EPA JOURNAL
SEPTEMBER 1977
VOL. THREE. NO. EIGHT
U.S. ENVIRONMENTAL PROTECTION AGENCY

EMERGING FROM SUMMER'S SMOG

Cleaning the Air

The near-record number of air pollution alerts in Washington and the thick smog blankets that smothered other cities this summer graphically reminded us all of the continuing and pressing need to curb the heavy load of pollutants being discharged by automobiles.

Dirty air in Washington was cited by one senator as an example of why Congress should refuse to buckle under to auto industry lobbying efforts to push back new and more stringent emission controls for five years.

The Clean Air Act amendments finally passed by Congress were hailed by President Carter as "a sound and comprehensive program for achieving and preserving healthy air in our Nation."

Air pollution grips West Los Angeles.

While the auto industry was given a two-year grace period before the new and tighter limits take effect, the President noted that "the automobile industry now has a firm timetable" for meeting these standards.

Meanwhile, EPA is continuing with its efforts to insure that the auto industry complies with whatever standards are actually set. An article reports that Detroit has had to recall millions of cars so far because they did not comply with the required emission limits.

On the subject of autos, this issue of EPA Journal also carries an interview with Eric Stork, Deputy Assistant Administrator for Mobile Source Air Pollution Control, on the meaning of the new car gas mileage figures which will be released soon. These figures are a valuable by-product obtained in testing prototypes of new auto models to make sure they conform to emission controls.

Another article reports on two cities in which a new EPA policy was applied to allow the construction of new auto assembly plants while moving towards cleaner air.

The magazine also takes a look at the Administrative Law Judges who help the Agency make critical decisions.

A Marine teaching a bird to fly makes for an odd juxtaposition. But another article's subject is the extraordinary energy and interest in environmental programs at a Marine Corps air station in Hawaii, which is not only helping to preserve the island of Oahu, but has won the Marines a national award.

The Journal also reports on a new program by EPA and three other Federal agencies to reduce duplication and protect public health and the granting of permission by EPA for use of poisons to kill predators endangering the survival of rare birds.

EPA JOURNAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

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Cover: Air pollution haze blurs view of U.S. Capitol. Photo by Bernie Boston of the Washington Star.

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Printed on recycled paper.

The EPA Journal is published monthly, with combined issues July-August and November-December, by the U.S. Environmental Protection Agency. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget. Views expressed by authors do not necessarily reflect EPA policy. Contributions and inquiries should be addressed to the Editor (A-107), Waterside Mall, 401 M St., S.W., Washington, D.C. 20460. No permission necessary to reproduce contents except copyrighted photos and other materials. Subscription: $8.75 a year, $.90 for single copy, domestic; $11.00 if mailed to a foreign address. No charge to employees. Send check or money order to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

ARTICLES

DEPARTMENTS

The New Clean Air Act

Smog shrouds downtown Chicago.

I am pleased to sign into law . . . the Clean Air Act Amendments of 1977. This Act is the culmination of a three-year effort by the Congress to develop a law which will continue our progress in meeting our national clean air goals in all parts of the country. . .

The automobile industry now has a firm timetable for meeting strict, but achievable, emission reductions. That industry now knows with certainty what is required and can devote its full-time energies to designing cars which will further our clean air goals while continuing to improve fuel efficiency.

This timetable will be enforced.

—President Jimmy Carter

The Clean Air Act Amendments of 1977 are now law. Among the new provisions: A two-year extension on current standards for tailpipe emissions on new model automobiles (See box). Members of both the Senate and the House had been under intense lobbying pressure to adopt a five-year extension schedule.

Administrator Costle said, "Senator Edward S. Muskie and Congressman Paul G. Rogers and the members and staff of the Senate Public Works and Environment Committee and the House Commerce Committee deserve the thanks of the American people for their courage and persistence in the long legislative effort to protect the quality of our air.

"I am extremely pleased that the long struggle over the Clean Air Act is over. The legislation enacted by the Congress will resolve a number of critical issues. It will permit expanded use of coal while maintaining protection of the public health. It will safeguard the air quality in those areas of the country which are still pristine. And it will provide an acceptable schedule for continued future reduction in emissions from automobiles."

Shortly before Senate-House conferees approved the compromise version of the Act, Sen. Wendell Anderson voiced this sentiment on behalf of the more stringent cleanup schedule: "Driving in from Virginia, I can't see the Washington Monument," adding that in walking from his office to the Senate he has "a feeling of nausea . . . my eyes hurt. There is a health problem."

According to wire-service reports, reaction to the new Act from Detroit—which had claimed it would be forced to shut down under the old cleanup schedule—was mixed.

Elliot M. Estes, President of General Motors, the Nation's largest auto producer, expressed relief over the decision. "Our challenge now," he said, "is to

meet the requirements with cars which serve the wants and needs of our customers."

William O. Bourke, Executive Vice President of North American Operations for the Ford Motor Company, said, "We will make every effort to meet them [the new standards] on schedule and with as little impact on vehicle and fuel efficiency as we can."

But an unsigned statement issued by the Chrysler Corporation stated, "These standards . . . go beyond health needs, and will unquestionably waste fuel and will be an additional unnecessary cost burden to the American consumer."

Other provisions of the new Act include:

Prevention of Significant Deterioration. Each State is required to classify areas which are presently cleaner than the national ambient air quality standards as Class I, Class II, or Class III. Class I designations are mandatory for national parks and national wilderness areas. Areas where the air is not as pure as the Class I regions but is still currently cleaner than national standards will be classified as Class II. Allowable pollutant levels are highest in Class III areas. A State may reclassify any areas other than a mandatory Class I area by following a procedure set out in the new Act.

An "allowable increment" is the permissible increase in pollution in any Class I, II, or III area. The Act provides for limited allowable increments. The smallest increments are allowed in Class I, the next largest in Class II, and the largest increments are allowed in Class III areas.

However, a variance above the established Class I increment can be granted by a Governor (eight percent above the allowable increment for low terrain areas and 15 percent for high terrain areas). The President of the United States is made arbitrator regarding approval of a variance in cases where there is a disagreement between the State and the Federal land manager.

Nonattainment. The new Act endorses EPA's "offset" policy for new or modified major sources of air pollution in areas that do not meet air quality standards. The offset policy allows new development if the net effect is an improvement in over-all air quality due to decreases from other sources. However, the Act also provides for waivers of offset requirements where the State has an adequate program for incremental reductions in emissions which will assure attainment of the standards by the deadlines (1982 for pollutants other than those which are auto-related; 1987 for auto-related pollutants). In order to use the waiver provision, a State must have submitted a revised State Implementation Plan by 1979, showing attainment by the '82 or '87 dates.

The Act strongly encourages the adoption of auto inspection and maintenance programs as a tool for attaining Federal clean air standards.

Governors can suspend on-street parking restrictions, gas rationing, and noncommercial vehicle retrofits that are a part of an existing transportation control plan in a nonattainment area until submission of the required new State Implementation Plan, under certain circumstances.

Coal conversion. The new Act allows for extensions for compliance with emissions limitations for power plants ordered to convert to coal. This extension on meeting standards is effective prior to the date of the conversion. But sources which are ordered to convert can only begin to actually burn coal when they can do so without causing or contributing to concentrations of any pollutant in excess of primary air quality standards. This latter feature of the Act is called the "primary standard condition."

Also, the Act authorizes the State, EPA, or the President to require use of local coal to prevent severe economic disruption or unemployment which might be derived from use of coal, other than that locally available.

New penalties. Any polluting source which received an enforcement order but does not comply by 1979 shall automatically be subject to a compliance penalty in the form of monthly payments equal to all costs that would have been required to achieve compliance. The effect of this measure should be that there is no economic advantage in delaying installation of pollution control devices.

Warranties. The duration of the performance warranty for auto emission control devices remains five years or 50,000 miles. However, a general performance warranty, which includes carburetor adjustments, etc., is set at two years or 24,000 miles.

Tampering. The anti-tampering (with auto emission controls) prohibition is extended to any person in the automotive repair business.

Smelters. Through application of an owner or operator, a delayed compliance order may be issued to a nonferrous smelter by the State or the Administrator if the smelter is unable to comply with an ultimate sulfur dioxide requirement in the State Implementation Plan. No more than two such orders may be issued per smelter, the first effective until Jan. 1, 1983, and the second until Jan. 1, 1988.

Best available pollution control technology. The new Act narrowly redefines the requirement for "best emissions reduction system" as the best technological system of continuous emission reduction. This means that where a control technology for substantially reducing pollution exists, no polluting sources may comply simply by burning untreated fuels. All new source performance standards must be revised to reflect this change within the next year. ■

BOX SCORES
in grams per mile

The Old Auto Standards (Clean Air Act Amendments of 1970)

Beginning in Model Year	Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
1977	1.5	15.0	2.0
1978	.41	3.4	.4

The New Auto Standards (Clean Air Act Amendments of 1977)

Beginning in Model Year	Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
1978–1979	1.5	15.0	2.0
1980	.41	7.0	2.0
1981	.41	3.4*	1.0

* The Administrator may waive the 3.4 requirement for carbon monoxide up to 7.0 upon a finding that the technology for control is not available, determined by cost, drivability, fuel economy, and other factors.

Emerging from Summer's Smog

Despite major gains in reducing air pollution nationally, an oppressive heat wave left many major cities in the eastern United States suffering this summer in a foul, gray haze responsible for numerous air pollution alerts and advisory warnings.

State air pollution control experts reported unprecedented smog exposure in such places as Waukegan, Ill., Cincinnati, O., and southern Connecticut.

In Washington D.C., where the record for total alert days may be broken, bicycle lockers at government buildings were stuffed with ads for strap-on respirators resembling oxygen masks. The hand-outs proclaimed, "DON'T LET POLLUTED AIR GET YOU DOWN."

In southern Ohio and in Baltimore selected industries were ordered to cut back on emissions as part of alert procedures to relieve air quality problems.

Conditions seemed somewhat better elsewhere. Spokesmen for States such as Massachusetts, Pennsylvania, and New York reported normal or better-than-average summers with regard to air pollution. Western cities such as Los Angeles escaped July's high pressure system which created moist, stagnant air over much of the East, but by the month's end a California heat spell was triggering smog alerts.

The technical name for smog is photochemical oxidants. Such oxidants are not emitted directly into the atmosphere, but are produced by a complex series of chemical reactions when certain emissions from motor vehicles and other sources—hydrocarbons and oxides of nitrogen—mix in the presence of sunlight.

A chief component of smog is ozone, a pollutant which is reported frequently by weathermen giving Air Quality Index (AQI) readings.

"Emission-related ozone has some harmful effects on human health of its own," Dr. Lawrence Plumlee, EPA Medical Advisor, said. "It is used also as an indicator of the level of photochemical oxidants in the ambient air. The ozone level corresponds to the overall smog level.

"Not only has ozone reached high levels in Washington, D.C., this summer, but they have been persistently high. Such prolonged conditions may reduce our resistance to disease.

"The effect of these pollutants on the population varies. Within any group of people there will be a range of sensitivities. Most people will experience some eye irritation. Throat and chest ailments are more frequent during these periods of heat and high oxidant levels. And, of course, persons with existing lung ailments are vulnerable, as are the very old and the very young. But even the very hearty will experience quicker fatigue during vigorous exercise.

"Due to the effects of a combination of oxidants, particulates (dust particles, lead, etc.) and nitrogen oxides, a large proportion of the population will experience dry throats. For some, this will become a sore throat. These sore throats can open the door for virus or bacterial infections in some people because the defense system is broken down. Headaches are another common complaint during inversions, most likely because of high carbon monoxide levels."

The National Weather Service reported that during July a humid, stagnant air mass was produced by a high pressure system combined with poor upper air movement and a general lack of weather activity. This condition extended from New England and central New York through central Michigan and Minnesota, as far west as Nebraska and south to the Gulf of Mexico. Temperatures soared well into the nineties and sometimes higher. New York City, for example, experienced the second hottest day in its recorded history, 104° F. Its all time high is 106° F, set in 1936.

Dr. Maurice Franks, house physician for the Hebrew Home of Greater Washington, Rockville, Md., said that during the worst pollution period, "We asked our senior citizens to remain indoors most of the time because of the excessive air pollution and heat. The pollution makes breathing difficult and aggravates many cardio-pulmonary conditions. Fortunately, our facility is air-conditioned and we have had no serious problems."

Rose Wimmer, age 84, a retired nurse living in Arlington, Va., stated, "When we do have air pollution, my legs get weak and I can hardly walk. It makes my eyes burn and I can't get my breath. I stay inside as much as I can. I can hardly make the two block trip to the store, so sometimes I have to get the food delivered. During air pollution periods I have to rest a lot and it's hard to get my housework done."

Raymond Lewis, 74, while out for a stroll in Washington, D.C.'s Rock Creek Park, said, "I've always made it a point these last few years since my stroke to take a walk in the evening. But this summer, what with the hot weather and the pollution and all, there are times when I just cannot get out."

In a recent letter to the Washington Post, James L. Fulton of the Potomac Pedalers Touring Club, a bicycling organization, wrote, "On any given weekend our members may be cycling distances of from eight to over 100 miles. After these rides there has lately been a disturbing incidence of headaches, burning eyes, weakness, nausea, etc."

The Richmond Times Dispatch, Richmond, Va., reported on July 8, during a period of high ozone readings, that "Area hospital emergency room staffs are seeing more patients with cardiac and pulmonary distress . . . In general, these medical problems are attributable to combinations of heat, humidity, and increasing pollution."

Dr. Michael Rolnick, Chief Resident of the Georgetown Medical Center Emergency Room, Washington, D.C., said that "based on personal observation and that of my staff, there seem to be more airborne disease problems this summer than last. Asthmatic patients are being seen more. In general, there seems to be an increased number of outpatient respiratory problems . . ."

Harold Frankford, an environmental protection specialist for EPA's Region III Office, explained that in the National Capital Interstate Air Quality Region, which includes the District of Columbia and parts of Maryland and Virginia, Agency efforts to curb air pollution have been limited. For instance, the Clean Air Act prohibits EPA from implementing such transportation control measures as park-

Washington's mall leads to a Capitol wrapped in summer smog.

ing surcharges designed to reduce auto traffic in Washington.

Most of the pollution in Washington, this summer, he noted, has been caused by the discharge of auto fumes and the hot, stagnant air.

While noting that nothing can be done about the weather, Frankford said that a major effort is being undertaken to develop a comprehensive region-wide plan to control and abate pollutant levels in the Washington metropolitan area.

One of the strategies being considered is an auto inspection and maintenance program. A new amendment to the Clean Air Act allows for such programs in areas exceeding the ambient air quality standards for auto-related pollutants. The D.C. government is willing to adopt an inspection and maintenance program, according to Frankford, but has held off because the Maryland and Virginia legislatures have not yet passed laws to permit similar programs in their jurisdictions.

"Adoption of an inspection and maintenance system," he said, "could help reduce auto fumes from improperly tuned and maintained cars." He added that steps are also being taken to require installation of vapor control devices at service stations, another step that should help reduce pollution.

According to Dr. Plumlee, ozone can be windswept to areas other than where it was formed, creating problems there. For instance, a spokesman for the Connecticut EPA reported, "This summer may qualify as one of our worst. Some of our urban areas—specifically Derby, New Haven, and Danbury—have experienced their highest ozone levels in the four years we've been taking readings. Ironically, our problems are not caused so much by stagnation, but by extra high levels of ozone being blown in from other urban areas. When we're experiencing 10 to 12 mph breezes, our ozone problem is often at its worst."

Ozone problems in large cities, however, are usually exacerbated by stagnant air, Dr. Plumlee explained. Furthermore, atmospheric conditions called inversions, when a layer of cool air is trapped against the Earth by a layer of warm air above, also tend to prevent pollution from being dispersed or rising into the upper atmosphere.

An Indiana Department of Health official reported that "there was a belt of stagnation this July that ran along the Ohio River Valley."

The effects of this stagnation were felt in southern Indiana and Ohio, and northern Kentucky. A spokesman for Ohio EPA said "This has been a very bad summer for us. We've already had several alerts for ozone so far this year in many of our counties. We've also had some trouble with particulates in the industrialized Steubenville area." An official for the State of Kentucky stated that "we've been flooded with phone calls from people with respiratory problems asking for information about oxidant levels and advice about what precautions they should take. We've had to install a toll-free phone line with a recorded message giving daily indices and bulletins."

In Los Angeles, the original smog capital, a member of the California Air Resources Board said, "Our summer was fairly mild until late July. We had the usual number of inversions and a continuing smog problem, but then we got into the period of intense heat, resulting in alerts. You must keep in mind that the first stage of our pollution alert scale is at .2 parts per million of ozone. I understand that on the average it is much lower on the East Coast." (In Washington, D.C. for example, an ozone alert is issued at .1 parts per million of ozone).

One problem which has led to some confusion is the lack of a uniform national index. EPA and the Council on Environmental Quality have recommended that agencies which take air pollution readings voluntarily adopt a proposed uniform system called the Pollutant Standards Index. (See EPA Journal, October 1976).

"EPA and the President's Council on Environmental Quality advise the States on how to organize pollution alert systems," Administrator Costle said. "EPA makes scientific judgments about the health effects of various levels of pollutants, and publishes criteria and guidelines accordingly. There is still a great deal we do not know.

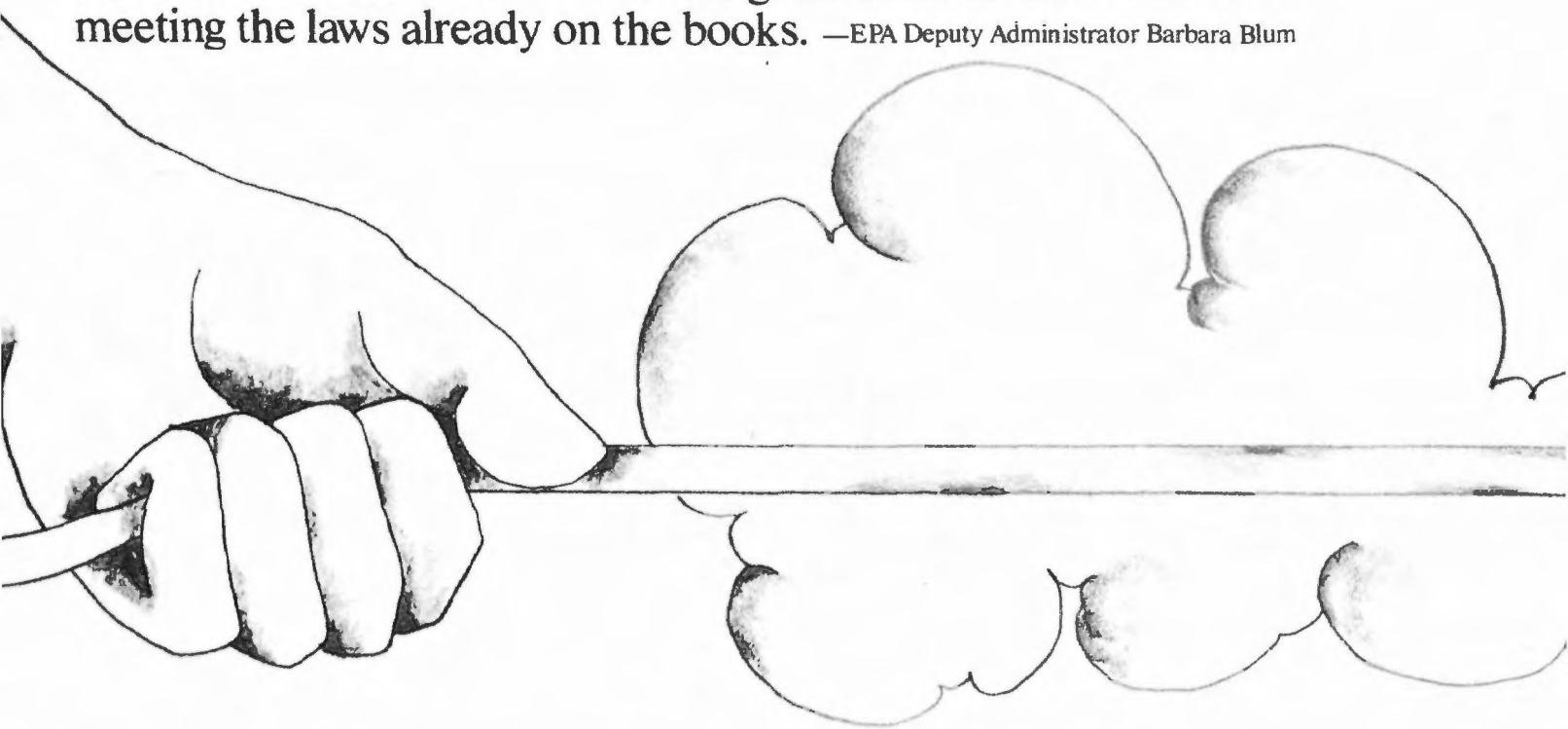
"While there is not enough historical data to presently determine national trends for oxidants, there are some clues to progress: In the mid-1960's, Los Angeles residents were exposed to smog levels violating health standards an average of 176 days a year; but by the mid-1970's this exposure was down to an annual average of 105 days.

"Basically, since much smog is auto-related, society faces a trade-off in its transportation system. Our romance with the automobiles has to be weighed against the desire for better health. Dirty air is already costing us over $21 billion a year in medical and property costs.

"This is an important time for citizens to learn about the issue of clean air, and to get involved." ■

Auto Recalls

The auto manufacturers should spend less time and money fighting future auto emission standards and get around to the business of meeting the laws already on the books. —EPA Deputy Administrator Barbara Blum



Item: February 15, 1973. The first recall order under the Clean Air Act was issued by then EPA Administrator William D. Ruckelshaus. It involved 2,290 General Motors vehicles. In his letter to the car company, Ruckelshaus stated that engine modifications were necessary to reduce excessive emissions.

Item: March 6, 1974. Then EPA Administrator Russell E. Train ordered what was termed "the first large-scale recall campaign." It affected 826,000 Chrysler vehicles and remains the largest recall issued by the Agency to date. A defective device, detected and reported to EPA by the Chrysler Corporation, required correction to reduce nitrogen oxide emissions for compliance with Federal standards.

Item: March 22, 1977. Douglas M. Costle began his second week as head of EPA with his first news conference. He made the following announcement: "I am today ordering the General Motors Corporation to recall approximately 135,000 1975 Cadillacs for violation of air pollution standards. The recall is based on a defective carburetor design which resulted in excessive emissions of carbon monoxide. I do want to acknowledge GM's agreement to voluntarily recall these cars."

Item: July 13, 1977. EPA issued its most recent recall, involving some 220,000 Fords for violation of the nitrogen oxides standard. In announcing the recall, EPA Deputy Administrator Barbara Blum said, "Today's actions reiterate our commitment to solving such pollution problems so that we all may breathe healthier air."

Beginning with the first such action in 1973, about 7.3 million vehicles have been recalled for emission problems. Of that total, 5.8 million have been voluntarily recalled by the manufacturer as the result of EPA investigation. About 1.5 million vehicles have been recalled as a result of a direct order by the Agency.

"This repeated failure to meet emission standards has occurred at the expense of public health," Barbara Blum said. "The recent air pollution alerts on the East Coast and elsewhere are graphic examples of the problem."

EPA is granted authority for this recall program under Section 207 (c) of the Clean Air Act. The provision states that if a substantial number of any class of vehicles or engines—although properly maintained and used—do not conform to the emissions standards when in actual use, the Administrator shall order the manufacturer to recall the vehicles to remedy the nonconformity.

According to Dr. Norman Shutler, Deputy Assistant Administrator for Mobile Source and Noise Enforcement, 11 million 1973–77 vehicles are currently being investigated by EPA for possible emission-related recalls. "The fact that a class of vehicles is under investigation does not necessarily mean that a recall will be ordered," he explained. "However, it does indicate that a violation of emissions standards or some defect related to emissions controls may exist."

A recall investigation may be initiated as the result of EPA surveillance testing of in-use vehicles, EPA's assembly line audit program, the manufacturer's own assembly line emission testing, or a consumer complaint which might indicate a potential problem with emissions.

During the second phase of an investigation, EPA tests samples of properly maintained and used vehicles to determine their emission levels while being driven, or to assess the effect of a particular defect on emissions.

In the final step of the investigation, a report is prepared which assesses whether

or not all legal criteria have been fulfilled, as well as the impact of the excessively polluting vehicles on the environment and the economic costs of making corrections.

The EPA Administrator then issues a recall order to the manufacturer, who has 45 days either to submit a plan for remedying the problem, or to request a hearing to contest the basis for the recall.

One recall to date has been contested. On December 10, 1976, former EPA Administrator Russell Train ordered Chrysler Corporation to recall 208,000 of its '75 cars, including Cordobas, Newports, Plymouth Furys and Grand Furys, Dodge Monacos, Charger SE's, and Coronets. The recall was based on carburetor misadjustments which resulted in excess emissions of carbon monoxide. Train labeled this "precedent setting" since it was the first recall based on improper design and adjustment procedures. Previously ordered recalls had been based on manufacturing defects.

According to Matthew Low, EPA's Chief Counsel for the hearings, the outcome of this judicial proceeding may be highly significant. "It could define the entire course of the recall program," Low said. "In the Chrysler case, certain facts indicate that the company designed a vehicle in such a way as to facilitate or cause misadjustments in use.

"Thus, the ultimate significance of the Chrysler case may well be that it will establish a standard for manufacturers to design maintainable vehicles."

The hearings will commence on Sept. 19 at EPA headquarters, Washington, D.C. Low said that he expects them to last three to four weeks, with a decision being handed down by an Administrative Law Judge sometime around the end of the year.

Since last January, EPA's various investigation methods for determining if vehicles are in compliance with emissions standards have included testing selected samples of new cars as they come off the assembly line. This is called Selective Enforcement Auditing (see EPA Journal, January 1977). On February 8, 1977, the first enforcement action under the new assembly line testing regulations was taken.

As a result, the Ford Motor Company was cited for failure of certain '77 Granadas and Mercury Monarchs to pass the tests. EPA ordered Ford to recall about 54,000 of the cars already built. John R. Quarles, then EPA Deputy Administrator, stated at that time, "It's very disturbing that in this early testing we find cars with emission levels ranging as high as four times the carbon monoxide limit. On the average, the cars emitted about twice the allowable levels."

The auto recall program also includes foreign cars produced for sale in the United States. Some 550,000 non-domestic vehicles have been ordered recalled to date. For example, on April 5, 1976, EPA and the Department of Transportation accepted a Volkswagen of America proposal to recall voluntarily 138,000 of its 1975 and early 1976 Rabbits and Sciroccos in order to improve the reliability and safety of the emission control systems. EPA and DOT's National Highway Traffic Safety Administration began investigations of potential problems in those models after receiving a number of consumer complaints about overheating of catalytic converters and malfunctioning of an evaporative emission control device.

Regarding the auto recall program, Administrator Costle has said, "The emissions data and engineering analysis associated with the recalls leave no room for doubt that EPA should order these cars be cleaned up. I intend to pursue a vigorous enforcement effort toward assuring that the Nation's automobiles are as clean as Federal standards dictate." ■

Your Gas Mileage

Interview with Eric O. Stork, Deputy Assistant Administrator for Mobile Air Pollution Control

(The "1978 Gas Mileage Guide for New Car Buyers," published jointly by EPA and the Federal Energy Administration, is expected to be available soon from auto dealers and from the Consumer Information Center, Pueblo, Colo., 81009. The free booklet gives the fuel economy results from EPA's testing of 1978 model cars and light trucks. The following interview explains how the results are obtained and what they mean.)

Q: *Why does the EPA, which is responsible for environmental protection, get into the business of telling the public about the fuel economy of cars? How does that relate to environmental protection?*

A: The fuel economy information that EPA has published for a number of years has been an outgrowth of our environmental protection work, and has been a vital support to our primary mission.

Here's how it came about. Back in the early seventies, we began to get complaints about what emission controls were doing to cars. Now, the auto industry has a long history of building some lemons. When you build millions of cars there will be some mistakes. Before the Clean Air Act mechanics and auto companies had to take the blame for their own errors.

But with the coming of emission standards, mechanics and the industry found a scapegoat—the emission standards. Emission controls began to be blamed for everything wrong about cars.

We started getting all sorts of complaints, including complaints that emission control caused fuel economy to drop off sharply. So I asked our staff at our laboratory in Michigan to give me a report on the effect of emission controls on fuel economy. At first our staff said that there was no way in which they could do this, because there was no consistent data base on the fuel economy of cars. While every auto company and some private organizations all had used various fuel economy test procedures, none of these were compatible with the others. To make an analysis of the type we needed we had to have a data base of fuel economy tests made on a consistent test procedure.

Then a couple of bright young fellows in our lab realized that we had in our own files an absolute gold mine of information. You see, we had been testing auto emissions for some time, and we had saved the results of those tests in our files. Now, when a car is tested for emissions, you keep track of the carbon monoxide coming out of the tail pipe, as well as the unburned hydrocarbons, and the oxides of nitrogen. And you also keep track, for technical reasons, of carbon dioxide coming out of the tail pipe.

Hydrocarbon, carbon monoxide, carbon dioxide. These are all carbon terms, and are the only forms of carbon that come out of the tail pipe when you test a car for emissions. All that carbon comes from the fuel that's powering the car during the test, namely gasoline.

Since the amount of carbon in a standard gallon of gasoline is known, and since we knew how far we drove the car in the emission test, it was possible to determine the fuel economy of the vehicles tested, and to analyze fuel economy effects of things like emission control.

Q: *What did you find from this analysis?*

A: The single most important factors determining fuel economy of cars are vehicle weight and engine size. A car that weighs 5000 pounds takes just about twice as much fuel to drive in urban traffic as a car that weighs 2500 pounds. Similarly, if two cars weigh the same the one with the more powerful engine will have significantly lower fuel economy, especially in city driving.

We also found other ways in which fuel economy is lost. The automatic transmission is one example. Air conditioning can use a lot of fuel, depending on how hot it is, the humidity, and the length of time it's on. Tires make a difference. There are also a number of other factors.

We also found that emission standards had had an effect on cars. Up through the 1974 model year, emission controls had reduced fuel economy for all cars by 11 or 12 percent on the average. The reduction was greater than that for larger cars, and for small cars there was little or no loss.

Q: *What did you do with this information?*

A: This information became very important in the debates about energy conservation and emission control. In the spring of 1973 the President directed EPA to publish its fuel economy car information, for the use of car buyers. Nothing we've ever published in the *Federal Register* received as much public interest, and so as a follow-up we developed the Mileage Guide and the voluntary car mileage labeling program.

Congress, in 1975, wrote into law a requirement that all auto companies label their cars with fuel economy information obtained from EPA into the Energy Policy Conservation Act, so what had started as a voluntary program became mandatory.

Congress also wrote into the law a requirement that EPA publish the Mileage Guide. And Congress based the fuel economy standards for future cars on our mileage estimates.

Q: *Why should EPA continue to provide fuel economy information?*

A: There are still people around, including the auto companies at times, who insist that environmental controls of automobiles must reduce fuel economy. That claim is just not true. If a manufacturer elects to use the best available technology, he can meet emission standards even more stringent than present ones without reducing fuel economy. It's extremely important for the Federal Government to remain active in fuel economy to be able to keep that record straight as the emission standards get tighter. In addition, the Mileage Guide and car labels provide a useful service to the public by helping people select from among new cars those that have the better fuel economies. Since fuel economy is now such a large factor in selling cars, someone has to keep the industry honest on fuel economy claims. The GAO and others have concluded that EPA can do this, in conjunction with our certification program, at a small fraction of the cost any other agency would have to incur.

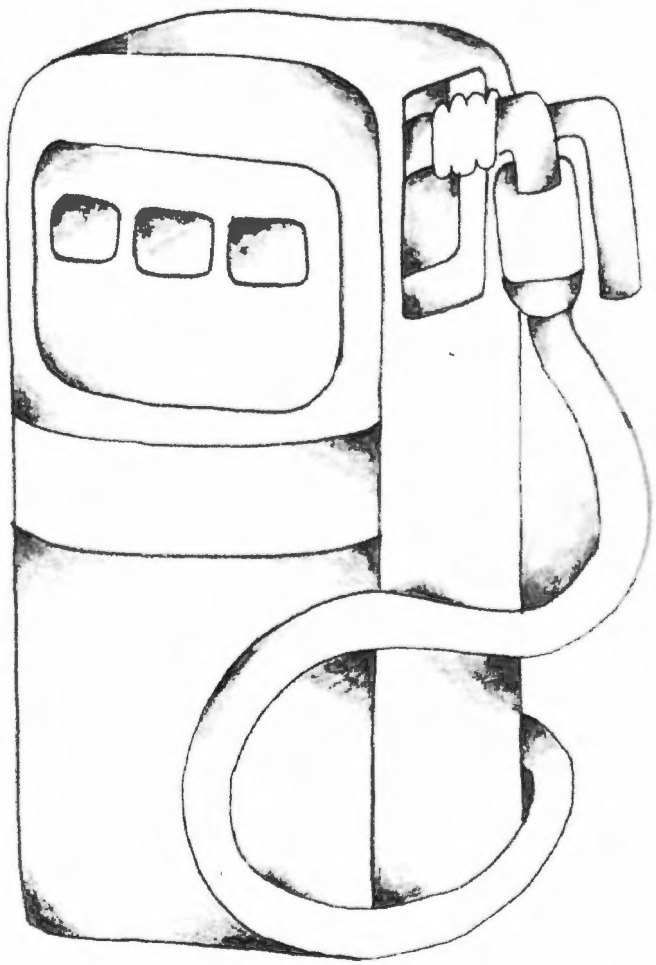
Q: *Why doesn't my car get the gas mileage your figures say it should?*

A: This is a question we're often asked. The fuel economy of any car is dependent on how you drive it—in real life or in a test. There isn't a car anywhere in the United States on which we could not demonstrate fuel economy that ranges from zero to better than 100 miles a gallon.

I'd better explain that. We'll measure zero miles per gallon if the car sits and idles long enough. We'll measure better than 100 miles per gallon if the car coasts down a mountain.

Now, neither one of those is a realistic way of testing for fuel economy. But before EPA standardized fuel economy testing, the figures used in auto company ads were sometimes not much more realistic.

The key point is that fuel economy of a car is dependent on how you drive that car, how long a trip you take it on, the speed at which you drive, whether you have a heavy or gentle foot on the accelerator, whether your tires are properly inflated, whether the weather is hot or cold or moderate when you start. Whether the car is properly tuned up or not properly tuned up. There are a host of variables.



That is why there is no way to design a test procedure that will predict with precision the fuel economy that each and every individual owner will get in his car, because they'll all get different results from nominally identical cars.

The most that is possible is to develop a test procedure that is based on average driving, as we have done. One that gives you reliable figures on the *relative* fuel economy performance of cars that are available for purchase.

In using the EPA Mileage Guide, you should not look at an absolute fuel economy number and say to yourself, I'm going to get this number. You may get less, you may get more, in your own kind of driving.

Rather, you should look at those numbers and compare them to other cars that you're considering for purchase. If the Mileage Guide rates Car A at having 20% better fuel economy than it rates Car B, then you can be pretty sure that you'll get about 20% better fuel economy from Car A than from Car B, in your own kind of driving. That's really all the numbers are designed to tell you.

Q: *What can I do if I find my car isn't getting the gas mileage listed by EPA?*

A: If you find that your car isn't getting anywhere near the EPA's estimate you can start by comparing your kind of driving to the driving that's done under EPA tests.

The trips you take in your car may be much shorter than the test cycle used by EPA. Our city trip represents an average urban trip of about 11 miles, at an average speed of about 22 mph. Your average trip may be shorter, or you may drive much faster. Also, many people drive on freeways at substantially higher speeds than used in our highway tests, which represents an average of all non-urban driving—not freeway driving alone.

You might also assume that your engine is properly tuned up. If it isn't, you're going to get poorer fuel economy.

You should also make sure that your tires are properly inflated. If they're not, you're wasting a lot of energy. Check to see that your front end is properly aligned, so that you don't drag your front tires down the highway sideways to some degree.

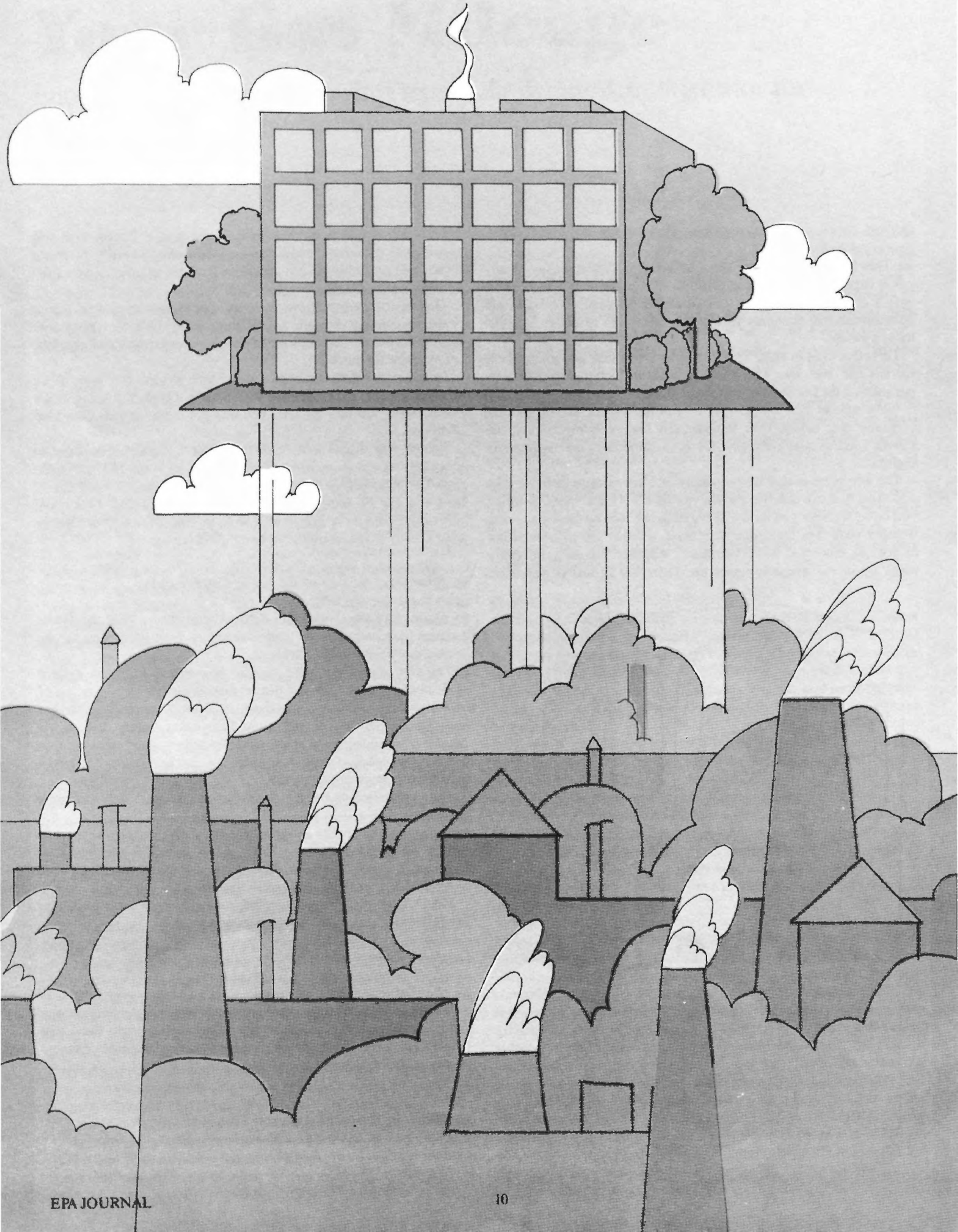
Finally, you might be able to change some of your personal driving habits if you find that your fuel economy is too low.

Q: *Has experience shown that auto inspection and maintenance programs help gas mileage?*

A: Yes. Data available on inspection and maintenance programs, as well as data available from other studies in which fuel economy was evaluated on cars before and after tune up, consistently show that the fuel economy of well-tuned cars is better than the fuel economy of cars in what might be called an average state of repair.

Q: *Based on the information you have now, are there any new trends or new information emerging from the tests?*

Continued on page 21



A Tale of Two Cities

This is a tale of two cities—Oklahoma City, Okla. and New Stanton, Penn.—in which EPA has given the go ahead for the construction of new auto assembly plants even though both cities are already suffering from extremely dirty air.

Allowing the plants, major contributors of hydrocarbon pollution, to locate in these areas may seemingly contradict EPA's goal of a clean environment. However, EPA's newly evolved "emissions offset" policy is a compromise that allows industrial growth in polluted areas of the country if progress is made toward cleaning the air.

Under the policy of "emission offset" new air pollution emissions from new industrial sources—already minimized by available technology—must be more than offset by a reduction in emissions from already existing facilities. The ratio of the trade-off must be more than one to one.

If a major, new source wants to locate in a polluted area, it must meet strict requirements. A major source is defined as one with emissions greater than 100 tons per year of major pollutants, or 1,000 tons of carbon monoxide. It must control its emissions, achieve more than an equivalent offset, and make reasonable progress towards national air standards. Although the primary responsibility for finding the offsets rests with the locating industry, the State still has the option to find offsets itself, as the State of Pennsylvania chose to do in New Stanton.

An important aspect of the policy is its built-in flexibility. Emission offsets may actually be obtained in a variety of ways—by cleaning up the emissions of an existing facility owned by the new company, by cleaning up a source belonging to another company, or by shutting down facilities.

"The net effect of the new industrial growth," says EPA Administrator Douglas M. Costle, "will be an actual improvement in air quality."

The construction of a Volkswagen assembly plant in New Stanton, and a General Motors assembly plant in Oklahoma City mark two of the first major facilities to come under the policy. The GM plant will add more than 3,000 tons of hydrocarbons annually to the already polluted Oklahoma City air. The process of finding offsets to allow the plant to come in began with a series of meetings between Region VI Administrator John White, Governor of Oklahoma David L. Boren, representatives of GM, the county Department of Health, and the city's Chamber of Commerce. Further discussions were held among the city's industries to figure out where hydrocarbon emissions could be reduced or eliminated.

It was discovered that many crude oil storage companies had storage tanks that were "breathing" hydrocarbon vapors. These could be eliminated by placing floating roofs on the tanks. The roof floats with the liquid level inside and prevents the escape of vapors. EPA, GM, and the city then got together to find ways to further control emissions in the new plant itself. They found that by using new absorption systems, and by switching to a water-based paint in areas of the plant where the car bodies receive the first coat of paint, GM could achieve significant reductions in its own hydrocarbon emissions.

According to Costle, "EPA, State, and local government and business representatives worked together and persuaded several oil companies in the area to reduce their aggregate emissions of hydrocarbons by 5,280 tons per year. Now GM can begin building a plant that will provide new jobs, add to the city's tax base, and yet not deteriorate air quality." Thus, by using the policy, the net reduction of hydrocarbon emissions achieved was over 2,000 tons per year.

In New Stanton, near Pittsburgh, a proposed Volkswagen auto assembly plant posed similar problems. It was estimated that the plant would emit 900 tons of new hydrocarbon emissions into air already considered by EPA to be polluted. The state of Pennsylvania, through its Department of Environmental Resources, chose to actively assist in providing offsets. They first explored traditional sources, like plants with smokestacks, and found that, for a variety of reasons, they would not be appropriate for offsets.

EPA worked with the State to find ways to reduce hydrocarbon emissions. As a result, it was found that if the State started using a low-polluting asphalt in its road maintenance operations, the necessary reductions could be achieved. The asphalt uses a water-based solvent and its use will reduce hydrocarbon emissions by 1,025 tons per year.

The Clean Air Act of 1970 does not allow the location of new industrial sources of air pollutants in areas violating Federal air quality standards if they "interfere" with the eventual attainment of those standards. The "emission offset" policy was issued last December as a further interpretation of this prohibition. The policy is based on the assumption that industrial growth is realistically compatible with the philosophy of the Act. Congress originally set 1975–1977 as the years in which the standards for major pollutants had to be achieved nationally. While significant cleanups were made, most areas of the country failed to meet their deadlines. The question was raised as to whether or not new industrial growth would have to be stopped in these areas. EPA decided that growth could continue if it resulted in progress towards cleaner air.

The success of EPA's emission offset policy in Oklahoma City and New Stanton demonstrates that concern for environment and human health, and the goals of industry, can be aligned if a mechanism is provided.

In both cities the technology for resolving the problem of growth and pollution was readily available. It is hoped that in future situations the policy will be "technology-forcing" by providing industry with incentives to use all the ingenuity it can to evolve new methods of pollution control.

In both cases, industry actually saved money by changing technologies, and progress was made toward the goals of human health. In this tale of two cities, it can be said that an acceptable balance was achieved.

The "emission offset" policy is now being used in a wide variety of cases throughout the Nation. But New Stanton and Oklahoma City are significant in another respect—both situations involved automobile plants.

"It is ironic that the first two companies to build under our offset policy are auto manufacturers," commented Costle. "The purpose of the policy is to allow economic growth in non-attaining, or polluted, areas, yet auto pollution is the main reason many areas have not yet achieved air quality standards. If the auto industry continues to pollute without using new, as well as available, technologies to curb pollution, then controls on industry, especially new industry, will have to be toughened." ■

AROUND THE NATION

paper penalty

The Scott Paper Company has paid a total of $110,000 in civil penalties for air pollution violations from its Winslow, Maine mill. A $10,000 fine was assessed for violation of the national ambient air quality standard for sulphur dioxide plus $1000 for each day in June that the mill continued to operate in violation of applicable sulphur dioxide emission limitations. The mill at Winslow was shut down on June 19th, and this operation transferred to a new plant at Somerset, Me., which is expected to meet air quality standards. The Winslow mill produced wood pulp for making paper. Chemicals used in the process produced sulphur dioxide that can irritate eyes, nose, throat, and lungs when carried in the air. The plant had been assessed heavy penalties for air violations earlier this year.

annual report

The third Regional Administrator's Annual Report on Environmental Quality in New England has been completed by the Region I Public Affairs Office. Once again automobile-related pollutants appear to be New England's most difficult air pollution problem. While the report indicates that water quality improved slightly in 1976, with 51 percent of the major stream-miles meeting the fishable-swimmable standards, it also points to the increasing threat of polychlorinated biphenyls (PCB's) to the Region's waterways.

puerto rican violations

EPA's Region II issued a "show-cause" order to the Puerto Rican Aqueduct and Sewer Authority concerning violations at 91 sewage treatment facilities operating on the island.

On the basis of EPA and Environmental Quality Board site inspections and the Authority's monitoring reports, Region II found a continued pattern of poor maintenance in violation of provisions of the Federal Water Pollution Control Act of 1972.

Regional officials and the Authority are discussing measures to bring all plants into compliance by means of training programs for operators, development of a spare parts inventory to assure speedy equipment repairs, and a program of periodic site inspections.

dusty streets

Region III is using a novel approach to determine if one of the causes of high particulate readings in Philadelphia's air is due to street dust.

During a three-day period in June, city water trucks continuously doused a five-block section of Broad Street, one of Philadelphia's major thoroughfares, in order to wash away dust and other particulate matter. Specially erected air monitoring equipment was used to determine what airborne pollution was eliminated by the street washing.

While such intensive street washing would not be used as a routine control measure, other types of control would be considered if street dust is found to be a significant cause of city air pollution. A report on the study should be completed later this month.

sludge disposal

Two recent EPA grants went to projects that will use sewage sludge for land application. A $28 million construction grant was awarded to the Butler (Pa.) Area Sewer Authority for the expansion of a treatment plant and construction of new sanitary sewers. The sludge produced at the plant will be transported and disposed of on a former strip-mine. The reclaimed land will eventually be used for a public park.

Region III also awarded the first of two grants totalling more than $5.7 million for the construction of a sludge composting facility for Washington, D.C.'s Blue Plains Water Pollution Control Facility. The composting process, developed at the Beltsville Agricultural Research Center, will produce a product that can be sold commercially for soil enrichment.

permits denied

Paul Traina, enforcement director of Region IV, has announced that EPA will not issue pollution control permits to 47 east Kentucky coal mines—a majority of which are strip mining operations. A large number of these mines are located in Pike County.

The action follows a determination by the U.S. Army Corps of Engineers that discharges of pollutants from the mines would potentially affect navigation in the receiving streams.

Under the Federal Water Pollution Control Act, EPA must refuse to issue a permit to an applicant when the Corps concludes the discharges would adversely affect anchorage and navigation in receiving streams.

Traina notified each mine operator that "any discharge into waters of the United States without a permit is a direct violation of the law subject to civil and criminal action." Civil penalties of up to $10,000 per day, and criminal fines of up to $25,000 per day, could be assessed.

steel enforcement

Interlake, Inc., an Illinois steel company, has agreed to reduce particulate emissions from its coke-making facilities by 90 percent over the next 30 months. EPA officials and U.S. attorneys reached this settlement with the Illinois steel plant during a lawsuit in which EPA charged Interlake with violation of the Clean Air Act for failure to install controls at its coke batteries. Harmful particulate matter is emitted during the pushing stage of the coke making process.

In another action, involving the U.S. Steel Corporation, Region V moved to bring about cleanup of particulate matter from five coke batteries at Gary, Ind., by issuing a 30-day notice of violation of federally enforceable State pollution regulations. The five coke batteries have been emitting more than 2,400 tons of particulate matter a year. Indiana regulations allow only 1,527 tons a year. Recently, U.S. Steel was fined $4,250,000 for violations of air and water regulations.

spot checks

EPA's Region VI Office in Dallas is continuing its random inspections of municipal vehicles and gasoline supplies to determine compliance with unleaded fuel regulations. The regional office recently received a $28,000 check from the city of Houston for violation of regulations.

water cleanup

The first significant water cleanup of Morgan Lake, in the Four Corners, New Mexico area, is under way. The Arizona Public Service Company will spend $6 million to bring its Farmington facility into compliance with Federal water requirements.

The company, the State, New Mexico Citizens for Clean Air and Water, and EPA reached a workable solution after two-and-one-half years of administrative litigation. The lake cleanup is important because the lakewater flows into the San Juan River, which empties into the Colorado River. Morgan Lake is located on the Navajo Reservation, and the company's efforts will mean cleaner water for sheep grazing, fishing, and recreational activities.

prodding the press

EPA has assumed primary responsibility for the enforcement of the Safe Drinking Water Act in Missouri. The Missouri General Assembly defeated a bill that would have made Missouri's drinking water regulations at least as stringent as the Federal law and given the State the means to enforce the regulations. With EPA's assumption of primacy for Missouri, the Region VII Water Division and the Public Affairs Office decided that affected communities throughout Missouri should be informed about the change. Three teams, made up of a water supply specialist and a public affairs specialist, divided the State into three areas. The week before EPA assumed primacy the three teams set out to contact all media possible. Daily and weekly newspapers were considered the most important source of getting the information to the people. The papers were provided with a press release, a feature story and pamphlets on the Safe Drinking Water Act.

A total of 64 weekly and daily newspapers were contacted throughout the State as well as several radio and television stations. News stories appeared on the front pages of the St. Louis Post-Dispatch and the Kansas City Star.

gift photos

In cooperation with EPA's Region VIII office, Naval Air Force Reserve units recently took aerial photographs of selected areas of the Region as part of their active training program in intelligence and reconnaissance missions. The color photographs were given to EPA for use in conducting compliance inspections for spill prevention and control. The Naval Reserve units got valuable training, and the Region VIII Emergency Planning and Response Branch received information that is ordinarily gained through time-consuming on-ground inspections.

energy tour

Barbara Blum, Deputy Administrator, completed a tour of energy developments in the Region, including a prototype oil shale recovery plant at Rifle, Colo., a major coal-fired power plant near Rock Springs, Wyo., and the Nation's largest operating coal strip mine operation near Decker, Mont. She met with environmentalists and industry representatives to hear their views on energy development in the West and on environmental problems. Blum traveled by chartered aircraft, auto, and helicopter while making the tour.

more jobs

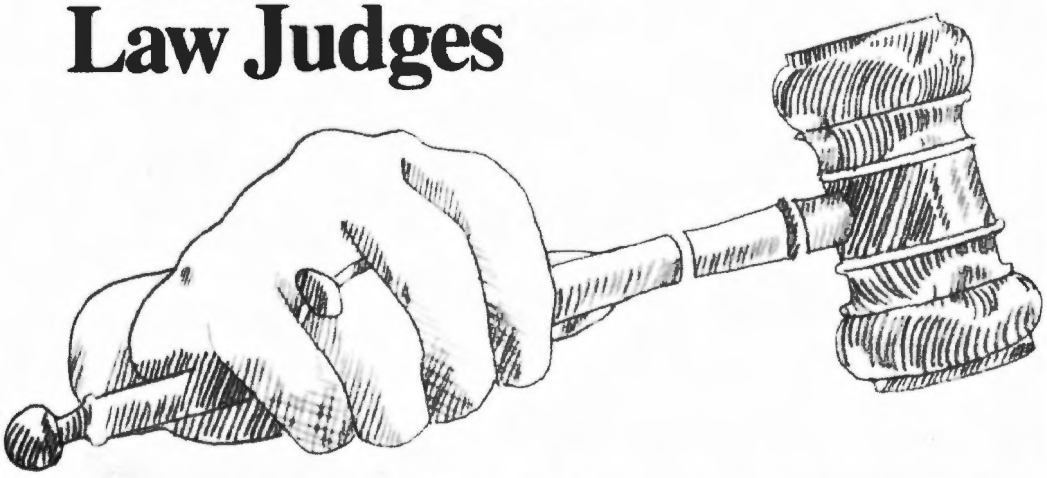
Region IX obligated a record-breaking $22 million in construction grant funds during June. In addition to being a substantial step toward achievement of national wastewater treatment goals, the grants will provide employment for an estimated 10,000 individuals. Regional Administrator Paul De Falco Jr. said, "I don't believe that there is, as yet, adequate public understanding of the economically stimulating aspects of our construction grants program. In a time when we are being criticized for actions that allegedly have a negative impact on the job market, it is important to recognize the job-creating aspects of such programs."

unsafe water

EPA officials have notified suppliers of public drinking water in six small Oregon communities that tap water in their systems violates national drinking water standards for bacteriological purity. Operators of five of the systems were asked by EPA to issue "boil water" notices to consumers. Although the six communities have small populations, all are located in recreational areas—two in northeastern Oregon and the others on the Pacific Ocean in Tillamook County—and are visited by a large number of summer vacationers. There have been no reports so far in any of the communities of illness that could be attributed to the water supplies.

The six systems were among 30 Oregon water supply systems checked out by EPA field crews since June 24, the day the national drinking water standards went into effect. Oregon did not assume authority for enforcing those standards.

Administrative Law Judges

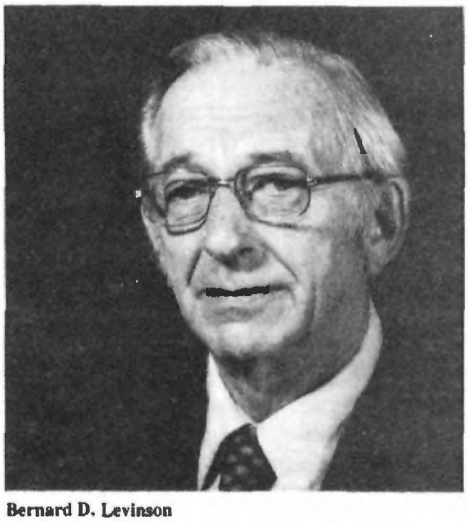


Herbert L. Perlman

Edward B. Finch

Gerald Harwood

Marvin E. Jones



Bernard D. Levinson

Spencer T. Nissen

Thomas B. Yost

In September of 1974, Administrative Law Judge Herbert L. Perlman handed down his decision in the now famous Aldrin-Dieldrin suspension proceedings. In a 109-page opinion, later adopted in substance by the Administrator and eventually affirmed by the U.S. Circuit Court of Appeals, Judge Perlman concluded that the registrations of the pesticides Aldrin and Dieldrin should be immediately suspended in order to prevent an imminent hazard to human health.

The dramatic and controversial hearings probed deeply into the carcinogenic effects of the pesticides on laboratory animals and industrial workers. In determining that an imminent hazard existed, Judge Perlman relied heavily on the testimony of many government and industry witnesses. Various environmental groups, farm representatives and government agencies intervened in the proceedings to present their side of the story . . . some advocated complete cancellation or suspension, others favored limited uses, and still others, challenging the reliability of the cancer reports, urged full and unrestricted use.

The tradeoffs involved in the Judge's decision presented the classical dilemma of environmental regulation. Aldrin and Dieldrin were two widely used agricultural pesticides. It was predicted that without them, or comparable substitutes, a substantial portion of America's farm harvests would be destroyed by insects. On the other hand, laboratory studies consistently indicated that the pesticides caused cancer in test animals.

Ultimately the outcome of such clashes between the public interest and the private economy turn on questions of law. And questions of law require the determination of facts. Within the Federal regulatory agencies, the initial determination of facts and the application of law to those facts is the responsibility of Administrative Law Judges.

Many Federal agencies are obligated by Congress to carry on similar quasi-judicial functions. Statutes defining an agency's field of regulation often required the agency head to conduct formal hearings reviewing the merits of administrative actions. In order to perform this judicial role fairly it became necessary to separate the Administrator's function of prosecutor from that of judge. Furthermore, the heads of these agencies were unable to conduct the required hearings themselves because of the substantial amount of time and expertise required to gather the evidence and sift through the facts. Thus, in 1946 Congress created the position of Hearing Examiner, now known as Administrative Law Judge, to perform the quasi-judicial functions delegated to the regulatory agencies.

The Administrative Procedure Act of 1946, by establishing the Administrative Law Judges, in effect created an independent judicial arm within each agency. In order to separate the discretionary and judicial functions of the agency head, it set up strict rules including prohibition against off-the-record communication between the Judge and interested parties, including the prosecutor.

EPA Administrative Law Judges are selected and appointed by EPA's Chief Judge from a list of eligibles furnished by the Civil Service Commission. While they are paid through agency funds, the salaries of Administrative Law Judges within an agency are fixed by the Civil Service Commission and range from GS 15 to 17. They have what are known as "career absolute" appointments. Unless a judge so requests or agrees, he cannot be transferred to another agency or another position, his decisional functions cannot be regulated and he cannot be removed or disciplined except for cause after a formal hearing before the Civil Service Commission.

"The requirements for appointment as an Administrative Law Judge are probably more rigorous than those for any other Civil Service position," according to Charles Dullea, Director of the U.S. Civil Service Commission's Office of Administrative Law Judges. The minimum requirements set by the Civil Service Commission call for at least seven years prior legal experience either as a judge, a trial lawyer, or as an agency attorney.

When an application is received by the Civil Service Commission, it is reviewed by the Director of the Office of Administrative Law Judges. The applicant's qualifications are then carefully investigated by the Commission through written and oral interviews with professionals around the country who have known the applicant.

The prospective judge is then given a score from 0 to 100 based upon the Director's evaluation and the reference investigation. A score of 80 percent, 10 points higher than the general Civil Service Exam, is required to pass.

If the prospective judge passes these preliminary evaluations he is then called in to write a sample administrative law decision which is graded by a panel composed of a Civil Service Commission representative, an examiner from the local bar association, and a representative from one of the Federal regulatory agencies.

A lengthy oral interview is then conducted and a final rating assigned. In the selection of candidates special weight is given to the personal interview results since a judicial temperament, one of the primary qualifications for appointment, is not easily assessed by test scores. If the applicant scores above 80 percent on all tests, his or her name is then placed on a ranked list of eligibles for certification to the agencies when requested.

A total of 850 Administrative Law Judges, are now assigned to 29 Federal agencies.

EPA currently has seven Administrative Law Judges. Five are located at EPA headquarters in Washington, D.C. The two field judges are stationed in Atlanta and Kansas City. These judges hold hearings throughout the country, depending on the type of hearing, the requirements of the statute, and the convenience of the parties.

EPA's Chief Administrative Law Judge is Herbert L. Perlman. In addition to presiding over cases of his own, Judge Perlman assigns cases to the other six judges. Some of these cases are short, with hearings lasting only a day or a few days. Others, such as the pesticide cancellation hearings, can take months or even years to complete.

"The reason some of these cases take so long is that the factors on which the decision must be made are so complex." Judge Perlman said. "To decide whether the benefits of some widely used and efficacious pesticide outweigh the risks to human health and the environment is no simple task." Much of the evidence presented in such cases is theoretical, and in many instances is challenged by other studies by competent investigators.

The initial decisions of the EPA Judges are subject to review by the Administrator on appeal. Using the record of the administrative hearing and the judge's written decision the Administrator makes a final decision which becomes binding

Continued on page 22

Marines Protect Environment

On a lava outcrop off the shores of Oahu, Hawaii, a young wedge-tailed shearwater waits in the warm sun. Almost grown, the bird has been abandoned by its parents. Plentiful fat reserves will keep it from going hungry for a while. It tries its wings. In a few flaps it is airborne, but the new and awkward muscles are no match for the trade winds. Blown toward shore, it makes an ungainly landing on the sands of Mokapu Peninsula. Left on the beach, the shearwater would not survive, for it is easily preyed upon by Hawaii's voracious aliens, cats, dogs, and mongooses. A young Marine picks up the bird and reminds it how to fly by throwing it into the air. First five feet, then ten, and at twenty feet the fear of falling triggers an instinct. The wings flap and the shearwater takes flight to finally join the rest of its kind. This rescue is only one that has helped make the Marine Corps Air Base at Kaneohe Bay, Oahu, the recipient of the 1976 Secretary of Defense Environmental Quality Award.

The selection committee, under the sponsorship of Dr. John White, Assistant Secretary of Defense for Manpower Reserve Affairs and Logistics, met on June 16, 1977 to decide which Defense installation had the most exemplary environmental program in 1976. Other members of the committee were Rebecca Hanmer, Director of EPA's Office of Federal Activities; Harold O'Connor, Deputy Associate Director of the U.S. Fish and Wildlife Service; and Rob Robson, Budget Examiner of the Environmental Branch of the Office of Management and Budget. The Department of Defense began the Awards program in 1973 to encourage environmental programs on its 243 installations that embrace more than 19.5 million acres.

Initially, each of the armed services submitted an area for consideration in the competition. The nominees were evaluated by the committee using criteria based upon the successful implementation of pollution control requirements and the National Policy Act (NEPA). Does the installation's program comply with NEPA? Was a viable environmental organization set up? Are unquantifiable ecological and human values being considered in the planning process? Has the public had a chance for input? Is ecological diversity being maintained? These were just a few of the questions each facility had to answer.

Additionally, the committee had to weigh in the military mission and constraints that go with it.

By a unanimous decision, the winner of this year's award was the Marine Corps Air Station at Kaneohe Bay.

"We found it necessary," said the judges' letter of recommendation, "to identify the one installation that went the extra mile to meet the spirit . . . of our national environmental policies. It was this additional criterion that set the 1976 Kaneohe Bay program apart . . . With very limited resources, the Command at Kaneohe Bay went the extra mile to imbue its personnel with a special concern for the environment and a desire to work with State and local officials to enhance and protect it. This special concern and desire that we found in the program . . . and its innovative use of limited resources was unique."

> "The goal of our environmental program is to give Nature the freedom to do its best."
>
> Environmental Quality Report (1976)
> Marine Corps Air Station
> Kaneohe Bay, Oahu, Hawaii

Three other military bases received recognition for outstanding programs in this year's competition. Point Mugu Naval Test Center in California, Vandenberg Air Force Base, also in California, and Fort Sill in Oklahoma all had notable environmental programs. "The programs of these four installations establish a standard of excellence for other Defense installations to emulate," the Committee said.

The Marine Corps Air Station at Kaneohe Bay is situated on 4.6 square miles of the Mokapu Peninsula on the island of Oahu. About 16,000 persons either live or work on the station. Because an island is relatively small and isolated to begin with, resources are sharply limited and the environment far less resilient than on a mainland. The disposal of solid wastes and toxic substances, and the pollution of fresh water can present acute problems demanding innovative approaches. The Marine Air Station is faced with problems common to islands throughout the world, as well as in cities in general. Bounded by military constraints and budget limitations, the Marines have managed to generate an imaginative array of programs that save resources and encourage on-base lifestyles to be more ecological.

For instance, the supply of fresh water on Oahu is limited. Occasionally, there are times when water hours, or conservation hours, are mandatory. The use of water on the base was found to be increasing. In response, the Marines undertook an extensive conservation project. Loudspeakers on cars announced the program, violation notices were issued for misuse, and wastewater from the on-base sewage treatment plant was substituted for fresh water in irrigation. As a result, the station's overall consumption went down even though its population had grown.

The recycling of wastes and toxic substances is an important facet of Kaneohe environmental activity. Old oil from vehicles is used to power the station's boiler plants. Plant engines are kept well-tuned by experts, thus eliminating bad emissions. Waste oil is also used to subdue dust on roads, and is mixed with jet fuel for fire-fighting practice.

Asphalt is extremely costly in Hawaii. When the airfield needed repaving the Marines decided to try something new, the heater-scarifier method. A large machine looking like something out of a science fiction movie was used to plow up the old asphalt. This material was then mixed with a binder and re-used for paving. According to Tom Cajski, the station's environmental affairs officer, the

Tree planting is an important part of the environmental program sponsored by the Marines.

materials and energy used were one-third of those normally used in a repaving project. Kaneohe Air Base was the first in the tropics to use this method, he said.

All sewage on the base receives secondary treatment. In an experiment at the digester of the treatment plant, methane gas is trapped as it's being given off, and is burned as fuel to heat the digesting bacteria, which then work faster.

Other environmental quality programs on the station include the installation of sound-suppression facilities and a special test cell that filters emissions from F–4 Phantom jet engines, taking part in a community-sponsored recycling center, school tours, plantings by Youth Conservation Corps members, and a joint archaeological preservation program with Honolulu's Bishop Museum.

The Mokapu Peninsula was long the home of Hawaiian chiefs. It had a reliable supply of fresh water, suitable farming land, and access to the sea. The word "mokapu" actually means 'sacred land' in Hawaiian. One of the most important archaeological sites on the Marine station is the Nuupia Ponds area, man-made ponds in which the ancient Hawaiians cultivated food fishes. It is also the place that the rare and endangered Hawaiian stilt, a black and white bird with long red legs, chooses to call home.

Today the ponds are officially the Nuupia Ponds Wildlife Refuge Complex. They illustrate yet another dimension of the Kaneohe Bay air station environmental program. The Marines cooperate closely with the National Fish and Wildlife Service and the Fish and Game Department of Hawaii to monitor and maintain species in this important area. Amtraks, large amphibious tanks, are run back and forth across the mud flats to help make raised nesting sites for the stilts. Worn-out tires filled with construction rubble are then placed on the sites, creating small, raised islands. The stilts readily occupy these pre-fabricated nests. The creation of these special nesting areas is necessary to protect the stilts from cats, dogs, and mongooses. The station has an active live trapping program for mongoose. Once captured, the animals are donated to the University of Hawaii for medical research.

Marines are also working with the Fish and Wildlife Service to maintain two breeding colonies of red-footed boobies, teaching stranded young shearwaters to fly, controlling the growth of the introduced mangrove trees to keep them from choking the Ponds area, planting rare and endangered plants, cultivating a garden of ancient Hawaiian herbs, and placing old car bodies in Kaneohe Bay to act as habitat for reef organisms.

All of these programs illustrate the degree to which the Marine Corps Air Station at Kaneohe Bay has incorporated environmental thinking into as many aspects of the station's lifestyle as possible. Moreover, most of the programs have been voluntary.

Says Col. John H. Miller, commanding officer of the station, "We like to think enhancement comes through the attitudes of the people who live and work on the Air Station, and not enforced directives."

The Corps has made a sincere effort to reach into the community. It is active in several community organizations. Civilian suggestions are encouraged. "Sure, we're Marines running a military operation which can't always be environmentally kind," said Tom Cajski, "But we're also a group of citizens equivalent in size to a city, living on an island, a vulnerable part of the ecological world. We try to live up to the Hawaiian tradition of 'aloha aina' — I guess you could call it an awareness, a love, of the land."

This fall young wedge-tailed shearwaters are again launching into the winds that will carry them toward the beach. Marines will pick them up and help them fly. The ancient Hawaiians, now buried under the Oahu earth, would be happy to know that even in the midst of military maneuvers, the spirit of 'aloha aina' is still found on the Mokapu Peninsula. ■

PEOPLE

New officials starting their duties in high ranking posts at EPA headquarters are (from left): **William Drayton, Jr.**, Assistant Administrator for Planning and Management; **Alice B. Popkin**, Associate Administrator for International Activities; **Joan Bernstein**, General Counsel; and **Joan M. Nicholson**, Director of Public Awareness.

Adlene Harrison has been named Regional Administrator for EPA's Region VI office. Harrison was a Dallas City council member, a post she had held since 1973. She served as interim Mayor of Dallas, as well as Mayor pro tem. She was on the city council's committees on community development, transportation, utilities, minority employment, and arts and beautification.

Harrison supported a stringent air pollution ordinance for Dallas, co-sponsored an ordinance to establish a city environmental committee and sponsored local consumer protection legislation. She is a member of the National League of Cities' Steering Committee for Environmental Quality. She attended the University of Mississippi.

Donald P. Dubois has been reappointed Regional Administrator for EPA's Region X office in Seattle. He has held that position since 1976. Dubois joined the Agency in 1970 as Interim Regional Coordinator in the Denver office, and was Deputy Regional Administrator there from 1971 until his transfer to Seattle. His previous Government service was with the Environmental Health Service from 1957 and the U.S. Public Health Service from 1969.

Dubois earned a bachelor's degree in civil engineering in 1957 from Washington State University, and a master's degree from the California Institute of Technology in 1961.

Alan Merson, a professor at the University of Denver College of Law, has been named Regional Administrator for EPA's Region VIII office in Denver. Merson has been Chairman of the Colorado Land Use Commission, a member of the Governor's Planning and Coordinating Council, and a consultant to the Rocky Mountain Center on Environment and the Environmental Law Institute Solar Energy Project. He has taught at the College since 1969. His prior experience includes legal consultant services to Ohio University, Deputy Director of the Alaska State Community Action Program, Assistant District Attorney for Anchorage, and private legal practice.

Merson earned a bachelor's degree with honors from Harvard College in 1956, did graduate work in political science at the University of Chicago, and received his law degree from Harvard Law School in 1962.

Mary Leyland, former Executive Officer in EPA's Office of the Administrator, has been appointed by President Carter to be ACTION's assistant director for administration and finance.
ACTION, the Federal agency for volunteer service, oversees VISTA and the Peace Corps.
The nomination is subject to Senate confirmation. She will direct support services for ACTION'S domestic and international programs.
Mrs. Leyland had been with EPA since 1972. She had served as a program analyst in Region I and chief of grants administration for Region II before coming to Headquarters.
Her previous experience include serving as a systems analyst for the Commonwealth of Massachusetts and also for IBM in New Haven, Conn.
She earned a bachelor's degree in philosophy from Newton College of the Sacred Heart in Newton, Mass., and a master's degree in education from Boston State College in 1967.

Gene L. Barnhart has been named Regional Inspector for EPA's Kansas City office. He will handle investigations of unethical conduct or irregularities by EPA employees or contractors, in order to maintain the integrity of Agency programs. His most recent position was with EPA's Security and Inspection Division in Washington, D.C.
Barnhart earned a bachelor's degree in business from Oklahoma State University. He has served with the Marine Corps and the Naval Investigative Service.

Deputy Administrator Barbara Blum is one of five winners of this year's Feinstone Environmental Awards. The citation and a $1,000 check will be presented to her by Georgia Governor George Busbee in Atlanta Sept. 23.
Blum is being honored for her volunteer work—starting 17 years ago—to protect the Chattahoochie River in Georgia. She is credited with initiating and leading local and State efforts to maintain the recreational values and water quality of the river, which flows through Atlanta and is the city's main water supply.
The Feinstone Awards were started last year by the State University of New York's College of Environmental Science and Forestry at Syracuse, with a $100,000 endowment from Sol Feinstone, a forester and historian who was graduated from the college.
Other winners were: Marjorie Harris Carr, Micanopy, Fla., a biologist who led efforts to save the Oklawaha River from canalization; Beaula Edmiston, Los Angeles, Calif., for her work on protecting desert plants and animals; Ralph E. Madison, Louisville, Ky., for a successful campaign to halt a dam-building project in the Red River Gorge in that State; and Jean and William Siri, Richmond, Calif., a husband and wife team active in many conservation efforts in the San Francisco Bay area.

Jack J. Schramm has been named Regional Administrator for EPA's Region III office in Philadelphia. He was partner in the law firm of Zimbalist and Schramm in Clayton, Mo., and served in the Missouri House of Representatives from 1965 to 1972. As a legislator he was active in the formulation and passage of laws relating to air and water pollution control, solid waste management, open spaces, and clean rivers.
Schramm was chosen one of the outstanding State legislators in the Nation in 1967 by the Eagleton Institue of Politics of Rutgers University.
While serving as a special consultant for Arthur D. Little, Inc., a major consulting firm, Schramm played a major role in the preparation of a land-use planning and management program for Colorado.
Schramm received a bachelor's degree with honors in political science from Colgate University in 1953. He earned a law degree from Washington University School of Law in 1959.

John C. White, who has been Regional Administrator for EPA Region VI office in Dallas since 1975, has been named to head the Agency's Region IV office in Atlanta. He was formerly Deputy Regional Administrator, and enforcement chief in Atlanta.
White joined EPA in 1970. He had been with the Federal Water Pollution Control Agency, a predecessor agency, since 1966. His prior government service included four years with the Department of Housing and Urban Development. Before that he was an engineer in private business.
White earned a bachelor's degree in civil engineering from the University of Alabama in 1957 and a doctor of law degree from Emory University in 1968.

Kenneth A. Konz is the new director of EPA's Eastern Area Audit Division, responsible for audits of Agency grants in Regions I and II. Prior to taking over the new position, Konz was on a year's Intergovernmental Personnel Assignment to the New Jersey Department of Environmental Protection as special assistant to the Commissioner. He reviewed and drafted guidance, standards, and regulations.
Before joining EPA in Region III in 1971, Konz had been an auditor in the Charlottesville and Denver regional offices of HEW and the Denver branch office of the U.S. Army Audit Agency.
Konz is a 1965 graduate of the University of Denver.

Regulatory Reform

EPA and three other Federal agencies have joined forces to simplify their regulations that deal with public health and safety. Acknowledging that Federal rules concerning the environment, foods and drugs, consumer products, and working conditions often overlap to some extent, the heads of four agencies recently announced that they will plan jointly and work together to eliminate duplication and to improve the protection of public health.

EPA Administrator Douglas M. Costle; Commissioner Donald Kennedy, head of the Food and Drug Administration in the Department of Health, Education, and Welfare; Chairman S. John Byington of the Consumer Product Safety Commission; and Eula Bingham, Assistant Secretary for the Labor Department's Occupational Safety and Health Administration, made the announcement.

In a joint statement they noted that President Carter had promised the American people during the election campaign that "waste and duplication in the Federal Government would be eliminated wherever possible."

"Our agencies," the statement said, "often deal with many of the same issues and the same industries, and they often have the same research, regulatory, and enforcement objectives. It's time we planned and worked together."

The first step in the simplification and streamlining process is already under way. The four agency heads ordered their field staffs across the country to start work right away on common action plans.

These plans, to be drafted before the end of August, will include the sharing, wherever possible, of facilities, laboratories, libraries and information systems, vehicles, testing equipment, and any other resources that could be used by two or more agencies.

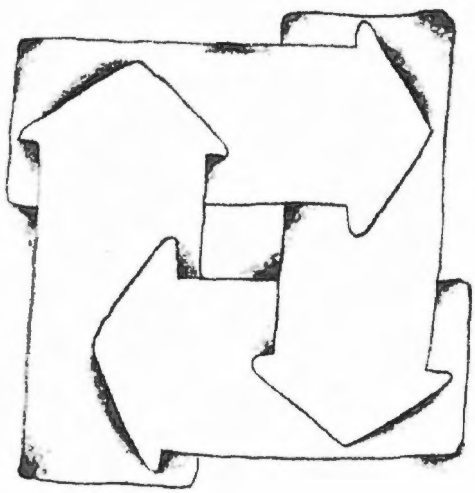
The staff studies are also considering ways for the four agencies to cooperate in the setting and enforcement of the regulations with which industries and businesses have to comply to protect the health of workers, consumers, and the public in general.

Possible ways to reduce the burden on industries of reporting and record-keeping are also being sought, perhaps by combining the data required for two or more agencies. This probably can be done, the four-agency statement implied. "We are particularly sensitive to the need to minimize duplicative requests for information from industry" by the Federal Government. "Our goal is to make the regulatory process more efficient for our agencies, for industry, and for the public."

In no case, however, would there be any lowering of the standards of protection required by law of the four agencies.

The four agency heads said they would initiate cooperation in seven different areas:

- Testing standards and guidelines that are compatible among the four agencies. The study groups will seek to determine what criteria should be used in deciding whether tests are needed, what tests should be made, what amount and type of information is necessary for determining safety, and how the information should be interpreted.



- Assessments of risk, safety, and hazard to health. Here the problem is to decide what data each agency needs to determine the risk or safety assessments required of it, what methods will be used, and how the results will be announced.
- Information sharing. Each agency's current systems for storing and retrieving information will be studied to determine if a joint system to be used by all—for instance, a national information system on toxic substances—is needed, and, if so, how it can be developed.
- Research planning. This will include a review of each agency's research needs and capabilities and an exploration of the cost and effectiveness of cooperative research programs.
- Regulation development. This study aims to improve cooperation among the four agencies in the drafting and issuance of their regulations. Wherever possible duplication is to be avoided and compatibility promoted.
- Compliance and enforcement. This includes the study of how field personnel of each agency can contribute to the mission of the other three and whether and how laboratory and other field facilities can be efficiently shared.
- Interagency communication and public education on toxic substances. All four agencies have a direct concern with toxic substances. Studies in this area will examine the possibilities for joint exchange of information among the agencies and with the regulated industries and the public through publications, seminars, conferences, and hearings.

In a letter to President Carter, the four agency heads explained why they had decided to act together:

"We have concluded that, within our collective legislative mandates, there are significant and exciting opportunities—acting as a team—to effectively control hazardous materials for the protection of public health.

"We have agreed to examine, assess, and redesign, if necessary, the processes by which we collectively regulate the chemicals which impact on people and the environment. . ."

Three of the four agencies are already acting cooperatively in the regulatory process. EPA, the Food and Drug Administration, and the Consumer Product Safety Commission last spring announced a plan to ban most uses of chlorofluorocarbons as spray-can propellants. These organic chemicals persist in the atmosphere and are believed by many scientists to threaten depletion of the ozone layer, high in the stratosphere, which protects animal and plant life from excessive ultraviolet rays from the sun. Overexposure to ultraviolet light can cause skin cancer in man.

Other cooperative efforts among the agencies to date include actions to limit the exposure of workers and the public to vinyl chloride, a chemical that causes high rates of liver cancer among people exposed to it, and proposals for similar joint actions regulating human exposure to benzene, another cancer-causing chemical.

The agencies believe the new effort will strengthen day-to-day interagency coordination. "We are confident," the agency heads said in their joint statement, "that these efforts will result in more consistent regulatory policy, better sharing of information resources, and improved protection of public health." ■

A: No, nothing new or startling. Fuel economy continues to get better. That's not surprising. Fuel economy has to continue to get better. The law requires automobile manufacturers to improve the fuel economy of their cars each year. For the 1978 model cars, the first model year of cars subject to the new fuel economy standards, the average fuel economy for all cars produced for each manufacturer has to be at least 18 miles per gallon. Any manufacturer violating this law will be subject to a substantial monetary penalty.

In 1979, it's going to have to be 19 mpg, in 1980 it's going to have to be 20 mpg, and then from '81 through '84 it continues to go up. In 1985 the average fuel economy for each manufacturer is going to have to be 27.5 miles per gallon.

We'll be seeing a continuing improvement in fuel economy of cars, achieved primarily through weight reduction, and through such things as more efficient combinations of engines and vehicles, lock-up automatic transmissions, and better aerodynamics.

Q: *Do you anticipate any kind of pressure on you because of the fact that there will be major penalties for not meeting gas mileage figures?*
A: I suppose we'll have pressure. We have pressure on us all the time. This whole business of testing cars for emissions, as well as for fuel economy, is a hectic business.

Our staff and I have over the years developed pretty thick hides, and lots of calluses, so I think we're about as pressure-resistant as anybody around.

Q: *Is there any outside check on the accuracy of figures?*
A: Yes, of course there is. The automobile companies have an enormous interest in the fuel economy data that we report. Each car that we test for fuel economy has been tested by auto companies before, and sometimes after, we test it.

So if there's a disagreement, or if there's reason to question the fuel economy numbers, you can be sure we hear about it. So there is that outside check; it's built into the system.

Q: *There's a general impression that foreign cars seem to get better gas mileage than American cars. Is that true in your experience, and if so, why?*
A: There certainly is nothing magic about building fuel-economic cars, and there is no reason at all to think that American manufacturers are unable to do what foreign manufacturers can do. Foreign cars generally get better fuel economy than American cars simply because foreign cars generally are smaller than the average American cars. It takes less energy to move less mass.

Q: *Is that the only reason that the foreign cars often get better gas mileage—because they're smaller?*
A: Sometimes foreign cars, in addition to being small, have lower maximum speed. They have a lower horsepower-to-weight ratio. But even though foreign cars have gained a great deal of acceptance in this country over the past twenty years, our domestic manufacturers were not convinced that the public will accept cars that take longer than 11 or 12 seconds to go from zero to 60. They seemed to see it as a rather wrenching sacrifice for a car to have lower acceleration. But that is changing, slowly and surely. American cars are improving greatly in terms of fuel economy.

Q: *Do you think experience has shown that catalysts were a desirable solution in order to meet emission standards, and also fuel economy?*
A: Yes, I think so.

The catalysts are an available, safe, effective, and relatively cheap way of achieving the national goal of lower emissions and improved fuel economy.

Q: *Do you think the catalyst then will be with us for the next five years at least?*
A: I think the catalyst will be with us certainly for at least the next five years, maybe longer.

The advantage of the catalyst is that it permits the continued use of plant and machine tools in which our Nation has many, many billions of dollars invested. That's a large advantage. To throw away the machine tools that make today's cars and engines would be a very major cost to the Nation, and not just to Detroit.

After all, we must recognize that the auto business, like every other business, is a cost plus business. Whatever the companies have to spend they have to charge for, and they also tack on a percentage for profit. So we all have a stake in seeing the best, most economical technology used to achieve the national goals of clean air and good fuel economy.

Q: *What is the optimum fuel economy you foresee in the next decade?*
A: I would say the optimum fuel economy may be in a range from the 1985 standard of 27 1/2 miles per gallon to 30–35 miles per gallon. It depends on the size of car that Americans are willing to settle on for most of their driving.

Q: *But will people buy such small cars?*
A: We are just going to have to change our way of thinking about our cars. At the present time we sort of have the idea that the car that sits in our garage should have many different functions. We want the car to be able to tow a trailer across the country with five or six passengers, and also to transport one person five or ten miles to his job. A car like that causes an incredible waste of fuel. One car can do it, but it cannot do it efficiently. We won't achieve our energy conservation goals this way.

Q: *Why do so many of our cars on the road now fail to meet emission standards?*
A: That's a very important problem. Studies by our staff have shown repeatedly that even relatively new cars with low mileage don't do well at all when you test them for emissions, even though they were designed and built properly.

When we borrowed cars from their owners and tested them for emissions, about 60 percent failed to meet one or more emission standards. And that's terrible.

But properly adjusted and repaired, 80 percent or more of them will meet emission standards.

The reason cars don't meet emission standards in the field is that they're far too often not properly adjusted, and that's where much of our effort in the future is going to have to go. We need inspection and maintenance programs so that maladjusted and dirty cars can be identified and corrected.

Q: *Could this type of effort also insure that a new car with good gas mileage and emission controls will continue to have a satisfactory gas mileage when it is, say, three or four years old?*
A: To the degree that the effort to get cars properly maintained is successful, it will certainly have that effect. The studies we've made, in what we call our restorative maintenance program, which is the program in which we test the cars as we receive them and then fix them up, those studies have shown that proper adjustment and tuning greatly decreases car emissions and slightly increases fuel economy.

So certainly keeping cars properly tuned, or conversely getting them built so they're not so easy to get out of tune, is going to help our fuel situation. ■

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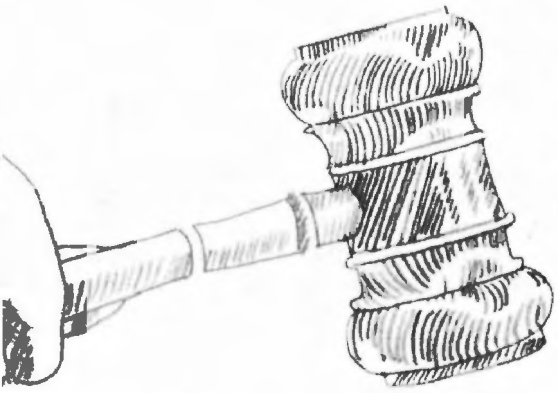


upon the parties unless it is appealed to the appropriate Federal court for judicial review. Resort to the Federal courts is not allowed under most statutes administered by regulatory agencies until all the administrative remedies are exhausted.

By serving as the initial fact-finder in the administrative law process, the Administrative Law Judge takes on a judicial role roughly equivalent to that of a trial court in the judicial system. The sworn testimony of witnesses is recorded verbatim. Documentary evidence, often voluminous, is made part of the record. When the evidence is completed, the parties have an opportunity to file briefs. On the basis of the evidence in the record and the arguments of counsel the Administrative Law Judge issues a written decision in which the reasons for his conclusions are fully explained.

Complex technical issues are decided in proceedings where great weight is given to expert testimony. As a result, the rules regarding admissibility of evidence in administrative hearings are much more liberal than those applied in jury trial cases. Relevant and reliable evidence, which might be excluded in court trials, is often admitted. The objective is to prepare a clear and complete record upon which the judge, the Administrator, and ultimately the courts can base an informed decision. While the degree of formality in particular cases is largely a function of the judge's style and preference, most administrative law proceedings are far less formal than courtroom trials.

The powers and functions of Administrative Law Judges vary according to the agency and the particular statute under which they operate. Rules of practice for EPA hearings are usually issued by the Administrator, with the advice of the General Counsel, the Office of Administrative Law Judges and the particular program staff concerned.

EPA judges have the power, in some cases, to subpoena witnesses, to assess civil penalties for violation of certain laws enforced by EPA, and to order the suspension or cancellation of registrations for pesticides found to pose an unreasonable risk to man or the environment. The Administrative Rules of Practice provide for the issuance of accelerated decisions in cases where there is no legal basis for further proceedings and for default orders in cases where parties fail to answer complaints, submit required prehearing materials, or appear when given the opportunity to present their case.

Cases arising under three major Federal laws (the Clean Air Act, the Water Pollution Control Act, and the Federal Insecticide, Fungicide, and Rodenticide Act) comprise the bulk of the EPA judges' current activities.

The pesticide act brings three principal types of cases before the EPA Administrative Law Judges. Under that statute, pesticide producers and formulators whose registrations are denied, cancelled, or suspended are given the right to a full adjudicatory hearing on the merits of the Agency's action. They are usually represented by counsel who argue and present testimony by experts and others in support of continued production and use. EPA attorneys offer evidence in support of and argue the Agency's position.

These hearings are major battlegrounds in the conflict between human health, environmental protection, and the private economy. Under the Act, a registration to produce and distribute a pesticide may be denied or cancelled whenever it is found to present "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide." The burden of proof is on the producers to demonstrate the safety and efficacy of their products.

"The judge is faced with the difficult task of weighing the possibility that a particular insecticide is carcinogenic against the loss of crops from insects that may result from cancellation." As Judge Perlman said, "In almost every case it is health and environmental risk versus economic benefit. The factors are not susceptible of easy classification or quantification. Our standards of measurement cannot be applied with mathematical precision. The choices are always difficult ones and we must, to a considerable extent, rely on the opinions of experts."

Violations of the pesticide act by registrants and distributors are also handled by EPA judges. The statute provides for civil penalties up to $5,000 for each violation. Over 80 percent of these cases are settled during the pre-hearing process conducted by the Administrative Law Judges. This process, though sometimes carried on by correspondence, usually involves an informal pre-hearing conference in which the parties and the judge attempt to narrow the issues to be tried and the evidence to be adduced at the formal hearings. During these pre-hearing conferences, parties will sometimes reach a settlement agreement without the need for a formal hearing.

The statute also provides for hearings to determine what is reasonable compensation for data submitted by one registrant and relied upon by others to obtain registrations of similar pesticides.

Under the Water Pollution Control Act of 1972, EPA Judges hold hearings concerning the licensing and modification of permits to discharge wastes into the navigable waters of the U.S. Violations of the water permits are handled in the courts. However, permits may be terminated or modified for cause after an opportunity for hearings within the Agency.

Under section 307 of the Water Act, EPA Judges conduct formal hearings to obtain a record of testimony for use by the Administrator in setting effluent standards for toxic substances.

Some cases arising under the Clean Air Act involve alleged violation of automobile emission standards. If the evidence presented at a hearing discloses that cars on the road or on the production line are not meeting Federal emission standards, the judge can order either a halt to production or recall of all vehicles in violation.

The Noise Control Act, the Ocean Dumping Act, the recently enacted Toxic Substances Control Act and the Solid Waste Recovery Act, all include provisions for formal administrative hearings. It is anticipated that an increasing number of hearings will be called as Agency enforcement activities accelerate in these areas. In fact, a recent case under the Ocean Dumping Act resulted in an initial decision by the Administrative Law Judge recommending a $225,000 fine ($5,000 to $10,000 per violation) against the City of Philadelphia, Pa. for violating Federal laws regulating the disposal of city wastes in the Atlantic Ocean.

In some types of cases that come before an Administrative Law Judge, a number of interested parties called intervenors present evidence and submit briefs to the judge. Other Federal agencies, such as the Departments of Agriculture and Transportation, trade associations, public interest and environmental groups, as well as various State governments, are participants.

According to Chief Judge Perlman, "These inputs from all interested parties are vital to the quality and effectiveness of our decisions. In order to balance the alternatives properly, one must have a complete and accurate understanding of the components on each side of the scale." ■

ENVIRONMENTAL ALMANAC

A GLIMPSE OF THE NATURAL WORLD WE HELP PROTECT

SEPTEMBER

SPRINGS

Our favorite spring, which in the wet season burbles like a bathtub faucet, has been reduced to a silent pool of water by summer's drought.

Instead of the usual splashing you hear only the buzzing of flies and the chirping of crickets. The stream of water which once led from the spring to a nearby creek is completely dry.

The first scarlet leaves of fall have started to collect in the small spring opening in a wooded hillside. The leaves are from a nearby sour gum tree which races the Virginia creeper vine and the sumac to provide the first red of autumn.

No attempt has been made to cover this spring. We use its waters only to cool bottled beverages rather than for drinking. The spring also serves as a home for frogs. We don't know what kind of frogs they are but their hearing is excellent. No matter how quietly you try to approach on the path to the spring, the frogs hear you and there are a series of quick plopping sounds as they jump from their mossy perching places into the water. Once submerged, they swim down and bury themselves in the bottom mud.

The mud left when the spring pool recedes reveals the identity of animals who visit to take a drink under a star-studded night sky or in the murky mists of early morning.

We have been able to identify the tracks of deer, possum and racoons. Other visitors did not leave prints we could decipher.

The water flow in the spring is quixotic. Sometimes it falls in sheets and then again it shrinks to a trickle. It emerges from red-brown shale that has been exposed by erosion.

It is difficult to tell how many years the spring has been splashing. However, its waters have been flowing long enough to expose the roots of a large maple tree which grasp the spring hillside. Its arm-thick roots criss-cross the face of the spring.

A friend of ours once spent most of an afternoon cleaning out our spring with a gasoline-driven pump.

That was a time when we had thought about constructing a spring house to keep out the leaves and debris. Subsequently our ambition faded.

But many of the hundreds of thousands of springs in the United States are used for drinking water and some small cities depend on strong springs as their only sources of water.

Usually disinfectants are added to these waters, however, and all spring owners are advised to check with their local health officials before drinking from these sources.

A common misconception is that since spring water is often apparently clear, cold and tasty, it is better than tap water for drinking.

However, even spring water which is bottled and sold in grocery stores is not always safe, an EPA survey a few years ago discovered.

Any spring water should be checked for possible bacterial or chemical pollution. And just because spring water has been found safe once does not mean you can always count on it.

As more people move into rural areas the countryside becomes increasingly contaminated. Wastes from septic tanks, industrial disposal wells, and sanitary landfills can sometimes travel miles to pollute a previously good source of spring water.

All springs are fed by underground reservoirs that are so full they overflow through a spring or by discharging into a stream or river.

Elaborate and decorative buildings were once constructed on many American farms to protect the springs serving as the families water supply and cooling rooms for milk and other dairy products.

While some spring houses are still used, the discovery of high bacteria counts from farm animal waste drainage and the arrival of piped water from the city has left many of these structures as memorials to an earlier, simpler, and less polluted age.

—C. D. P.

UPDATE

A listing of recent Agency publications, and other items of use to people interested in the environment.

GENERAL PUBLICATIONS

Single copies available from the Printing-Public Information Center (PM–215), US EPA, Washington, D.C. 20460. (202–755–0890)

Standards for Certification of Pesticide Applicators (Reprinted May, 1977) A 16-page booklet reprinting the certification guidelines that appeared in the Federal Register. The booklet includes definitions, commercial applicator categories, private applicator standards, and supervision of non-certified applicators.

Safe Pesticide Use Around the Home (Revised June, 1977) An 8-page guide to the hazards of pesticides commonly found in and around our homes. This pamphlet tells how to choose the right pesticide to fill your needs, how to apply it properly, and store it safely after use.

Farmers' Responsibilities Under the Federal Pesticide Law (Revised August, 1977) An 8-panel folder that outlines precautions farmers must take to protect their workers when using pesticides.

The Public Benefits of Cleaned Water: Emerging Greenway Opportunities (September, 1977) This 36-page pamphlet describes a combined Federal initiative by EPA and the Department of the Interior to show communities how they can develop open space and recreational opportunities along water bodies that are improving due to water pollution cleanup. It tells how communities have successfully used this concept in San Antonio, Tex.; Ann Arbor, Mich.; and along the Saco River in Maine.

FEDERAL REGISTER NOTICES

Copies of Federal Register notices are available at a cost of $.20 per page. Write Office of the Federal Register, National Archives and Records Service, Washington, D.C. 20408.

New Motor Vehicles and Engines. EPA adopts emission defect reporting regulations; effective 7–5–77. pp. 28130–131. June 2.

Clean Air Act. EPA identifies benzene as a hazardous air pollutant, effective 6–8–77. pp. 29332–333. June 8.

Water Pollution. EPA allocates one billion dollars to States for carrying out the requirements of the Federal Water Pollution Control Act; effective 6–3–77. pp. 29481–482. June 9.

Pesticide Programs. EPA determines registration and claims procedures for pesticides. p. 31283. June 20.

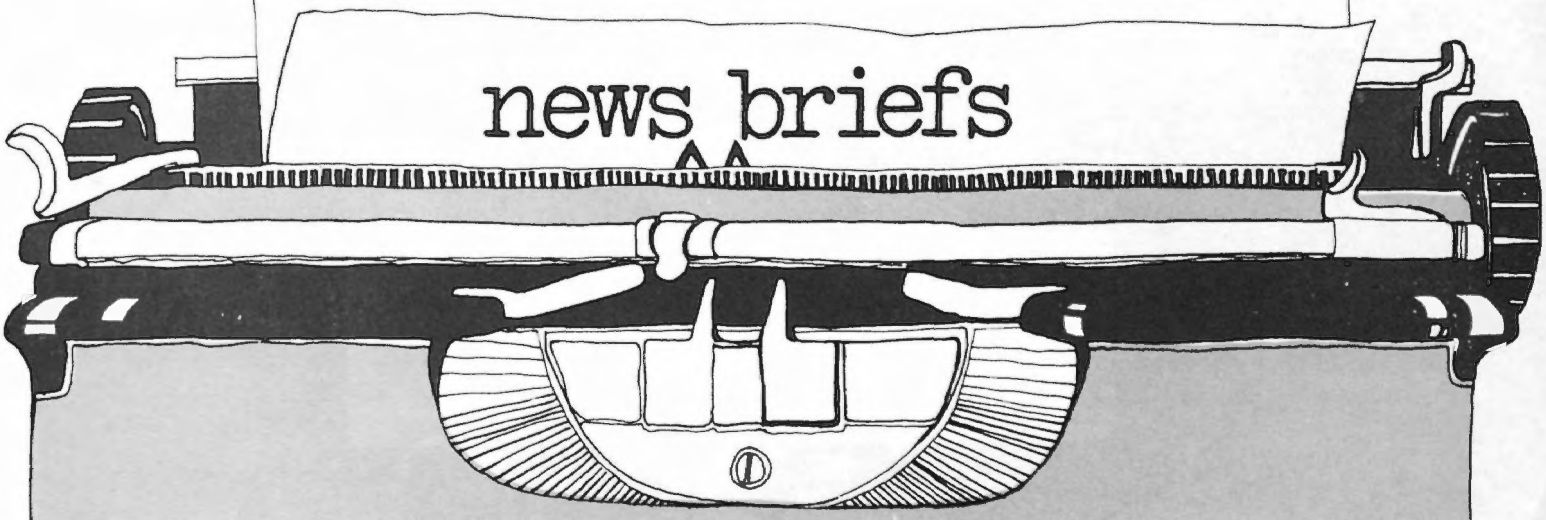
Air Pollution. EPA suspends standards for new and modified grain elevators; effective 6–24–77. p. 32264. June 24.

Transportation and Construction Equipment. EPA proposes noise emission standards, pp. 27618–620. June 31.

Motor Vehicles. EPA publishes 1977–79 model year certification regulations. p. 32905. June 28.

COMING EVENTS

Administrator Douglas M. Costle will be the keynote speaker at the 50th annual meeting of the Water Pollution Control Federation in Philadelphia, on October 3.



FLAWS FOUND IN SOME PESTICIDE SAFETY TESTS, AUDIT ORDERED

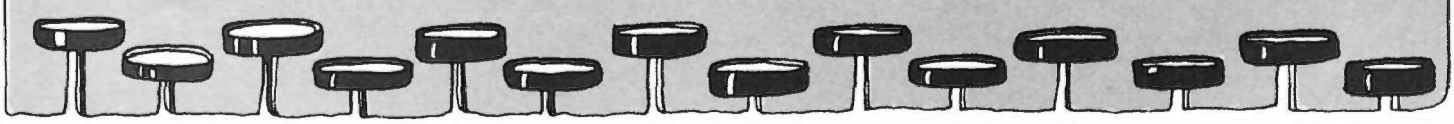
Deficiencies in the testing of pesticides for such harmful health effects as cancer, birth defects, and nerve damage have been found in work of one firm that has done thousands of studies supporting, at least in part, EPA approval of many widely used products. The Agency has ordered more than 30 pesticide manufacturers to review and certify the accuracy of all testing by the Industrial Biotest Laboratory, Northbrook, Ill. The firm's questionable practices were revealed by investigators from the Food and Drug Administration, working with EPA in a joint program to inspect all labs involved in the safety testing of drugs, pesticides, and other regulated chemicals.

OCEAN DUMPING DECLINES FOR THIRD STRAIGHT YEAR

The amount of waste dumped off the Atlantic and Gulf coasts declined again last year to 24 percent below the figure for 1973, when EPA's ocean protection program started. In its annual report to Congress the Agency gave these totals: 10.9 million tons in '73, 10.3 million tons in '74, 8.8 million tons in '75, and 8.3 million tons in '76. Sewage sludge dumping in the Atlantic has increased slightly, but industrial and construction waste dumping has declined. Industrial dumping in the Gulf of Mexico has been cut 93 percent.

NOISE LIMITS PROPOSED FOR GARBAGE TRUCKS

The noise made by truck-mounted solid-waste compactors would have to be reduced, starting in 1979, under rules proposed by EPA. Such trucks now average 81 to 83 decibels. The proposed limit for all new compactors would be 78 decibels in 1979 and 75 decibels starting in 1982. Administrator Douglas Costle said this would cut the sound energy of the vehicles by more than 50 percent. The reductions are technically possible and costs would be reasonable, he said. Two public hearings were held on these proposals last month.



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EPA-335
THIRD CLASS BULK RATE

Protecting Rare Birds

EPA has approved the emergency use of a highly toxic pesticide to help protect two endangered species—the whooping crane and the Aleutian Canada goose—from predators.

At the request of the Department of the Interior, the Fish and Wildlife Service will be permitted to use sodium cyanide to control coyotes near a wildlife refuge in Idaho and blue foxes on an Alaskan island.

Only 65 wild whooping cranes, a bird victimized by destruction of its habitat, are now surviving, according to the Department of the Interior.

Attempts to restore the crane to the Grays Lake National Wildlife Refuge in eastern Idaho have been frustrated because an estimated 113 crane eggs have been eaten by coyotes.

On Agattu, one of the western islands in the Aleutian chain off Alaska's coast, a handful of blue foxes are preventing the reestablishment of Aleutian Canada geese, a native species. The foxes are "foreigners" on Agattu, placed there to be raised for their valuable fur, perhaps as long ago as when the 49th State was Russian property.

Attempts to destroy the predators by shooting, trapping or aerial hunting have failed, according to Interior.

As a result, Fish and Wildlife agents were granted the permits by EPA to use the lethal, fast-acting sodium cyanide.

Agattu is usually uninhabited by people, but a team of four or five Fish and Wildlife agents is now camped on the island to release additional Aleutian geese and to place and monitor M–44 tubes which discharge the cyanide.

The tubes are metal containers, roughly six inches in length, that are placed in the ground and baited with a piece of scented material attractive to canine-type animals. When the bait is tugged by the animal, a puff of deadly cyanide powder is propelled by a spring into its mouth. The animal dies in a few seconds.

Interior acknowledges that on Agattu some birds, a few sea gulls and ravens, for example, may also be killed by the cyanide tubes. But the Department expects no serious damage to these abundant species.

Adverse effects from use of the M–44's at Grays Lake in Idaho are considered "highly unlikely."

The permission to use the sodium cyanide was granted by EPA under the emergency use provisions of the 1972 Federal pesticide law. Permits were needed because a 1972 executive order prohibits the use of chemical predator poisons in Federal wildlife and recreation areas. But exceptions allowed under this ban include efforts to protect species threatened with extinction.

In 1972, EPA issued an order banning the use of these poisons on private lands. In 1975, EPA modified this ban to allow government trappers and State-trained ranchers and farmers to use sodium cyanide in the M–44 tubes to halt serious sheep and cattle losses because of coyotes.

The EPA authorization limits the Fish and Wildlife Service to 75 sodium cyanide capsules on 500 acres of the Idaho wildlife refuge and to 50 capsules on Agattu. The Idaho program must end on October 31 and the Agattu program was to end Aug. 30. ■

An Aleutian goose.