United States
Environmental Protection
Agency

Office of
Public Affairs (A-107)
Washington DC 20460

Environmental News

A compilation of news releases, advisories to the press and other timely information

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EPA ANNOUNCES SIGNIFICANT PROGRESS IN MEETING U.S. CLEAN WATER DEADLINES

Eighty-seven percent of all publicly-owned sewage treatment plants in the country met the congressionally-established July 1, 1988, deadline for legally-required pollution cleanup, EPA Administrator Lee Thomas announced today. As a result, 95 percent of the total sewage processed in the United States receives secondary or better treatment. Secondary treatment protects public health from the disease potential of human waste and also protects fish and other aquatic life.

Thomas cited both voluntary compliance and federal and state enforcement efforts as reasons for achievement of the 87-percent compliance figure. Municipal compliance with water pollution control laws has been an EPA priority since 1984, when the agency established its National Municipal Policy (NMP). The NMP required municipal compliance by July 1, 1988, whether or not a city got federal funding for sewage treatment plant construction.

The 87 percent which achieved compliance with their water pollution control permit requirements serve 108 million people nationwide. Of the remaining 13 percent of sewage treatment plants in the United States, most are on enforceable timetables leading to compliance or are in some stage of a judicial process leading to the establishment of these timetables.

Speaking at a joint Washington press briefing with Roger Marzulla, U.S. Justice Department Assistant Attorney General for Land and Natural Resources, and Roberta Savage, Executive Director of the Association of State and Interstate Water Pollution Control Administrators

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Thomas praised the cooperative federal and state effort that made this compliance success possible:

"Under the landmark 1972 Amendments to the federal Clean Water Act, Congress set for a pollution-plagued nation the formidable goal of making most U.S. waters fishable and swimmable again," Thomas said. "A large part of this task was cleaning up wastewater from our often overloaded and overworked municipal sewage treatment plants. To meet this challenging goal, Congress mandated a joint federal-state cooperative effort in pollution cleanup. Since 1972, EPA has provided over $45 billion in federal grants to help local communities build and upgrade sewage treatment facilities, with state and local governments contributing an additional $15 billion in matching funds. Although the majority of municipalities have met the nation's clean water goals, there has been recalcitrance, but EPA, the U.S. Justice Department and state officials have been aggressive in bringing these cities into compliance. More than 125 lawsuits have been filed by the federal government against municipalities since 1984 to obtain compliance under the NMP. The 87 percent compliance rate of U.S. sewage treatment plants is a success story of which state and federal environmental officials can truly be proud."

The vast majority of Americans are served by publicly-owned (taxpayer-supported) sewage treatment plants (POTWs). Of the rivers and streams in the United States that do not meet their state water quality standards, 17 percent are failing because of pollution from POTW's. For estuaries, 22 percent are not meeting their standards because of POTW's.

For Treatment plants, meeting the July 1 deadline meant complying with permit requirements to provide at least secondary treatment of wastes. Secondary treatment is the second stage of sewage treatment, in which bacteria is used to eliminate organic human waste. (The first step in sewage treatment is called primary treatment, in which screens and sedimentatio tanks are used to remove most materials that float or settle.) Secondary treatment protects communities from the disease potential of untreated human waste and removes materials that can rob waters of oxygen necessary for aquatic life. For some treatment plants, the July 1 deadline was tied to permits requiring more advanced waste treatment that significantly reduces materials like nitrogen and phosphorus, which can also choke and kill water bodies and their fish.

The National Municipal Policy, established in January 1984, grew out of congressional, federal and state concern in the early 1980's that many cities were not making expected progress in treatment-plant construction. The original deadline in the 1972 Amendments for plants to meet their permit requirements was 1977; Congress later extended this deadline for some cities to 1983, and then to July 1, 1988.

Also, diminishing federal funding of the program raised the question at that time of whether cities would be required to comply with discharge limits. Since 1977, the courts had ruled that treatment plants had to comply with their discharge limits, regardless of the availability of federal money.

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The NMP made it clear that, with or without federal funding, EPA and the states would be pushing municipalities to meet their permit requirements by July 1, 1988, or sooner if possible. The sole exceptions were those cities that could prove they were physically or financially unable to complete construction by this deadline; however, they generally would have to abide by court-enforceable schedules to achieve compliance as quickly as possible.

There are about 15,500 publicly-owned treatment plants in the United States. About 3700 are what EPA calls "majors," defined generally as plants designed to serve 10,000 or more people and to process one million gallons or more of wastewater a day. The rest, which EPA calls "minors," total about 11,800.

Of the 3,700 total majors, 2,200 had achieved compliance by 1984. The NMP focused on the remaining 1,500 major sewage treatment plants which had not achieved compliance as of 1984. As of the July 1, 1988, deadline, over 1000 achieved compliance. Of those not achieving compliance, the majority are on enforceable court schedules or are the subject of federal or state judicial actions. Further, over 60 percent of the remaining NMP majors not in compliance already provide secondary treatment or better.

Of the 11,800 total minors, 9,300 had achieved compliance by 1984. The NMP focused on the remaining 2,500 minor sewage treatment plants which had not achieved compliance as of 1984. As of the July 1, 1988, deadline, over 800 have achieved compliance. Of the rest, approximately 1,500 are on enforceable schedules or are the subject of federal or state enforcement actions.

"As impressive as these figures are," said Thomas, "EPA and the states have no intention of slacking up on our enforcement efforts. We are reaffirming our commitment to bring all sewage treatment plants in this country into compliance with the law and to make sure these plants remain in compliance. Together, we will ensure that all plants currently on enforceable compliance schedules stay on those timetables and that those plants not yet on schedules are put on them as soon as possible. I want to make it absolutely clear that EPA is prepared to take additional enforcement actions against cities that refuse to cooperate in protecting the environment and health of their citizens."

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EPA Environmental News

FOR RELEASE: TUESDAY, JUNE 21, 1988

EPA PROPOSES ADDING 229 SITES TO SUPERFUND PRIORITY LIST

The U.S. Environmental Protection Agency today proposed adding 229 hazardous waste sites, including 14 federal sites, to its Superfund list of most serious hazardous waste sites. In addition, the agency is announcing its intended action for 43 Resource Conservation and Recovery Act (RCRA) sites previously proposed for the National Priorities List (NPL).

The Superfund program provides funds to take action at the nation's most serious hazardous waste sites. The funds are authorized under the Superfund Amendments and Reauthorization Act (SARA) of 1986. The NPL is the agency's list of hazardous waste sites potentially posing the greatest long-term threat to human health and the environment. NPL sites are identified through a process which evaluates sites according to threats to nearby populations through actual or potential contamination of groundwater, surface water or air.

With today's proposals, there are now 799 final sites and 378 proposed sites, bringing the total to 1,177 on the list. Sixty-two federal sites are proposed for the NPL.

"In the twenty months since passage of the Superfund amendments, we have made considerable progress in addressing the nation's most serious hazardous waste sites. Today's addition to the National Priorities List is an important step in identifying hazardous waste sites which are eligible for the federal program," said Jack McGraw, Deputy Assistant Administrator for Solid Waste and Emergency Response.

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Sites from 42 states are being proposed. California leads the list with 25 sites, followed by Pennsylvania with 17 and Washington with 15. New Jersey continues to have the most NPL sites (110), followed by Pennsylvania (97), California (88), Michigan (81) and New York (76).

Today's announcement also adds new criteria to the June 1986 policy regarding listing of non-federal RCRA facilities. RCRA facilities treat, store or dispose of hazardous wastes and are regulated under RCRA Subtitle C. Some of these facilities have contaminated nearby groundwater, for example, and will require corrective action.

Under the June 1986 policy, facilities subject to RCRA corrective action are deferred from being listed on the NPL unless the owner or operator is bankrupt or is unwilling to undertake remedial activities. Four new categories of facilities announced today also may be placed on the NPL to ensure timely action -- for example, facilities where EPA cannot compel corrective action until the facility's RCRA permit is renewed in several years.

Under this NPL/RCRA policy, EPA is reproposing 13 sites for placement on the NPL and is soliciting comment on the appropriateness of listing them.

EPA also is proposing to remove 30 RCRA sites currently proposed on the NPL because site problems can be addressed under RCRA authorities alone or in conjunction with other authorities, and the sites do not meet the criteria for listing. RCRA authorities, substantially broadened since the passage of the 1984 RCRA amendments, require corrective action at hazardous waste treatment, storage or disposal facilities similar to that required under Superfund. Remedies under both RCRA and Superfund are designed to protect human health and the environment.

The policy for non-federal RCRA facilities is intended to ensure that solutions to as many site problems as possible are achieved by their owners or operators, thereby preserving Superfund money for sites where no other authority is available.

The agency will be publishing a Federal Register notice in the next several weeks which will clarify how the agency will determine an owner's or operator's unwillingness or inability to perform corrective action under RCRA. This will be used to determine if a non-federal RCRA site should be placed on the NPL.

The inclusion on the NPL of 14 federal sites being proposed today is consistent with the agency's policy. Although Superfund money cannot be spent on remedial activities at federal sites, SARA requires all federal facilities comply with the same standards to protect human health and the environment that apply to any non-governmental entity.

Superfund also is available for emergency and short-term actions at sites to alleviate immediate threats to human health from toxic substances. To date, 1,184 emergency response actions have been undertaken, 259 at NPL sites.

This rule will appear in the Federal Register in the next two weeks and will have a 60-day comment period.

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EPA

Superfund Status Report

TUESDAY, JUNE 21, 1988

The Superfund Amendments and Reauthorization Act (SARA) was signed into law on Oct. 17, 1986. The five-year, $8.5-billion program provides federal authority and resources to address the nation's uncontrolled hazardous waste site problems. This report will be updated and issued quarterly to identify progress made in the Superfund program.

SUPERFUND INVENTORY OF POTENTIALLY HAZARDOUS SITES: 29,463 sites have now been identified as potential hazardous waste sites. Preliminary assessments have been completed at 27,082 of these sites. 8,875 site investigations have been completed. Those sites posing the greatest potential hazard and requiring significant long-term action under Superfund will be assessed for placement on the National Priorities List (NPL).

NATIONAL PRIORITIES LIST: There are presently 1,177 sites on the agency's priority list of hazardous waste sites. NPL sites are identified through a process which evaluates sites according to threats to nearby populations through actual or potential contamination of groundwater, surface water or air. There are 799 final sites and 378 proposed sites on the NPL at the present time. Sixty-two of these are federal sites. Sixteen sites have been deleted from the NPL and an additional five have been proposed for deletion.

SUPERFUND REMOVAL ACTIONS: Removal actions are undertaken to stabilize or remediate hazardous waste sites or incidents that pose a short-term threat to human health or the environment. SARA allows such removal actions to last up to 12 months and to cost up to $2 million. 1,217 removal actions have been undertaken; 376 of these were performed at NPL sites.

SUPERFUND REMEDIAL ACTIVITIES: Thirty-two NPL sites have completed remedial activities. These sites include those which have been deleted from the NPL, are proposed for deletion, or soon will be proposed for deletion. An additional three sites have been completed, but operation of control systems remains underway.

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o NPL REMEDIAL ACTIVITIES - There currently is work underway at 881 NPL sites. Activities at an NPL site are undertaken in several phases:

currently underway	completed	
641	327	RI/FS - A Remedial Investigation/Feasibility Study is the initial study conducted at the site to determine the type and extent of contamination and to identify possible remedies.
	327	ROD - A Record of Decision documents the chosen remedy. A completed RI/FS results in a ROD.
137	149	RD - The Remedial Design details the engineering design plans and specifications for conducting the remedial action.
103	68	RA - The Remedial Action stage is the implementation of the chosen remedial activity. (This number refers to completed actions at portions of sites -- operable units as well as whole sites.)

o NPL SITES IN LONG-TERM RESPONSE - Many NPL sites will require continuing actions, such as long-term pumping and treating of groundwater, long after the remedial activity and final construction are completed. These sites will not be deleted from the NPL until the long-term response efforts are completed (e.g. achieving the required cleanup level in the groundwater). At present, EPA has completed work at three sites where operation of control systems remains underway.

SUPERFUND ENFORCEMENT ACTIONS: The agency can require accountable private parties to pay for or undertake activities at Superfund sites. Through enforcement actions, EPA and the states have secured from private parties approximately $600 - $700 million through 735 actions. EPA has issued 602 administrative orders requiring responsible parties to take action at sites. EPA has referred 281 cases to the Department of Justice and 232 of these have have been filed in the courts.

SUPERFUND COST RECOVERY: The agency has initiated judicial cost-recovery actions at 191 sites for $258 million. In addition, EPA has achieved administrative settlements at 68 sites for cost recovery through fiscal year 1987. To date, $78 million has been reimbursed to the fund.

SUPERFUND BUDGET INFORMATION: Since 1981, Congress has appropriated $4.4 billion to the Superfund program. In 1988, Superfund is operating under a $1.5-billion budget for the year. EPA has requested $1.6 billion for fiscal year 1989.

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EPA Environmental News

FOR RELEASE: WEDNESDAY, JUNE 22, 1988

EPA PROPOSES STATE MANAGEMENT PLANS TO PREVENT GROUNDWATER CONTAMINATION BY ALDICARB PESTICIDE

The U.S. Environmental Protection Agency today proposed regulating the use of the pesticide aldicarb to prevent contamination of groundwater. Under EPA's proposal, the continued use of aldicarb will depend on the development of pesticide-management plans by those states identified as having areas with the greatest likelihood of groundwater contamination by this product.

EPA also is proposing label restrictions, including a prohibition against using aldicarb within 300 feet of drinking-water wells in all areas of the country.

EPA has determined that there are unacceptable risks to persons drinking water that is contaminated with aldicarb at levels greater than the health advisory of 10 parts per billion (ppb). Health-advisory levels are established by EPA's Office of Drinking Water.

"Some innovative measures are included in today's proposed action which we believe will prevent contamination of groundwater by aldicarb," said Dr. Jack Moore, EPA's Assistant Administrator for Pesticides and Toxic Substances. "Because the decision on aldicarb will be the first to implement fully our recently released strategy to protect groundwater from pesticide contamination, we are soliciting specific comments on a wide range of issues surrounding today's announcement. This is a very different kind of problem, in that both the risk-assessment and risk-management answers are geographically dependent. The ultimate solution calls for a new way of thinking and managing pesticides."

Aldicarb, marketed under the trade name Temik, is a pesticide used to control insects, nematodes (root

worms) and mites. The major uses are on cotton, citrus, potatoes, peanuts and soybeans. Other uses are on sugar beets, tobacco, ornamentals, sweet potatoes, dry beans, pecans, sugarcane, seed alfalfa (California only) and grain sorghum.

Animal tests show that aldicarb is highly toxic when in contact with the skin, inhaled or orally ingested. It is one of the most acutely toxic pesticides registered by EPA. Aldicarb is a cholinesterase inhibitor and acts by interfering with the normal transmission of nerve impulses. According to a large range of valid test studies reviewed to date, neither aldicarb nor its metabolites have been shown to exhibit any adverse chronic effects.

Aldicarb has been found in the groundwater of 48 counties within 16 states: Arizona, Arkansas, California, Florida, Maine, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Oregon, Rhode Island, Texas, Virginia, Washington and Wisconsin. The levels range from the "level of detection" to 515 ppb. Detection of aldicarb in groundwater has been associated most commonly with its use on potatoes and citrus.

EPA has made a presumption that the aggregate risks posed by aldicarb above the 10 ppb health-advisory level in drinking water will exceed the benefits derived from its continued use.

In accord with a proposed strategy issued by EPA in late February for addressing concerns of groundwater contamination by pesticides, the agency has evaluated three options with regard to aldicarb in areas of the nation with groundwater vulnerable to contamination.

In the first option, the agency considered use of a registrant-submitted label-modification proposal which would be targeted to the users. The costs of monitoring groundwater contamination and taking corrective actions would be borne by the registrant. Preventive measures would be tailored to specific conditions of the application site to prevent contamination of drinking-water wells above the health-advisory level. This option was rejected as it was believed that the label would be too difficult to interpret. EPA is prepared, however, to accept those label modifications which are easy to follow and which would reduce the potential of groundwater contamination by aldicarb.

The next two options, both of which permit states to play the lead management role in protecting groundwater, consist of three components. A labeling component would prohibit use near all existing wells and would restrict use of aldicarb to certified applicators because of groundwater concerns (aldicarb is already classified for restricted use due to its acute toxicity). The second component would require monitoring in medium vulnerability areas to characterize better the potential for aldicarb to reach groundwater and to help determine whether further regulatory action is needed. Finally, in areas where there is the highest likelihood of groundwater contamination, the continued use of aldicarb will depend on the implementation of state pesticide groundwater-management plans.

EPA is seeking extensive comment on the design of management plans and will be sponsoring a series of regional workshops beginning this summer to explore the concept further. As currently envisioned by EPA, the management plan would need to: 1) describe the state's overall philosophy and approach to protecting groundwater from pesticide contamination; 2) list specific measures to be employed; 3) identify the state's authority and capabilities for implementation; 4) identify the location of all groundwater that is currently or potentially a source of drinking water; 5) contain a monitoring scheme; 6) establish contingency plans and funding mechanisms to deal with contaminated groundwater; 7) in cases where contamination occurs above the specified level, describe the mechanisms to be used to reduce contamination, including the source of funding; and 8) describe how the public will be kept informed and involved.

Under today's proposed action, EPA would use the two options which permit states to play the lead management role in protecting groundwater. In addition to labeling and monitoring requirements, states would need to implement management plans in areas identified as having a high potential to leach. The two options use different methods for identifying these areas. One option is based on a groundwater assessment which evaluated 11 hydrogeologically similar areas called heath regions. If this method were used, the following states would need to submit management plans: Alabama, Florida, Georgia, Maine, Michigan, Minnesota, New York, North Dakota, Pennsylvania and Wisconsin. The other option is based on a county evaluation assessment. Although the agency has not yet applied the county-assessment criteria to all counties in the United States, it is anticipated that 15 to 24 states would need to submit management plans. Both assessment methods use various criteria which are then used, with a weight-of-evidence approach, to designate those areas having a "high," "medium," or "low" potential to leach. Both approaches place emphasis on actual monitoring data and use computer modeling to predict an area's vulnerability to contamination. The agency is soliciting comment on which option is favored.

If aldicarb were cancelled, the cost to producers/growers is estimated at $104 to $135 million. Users would switch to alternatives which are typically less effective, some of which would contaminate groundwater or present other adverse ecological and/or toxicological effects. Specifically, the estimated adverse economic effects would be the following: citrus, $54.5 million (Florida oranges and Texas grapefruit) and peanuts, $17 to $33 million. Moderate economic effects at the national level would be expected for cotton -- $20 to $29 million; potatoes -- $11 to $15 million; tobacco -- $0.1 to $0.7 million; sweet potatoes -- $1.3 to $2.7; and pecans -- $0.48 million. For all uses, these effects would result primarily because alternatives are less effective and more expensive than aldicarb.

Use of aldicarb already has been banned in a number of areas because of groundwater contamination: Suffolk County, N.Y., where it was used on potatoes and banned in 1979; and Del Norte County, Calif., where it was used on lily bulbs and banned in 1983. Additionally, new rules instituted in the state of Wisconsin in 1987 resulted in a significant reduction of aldicarb use on potatoes in Wisconsin.

EPA is deferring a decision regarding the potential risks due to dietary exposure to aldicarb from consumption of treated food commodities until the final results have been evaluated from the national food survey conducted by the registrant of aldicarb. At that time, EPA will determine if further regulatory action will be necessary.

Because of its acute toxicity, aldicarb is formulated into granules which are incorporated into the soil with a special implement. Soil moisture releases the aldicarb, which is then absorbed by the plant and translocated to the stems and leaves. Under current label requirements, applicators are required to wear long-sleeved shirts and long trousers.

Approximately 75 species of insects and 40 species of nematodes are controlled by the use of aldicarb. An estimated 5.2 to 5.7 million pounds of aldicarb active ingredient are used in the United States annually. Rhone-Poulenc is the sole producer and registrant of aldicarb, which was first registered in 1970.

EPA initiated a Special Review of aldicarb in 1984 based on evidence that the pesticide posed a risk to public health from dietary exposure to drinking water from groundwater wells contaminated with aldicarb. Under the Special Review process, the risks of using a pesticide are carefully examined and a determination is made whether such risks are unreasonable in the light of the benefits of the product.

Under the Federal Insecticide, Fungicide and Rodenticide Act, the agency is responsible for conducting pre-market reviews of the health and safety of pesticides before they can be registered for use. This involves weighing the risks of using the pesticide against its economic and social benefits.

If at any time after a pesticide is registered, new evidence casts doubt on its safety, EPA conducts further risk/benefit evaluations to see if regulatory measures to reduce any unreasonable risks should be initiated. As in the case of aldicarb, the registrant is given an opportunity to refute the evidence of risk. In addition, any evidence regarding the benefits of the pesticide from the registrant, applicators and other interested parties will be considered by the EPA Administrator in determining the most appropriate regulatory action.

The options available to the Administrator are to continue registration, to restrict further the use of aldicarb or equivalent action or to cancel the registration.

All public comments on today's proposed actions on aldicarb should be made within 60 days to: Program Management and Support Division (TS-757C), Office of Pesticide Programs, U.S. EPA, 401 M St. S.W., Washington, D.C. 20460.

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EPA Environmental News

FOR RELEASE: WEDNESDAY, JUNE 29, 1988

EPA PROPOSES NEW WORKER-PROTECTION STANDARDS FOR AGRICULTURAL PESTICIDES

To decrease further the occupational exposure of workers to agricultural pesticides, the U.S. Environmental Protection Agency is proposing extensive additions and revisions to its current requirements that protect workers from unreasonable adverse effects of pesticide exposure.

These proposed revisions will expand the scope of the standards to include not only workers performing hand-labor operations in fields treated with pesticides but also workers in forests, nurseries, and greenhouses where pesticides are used, as well as workers who mix, load and apply pesticides in these locations. Flaggers and those who clean and repair contaminated application equipment also are included.

Persons not covered by the proposed action are those associated with use of pesticides for treatment of livestock, weed control on rights of way, direct injection, post-harvest treatment, seed treatment and pesticide research.

"We have become increasingly concerned about the adequacy of our present regulations to protect agricultural workers from occupational exposure to pesticides, " said Dr. Jack Moore, EPA's Assistant Administrator for Pesticides and Toxic Substances. "The proposed worker-protection standards will improve the health and safety of agricultural workers on farms, and in forests, nurseries and greenhouses.

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Among the new proposed requirements to protect workers are the following:

- Employers must post for workers' information the location of the nearest emergency medical facility. If pesticide poisoning is suspected, workers must be provided with transportation to a medical facility. Available information about the suspected pesticide or circumstances of the suspected poisoning must also be provided to the worker and medical personnel.

- Early re-entry workers and handlers (handling is defined as mixing, loading, applying, flagging, equipment cleaning and repairing and disposal) must wear personal protective equipment (PPE) as specified by pesticide labels. An extra protective suit must be available to handlers and early re-entry workers in case of a spill or other contamination. The PPE must be clean and in working condition and may not be worn or taken home if contaminated. Contaminated PPE must be laundered separately from other clothing. Handling of pesticides that require chemical-resistant PPE is prohibited when conditions are such that heat stress is likely.

- All handlers and early re-entry workers must be trained according to specified minimum requirements.

- Re-entry intervals, in addition to current re-entry intervals, would be set at 48 hours for organophosphates and n-methyl carbamates in toxicity category I (most acutely toxic); and 24 hours for organophosphates and N-methyl carbamates in toxicity category II and all other products in toxicity category I (toxicity categories are determined by the oral or dermal route of acute toxicity). Re-entry intervals for all other pesticides will be until the sprays have dried, dusts have settled and vapors have dispersed.

- Soap, disposable towels and a quantity of water sufficient for washing of hands and face must be available to workers handling pesticides or where pesticides have been used during the growing season.

- If the pesticide is a serious eye irritant, an eye-wash dispenser must be available to handlers and early re-entry workers.

- If the pesticide product has the skull and crossbones on the label, (highly toxic) visual or voice contact must be made with the handler at least every two hours. Handlers of highly toxic fumigants in greenhouses must be under constant observation.

- No worker may be in the treated area during application unless involve in the application.

- Before any pesticide application, workers who will be working in the treated area or in a neighboring area must be notified orally of the treatment, in the language understood by the worker, on the day of application. Workers must also be notified of any treated areas still under a re-entry interval. Warning signs must be posted at points of entry to the treated area for those pesticides with re-entry intervals of greater than 48 hours.

- Commercial handlers of pesticides will be required to be monitored for cholinesterase inhibition, if they are exposed to organophosphate pesticides on three consecutive days or on a total of six days during a 21-day period (cholinesterase inhibitor pesticides act by interfering with the normal transmission of nerve impulses). Monitoring must be supervised by a licensed physician, and employers must follow the recommendations of the physician concerning removal from and return to exposure. Records of organophosphate handling also must be maintained for two years and made available to state and federal enforcement officials on request.

Pesticide producers are not required to print the regulations on the product labels in their entirety, but must incorporate the regulations by means of a reference statement. In addition, all product labels must have a statement prohibiting application in a way that will contaminate workers; must contain the signal words "caution," "danger" or "warning" in Spanish as well as English for toxicity category I or II products; must identify products with organophosphate or N-methyl carbamate active ingredients; must identify all fumigants and require continuous visual contact with the applicator during application; must have a statement requiring visual or voice contact once every two hours with handlers working alone who are applying products having the skull-and-crossbones symbol on the label; and must include appropriate PPE and re-entry requirements.

EPA originally promulgated farm-worker-protection standards in 1974 under the Federal Insecticide, Fungicide and Rodenticide Act. New data on pesticide toxicity, agricultural-worker exposure and pesticide incidents, as well as a need for a clearer delineation of responsibilities and liability, are the bases for EPA's determination that a revision of the standards is necessary. Regulatory negotiations over the revisions began in 1985. A committee of 25 members representing industry, user groups, farm workers, state officials and federal agencies was formed. The committee met several times in late 1985 and early 1986 to discuss working drafts of the revisions. Some representatives withdrew in 1986 without a committee consensus. EPA completed the final development of the proposed regulations.

The agency will hold a series of public meetings on the worker-protection standards soon after the proposal is published. The first meeting will be held in Washington, D.C., with subsequent meetings held in one or more major agricultural areas of each EPA region.

Public comments on the proposed regulations should be submitted to EPA within 90 days and addressed to the Document Control Officer (TS-757C), Office of Pesticide Programs, Environmental Protection Agency, Room 236, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, Va. 22202.

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EPA Environmental News

FOR RELEASE: WEDNESDAY, JUNE 29, 1988

EPA TO DEVELOP PROGRAM TO ENSURE REGULATION OF OIL AND GAS WASTES

The U.S. Environmental Protection Agency has concluded that federal hazardous waste regulation of oil and gas drilling and production wastes is not necessary and is impractical. The agency will develop a three-pronged approach to ensure that current federal and state authorities adequately address oil and gas wastes.

In a recommendation to Congress, in the form of a "regulatory determination," EPA found that existing state regulations and federal regulations under the Clean Water Act and Safe Drinking Water Act are generally adequate to control the management of oil and gas wastes. Certain state and federal regulatory gaps do exist, however, and enforcement of existing regulations in some states is inadequate.

As a result, the agency plans a three-pronged approach to fill the gaps in existing state and federal regulatory programs by:

- developing regulations for states under the non-hazardous authorities provided by the Resource Conservation and Recovery Act (RCRA); and improving existing federal regulatory programs under the Clean Water Act and the Safe Drinking Water Act for surface-water discharges and underground injection;

- working with the states to encourage changes in their regulations and enforcement to improve their programs where needed;

- working with Congress to develop any additional statutory authority that may be required.

Congress specifically exempted oil and gas wastes from RCRA regulation, pending completion of a study and today's regulatory determination. EPA's study of oil and gas wastes was issued in December as a Report to Congress. Congress asked EPA in the study to consider health and environmental impacts of current management practices, economic impacts of any additional regulatory controls on the industry and the adequacy of current regulatory authorities.

Dr. J. Winston Porter, EPA's Assistant Administrator for Solid Waste and Emergency Response, said, "We found that current federal and state programs are generally adequate to ensure proper disposal of oil and gas wastes, if vigorously enforced. We will take all necessary steps to improve the application and enforcement of current regulations and to identify and fill gaps in state and federal programs."

EPA found that imposition of hazardous waste regulations for all oil and gas wastes could subject billions of barrels of waste to regulation, causing a severe economic impact on the industry and on oil production in the United States. Economic models used by the agency to project impacts indicated potential domestic production declines ranging from 1.4 to 12 percent, with a corresponding annual direct cost passed on to consumers of $0.7-$4.5 billion. In addition, stripper operations (generally wells producing 10 or fewer barrels of oil per day during the declining phase of their production cycle) are sometimes economically marginal and are highly sensitive to small fluctuations in market prices and cannot easily absorb additional costs for waste management.

The hazardous waste authority under RCRA does not provide the agency with the flexibility to consider costs when applying hazardous waste requirements to oil and gas wastes. Consequently, EPA does not have the authority to craft a hazardous waste regulatory program to reduce or eliminate serious economic impacts on the industry in light of Congress' concern for the protection of the nation's current and future energy supplies.

As a result, EPA concluded that it would be more efficient and appropriate to fill regulatory gaps by strengthening regulations for surface-water discharge and underground injection and by developing regulations under RCRA's more flexible non-hazardous authorities. This tailored approach would enable the agency to apply all necessary requirements to the management of these wastes, while ensuring that economic impacts are minimized and reducing disruption of existing state and federal control programs.

EPA also believes that full-scale hazardous waste controls are impractical for oil and gas wastes because of the difficulty in regulating the nearly 800,000 crude oil and natural gas generating sites across the country, compared with just over 100,000 generators currently in the hazardous waste system. In addition, the agency found that such regulation could

severely strain existing hazardous waste storage, treatment and disposal capacity and significantly increase the permitting burden for state and federal hazardous waste programs.

Nearly 8.4 million barrels of oil and 44 billion cubic feet of natural gas are produced in the United States daily, primarily in Texas and Alaska. Stripper wells, small, independent operations located throughout the country, produce 14 percent of total U.S. production. These stripper wells account for nearly 70 percent of the total number of wells in this country.

The largest volume of waste associated with oil and gas production is produced water, which is generated from the oil wells during production. It contains water and other constituents. Produced water is generally disposed of in pits at the site, down disposal wells or by surface discharge. EPA estimates that 21.6 billion barrels total volume were produced in 1985.

Drilling muds and fluids are the second most voluminous waste generated by the oil and gas industry. Drilling muds are combinations of chemicals and other fluids used to facilitate well drilling. These are also disposed of in pits. EPA estimates a total volume of greater than 360 million barrels was produced in 1985.

Other wastes associated with oil and gas production, such as additional fluids and sludges, make up a very small percentage of the total volume of wastes.

The toxic constituents of oil and gas wastes include the hydrocarbons benzene and phenanthrene. Inorganic constituents include lead, arsenic, barium, antimony, chlorides and sodium.

EPA found that improperly managed wastes can cause damage to human health and the environment through surface-water and groundwater contamination. However, the agency found that the majority of damage cases it documented occurred as a result of violations of current regulations.

As part of the regulatory determination, the agency also recommended that no additional regulations be developed for the geothermal energy industry.

The regulatory determination will be published in the Federal Register within the next two weeks.

R-116 # # #

United States
Environmental Protection
Agency

Office of
Public Affairs (A-107)
Washington DC 20460

EPA Environmental News

FOR RELEASE: WEDNESDAY, JULY 20, 1988

EPA PROPOSES FOUR APPROACHES FOR CONTROLLING BENZENE EMISSIONS

U.S. Environmental Protection Agency Administrator Lee M. Thomas today proposed four alternative approaches for controlling benzene emissions from sources in the chemical manufacturing, petroleum refining and iron and steel industries. The widely varying alternatives, on which the agency encourages and expects considerable public comment, are each designed to limit human exposure to emissions of the high-volume-production chemical that is associated with leukemia in adults. The proposal is being made under section 112 of the Clean Air Act.

"Today's proposal deals with regulating benzene," Thomas said, "but the implications of this decision are far broader. They will determine in large measure what level of risk we as a society are willing to accept in terms of regulating all hazardous air pollutants."

The proposal of alternative policy approaches is designed to elicit the maximum public comment over various approaches to protection of public health and to frame a debate that will encompass such pertinent regulatory issues as acceptable health risks, appropriate criteria for the ample margin of safety, technological feasibility of controls, costs and other factors.

The final selected approach may be one of the four described specifically or a variation. EPA also intends to use the final approach as the framework for future hazardous-air-pollutant-control decisions.

(more)

"This proposal lays out four different approaches for controlling benzene emissions from many sources," Thomas said. "The public-health issues inherent in any decision dealing with hazardous air pollutants are extremely complex, and I strongly encourage a thorough public debate on the merits of the various approaches we have outlined here."

Each alternative policy approach in today's proposal offers a unique "acceptable-risk" decision. Each approach attempts to answer in a different way several critical questions. First, what measure or measures of risk should be given weight in the acceptable-risk decision? Second, are there specific levels of individual or population risk that are acceptable? Third, should the same levels be set and the same measures apply for all hazardous-air-pollutant decisions? Lastly, how should uncertainty in risk estimation be considered?

Exposure to Benzene

EPA estimates that about half of the American population is exposed to some cancer risk from the industrial sources of benzene covered under today's proposal. The risk is less than one chance in a million for the vast majority of that exposed population. The cancer risks from the sources under consideration account for approximately three fatal cancers per year nationwide. (For reference, the American Cancer Society predicts that 494,000 Americans will die of cancer in 1988). For the sources under consideration, the maximum individual lifetime risk, assuming 70 years of continuous exposure at the highest-modeled average annual concentrations, ranges from six chances in 1,000 to two chances in 100,000, depending on the specific source of the emissions.

A Two-Step Court Decision

Today's announcement is EPA's first proposal of a hazardous-air-pollutant standard since the landmark ruling by the D.C. Circuit Court of Appeals last year on vinyl chloride. The court mandated a two-step process for regulating hazardous air pollutants in which the EPA Administrator must first establish a "safe" or "acceptable" level of risk based on health considerations before setting an "ample margin of safety" in which he may then take into account costs and technological feasibility.

In an April 5 memorandum, Thomas outlined his thinking on how the appeals court's ruling on vinyl chloride would be applied in the benzene rule-making process. The memo drew critical comments from some Senate Environment and Public Works Committee members and environmentalists. Thomas decided that this decision was at the center of a critical policy issue and that it should be framed to examine carefully a broad array of regulatory approaches that offer varying levels of "acceptability" to both the hypothetically most-exposed individual and the population at large.

Estimating Risk

The risk to the most exposed individual, or maximum individual lifetime cancer risk, is the probability of contracting cancer following a lifetime exposure (24 hours per day for 70 years) to benzene at the maximum modeled

long-term ambient-benzene concentration. Estimates of maximum individual lifetime cancer risk are usually expressed as a probability represented in scientific notation as a negative exponent of 10. A risk of contracting cancer of one chance in 10,000 is written as 1×10^{-4}, one chance in 1 million as 1×10^{-6}, etc.

The population-exposure risk, expressed as an annual cancer incidence, is defined as the number of excess cancer cases expected annually in the exposed population residing in the vicinity (usually 20 to 50 kilometers, or 12 to 31 miles) of the industrial sources of benzene. This measure considers that people living at different distances and directions from the sources are exposed to different risks and adds these risks and numbers of people.

Central to the issue of standard setting for hazardous air pollutants is acceptability of risks. The EPA Administrator must make a determination of what risks are acceptable considering real-life factors such as risks encountered in everyday life, which range from one chance in 10 to less than one in 10 million. Everyday risks include those from natural background radiation (at sea level, lifetime cancer risks are in the range of one chance in 1,000, with risks higher as altitude increases), and from naturally occurring radon in homes (which can be as high as one chance in 10). Risks of death from accidents, natural disasters and rare diseases range from one chance in 10,000 (tripping and falling) to one chance in 10 million (rabies).

The Four Approaches For Determining "Acceptable Risk"

The first approach, or "case-by-case approach," considers for a given pollutant all risk information and measures such as maximum individual risk, risk distribution and incidence, as well as estimation limitations and uncertainties in determining acceptable risk. In decisions on acceptable risk under this approach, the Administrator would prefer to see risks in the range of 10^{-4} or less. However, a higher maximum individual risk, e.g., 10^{-3}, may be acceptable, under certain circumstances, depending on the overall distribution of the population at different risk levels, overall potential for increased incidence of disease and other risk considerations. For example, if the exposed population were extremely sparse and the number of people most exposed were small, less stringent risk figures could be considered. The case-by-case approach captures the qualitative as well as quantitative information in the risk assessment by recognizing the differences in the quality of the underlying assumptions.

The three remaining approaches are single-parameter approaches that take risk numbers at face value for the acceptable-risk decision and consider the weight of evidence in the second, or ample margin-of-safety, step.

The second, or "incidence-based approach," only considers the total number of cancer incidences per year in making the acceptable-risk decision. The agency proposes to consider one cancer case per year as acceptable in the acceptable-risk decision. One case per year is proposed because it is small in relation to the millions of persons exposed to benzene

and in relation to the incidence associated with risks from numerous everyday activities. Anything greater than one case per year would be considered unacceptable, and regulatory action would be indicated.

The third approach, or "1 x 10^{-4} or less maximum individual-risk approach," considers the maximum individual lifetime cancer risk as the only parameter in determining acceptable risk. In this approach, a maximum risk of 10^{-4}, or one chance in 10,000, is defined as acceptable. In other words, if the most exposed individual is determined to be, for example, at a 10^{-3} risk level, it would be considered unacceptable.

The fourth and under most circumstances most stringent approach, is the "1 x 10^{-6} or less maximum individual-risk approach." In this case, acceptable risk is defined as a maximum individual risk of one chance in one million or lower. Under this approach, a risk to an individual of 10^{-5}, for example, would be considered unacceptable.

"Ample Margin of Safety"
and Impacts of the Four Approaches for Benzene

After making the acceptable-risk decision, the EPA Administrator is then required to make the ample-margin-of-safety decision. This second step, mandated by the vinyl-chloride ruling, is basically the same for each of the four alternative approaches. It takes into consideration health-risk measures as well as technical feasibility, cost, estimation uncertainties and economic impacts.

"In terms of setting an ample margin of safety," Thomas said, "one question is should we opt for additional controls that may be expensive but only buy society little additional reduction?"

Today's benzene proposal applies the four alternative approaches to each of five benzene source categories which the agency previously considered for possible control.

One source category, maleic-anhydride process vents, originally proposed for control in 1980 and then later withdrawn, no longer uses benzene, so no federal action is warranted.

Of the remaining source categories, the first, ethylbenzene/styrene (EB/S) process vents, originally proposed for control in 1980 and also later withdrawn, is estimated to emit about 155 megagrams (170 tons) from the 13 plants manufacturing one or both of the chemicals. The agency estimates that under the first three approaches there may be no cost to industry because the baseline or existing risk meets the acceptable-risk criteria and represents an ample margin of safety. The fourth approach (10^{-6}) in this case could result in an impact that may close as many as six to eight of the 13 plants. Under this approach, the cancer incidence would be reduced from one cancer every 250 years (0.004 annual) to one case every 1,400 years (0.0007 annual).

The second source category, benzene storage vessels, was proposed in 1981 and withdrawn in 1984. At that time, there were 126 petroleum refineries, chemical plants and bulk storage terminals with benzene storage vessels. Total air emissions are estimated to be between 620 and 1,290 megagrams (680 and 1,420 tons) per year. Application of the first three approaches would be expected to result in a requirement for controls costing an estimated $100,000 annually. The population risk would be reduced from one cancer case every 10 years (0.1 annual) to about one case every 25 years (0.04 annual). Thus, there would be an estimated 1.5 fewer excess fatal cancers attributable to this source category every 25 years. The fourth approach would be expected to have a severe economic impact on the industry and would result in approximately one fewer fatal cancer every 10 years (0.1 annual).

The third source category, benzene equipment leaks, is currently regulated by EPA's 1984 rules. At that time, the agency estimated there were 131 facilities in the United States handling process streams that contain benzene. The 1984 regulations were estimated to reduce benzene emissions from equipment leaks by 69 percent (from 7,900 megagrams [8,700 tons] per year to 2,500 megagrams [2,750 tons] per year).

The first two approaches when applied to equipment leaks result in no additional controls since the baseline risk is considered acceptable. Under the third approach, EPA estimates that annual costs of at least $50 million would result from the application of the maximum feasible technology. However, EPA's best judgement based on 1984 emission estimates is that as many as 100 of the 131 facilities cannot achieve the emission standard without closing. These closings would result in a direct loss of approximately 30,000 jobs. The fourth approach would probably result in closure of all facilities to meet a level of control that would ensure a risk level of 10^{-6} or less. Direct job losses would probably exceed 35,000 and other job losses in associated industries could also be expected. The population incidence of leukemia from this source category would be reduced from one case every five years (0.2 annual) to one case every 1,400 years (0.0007 annual).

The final source category under consideration is coke-by-product-recovery plants. In the coke-by-product-recovery process, various components of the gases emitted from coke-oven batteries (usually co-located with iron- and steel-making facilities) are separated and recovered to obtain products such as crude tar, napthalene, light oils, benzene mixtures and refined benzene. Nationwide baseline benzene emissions from 44 plants assumed to be operating at full capacity were estimated after the 1984 proposal at 26,000 megagrams (28,600 tons) per year.

Applying the first approach to this source, while the baseline risk would be considered acceptable, emission-control equipment and work practices could improve the margin of safety at an industry cost of about $16 million per year. This would result in reducing the population incidence from three fatal cancers per year to one every five years (0.2 annual), a 93-percent reduction. The second approach would result in the same level

of control and impacts. The third approach would result in at least $26 million in annual costs for controls plus approximately four plant closures and eight other plants operating at reduced production. It is estimated that there may be a 40-percent loss of coke-production capacity under this approach and that as many as 3,000 workers may lose their jobs. The cancer incidence would be reduced from an estimated three fatal cancers each year to one every 14 years (0.07 annual). The fourth approach is not expected t be achievable even with the maximum feasible technology and thus is estimat to result in a possible closure of all 44 plants and a direct loss of rough 7,000 jobs. Cancer incidence would be reduced under this approach from three fatal cancers every year to one case every 2,500 years (0.0004 annual

Benzene Background

Benzene is a basic chemical produced in large quantities in this countr to manufacture a diverse variety of chemicals and products such as polystyrene, nylon and synthetic rubber. These derivatives are used in consume goods (toys, tires, packaging) and household goods (refrigerators, carpetin Benzene is common in indoor and outdoor air. Major sources include automobile exhaust, automobile refueling operations, consumer products, cigarette smoking and industrial emissions.

EPA has reviewed a limited number of measurements taken of benzene concentrations in urban and rural areas of the United States and the data suggest that the average background benzene concentration in urban areas ranges from about 1.5 to six parts per billion and that the average background concentration in rural areas seems to be less than one part per billion.

Since the turn of the century, the scientific and medical communities have recognized benzene as a toxic substance capable of causing acute and chronic effects. It was recognized as a potential human carcinogen (leukemia) in the mid-1970s based on occupational studies of synthetic-rubber, chemical and shoe workers. Other documented occupational effects include impairment of the blood-forming system, immunotoxicity, chromosome breakage and neurotoxicity. Results of animal studies support the leukemogenic potential of benzene and show reproductive and developmental toxicity also.

EPA listed benzene as a hazardous air pollutant under section 112 of the Clean Air Act in 1977 because of its carcinogenic properties. The listing led to the development in 1980 and 1981 of proposed standards for benzene emissions from maleic-anhydride process vents, EB/S process vents, benzene storage vessels and benzene equipment leaks. After public comment, EPA finalized standards in 1984 for benzene equipment leaks, but withdrew its proposals for maleic-anhydride process vents, EB/S process vents and benzene storage vessels. The withdrawal was based on the conclusion that both the benzene health risks to the public from these three source categories and the potential reductions in health risks achievable with available control techniques were too small to warrant federal regulatory action under section 112. Also on that date, EPA proposed a standard for benzene emissions from coke-by-product-recovery plants.

Shortly thereafter, the Natural Resources Defense Council, an environmental organization, filed suit with the U.S. District Court of Appeals for the District of Columbia Circuit seeking review of EPA's three withdrawals and the final standard for the benzene equipment leaks.

In 1987, the court ruled in the vinyl-chloride case, and EPA requested a voluntary remand in the benzene case to reconsider its 1984 rule makings. In a December 1987 order, the court approved the voluntary remand and established a schedule for proposed and final rules. The schedule was subsequently modified for a proposal date of July 20, 1988. The agency also decided to reconsider its proposed standard for benzene emissions from coke-by-product-recovery plants in light of the vinyl-chloride decision and to publish a supplemental proposal.

In today's rule-making notice, EPA indicates that the decision-making process described in the vinyl-chloride ruling is unique to Section 112 of the Clean Air Act.

Today's proposal should appear in the Federal Register within the next two weeks. A 60-day public-comment period will follow publication. A public hearing is being planned for Sept. 1 in Washington, D.C.

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R-128

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release August 2, 1988

The President today announced his intention to nominate Lawrence J. Jensen to be an Assistant Administrator (General Counsel) of the Environmental Protection Agency. He would succeed Francis S. Blake.

Mr. Jensen is currently Acting General Counsel for the Environmental Protection Agency in Washington, D.C. Prior to this, he was an Assistant Administrator (Water Programs) at EPA, 1985-1988. He was an Associate Solicitor at the Department of the Interior, 1981-1985; and an Associate in Jones, Waldo, Holbrook and McDonough in Salt Lake City, Utah, 1979-1981. From 1976-1979, he was a trial attorney in the Civil Division at the Department of Justice, 1976-1979.

Mr. Jensen was graduated from the University of Utah (B.A., 1973) and Brigham Young University (J.D., 1976). He was born January 17, 1950 in Salt Lake City, Utah. He is married, has three children and resides in Woodbridge, Virginia.

# # #

United States
Environmental Protection
Agency

Office of
Public Affairs (A-107)
Washington DC 20460

EPA

Note to Correspondents

TUESDAY, JULY 19, 1988

EPA Administrator Lee M. Thomas has appointed Dr. John A. Moore to serve as Acting EPA Deputy Administrator effective Aug. 15 following the departure of A. James Barnes to become Dean of the School of Public and Environmental Affairs at Indiana University. Dr. Moore has been Assistant Administrator for Pesticides and Toxic Substances since 1983.

Victor J. Kimm, the Deputy Assistant Administrator for Pesticides and Toxic Substances, will become Acting Assistant Administrator for that office, and Susan Vogt, Deputy Director of the Office of Toxic Substances, will take over as Acting Deputy Assistant Administrator.

Dave Cohen, Director
Press Division
202-382-4355

United States
Environmental Protection
Agency

Office of
Public Affairs (A-107)
Washington DC 20460

EPA Environmental News

FOR RELEASE: THURSDAY, JULY 28, 1988

1987 MOTOR VEHICLE SURVEY SHOWS TAMPERING REDUCTION

Results of the U.S. Environmental Protection Agency's 1987 Motor Vehicle Tampering Survey show significant reductions in catalytic-converter tampering and fuel switching in areas that include visual checks for these items in their vehicle-emissions-inspection programs.

Many states and localities have adopted vehicle-inspection programs to comply with certain Clean Air Act requirements. Local programs include inspection and maintenance programs (I/M) which test tailpipe idle emissions and anti-tampering programs (ATPs) where the emission-control components are visually inspected for evidence of tampering and fuel switching. Tampering among vehicles not covered by either of these programs was 32 percent, compared to 20, 18, and 16 percent for those vehicles covered by I/M-only, ATP-only, or I/M plus ATP respectively.

Lee M. Thomas, EPA Administrator said, "These data demonstrate the continued importance of state and local anti-tampering inspection programs especially in areas that fail to meet the national ozone and carbon monoxide air-quality standards. The results also are encouraging since they show that there can be significant and direct benefits achieved by effectively implementing anti-tampering programs."

There are currently 42 operating ATPs in 22 states covering approximately 25 percent of the nation's light-duty fleet. These programs range from roadside pull-over inspections covering one percent of the fleet to annual inspection programs covering the entire local fleet. Model-year coverage and selection of emission-control devices for inspection vary depending upon local program regulations.

(more)

Sites were selected for the 1987 tampering survey based on the need to evaluate control-program effectiveness instead of the desire to methodically sample the U.S. vehicle population. Fourteen of the 15 cities in the 1987 survey, comprising 91 percent of the survey sample, have an I/M and/or ATP even though less than 40 percent of the vehicles nationwide are subject to such programs. Even this heavily weighted survey sample retains an overall tampering rate of 19 percent. Also, one-third of the surveyed vehicles displayed some form of malfunction, possible tampering or definite tampering of emission-control components.

Thomas added, "Tampering rates remain at an unacceptably high level. Motor vehicles with tampered emission-control devices are a major environmental problem and a prominent source of urban air pollution. Our efforts to bring non-attainment areas into compliance are being hampered by the high degree of tampering."

The survey also found that 14 percent of the unleaded vehicles not covered by an I/M and/or ATP had been misfueled with leaded gasoline. Fuel switching among vehicles in I/M-only, ATP-only and I/M + ATP areas was nine, five and five percent respectively. Motorists who use leaded gasoline in a vehicle that requires unleaded gasoline actually end up spending extra money, even though leaded gasoline may be slightly cheaper at the pump. Fuel switching leads to more frequent repairs and tune-ups and accelerates engine deterioration.

The most serious, persistent environmental problems associated with emission-control-device tampering and fuel switching are ozone and carbon monoxide (CO) emissions. A major element of urban smog, ozone is formed when volatile organic compounds from gasoline vapors, solvents and other hydrocarbons (HC) and nitrogen oxides (NOx) react with sunlight and high temperatures. Ozone can cause various adverse effects on the human body, such as impaired pulmonary functions, symptomatic effects (such as cough, shortness of breath and chest pain) and aggravation of pre-existing respiratory disease. In addition to these health effects, ozone has been shown to cause crop-yield reductions, forest injury and damage to materials like rubber and dyes. The primary health concerns associated with CO are cardiovascular effects, in particular, aggravation of angina symptoms, and effects on the central nervous system. The agency's recently released air-quality-trends data showed that ozone and CO non-attainment continues to be one of the nation's major environmental problems.

Tampering and misfueling can cause dramatic increases in emissions of HC, CO and NOx. Motor vehicle emissions in urban areas account for nearly 60 percent of the total CO and 40 percent of the airborne lead emitted into the atmosphere annually. Studies show that removing a catalytic converter or ruining it by using leaded instead of unleaded fuel can increase HC emissions about 500 percent and CO emissions about 400 percent per vehicle.

Tampering with specific components of the emission-control system has been identified as a problem since 1978, when EPA conducted its first tampering survey. The 1987 report concluded that catalytic-converter tampering is much lower on vehicles covered by converter-inspection programs (two percent vs. 10 percent), and the effectiveness of inspection programs is particularly noticeable among the oldest vehicles surveyed (vehicles that are most likely to be tampered with).

EPA's 1987 survey found that air-pump systems were the most frequently tampered with components (eight percent). Air-pump tampering ranged from two percent in Charlotte, N.C., to 18 percent in Miami. Tampering with the air-pump system can increase HC emissions up to 200 percent and CO emissions up to 800 percent.

Since the 1968 model year, emission-control devices have been installed on light-duty trucks and passenger cars. The 1977 Amendments to the Clean Air Act made it illegal for any automobile dealer, or repair or service facility to disconnect or tamper with emission-control devices. EPA enforcement teams inspect car dealers, automobile repair faciities, muffler shops and other facilities that may remove or tamper with emission-control equipment. A maximum civil penalty of $10,000 per vehicle can be levied against new car dealers and manufacturers. Commerical repair facilities and fleet operators are subject to a maximum penalty of $2,500.

R-132

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United States
Environmental Protection
Agency

Office of
Public Affairs (A-107)
Washington DC 20460

EPA Environmental News

FOR RELEASE: THURSDAY, JULY 28, 1988

EPA SETS PENALTIES FOR VEHICLE TAMPERING VIOLATIONS

The U.S. Environmental Protection Agency today said it is proposing $475,000 in penalties against a group of muffler shops, automobile repair facilities and new car dealers for multiple violations of the Clean Air Act tampering prohibition.

The agency said it is charging 36 operators of 43 facilities for almost 400 violations involving the use of improper replacement, or after-market, catalytic converters, a major component of automobile emission-control systems.

Most of the violations involve installation of "two-way" converters on vehicles that require "three-way" converters. A "two-way" converter controls hydrocarbon and carbon monoxide emissions. A "three-way" converter controls nitrogen oxides emissions in addition to hydrocarbons and carbon monoxide. Other cases involve installation of converters that had not been tested in accordance with EPA's after-market catalytic-converter guidelines.

EPA's after-market converter enforcement policy, in effect since August 1986, established a test procedure, acceptance standards and installation requirements. The agency considers the installation of an after-market converter which does not conform to the policy requirement after January 1988 a violation of the Clean Air Act.

EPA also found cases where after-market converters had been installed on vehicles still under a manufacturer's five-year/50,000-mile emission-control warranty. These vehicles require original-equipment converters if a replacement is needed.

Factory-installed converters are designed to last the lifetime of a motor vehicle, provided the vehicle is properly maintained. A new replacement converter may be necessary, however, if the original has been damaged, removed or becomes inoperative from the use of leaded fuel or the vehicle fails a state or local emissions inspection. Vehicles with malfunctioning or missing converters emit up to eight times the level of harmful pollutants as vehicles with properly operating converters.

Don Clay, EPA Acting Assistant Administrator for Air and Radiation, said, "The activities of the facilities cited in these notices undermine our efforts to improve air quality. EPA's policies are intended to provide reliable converters at an affordable price for consumers who may need a replacement catalytic converter".

Installing the wrong converter significantly reduces the control of harmful pollutants emitted into the air. Motor vehicle exhaust emissions are the primary cause of ozone or smog in urban areas. Currently 68 areas violate the national ozone emission standard. Ozone causes lung and eye irritation, which leads to headaches, eye discomfort and visual problems.

EPA said the parties receiving Notices of Violation will have an opportunity to settle the cases with the agency. If a settlement cannot be reached, the cases will be referred to the Department of Justice for prosecution in court.

R-133

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