go far to allay these states' fears."

Earlier this month, the National Association of Counties and National League of Cities also indicated their support for H.R.10498 in letters to the committee. Like NCSL, they were particularly pleased with the bill's proposed solutions to intergovernmental relations problems. According to NACo, the bill "offers a rational approach to achieving the clean air standards of the country while affording reasonable deadline extensions for achieving these standards. H.R.10498 also ensures the proper involvement of those levels of government charged with the actual task of implementing pollution abatement programs," NACo said.

NLC pointed out that the bill, as reported, "reflects the careful consideration of intergovernmental relations problems identified by cities throughout the country during the initial stages of Clean Air Act implementation. Further," NLC said, "the bill is conceptually and in a number of cases explicitly endorsed by the Environmental Quality statement adopted by the League's 15,000-city membership in plenary session last December."

On other specific issues, NACo singled out auto emissions and indirect source control provisions of H.R.10498 as particularly deserving of support. NLC endorsed both those provisions, as well as those dealing with coal conversion, compliance date extensions and nondegradation. Subcommittee Chairman Paul G. Rogers (D-Fla.), who had the letters published in the *Congressional Record*, suggested that they serve as evidence of the "balance which this legislation has achieved and why it should meet Congressional approval."

* * *

EPA REPORTS ON CARCINOGENS IN DRINKING WATER

Studies have found 253 different organic chemicals in the nation's drinking water, most of which have not been tested for potential carcinogenicity, but even "in the case of recognized carcinogens, the actual risk posed by ingesting very low concentrations is not known at this time," Environmental Protection Agency has concluded in a report to Congress on "Preliminary Assessment of Suspected Carcinogens in Drinking Water." Report also points out that EPA's in-depth survey of drinking water supplies in 10 cities "was not extensive enough to demonstrate conclusively that the environmental contamination found was likely to be present nationwide."

Report's section on the cost of removing carcinogens provides detailed figures on expenditures for removing the precursors that react with chlorine to form chloroform and other trihalomethanes. For a 100-million-gallon-per-day facility, report says that furnace cost for one- to three-month regeneration of carbon is \$1.1-million; cost of initial carbon is \$988,000 for 2.6-million pounds; engineering fees, steam generator and quench tank are 3% of furnace and carbon costs; and labor for regeneration is \$15,000. Data are for the use of granular activated carbon as a replacement for the granular media used in conventional water treatment.

To remove arsenic V and II (oxidized) from drinking water, EPA estimates cost would be 12¢ to 15¢ per 1,000 gallons for a 1-million-gallon-per-day treatment facility using chemical coagulation and lime softening. For asbestos fiber removal, report says that estimated cost of water from a new 30-million-gallon-per-day direct filtration plant capable of removing particulates and asbestos fibers is about 7¢ per 1,000 gallons. In existing plants currently operating to remove particulates, additional cost to upgrade treatment to handle asbestos fibers would be small, EPA says.

* * *

TRAIN HALTS SOME USES OF CHLORDANE, HEPTACHLOR

Environmental Protection Agency Administrator Russell E. Train last week ordered an immediate halt to use of chlordane and heptachlor for lawns, household pest control and turf, ruling that such uses would create an "imminent hazard" of cancer in humans. Train's order, which overrules an earlier recommendation by an EPA administrative law judge, permits use of the chemicals against insects in corn through Aug. 1, 1976, for control of pests in minor crops, and for underground termite control. Environmental Defense Fund said it will appeal the EPA order in Federal court, seeking a complete ban on all uses.

In a related development, General Accounting Office this month criticized Federal pesticide programs, contending that EPA has failed to insure that only pesticides which do not cause unreasonable adverse effects are approved and that Food and Drug Administration has failed to adequately regulate pesticide residues in food. Various kinds of information concerning environmental effects of pesticides are not presented to EPA prior to registration, GAO said, urging that EPA improve its testing of inert ingredients and improve labeling requirements.

SENATE ADOPTS COMPROMISE ALLOCATION FORMULA

Legislation authorizing \$1.4-billion in sewage treatment plant construction grant funds, H.R.5247, was approved by the Senate on Dec. 17 and sent to the House for action next year (A/WPR, Dec. 15, 1975, p. 495). Following shows the allocation of additional funds among those states which would have benefited from redistribution of reserve funds under the Senate's Talmadge-Nunn amendment.

	Reserve Allocation	Talmadge-Nunn Formula	New Funds
Region I:			
Connecticut.....	\$ 155,091,800	\$115,740,000	---
Maine.....	78,495,200	46,566,000	---
Massachusetts.....	295,809,100	252,558,000	---
New Hampshire.....	77,199,350	53,226,000	---
Rhode Island.....	45,599,600	38,075,000	---
Vermont.....	22,506,600	21,555,000	---
Region II:			
New Jersey.....	660,830,500	407,682,000	---
New York.....	1,046,103,500	829,971,000	---
Puerto Rico.....	84,910,500	102,240,000	\$ 17,329,500
Virgin Islands.....	7,794,800	5,049,000	---
Region III:			
Delaware.....	56,394,900	33,264,000	---
Maryland.....	297,705,300	319,140,000	21,434,700
Pennsylvania.....	498,984,900	392,382,000	---
Virginia.....	251,809,000	214,308,000	---
West Virginia.....	59,419,900	160,614,000	101,194,100
District of Columbia.....	72,492,000	20,124,000	---
Region IV:			
Alabama.....	43,975,950	113,463,000	69,487,050
Florida.....	345,870,100	388,098,000	42,137,900
Georgia.....	117,772,800	198,603,000	80,830,200
Kentucky.....	90,430,800	128,745,000	38,314,200
Louisiana.....	38,735,200	76,311,000	37,575,800
Mississippi.....	110,345,000	204,678,000	94,333,000
North Carolina.....	82,341,900	123,804,000	41,462,100
South Carolina.....	107,351,400	150,075,000	42,723,600
Tennessee.....			
Region V:			
Illinois.....	571,698,400	459,009,000	---
Indiana.....	251,631,800	194,283,000	---
Michigan.....	625,991,900	355,014,000	---
Minnesota.....	172,024,500	149,058,000	---
Ohio.....	497,227,400	461,781,000	---
Wisconsin.....	145,327,400	182,853,000	37,525,600
Region VI:			
Arkansas.....	39,822,700	92,853,000	53,030,300
Louisiana.....	71,712,250	121,509,000	49,796,750
New Mexico.....	15,054,900	31,059,000	16,004,100
Oklahoma.....	64,298,700	115,974,000	51,675,300
Texas.....	174,969,850	436,710,000	261,746,150
Region VII:			
Iowa.....	100,044,900	105,300,000	5,255,100
Kansas.....	53,794,200	94,968,000	41,173,800
Missouri.....	157,471,200	178,268,000	20,791,800
Nebraska.....	38,539,500	49,482,000	10,942,500
Region VIII:			
Colorado.....	43,113,300	86,256,000	43,142,700
Montana.....	12,378,200	21,276,000	8,897,800
North Dakota.....	2,802,000	17,838,000	15,036,000
South Dakota.....	5,688,000	18,288,000	12,600,000
Utah.....	21,376,500	47,682,000	26,305,500
Wyoming.....	2,930,650	15,885,000	12,954,350
Region IX:			
Arizona.....	18,833,450	85,275,000	66,441,550
California.....	945,776,800	865,845,000	---
Hawaii.....	51,903,300	60,381,000	8,477,700
Nevada.....	31,839,800	33,579,000	1,739,200
American Samoa.....	738,200	2,952,000	2,213,800
Pacific Trust.....	2,672,800	16,515,000	13,842,200
Guam.....	6,399,200	10,656,000	4,256,800
Region X:			
Alaska.....	25,250,500	38,151,000	12,900,500
Idaho.....	19,219,100	34,290,000	15,070,900
Oregon.....	77,582,900	81,603,000	4,020,100
Washington.....	103,915,600	139,221,000	35,305,400
Total.....	9,000,000,000	9,000,000,000	1,417,968,050

POLLUTION CONTROL INDUSTRY NEWS

American Air Filter Co., Inc., Louisville, Ky., has received an order in excess of \$3-million for environmental control systems to be used at four nuclear power stations. Standardized Nuclear Unit Power Plant Systems, a project of five electric utility companies, ordered the systems for nuclear plants being constructed in Burlington, Kan.; Fulton, Mo.; Durand, Wis.; and Sterling, N.Y. AAF will design and supply four containment coolers for each of the 1,150-megawatt plants.

Resources Conservation Co., a joint venture owned by Reading & Bates Offshore Drilling Co., El Paso Co. and Boeing Co., has sold two cooling tower water purification and recycling systems to Public Service Co. of New Mexico and Tucson Gas & Electric Co. for more than \$3-million. First unit is being used at the utilities' San Juan No. 1 plant in northwestern New Mexico; second unit will be installed at San Juan No. 2 in 1977.

JBF Scientific Corp., Burlington, Mass., is offering a testing service to provide data on the dispersion characteristics of dredged material and sludges to use as an input to environmental impact statements and for planning purposes in selecting disposal sites. Samples of sediments and sludges are analyzed to allow quantitative prediction of the descent, impact, mounding and spreading characteristics of the material when dumped at a specified site. Actual laboratory tests on the sample provided are scaled to full scale for the specified site.

American Paper Institute said last week that capital expenditures for pollution abatement equipment at pulp and paper mills in 1975 has been estimated at \$644-million, accounting for well over one-third of the total capital expenditures at these mills. Operating expenses for this equipment totaled about \$200-million this year.

Ecodyne Corp., Lincolnshire, Ill., this month announced plans for a new, multimillion dollar manufacturing and office complex at Conroe, Tex., to provide firm's MRM Division with a base for overseas shipment of equipment and better access to southwestern markets.

Penberthy Houdaille's Water & Waste Water Systems Division has moved to new headquarters in Cedar Falls, Iowa, where it will be located with the Viking Pump Division of Houdaille Industries.

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FOR THE RECORD

Procurement under grants for construction of treatment works: state and local assistance. Environmental Protection Agency. Dec. 17 Federal Register p. 58602.

Miscellaneous amendments for energy related authority. EPA. Dec. 18 FR 58644.

Delegation of authority to Washington local agencies for national emission standards for hazardous air pollutants. EPA. Dec. 18 FR 58646.

Labeling and importation of catalyst equipped vehicles. EPA. Dec. 18 FR 58646.

Proposed legal authority for South Carolina implementation plan. EPA. Dec. 18 FR 58663.

Proposed order and guidelines for diligence in Outer Continental Shelf oil and gas operations. U.S. Geological Survey. Dec. 19 FR 58862.

Proposed regulation of OCS operations. USGS. Dec. 19 FR 58862.

Guidelines to OCS Order No. 14. U.S. Department of Interior. Dec. 19 FR 58873.

Revision to Virgin Islands air quality implementation plan. EPA. Dec. 22 FR 59204.

Proposed redesignation-revision of environmental impact statements for program-related instructions. Farmers Home Administration, U.S. Department of Agriculture. Dec. 22 FR 59214.

Notice of meeting of Science Advisory Board Hazardous Materials Advisory Committee. EPA. Dec. 22 FR 59241.

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PEOPLE IN THE NEWS

Jack Roderick has been named Deputy Commissioner of Alaska Department of Natural Resources.

John Cobb has been appointed to the Colorado Air Pollution Control Commission.

Kenneth A. Konz has been appointed special assistant to New Jersey Environmental Protection Commissioner David J. Bardin.

John A. Gubancich will succeed retiring John J. Barr as president and chief executive officer of American Water Works Co., Wilmington, Del.

Leon W. Weinberger has been named chairman and chief executive officer of Environment Control Corp., Painesville, Ohio.

Richard L. Klimisch has been named head of the Environmental Sciences Department at General Motors Research Laboratories.

David K. Edwards has been appointed director of research and engineering for Penberthy Houdaille's Water & Waste Water Systems Division, Cedar Falls, Iowa.

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MISCELLANEOUS GRANTS AND CONTRACTS

Environmental Protection Agency has awarded Bolt Beranek and Newman, Inc., Cambridge, Mass., \$82,800 for development of noise control technology for specialty truck components;

University of Rhode Island, Kingston, \$64,982 to conduct an environmental impact assessment;

Science Applications, Inc., McLean, Va., \$55,200 for development of technology and legal review for loaders and dozers;

Development Sciences, Inc., East Sandwich, Mass., \$53,900 for development of environmental performance criteria;

Dames & Moore, Cranford, N.J., \$52,900 for preparation of draft environmental impact studies for tracked and wheeled loaders and dozers;

Aerospace Corp., Los Angeles, Calif., \$52,831 to research capabilities of quick response to very specific areas of environment;

Booz Allen Applied Research, Division of Booz Allen and Hamilton, Inc., Bethesda, Md., \$30,000 for technical report for cost analysis and economic impact relative to snowmobiles.

Office of Naval Research has awarded University of Delaware, Newark, \$61,581 for research on coastal environments.

EPA WASTEWATER TREATMENT GRANTS

EPA regional administrators have awarded 46 construction grants totaling \$3,601,519 to help finance waste treatment facilities.

	Grant	Project
AL: Spragueville	6,750	Plant planning
AK: Lakelse	11,250	Plant planning
CA: Amador	343,875	Interceptor
King	60,225	Plant design
Point Arena	7,500	Plant planning
S. Lake Tahoe	89,250	Plant planning
Tuolumne	6,250	Plant planning
FL: Gainesville	300,660	Plant planning
ID: Avery	4,838	Plant planning
IL: Bureau Junction	9,000	Plant planning
Damianville		
Water Dist.	3,000	Plant planning
IN: Mount Carroll	11,850	Plant planning
Shipshewana	1,925	Plant planning
IA: Anita	10,120	Plant planning
Homestead	7,720	Plant planning
KS: McPherson	248,250	Interceptor
KY: Calvert City	29,571	Plant planning
Hodgenville	22,500	Plant planning
Jackson	24,144	Plant planning
Louis	17,745	Plant planning
Owingsville	18,750	Plant planning
Vicco	11,693	Plant planning
LA: Krotz Springs	3,750	Plant planning
W. Quachita		
Saw. Dist.	331,050	Plant design
MI: Dundee	19,050	Plant planning
Sunfield	21,300	Plant planning
MO: Goodman	4,500	Plant planning
Van Buren	9,000	Plant planning
MT: E. Helena	15,000	Plant planning
NH: Durham	121,425	Plant design
NC: Cardmoor	22,500	Plant planning
Hertford	9,750	Plant planning
Memphal	14,492	Plant planning
Yanceyville	16,500	Plant planning
OH: Clayton	23,775	Plant planning
Cuyahoga Falls	935,400	Plant
Fort Jennings	4,125	Plant planning
Summit City	\$47,950	Plant design
RI: Coventry	60,000	Plant planning
TX: Cold Springs	11,100	Plant planning
Glen Rose	197,895	Plant
Odessa	27,750	Plant planning
Tye	3,852	Plant planning
UT: Castle Dale		
Orangeville	19,800	Plant design
WA: Pe Ell	11,250	Plant planning
WI: Milwaukee City	10,725	Plant planning

WATER RESEARCH GRANTS AND CONTRACTS

Environmental Protection Agency has awarded W.A. Wahler & Associates, Palo Alto, Calif., \$299,600 for evaluation of the cost effectiveness of aquifer dewatering;

University of Cincinnati, Cincinnati, Ohio, \$170,115 to study occurrence and effects of organics in drinking water - mutagenic and carcinogenic effects and studies of metabolic activation;

American Petroleum Institute, Washington, D.C., \$75,000 for refinery sour water stripper studies;

Resources Administration and Development, Inc., Fort Collins, Colo., \$46,098 to study relevance of water quality control statutes and administrative agencies to irrigation return flow quality control;

University of South Carolina, Columbia, \$33,980 to develop standard bioassay methods for larval arthropods using flow-through system;

Virginia Mason Research Center, Seattle, Wash., \$28,134 to develop instrumentation suitable for monitoring of total dissolved gas pressure in natural waters;

University of Maryland, College Park, \$26,638 to study impact of waterfowl on microbial population of estuaries with special reference to dissemination of potential human pathogens;

Johns Hopkins University, Baltimore, Md., \$24,962 to study impact of waterfowl on microbial population of estuaries with special reference to dissemination of potential human pathogens;

University of Rhode Island, Kingston, \$14,500 to develop method for stabilizing indicator bacteria in water samples;

National Sanitation Foundation \$6,000 for conference on onsite wastewater systems.

Office of Naval Research has awarded Bermuda Biological Station for Research, Inc., St. George's, Bermuda, \$39,948 to determine the extent that hydrocarbons in the open ocean are associated with colloids;

University of Alaska, Fairbanks, \$36,269 for research to determine quantity and composition of gases entrained in sea ice.

AIR RESEARCH GRANTS AND CONTRACTS

Environmental Protection Agency has awarded IIT Research Institute, Chicago, Ill. \$298,959 for study to determine the interactions of various air pollutants on causation of pulmonary disease;

Pacific Environmental Services, Inc., Santa Monica, Calif., \$94,962 for survey of compliance status and study of air pollution problems and controls at petroleum refineries;

New York University Medical Center, New York, N.Y., \$68,922 for comparative effects of respirable particles, gases and mists using pulmonary function and particle deposition and clearances in donkeys and man as the model for pulmonary irritation;

Air Pollution Technology, Inc., San Diego, Calif., \$60,000 for conceptual design of scrubbing systems for rocket motors;

Pedco Environmental Specialists, Cincinnati, Ohio, \$60,000 for maintenance plan development for air quality maintenance area in EPA Region VIII;

APT, Inc., San Diego, Calif., \$55,349 to study effects of high temperature and pressure on particle collection mechanisms;

California Institute of Technology, Pasadena, \$49,851 to conduct modeling of plumes from multiple cooling towers;

Institut für Aerobiologie der Fraunhofer-Gesellschaft, West Germany, \$34,000 to design and test the performance of an aerosol mass distribution monitor;

Automotive Testing Laboratories, Inc., Denver, Colo., \$26,000 for study on the effectiveness of an air-bled/exhaust gas recirculation retrofit.

Office of Naval Research has awarded University of Arizona, Tucson, \$45,775 for research on measuring ozone in air.

Aberdeen Proving Ground has awarded Hydro-nautics, Inc., Laurel, Md., \$39,520 for basic studies on high volume sampling techniques of chemical agents in the atmosphere.

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