



Inter Office

Car Engineering

August 22, 1979

MEMO TO FILE

Subject: Asbestos

The attached pages have been selected to represent the increased activity in newsletters, "newspapers", and Washington related sources in the tox/haz area, especially concerning asbestos. There are many more, but the important pressures are clear:

1. The slant is toward asbestos elimination.
2. There is an increased mood supporting "no safe level of exposure".
3. Imprisonment and fines for corporate managers are being stressed.
4. Some members of Congress are becoming vocal. An example is a quote using "a legacy of four decades of cover-up....."
5. It is being emphasized that OSHA may issue standards without substantiating the health benefits.
6. There is draft regulation in the works.
7. There is an advanced notice for proposed rulemaking to TSCA.
8. There is an umbrella being considered as an "overall approach to cancer"...which supports those factions favoring total elimination of asbestos.
9. Gaskets and brakes are sometimes covered specifically but, even more dangerously, would be subject to broad general rulings where specifications would be more difficult.

002953

PRODUCED BY FORD

SINGLE DOSE OF VCM CAUSES TUMORS IN LABORATORY MICE, CPSC REPORTS

A single high dose of vinyl chloride monomer gas has been found to cause tumors in laboratory mice, Consumer Product Safety Commission reported April 26. Preliminary results of a four-year, \$700,000 CPSC study have indicated, for the first time, that inhaling one high dose of a known carcinogen may cause cancer in animals.

As a result, CPSC is now suggesting that a one-time exposure to VCM, or possibly other similarly acting carcinogens, occurring in connection with an accidental spill, "could threaten workers at the spillage site, public safety personnel, and perhaps even nearby residents."

During the study, laboratory mice and rats were exposed to VCM for one hour at levels of 5,000 and 50,000 parts per million. The animals were allowed to live their normal life span, then examined for evidence of tumors. Pulmonary tumors, both benign and malignant, were common in the mice, although not in the rats. A concurrent reproduction study showed no evidence of mutagenic or teratogenic effects.

According to CPSC's Joseph McLaughlin, project supervisor, this study is the first to assess the effects of short-term exposure. VCM was selected for the study because its carcinogenic effects are well known, but CPSC says that further short-term, high-dose studies of other carcinogens may be appropriate.

Study was conducted by Bernard McNamara and his staff at the Chemical Systems Laboratory, formerly the Edgewood Arsenal at Aberdeen Proving Grounds in Maryland. Results are now undergoing review by other government cancer experts, notes CPSC, which will assess their regulatory implications. Copies of a draft summary report are available from Office of the Secretary, CPSC, Room 300, 1111 18th St., N.W. Washington, D.C. 20207.

* * *

NIOSH CHIEF URGES ELIMINATION OF ASBESTOS IN ALL NON-ESSENTIAL USES

All non-essential uses of asbestos should be eliminated and no further uses permitted, according to National Institute for Occupational Safety and Health Director Anthony Robbins. Testifying May 1 before the House Subcommittee on Labor Standards, Robbins said that "sufficient research has been conducted to conclude that asbestos is so hazardous that less toxic substitutes should be used whenever possible so that future generations of workers will not have to suffer debilitating or fatal asbestos-induced disease."

Robbins said he could not accept the industry complaint that, "Gee, I don't have a substitute," and he called for studies to establish minimum essential uses of asbestos and to document the "life cycle" of the mineral from mining to disposal. NIOSH has previously advocated tougher workplace standards for asbestos, explaining that "because it is not possible to specify a safe exposure level for a carcinogen, only a ban on the use of asbestos can ensure complete protection against this mineral's carcinogenic effect."

Compensation for Asbestos-Related Illness

The subcommittee hearing was one in a series on the need to provide workers' compensation benefits for specific job-related illnesses. Previous hearings have focused on cotton dust victims; others are planned to consider workplace hazards involving respiratory illnesses, radiation and chemicals.

With respect to asbestos, Albert Einstein Hospital's Dr. Leon Candor testified that criteria for establishing eligibility for compensation should include a list of asbestos-related diseases, criteria for diagnosis with a system of case review, and criteria for establishing disability from asbestos exposure.

Rep. Millicent Fenwick (R.-N.J.) led off the hearing in support of her bill (H.R. 2740) to compensate victims of asbestos-induced disease as well as members of the workers' household and surviving dependents. Fenwick's bill is opposed by Rep. John Erlenborn (R.-Ill.), who does not favor a disease-by-disease approach to workers' compensation and who also opposed efforts to compensate textile workers stricken with brown lung disease as a result of exposure to cotton dust.

002954

EFFICACY WAIVER IN CONDITIONAL REGISTRATION MEETS WITH USDA DISAPPROVAL

Environmental Protection Agency's plans to allow conditional registration of pesticides without reviewing efficacy data submitted in support of new or old uses of a product have been criticized by the Agriculture Department. Commenting on the new rules for temporary pesticide registrations, USDA said the lack of an efficacy review could lead to approved pesticides with "less than desirable formulations" which could jeopardize the production of agricultural resources.

The Federal pesticide law requires EPA to solicit the opinions of USDA before the rules can be promulgated. USDA's comments and EPA's response to them are the last procedural requirements needed before the Administrator can sign off on the rules. His signature is expected within the next two weeks.

Barry Flamm, USDA's Coordinator for Environmental Activities, wrote EPA that it "is essential that adequate supplies of efficacious materials" be available for farmers. He said the lack of an efficacy data requirement could allow ineffective or phytotoxic products to reach the market. EPA hopes the waiver of efficacy data requirements will help speed up additional registrations, but Flamm said USDA fears the real result will be the introduction of poorer quality pesticides.

EPA Will Re-evaluate Efficacy Waiver

EPA Deputy Assistant Administrator for Pesticide Programs Edwin Johnson, in an April 18 letter, replied that the new waiver policy is intended as an experiment to speed the registration process by reducing the burden on pesticide registrants and by concentrating agency reviews on potential harmful side effects of the products. He reminded USDA that both agencies had supported the plan during Congressional hearings. EPA is counting on the market to weed out non-efficacious products, Johnson said, but noted that EPA will re-evaluate the waiver plan if it "fails to produce the desired benefits or abuses begin to develop."

USDA also said that the final interim regulations "do not adequately describe data requirements" for conditional registration, and the department does not see how the rules will result in lower registration costs. Johnson answered that "data requirements for chemistry and efficacy are spelled out in detail" in the rules, and EPA is asking for risk assessments of individual new use patterns.

Lower costs that EPA projects will result from implementing the additional registration process will be achieved because of the "deferred testing provisions." Johnson noted that experience has shown it has been the cost of testing necessary for a formal registration that has been the "inhibiting" factor slowing down registrations over the past three years. However, Johnson added that the savings are intended only for the time being and that testing requirements will have to be incurred as planned generic standards become effective.

* * *

ULV APPLICATIONS TO BE POSTPONED UNTIL NEXT GROWING SEASON

Despite some real benefits to be gained from using ultra-low volume (ULV) applications of pesticides, Environmental Protection Agency has decided not to allow pesticide applicators to deviate from recommended label directions, at least for this growing season. Forwarding a special EPA report on ULV methods to Congress, Assistant Administrator Steven Jellinek said the agency would be issuing an advisory opinion to this effect in May.

However, a second advisory will also be issued by the next growing season, Jellinek said, that will allow more user discretion in diluting pesticides. These options may take the form of performance standards which would specify end results for drift, residues and health impacts, he said.

EPA's decision to postpone use of ULV methods relies on the report by an agency study group which concluded that, based on available data, the advantages of ULV methods "are not sufficient to outweigh the potential adverse effects on man and environment." Study group noted that these hazards preclude most benefits of ULV uses because the risks associated with the alternatives have not yet been evaluated. When these risks are assessed, the agency would then be in a position to grant exemptions which could be based on "inherent hazard rather than assumed safety," the group said.

002955

STATES REQUEST MORE MONEY FOR HAZARDOUS WASTE CLEANUP

Representatives of New York, New Jersey, Michigan and Kentucky have appealed for Senate support for more money for hazardous waste cleanup, claiming the Administration's superfund proposal allocating \$300,000 for emergency aid "will hardly make a dent" in the problem of bringing chemical waste dumps under control.

Disadvantaged by the lack of time to adequately study the new bill, state officials told a Senate Joint Committee June 21 that they were uncertain whether dumpsites in their states would even be covered by the administration proposal, which allocates money for emergency measures and for containment, not cleanup. Senator Bill Bradley (D.-N.J.) said "containment" is "hardly sufficient" for the New Jersey site formerly owned by Chemical Control Corporation where pounds of explosive chemicals have been found recently. Bradley estimated that \$10-million would be needed for permanent cleanup of this site which would not be covered under the superfund proposal. (Off-site disposals are not covered unless these costs are less than the cost of 20-year containment.)

Glen Paulson, Assistant Commissioner for New Jersey's Department of Environmental Protection, termed the \$300,000 emergency aid "wholly unrealistic," since evacuation costs alone often exceed this. Regarding containment costs, Paulson estimated the state's share, which goes up from 10% of costs exceeding \$200,000 to 50% of this excess for municipally-owned or state-owned dump sites during the first year, would cost New Jersey between \$300-600-million.

*** NO SAFE LEVEL OF

NCTR ANIMAL BIOASSAY REFUTES CONCEPT OF 'THRESHOLD DOSE' FOR CARCINOGENS EXPOSURE

National Center for Toxicological Research released results June 15 which undermine the hypothesis that some carcinogens have a threshold dose which must be exceeded before these chemicals cause cancer.

In a 24-33 month carcinogenicity bioassay in which 2-acrylamino-fluorene, a known carcinogen, was administered to 24,192 female mice, NCTR toxicologists found cancer in animals treated at even the lowest doses. Liver cancer usually did not develop in animals until 18 months into the study. These tumors continued to develop in animals that had been treated continuously for 24 months, or for only 9 months of the study. Incidence of bladder cancer in mice treated for only 9 months dropped, however, in comparison with the incidence in animals treated for longer periods.

NCTR Acting Director Thomas Cairns said these results lend support to the policy of regulatory agencies to use the linear dose-response model (all doses down to zero cause some cancer) in estimating human cancer risk. This model is currently used by Environmental Protection Agency.

NCTR said survival in the mice was very high, 90% at 18 months, which prompted them to continue the tests in some animals for 24 months, and in others for 33 months.

EDF URGES CONGRESSIONAL LIMITS ON EX PARTE AGENCY MEETINGS

Explicit restrictions on ex parte contacts between Executive agency officials and other parties after the close of the public comment period on agency regulatory activities should be Congressionally mandated, Environmental Defense Fund urged June 20. In testimony before the Senate Governmental Affairs Committee, EDF attorney Jackie Warren said that ex parte controls are needed because "increasingly, we are seeing the development of two separate rulemaking procedures." First is the official public comment period.

Second is the practice of "secret communications from high-ranking members of the Executive branch as well as from members of Congress or private parties." These ex parte meetings are a "gross abuse of the administrative process," Warren said because these meetings seem to be at "the decisive stage in formation of controversial" new rules.

Warren suggested that since it would be impossible to totally ban these meetings, the agencies should keep either a transcript or detailed summary of these ex parte communications and allow the record to remain open for rebuttals.

002956

EPA SEEKS NEW IDEAS ON ENDING THE 'RACE TO THE COURTHOUSE' SYNDROME

Upon learning that the mail delivery of the *Federal Register* in some areas of the country falls 7- to 10 days behind its actual publication date, Environmental Protection Agency is seeking comments on how to provide "greater fairness" in the so-called "race to the courthouse" syndrome.

EPA has described this "race" as the attempts by industry and environmental groups to be the first to file suit in U.S. Appeals Courts against agency regulations under the Clean Water Act (TMN, June 18, 1979, p. 189). In a June 4 *Federal Register* notice, EPA acknowledged there was some confusion as to when these groups and the courts should consider an EPA rule "issued." EPA's first proposal, that "1:00 p.m., eastern time, one week after the rule's publication in the *Federal Register*," would be the official publication time. However, the agency now feels that this may not be enough time to ensure a fair race and is seeking ideas on the feasibility of a longer waiting period.

EPA officials point out that these rules may also be used for similar situations related to Toxic Substances Control Act regulations if this "race" becomes a regular feature of future TSCA actions.

Comments on the proposed racing rule are due Aug. 3 to: Richard Stoll, Office of General Counsel, EPA 20460, (202) 755-0760.

TOXIC MATERIALS NEWS IN BRIEF

Rep. Albert Gore (D.-Tenn.) has accused Hooker's parent company, the Occidental Chemical Co. of a coverup in connection with its pesticides disposal practices in Lathrop County, Calif. Documents released by Gore June 19 during House oversight subcommittee investigations of hazardous waste sites indicated that the company knowingly dumped five tons of pesticides into the ground annually and did not inform county health officials. A 1976 Occidental memo noted that if the dumping stopped, "we may escape unnoticed." In 1977, another memo said that "We have destroyed the usability of several wells in our area. If anyone should complain, we could be the party named in an action by the Water Quality Control Board." That water board has asked its now attorneys to prepare the way to seek civil penalties from Occidental.

Meanwhile, rebounding from the bad publicity of Love Canal, Hooker Chemicals and Plastics Corp. is undertaking a \$250-million renovation program at its Niagara Falls, N.Y. site to improve the company's public image and the facility's profitability. Company spokesman, Bruce Davis, said the five-year project includes a facelift for the 100-acre site to prevent Hooker from becoming a "tourist detraction" for Niagara Falls. Hooker plans to landscape its grounds, hide less picturesque areas behind trees, demolish roughly one-third of its buildings and paint the remaining buildings in earth tones.

Occupational Safety and Health Administration and National Cancer Institute have taken steps to protect workers removing asbestos insulation from public schools. Agencies announced June 20 a cooperative effort to produce educational materials on health hazards of asbestos and protective measures to be taken in working around the fibers. Project was undertaken because "it is imperative that the contractors hired by school districts across the country know how to protect the health of workers who must remove or contain asbestos materials," according to Assistant Secretary of Labor Eula Bingham. Educational materials will benefit school administrators, custodians and students since all might be exposed to asbestos if it is removed or contained improperly.

Deputy Administrator Barbara Blum announced June 20 that the nematocide DBCP has been found in Arizona drinking water in sampling tests conducted by the Environmental Protection Agency. DBCP tests turned up positive in 10 of 13 drinking water samples taken from Yuma County. Only one of 18 samples from Maricopa County were positive for DBCP and no samples taken from Phoenix water supplies were contaminated, Blum said. Water from Florida, Georgia, Hawaii, and South Carolina was found to be free of DBCP contamination. Blum speculated that soil conditions accounted for why the chemical was found in some areas and not in others since all five states still permit its use. DBCP was also detected in some California drinking water (TMN, May 30, 1979, p. 174).

002957



CHEMICAL REGULATION REPORTER

A weekly review of activity affecting chemical users and manufacturers

Volume 3, Number 18

THE BUREAU OF NATIONAL AFFAIRS, INC

August 3, 1979

HIGHLIGHTS

NO OMISSIONS of properly reported substances are found on the Environmental Protection Agency's inventory in checking for over 2,000 chemicals, according to agency staff. In countering industry charges that omissions have been found on the inventory, Assistant Administrator for Toxic Substances Steven D. Jellinek says the printed version of the inventory would necessarily always be incomplete (p. 727)

THE CURRENT DRAFT of reporting rules developed under Section 8(d) of the Toxic Substances Control Act includes asbestos, chlorinated dioxins, and chemicals associated with the production of chlorinated dioxins. The latest draft of 8(c) rules exempts retailers from reporting and would require automatic reporting by manufacturers receiving more than three allegations a year (p. 728)

THE OPTIONAL USE of United Nations shipping descriptions and identification numbers would be allowed on certain hazardous materials under a proposal issued by the Materials Transportation Bureau (p. 729, text p. 752).

EPA WILL NOT MAKE DECISIONS based on the belief that quantitative risk assessments are precise, says EPA Administrator Douglas M. Costle in a letter to the Natural Resources Defense Council. He says risk assessments should only be used as "coarse indicators" of degree of risk (p. 729)

FEDERAL AGENCIES should support and adopt integrated pest management strategies wherever possible, President Carter says in a message to Congress on the environment. He suggests formation of an interagency committee to coordinate IPM actions of federal agencies (p. 729)

THE FIRST 8(a) RULE for individual substances to be proposed under TSCA is expected to deal with polybrominated biphenyls and tris, according to EPA staff. The proposal, now

awaiting agency approval, would require notification of any production of the substances except in articles (p. 729)

A HAZARDOUS EMISSION STANDARD which deals with benzene emissions from maleic anhydride manufacturing is expected to be proposed in early 1980, according to EPA staff who say the agency plans to issue six separate standards dealing with benzene emissions (p. 730)

IMPRISONMENT AND FINES would be imposed on corporate managers found guilty of concealing information on health and safety hazards from industrial processes under a bill introduced by Congressman George Miller (D-Calif) after an investigation of the asbestos industry (p. 730)

FORMS AND INSTRUCTIONS for reporting substances to be included on the revised chemical substance inventory are distributed by EPA to chemical processors and users (p. 731, text p. 747)

BENZENE PRODUCERS accuse the Occupational Safety and Health Administration of exaggerating an appeals court ruling which struck down the agency's benzene standard. A brief filed in the Supreme Court by producers asks the court to affirm the appeals court decision (p. 732)

EXISTING LAWS ARE INADEQUATE to deal with compensation, liability, and cleanup of spills of hazardous substances, according to EPA, Coast Guard, and environmental group representatives testifying at a House subcommittee hearing (p. 733)

A CIVIL PENALTY of \$35,000 is sought by EPA from the Virginia Electric Power Company for improper storage and disposal of polychlorinated biphenyls. The agency says it has collected \$64,000 in penalties on seven PCB complaints to date (p. 734)

Section 1

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When someone makes a decision to conceal information about a product or an industrial process knowing full well that the product or process jeopardizes someone's life health or safety I believe a criminal act has occurred," Miller said.

INDUSTRY COVER-UP Asbestos and Chemical Hazards

Miller said the bill grew out of a year long investigation of health hazards in the asbestos industry (Current Report, January 12 p 1799 May 4 p 156).

We have pieced together a legacy of four decades of cover-up which has resulted in the exposure of millions of people to cancer-causing asbestos materials," Miller charged.

Miller also cited other examples of what he considers "this kind of corporate indifference to human health and safety."

He said congressional hearings have revealed "longstanding poisoning of underground water wells by the Occidental Chemical Corporation in Lathrop Calif. Miller asserted that Occidental continued to discharge contaminants for several years after an internal company memorandum said:

Our laboratory records indicate we are slowly contaminating all wells in our area" (June 29 p 470).

Another example Miller gave was continued production of dibromochloropropane (DBCP) which has been shown to cause sterility in workers. Miller said chemical producers knew as early as 1957 that DBCP was dangerous (August 19, 1977, p 792).

Miller also charged that Allied Chemical Company increased its production of Kepone in the mid 1960's, despite extensive laboratory tests which revealed its potential for causing cancer, liver damage and reproductive system failure (May 20 1977 p 332).

Miller also gave examples of what he considers "product hazards and cover-ups" from outside the chemical industry — including instances involving radial tires and automobiles.

In each case, Miller claimed, certain corporate officers made a conscious decision to subject unsuspecting and innocent people to hazards which could imperil their safety and even their lives.

Cover-ups Not Normal Practice

Miller also said, "I do not believe these sorts of cover-ups constitute a normal practice for most industries or most businessmen in the United States."

However, he continued, "Neither can one conclude that these are merely isolated incidents."

No Additional Testing

He said the measure would not require any additional testing of products, nor would it expand government regulatory activity, or impose exhaustive paperwork burdens on companies.

The Miller bill would create a new section of Chapter 89, Title 18 of the U.S. Code which deals with crimes related to professions and occupations. The bill's provisions are not restricted to any specific industry and no specific federal agency is mentioned as having enforcement responsibility.

Existing Reporting Laws

The bill's broad reporting requirements and penalties would overlap to some extent with existing provisions of a number of laws including the Toxic Substances Control Act and the Federal Insecticide Fungicide and Rodenticide Act.

However, the bill differs from the TSCA and FIFRA reporting requirements because it would not be restricted to chemical hazards. The measure also would not require reporting of environmental effects that do not endanger humans and it would establish much more severe criminal penalties.

B-3-79

Section 8(a) of TSCA, for example, requires a manufacturer, processor or distributor of a chemical substance or mixture to immediately notify the Environmental Protection Agency if he discovers information which reasonably shows that the chemical presents a substantial risk of injury to health or the environment."

TSCA establishes civil penalties of up to \$25,000 per day and criminal penalties of up to \$25,000 per day and imprisonment for up to one year for violations of the act.

FIFRA requires a pesticide registrant to notify EPA of new information regarding unreasonable adverse effects on the environment of the pesticide. Penalties under FIFRA are limited to a civil penalty of up to \$5000 for each offense and to a criminal penalty of up to \$25,000 and imprisonment for not more than one year.

No company has yet been taken to court for violation of TSCA section 8(a) reporting requirements. EPA enforcement personnel told Chemical Regulation Reporter August 1 that Section 8(a) does not lend itself to enforcement because of the difficulty of detecting the existence of a hazard information cover-up.

Reporting

EPA OFFERS FORMS, INSTRUCTIONS ON REPORTING FOR REVISED INVENTORY

The Environmental Protection Agency is distributing forms and informational booklets to aid chemical processors and users in reporting substances for inclusion on the revised chemical substance inventory.

The revised inventory, scheduled for publication in 1980 will include chemicals listed in the initial inventory published June 1 under the Toxic Substances Control Act. It also will list chemicals reported by manufacturers between June 1 and July 1, 1979, by processors before December 31, 1979, and any chemicals which have completed premanufacture notification procedures.

The EPA publication entitled "Instructions for Reporting For The Revised Inventory" gives detailed instructions to aid processors in filling out the "Form E" reporting document.

Copies of "Form E" and excerpts of the EPA reporting instructions are published in the Full Text section of this issue.

On the form, processors and users are to list their name, address, telephone number, the name and structural formula of the chemical and its Chemical Abstracts Service (CAS) number if known.

If a processor or user can get certification from its supplier that the chemical already has been reported to EPA for inclusion on the inventory, they need not be concerned with reporting, EPA said.

Either EPA or the supplier can tell the processor if the chemical is on the initial inventory.

Persons who received a booklet with the same title and with a brown and white cover should request the new booklet, EPA staff members said. Several changes have been made in the newest version.

Many of the instructions in the current version were included in EPA's May announcement that the initial inventory of chemical substances was available (Current Report, May 18 p 219 p 234).

After official publication of the initial inventory June 1, manufacturers and importers had 30 days to report chemical substances not included on the inventory.

After July 1, manufacturers and importers became subject to premanufacture notification requirements for new chemical substances.



OCCUPATIONAL SAFETY & HEALTH REPORTER

A weekly review of occupational safety and health developments

1978-1979

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THE BUREAU OF NATIONAL AFFAIRS, INC.

August 8, 1979

HIGHLIGHTS OF CURRENT REPORT

SAFETY PRECAUTIONS will be issued by the National Institute for Occupational Safety and Health regarding a potentially serious design limitation in a radio frequency method for protecting power press operators from press hazards. Because the effectiveness of the device is dependent on an operator's grounding conditions, a change in these conditions can create "holes" in the device's protection zone through which a worker can reach farther than is safe, NIOSH cautions (p. 235).

A REVISED PROCEDURE is announced by the Occupational Safety and Health Administration for responding to worker complaints about alleged unsafe and unhealthful workplace conditions. The new system calls for a thorough evaluation of all complaints before a workplace inspection is undertaken (p. 235).

NIOSH URGES EMPLOYERS to begin appropriate workplace practices to reduce the risk of worker exposure to arsine gas. Workers exposed to arsine or to another toxic gas, stibene, should be removed immediately from the workplace and prompt medical attention should be given if symptoms of poisoning appear, NIOSH recommends (p. 236).

A DELAY IN ISSUANCE of a revised voluntary standard for respiratory protection is urged by NIOSH pending resolution of "technical concerns" about the standard. Qualitative fit tests outlined in the American National Standards Institute standard are "potentially dangerous" with regard to some respirators, a NIOSH official asserts (p. 236).

THE HOUSE APPROVES the conference report on the fiscal 1980 appropriations bill for the Departments of Labor and Health, Education, and Welfare, clearing the measure for further Senate action following the congressional recess. Continuing controversy over anti-abortion provisions is expected to delay final passage of the bill (p. 237).

OSHA AND NIOSH plan to issue a joint current intelligence bulletin on worker exposure to non-ionizing radiation from radio frequency heat sealers, a type of industrial heating device. The bulletin is expected to reflect updated knowledge on protecting workers from the health hazards of nonionizing radiation from RF sealers, and information on recently developed instruments for measuring radiation (p. 237).

OSHA'S POSITION that it may issue standards without estimating benefits to workers' health "will inevitably increase the already substantial cost imposed on American business by OSHA regulation," the U.S. Chamber of Commerce charges in a brief filed in the U.S. Supreme Court. The brief is one of six friend-of-the-court briefs that urge the Supreme Court to uphold an appellate court decision striking down OSHA's benzene standard (p. 238).

AN INSPECTION WARRANT issued by a U.S. magistrate authorizing a "wall to wall" workplace inspection based on an employee complaint was valid and the scope of the warrant was not unconstitutionally broad, a U.S. district judge rules in a decision contrary to that reached by another judge in an earlier case (p. 239).

A NEW PROGRAM intended to train compliance officers in safety and health problems in the construction industry is initiated by OSHA. The program is expected to continue initially for three weeks and includes 15 trainees who have the equivalent of an apprenticeship and at least five years working experience in the field (p. 239).

THE REFERENCE FILE SUPPLEMENT with this week's OSHA includes revised Occupational Safety and Health Administration standards for commercial diving, cotton dust in cotton gins, and the chlorine listing in the table of toxic and hazardous substances, and revisions to the OSHA Field Operations Manual chapter on field reporting procedures and forms.

The primary difference is that the Senate measure (S 1622) would permit reimbursement to state governments for funds spent on programs to detect asbestos hazards in schools after January 1, 1976. The House bill would provide for direct grants only to school systems, and would be retroactive only to January 1, 1977.

Both the Senate and House bills would provide \$30 million per year for three years for grants to educational agencies for up to half the cost of programs to detect asbestos hazards in schools. The bills would also establish a three-year loan program, limited to \$100 million per year for up to half the cost of containment, removal, or replacement of hazardous asbestos-containing materials. The loans would be interest-free and would run for up to 20 years.

The 50 percent limit on the grant and loan programs would be waived for schools with financial difficulties. Grants and loans would be available retroactively to January 1, 1977, in the House bill, and to January 1, 1976, in the Senate version.

The bills would not require asbestos producers to reimburse the Government for the cost of the grant program, as urged by environmental groups and proposed in earlier versions of the House measure.

However, the bills would direct the attorney general to determine whether, by using all available means, the United States should or could recover, from any person, the funds spent under the grant program.

Asbestos

CPSC STAFF DRAFTS NOTICES FOR REGULATING ASBESTOS IN PRODUCTS

The staff of the Consumer Product Safety Commission presented the commissioners with draft *Federal Register* notices August 8 that, when published, will set the wheels in motion for the regulation of asbestos in consumer products.

Three draft notices are included in a package prepared by the staff: (1) a draft advance notice of proposed rulemaking, (2) a draft statement of policy on coordination of regulatory activities between the CPSC and the Environmental Protection Agency, and (3) a preliminary draft general order for the submission of specific information on a narrower group of specific consumer products containing asbestos yet to be determined.

The first two drafts are scheduled for an early review by the commissioners with an expected publication date around mid-September. The draft general order, however, requires approval by the General Accounting Office, and the staff has not yet prepared a specific list of products that would be included in the order.

Before submission to the GAO, the order must be approved by the commission and a supporting statement must be prepared, which includes a narrative justification for the reporting requirements, an estimate of the number of persons or firms subject to the order, an estimate of the compliance burden associated with the order, and an estimate of the cost to the commission of planning the reporting requirement and compiling the incoming data. The process of GAO clearance takes up to 45 days.

The draft general order will be submitted for CPSC consideration when the supporting staff work has been completed.

Originally, the staff was directed to issue special orders to manufacturers of asbestos paper as the best way to determine which consumer products contained asbestos. The staff said it now believes that sufficient information is known on the general categories of consumer products containing asbestos to enable it initially to direct general orders to

manufacturers of certain classes of products and eliminate the additional step of requiring manufacturers of asbestos paper to respond to special orders.

Advance Notice

The draft advance notice of proposed rulemaking will explain that the CPSC proposes to investigate the use of asbestos in consumer products by soliciting general information on the use of asbestos in products through this notice and by requiring, by special or general orders, the submission of information concerning certain products. The notice will describe CPSC's proposed regulatory approach to asbestos and will solicit public comments on the approach.

The joint statement on coordination of regulatory activities describes the cooperative efforts by the CPSC and EPA in dealing with asbestos in consumer products under the Toxic Substances Control Act and the Consumer Product Safety Act respectively. The CPSC can also regulate under the Federal Hazardous Substances Act.

The draft notice states that both agencies have acted previously to regulate asbestos but they are still concerned that human exposure to asbestos from many sources may present an unreasonable health risk.

EPA's efforts include a systematic gathering of information on groups of asbestos products, and an evaluation of risk from these products based on the life cycle concept. In the life cycle analysis, the cumulative risk from exposure to asbestos is examined from primary processing through end use and disposal. The CPSC will take a narrower approach to the investigation of possible health risks that may be associated with the use of asbestos in a number of consumer products.

The notice states that in some cases remedial action by the CPSC may be needed while broader action is being taken by EPA.

EPA will publish an advance notice of proposed rulemaking simultaneous with the CPSC in mid-September.

Lead

EPA ADOPTS REGULATIONS ALLOWING EXEMPTION FROM LEAD PHASEDOWN RULES

The Environmental Protection Agency August 7 adopted regulations exempting small refiners from the rules on lead content of gasoline (44 FR 46275).

Under the regulations (40 CFR 80), gasoline manufactured at a small refinery must not exceed a specified average lead content for any three-month period beginning October 1, 1979 and ending with the three-month period beginning July 1, 1982. The average lead content is as follows:

Barrels per calendar day ¹	Grams per gallon ²
5,000 or under	2.65
5,001 to 10,000	2.15
10,001 to 15,000	1.65
15,001 to 20,000	1.30
Greater than 20,000	.90

¹ Preceding calendar year production rate of gasoline

² Allowable average lead content of gasoline

A "small refinery" is defined as one with a crude oil or bona fide feed stock capacity of 50,000 barrels per day or less, and which is not owned or controlled by any refiner with a total combined crude oil or bona fide feed stock capacity greater than 137,500 barrels per day.



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SLANTS & TRENDS

A "FAIRLY SUBSTANTIAL PERCENTAGE OF PRODUCTS" containing asbestos will be the subject of an advanced notice of proposed rulemaking (ANPR) being developed by EPA as an initial step in its effort to regulate asbestos outside school buildings. The ANPR will seek discussion not only of risks from exposure during actual use of products containing asbestos, but also on risks incurred during mining, milling and manufacturing, an EPA official has told TMN. The agency has termed this the "life-cycle" approach to evaluating asbestos hazards, and hopes to use it in obtaining an unreasonable risk determination on all products listed in the ANPR, thereby avoiding the burdensome process of having to prove that unreasonable risks exist for each individual product. The ANPR is expected to be issued sometime in October.

AN ANPR ON THE SCHOOL ASBESTOS PROGRAM was released Aug. 14 by EPA, and will be published in early September. This document announces the development of regulations requiring the inspection of schools for materials containing asbestos, the correction of situations where obvious deterioration of asbestos-containing materials has occurred, and periodic monitoring. Eight factors for consideration in assessing the extent of hazard are included.

AN INTERAGENCY ADVISORY GROUP'S RECOMMENDATIONS for improving Federal regulation of toxic substances (see story on page 259) was not well received by industry. Tatian Roodkowsky of the U.S. Chamber of Commerce suggested that recommended restrictions on the protection of confidential business information "could hinder innovation and growth." She pointed out that "great strides have been made in protecting human health and the environment," yet current laws recognize the need for the chemical industry to expand. The report of the Toxic Substances Strategy Committee is a "hodge-podge" of concepts and recommendations that have either been disputed or discredited since the committee was created in 1977, according to a statement from the Chemical Manufacturers Association.

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SLANTS & TRENDS (Cont.)

TOO MUCH CHEMICAL TESTING has been designed to give chemicals "a clean bill of health and not to detect lesions," OSHA director Eula Bingham told a public meeting on the National Toxicology Program Aug. 10 (see story on page 261). Bingham said she hoped NTP would raise the consciousness of the scientific community concerning the need to improve test methods to detect chemical injuries.

* * *

EPA TO SEEK COMMENTS ON REIMBURSEMENT FOR TEST DATA

An advanced notice of proposed rulemaking that seeks comments on how EPA should handle the problem of reimbursement of firms that provide data to meet a Section 4 test rule requirement is going through the agency's review process and should be published within a month or two. Under the Toxic Substances Control Act, if a firm is doing testing required for an existing chemical, other firms can seek exemptions on the grounds that the testing is already being done. The exempt firms must then reimburse the testing firm. If firms cannot reach agreement on reimbursement, they will turn to EPA to resolve the matter.

In its draft ANPR, EPA is considering three alternative approaches by which it could determine the amount of reimbursement due the testing firm. The first approach calls for case-by-case determination of money owed on the basis of allowable testing costs and an exempt firm's market share and competitive position, with no set definition of those three terms. The second approach would establish a formula-like rule that defines the three terms and says how much weight should be assigned to each one in determining reimbursement. The third approach would define the terms but not provide the weight given to each.

According to EPA, the second and third approaches would be easier to implement, requiring less time and expenditure of resources, but they would be less flexible. They would also encourage direct settlements since firms would know how EPA is likely to set the reimbursement.

Other questions to be resolved and on which EPA will seek comments are: how to protect confidential information such as market share or even that a firm produces a certain chemical; when to set reimbursement so that a testing firm does not have to wait years for its money yet avoid continually recomputing a firm's share of test costs as new companies enter the market; whether or not to reimburse several firms which conduct similar tests;

Whether the market share should be based on sales or production and the period of time for which market share is measured; the definition of competitive position; whether allowable costs should include actual test costs or the standard cost of type testing conducted; the type of administrative proceedings to be used when EPA is called in (the agency currently favors an expert panel); and to what extent firms expect to collaborate on testing.

* * *

EPA RESPONDS TO CMA PETITION FOR PROCEDURAL CHANGES IN TSCA RULEMAKING

Environmental Protection Agency has given a mixed response to a request by the Chemical Manufacturers Association for changes in the manner in which the agency develops and handles rulemaking under the Toxic Substances Control Act.

In a recent petition, CMA asked EPA to better coordinate its work so as to avoid overlapping proposals. The same people in industry handle several issues and find it difficult to respond to several at one time, CMA pointed out. Responding to CMA, Assistant Administrator Steven Jellinek noted that EPA has many TSCA provisions to put into effect and "if EPA were to implement these provisions one at a time, it would be many years before TSCA would be fully implemented." But Jellinek conceded that a problem exists, and for this reason said that the agency is trying to keep interested persons fully advised of agency thinking prior to proposing rules in order to insure that material reviewed during the comment period is not entirely new.

Jellinek rejected a CMA request that all public meetings on proposed rules be held after the close of the comment period. He suggested instead that the timing of meetings be made on a case-by-case basis, since some rules are amenable to delayed meetings, while others necessitate swift action and delays in public meetings would not be in the public interest.

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PMNs. The other will deal with existing chemicals or chemicals on the inventory, according to the EPA staff. SNURs would be another means of gathering data on a substance after it has passed through the premanufacture review process, according to EPA staff.

General Policy

EPA OUTLINES REIMBURSEMENT SCHEMES. CONFIDENTIALITY REMAINS PRIMARY PROBLEM

Three options for reimbursement for use of testing data under the Toxic Substances Control Act are outlined in an Environmental Protection Agency draft notice undergoing agency-wide review.

The three approaches vary primarily in the degree of flexibility they would give EPA to determine market share, competitive position, and allowable costs.

Confidentiality, timing, and duplicative test data will be the primary problems in any approach adopted, according to the EPA draft advance notice of proposed rulemaking.

TSCA requires EPA to develop reimbursement strategies and procedures for the costs of testing required under Sections 4 and 5 in cases where other companies are able to use and consequently benefit from the testing.

Such a case could arise when EPA requires a manufacturer of a substance to do testing under Section 4 and EPA intends to grant exemptions from testing for other manufacturers. TSCA directs EPA to establish means whereby other manufacturers reimburse the company which did the testing.

EPA says two of its three main goals in writing data reimbursement procedures are to provide a means for fair and equitable reimbursement and to keep down transaction costs. The third objective is to reduce the adverse impact of rules, orders, and procedures issued under TSCA on competition, innovation, decisions to enter markets, small business, and the structure of the industry.

Reimbursement Options

The approaches outlined by EPA in the draft advance notice of proposed rulemaking range from a formula-type option to an ad hoc arrangement.

All three approaches would use market share, competitive position, and allowable costs as the basis for determining who owes what share of costs.

The least flexible approach would use these three factors, giving each a designated weight. The draft notice explains that the advantage of this approach would be that involved companies could use the formula without involving EPA. At the same time, this approach would allow no leeway for determining which factor might be more significant in individual cases.

The two other approaches would involve some degree of determination by EPA. One approach would define market share, competitive position, and allowable costs but would leave the weighting of these factors in individual cases up to EPA. The last approach would allow EPA to define these three factors in individual cases as well as weighting them.

The draft presents all three options, but also says a specific formula-type rule may not be feasible now.

Problem Areas

Confidentiality is expected to be a major problem encountered in apportioning testing costs.

The draft notice notes two issues which are likely to be sensitive and interfere with the sharing of testing costs.

First, many manufacturers may not want the fact that they produce a certain chemical to become public. If manufacturers claim such information as confidential, firms will not be able to arrive at a settlement on their own because they will not know what other firms are involved.

The second type of information which firms are likely to claim as confidential and which will interfere with apportioning costs is marketing data. Firms may not want other companies to know what their market share or allowable costs actually are.

In these cases, EPA will be forced to conduct the negotiations on data reimbursement, according to the draft notice.

Other problems in the data reimbursement area are deciding the stage at which EPA should be involved in the process and when reimbursement should be awarded.

EPA staff members have said the agency is agreeable to having manufacturers work out equitable arrangements on data reimbursement among themselves. EPA staff have indicated that there is no need for EPA to become involved at any stage in the reimbursement between firms unless there is a dispute.

However, considering the agency's experience with reimbursement under other legislation, it is considered unlikely that in most cases reimbursement can be arranged to all parties' satisfaction.

The draft notice cites duplicative testing as another potential problem in apportioning costs.

It provides some discussion of each of these issues and pros and cons for the three alternative approaches. It also asks for comment.

EPA staff members said the agency is particularly receptive to industry views on data reimbursement under TSCA. They said proposals from industry would be readily accepted.

One staff member indicated that EPA would check industry reimbursement proposals mainly to see that all segments of industry, both small and large, would be treated equitably.

TOTAL ELIMINATION OF
ASBESTOS POSSIBLE SOON

Carcinogens

EARLY SEPTEMBER IS TARGET DATE FOR PUBLISHING OSHA CANCER POLICY

A 1,000-page preamble to a final Occupational Safety and Health Administration cancer policy is being reviewed by OSHA staff, and publication of the final document is now projected for early September, according to an internal agency memorandum signed by OSHA administrator Eula Bingham.

The scientific portion of the massive preamble was distributed August 9 to agency staff members, who are under instructions from Bingham to forego official memoranda and bring comments or questions directly to the attention of Anson Keller, the policy's main author.

The preamble is the result of six-months work by OSHA and Clement Associates, the Washington, D.C. scientific consulting firm which has worked with OSHA on the development of the cancer policy since its earliest stages.

Jay Turim, vice president of Clement Associates, told BNA that "many hundreds" of pages of scientific and technical information were submitted to OSHA in late June.

The work done at Clement involved reviewing the massive record compiled during two months of hearings last summer on OSHA's proposal, "Identification, Classification and Regulation of Toxic Substances Posing a Potential Oc-

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cupational Carcinogenic Risk," the agency's "cancer policy" (Current Report, May 28, 1978, p. 299).

Clement Associates staff identified 30 or 40 key issues from the hearings, and outlined pros and cons of each, Turim said. The preamble discusses many of the arguments raised at the hearings, but Turim said Clement Associates did not attempt to draw conclusions on any of the issues.

Drawing conclusions as to what OSHA's decision was on each of the issues was the job of Keller, OSHA special assistant for regulatory affairs and principal writer of the cancer policy according to OSHA health standards staff.

Keller also supervised the Clement Associates work which was done as the final part of a \$600,000 contract awarded the consulting firm in April 1977 by OSHA for developing the cancer policy, Turim said.

Similar to Proposal

According to OSHA officials and others outside the agency who have seen the preamble, the final cancer policy may not differ significantly from the proposed policy. The proposed policy called for classifying toxic substances into one of three categories, with specific regulatory action to follow (October 7 1977, p. 1026).

The final policy is not expected to be subjected to any further regulatory review, according to OSHA officials. The Regulatory Analysis Review Group and OSHA both performed regulatory analyses of the proposed policy in 1978 (November 3 1978, p. 137).

The preamble now being reviewed by OSHA staff includes a 100-page discussion of cancer as a public health problem, as well as discussion of long-term and short-term bioassays and discussion of the regulatory dilemma.

Included with the preamble is the risk assessment document of the Interagency Regulatory Liaison Group which Bingham said "accurately reflects my policy." The IRLG document was published in July (July 13 p. 533).

2.4.5-T

SCIENTIFIC ADVISORY PANEL DEFERS RECOMMENDATION ON CANCELLATION HEARINGS

The Environmental Protection Agency's Scientific Advisory Panel August 16 decided to take another few weeks to consider the mass of evidence presented by EPA and Dow Chemical Company on the risks of 2,4,5-T and Silvex.

EPA asked the panel to make a recommendation on the agency's decision to hold hearings to consider cancelling the remaining registered uses of the herbicides (Current Report July 13 p. 529).

The panel met August 15 and 16 to hear detailed presentations from both EPA and Dow on the risks presented by 2,4,5-T, Silvex and their toxic contaminant, TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin).

Alsea Study Criticized

Dow representatives criticized the agency's study of miscarriages occurring among women near Alsea Ore., where 2,4,5-T has been sprayed on forest land.

Dow said the study, which reports the incidence of hospitalized miscarriages in the Alsea area was flawed because relatively few miscarriages resulted in hospitalization.

EPA Deputy Assistant Administrator for Pesticide Programs Edwin L. Johnson earlier told the panel that the Alsea study had assumed a survey of hospital records would yield information on about 50 percent of miscarriages. However, he said a further survey indicates that only 10 to

20 percent of miscarriages were reported in hospital records. He said EPA is conducting a new study which will be completed in time for the proposed cancellation hearings.

Dow claimed the Alsea study had a number of discrepancies.

► The authors separated the data into two three-year periods. The data show no significant increase in miscarriage incidence in the second period, although 2,4,5-T spraying tripled in comparison to the first period, Dow said.

► The study reported a peak in June miscarriages following spraying in April. However, the peak only occurred in 1976 although the spraying was conducted in each year of the six-year study according to Dow.

► Miscarriages during the 1976 peak occurred among women living at some distance upwind of the sprayed area, Dow claimed.

The members of the panel concluded that they would not have time to go into the problems surrounding the Alsea study and other reports of human exposure to 2,4,5-T and TCDD.

The panel decided to base its recommendations primarily on assessment of the laboratory testing data available on the herbicides and TCDD.

Testing

CHIPs DOCUMENTS RECOMMEND TESTING, FURTHER STUDY FOR 22 OF 40 CHEMICALS

The Environmental Protection Agency is recommending testing or further evaluation for 22 of the 40 chemical substances for which it prepared Chemical Hazard Information Profiles (CHIPs).

The reports were done over a two-year period ending August 1, 1978. Copies of the report are not yet publicly available, but should be available from EPA's Office of Industry Assistance in late October.

According to a survey of the 40 reports, EPA's Office of Toxic Substances (OTS) recommended that no further evaluation was needed at this time on five of the substances.

Four chemicals were referred to other agencies because they already were being studied there or because OTS information in the CHIPs might be of assistance in helping the agencies develop policy or evaluation procedures.

Another nine of the CHIPs reports were deemed incomplete. In these cases OTS wants more data or study before deciding if the chemicals need more evaluation.

EPA considered the remaining 22 chemical substances of sufficient concern to recommend testing to begin collecting data for further evaluation or to order movement into Phase I of EPA's hazard evaluation process.

CHIPs Decisions Preliminary

In its preface to the CHIPs documents, EPA said repeatedly that the decisions made about each of the substances were "tentative" and should not be considered final agency policy.

Because chemicals are chosen for CHIP preparation for a variety of reasons, the CHIP document for each chemical is "a brief summary of information available from abstracts, Government reports, and reference works and from a search of secondary literature," EPA said.

Information in the CHIP is reported as it appears in the literature and generally no attempt is made to verify the findings during the CHIP phase of hazard assessment, EPA said.

Subcommittee chairman Janette B. Sherman, a private physician, asked which states had refused to cooperate with the voluntary program.

John DeKany, EPA Deputy Assistant Administrator for Chemical Control, replied that no state has been entirely uncooperative, although there have been problems in individual school districts, such as Allentown, Pa.

He said state laws sometimes limit the power of local authorities to deal with asbestos problems.

Larry Dorsey, of EPA's Control Action Division, said a recent informal survey of EPA regional coordinators indicated that 40 to 50 percent of schools have been inspected for asbestos hazards. He said EPA estimates that between 5 and 16 percent will be found to contain asbestos materials.

Commercial Use Rulemaking

EPA representatives at the subcommittee meeting also discussed progress on developing an advance notice of proposed rulemaking to regulate present commercial uses of asbestos (July 6, p. 496).

Cindy Kelly, of EPA's Control Action Division, told the subcommittee that regulation of major asbestos uses in paper products, pipe, and friction products would cover 60 to 70 percent of asbestos in commercial use.

She said it is important to study exposure hazards from asbestos products throughout the life of products, particularly exposure resulting from disposal.

EPA Hotline

EPA is funding a hotline to answer questions about sampling and analysis of materials containing asbestos and about quality assurance techniques.

The hotline is operated by Donald Lentzen, an environmental scientist with Research Triangle Institute in North Carolina.

The toll-free hotline number is (800) 334-8571. The hotline is manned only during normal business hours and cannot be called from within North Carolina.

Hazardous Materials

INDUSTRY OPPOSES MTB PROPOSED RULE ON AIR SHIPMENT OF RADIOACTIVE CARGO

Cargo-carrying airlines and trade associations are criticizing on safety grounds a federal proposal which would eliminate the present requirement that airlines hold exemptions to transport certain radioactive materials.

Comments received by the Materials Transportation Bureau question the Department of Transportation's ability to ensure that carriers have adequate radiation protection programs.

The Nuclear Regulatory Commission, Airline Pilots Association, the Society of Nuclear Medicine and Express Airways were concerned that DOT is inadequately staffed to review the radiation protection programs.

Under the May 21 proposal, airlines could transport non-fissile radioactive materials without keeping them separate from undeveloped film and animals (Current Report, May 25, p. 267).

The carriers would be required to include in their radiation protection program supervision by a competent health physicist meeting certain minimum professional re-

quirements. They would have to keep exposure limits within the standards established by the Occupational Safety and Health Administration and otherwise as low as possible.

They would also have to conduct monthly contamination surveys and submit results to the local Federal Aviation Administration office.

Express Airways and the Federal Express Corporation, which hold DOT exemptions, and the New England Nuclear Corporation criticized the proposal for:

- Not providing for a formal evaluation of an airline and its radiation protection program before it starts to carry large quantities of radioactive materials.
- Not requiring carriers to notify in advance the airport manager or tower of the load's nature and time of arrival.
- Not defining the specific tasks of the qualified health physicist.

Hazardous Materials

COMMENT PERIOD FOR MTB PROPOSAL ON RADIOACTIVE CARGO TRANSPORT EXTENDED

The comment period for the Materials Transportation Bureau proposal to revise the radioactive materials transport rules has been extended until October 16 to coincide with a parallel Nuclear Regulatory Commission proposal.

The changes would make MTB's rules compatible with the latest International Atomic Energy Agency standards for radioactive materials transport.

The NRC proposal, "Packaging of Radioactive Materials for Transport and Transportation of Radioactive Materials under Certain Conditions," was expected to be published in the Federal Register August 17.

The MTB comment period was extended previously from April 5 to July 5 but publication of the NRC notice was again delayed.

Interested persons may file comments, submitted in five copies, by October 16 to Dockets Branch, MTB, Department of Transportation, Washington, D.C. 20590.

Pesticides

EPA PUBLISHES TOLERANCES, PERMITS, APPLICATIONS TO REGISTER PRODUCTS

The Environmental Protection Agency August 10 to August 16 issued notice of receipt of or action on petitions regarding pesticide products.

Tolerance Amendment

EPA August 16 revised 40 CFR 180 to establish a tolerance for residues of the insecticide methomyl on lentils at 0.1 part per million (ppm) (44 FR 47934).

Temporary Tolerances

EPA established a tolerance until July 15, 1980, for fluridone in or on cottonseed at 0.05 ppm at the request of the Elanco Products Company.

The agency also established temporary tolerances until July 25, 1980, for combined residues of the insecticide O-ethyl O-((4-methylthio)phenyl)S-propyl phosphorodithioate and its cholinesterase-inhibiting metabolites on tomatoes at 10 ppm, corn grain at 0.3 ppm, and (fresh corn including sweet corn (kernels plus cob with husk removed) at 1.5 ppm, at the request of the Mobay Chemical Corporation.

Tolerance Petitions

Petitions requesting establishment of tolerances were submitted by

GASKETS
BRAKES

ASBESTOS EMISSIONS

PROJECT

Brake & Clutch Emissions
Generated During Vehicle
Operation.
SAB May 14-18, 1973

AUTHORS

M.D. Jacob-Budix
R.T. Du Charme-Budix
J.N. Somers-RPA

SUMMARY

This report outlines the study conducted on disc & drum brakes & clutches utilizing dynamometer testing & actual driving cycles in the Detroit area.

On the average greater than 99.7% of the asbestos is converted to forsterite, olivine, polymeric & carbonaceous materials. The contribution to the atmosphere is 3.2% of the total asbestos emissions.

CONCLUSIONS

- The combined total to brake and clutch friction material worn away annually is 117 million lbs. For brakes & 6.56 million lbs. for clutches. The total debris is 123.6 million lbs. Assuming the asbestos content is a maximum of 6% by wt. the amount of asbestos worn away as friction material debris is approximately 7 1/4 million lbs.
- Observations relating to emission trends were the following:
 - Asbestos emissions were higher for new friction surfaces and decreased with use.
 - Drum brakes produced more asbestos emission than the disc brakes with the difference decreasing as the friction materials continued in use.
 - Heavy duty did not necessarily give a higher percent of asbestos; the large amount of debris produced, however, gave a significant rise in asbestos emissions.
 - For the disc pads there was an increase in asbestos emissions with increased asbestos content. No such trend existed for the drum materials.
- Observations:
 - Interfacial temperatures during braking could be high enough to decompose the chrysotile asbestos into non fibrous thermal degradation products.
 - Asbestos crudes (large bundles) were calculated to reach their rapid decomposition temperature during normal braking speeds between 18-56 mph. and above.
 - Local flash temperature and severe mechanical action are major factors in the breakdown of asbestos fibers for brake usage.
 - Examination of lining surfaces revealed the presence of non fibrous magnesium silicate in both crystalline (forsterite) and amorphous phases.

Shear causes structural strain & substructural fragmentation producing material fatigue which, with binder pyrolysis, can cause lining disintegration at temp. far below those required for chrysotile dehydroxylation (550-600°C). At lower temperature forsterite has been noted to form during prolonged static heating

Vehicle Materials Engineering
December 1977

Asbestos Emissions from Brake
Dynamometer Tests.
SAB May 14-18, 1973

A.E. Anderson,
R.L. Gentler,
R.D. McGuire and
J.M. Sprys-
Ford Motor Co.

Asbestos Exposure During
Brake Lining Maintenance
and Repair.
Dec. 10, 1975
Project Re-Funded

A.H. Rohl,
A.H. Langer,
H.S. Wolf,
A.J. Weisman-
Mt. Sinai School
of Medicine

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