P U B L I C H E A R I N G

before

SENATE ENERGY AND ENVIRONMENT COMMITTEE

on

SENATE BILL 1670

(Worker and Community Right to Know Act)

Held:
October 20, 1982
Washington Twp. Municipal Bldg.
Greentree Road
Turnersville, New Jersey

MEMBERS OF COMMITTEE PRESENT:

Senator Daniel J. Dalton (Chairman)

ALSO PRESENT:

Mark Connelly, Research Associate
Office of Legislative Services
Aide, Senate Energy and Environment Committee

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SENATE, No. 1670

STATE OF NEW JERSEY

INTRODUCED SEPTEMBER 16, 1982

By Senator DALTON

Referred to Committee on Energy and Environment

AN ACT concerning certain hazardous substances in the workplace and the community.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. This act shall be known and may be cited as the "Worker and Community Right to Know Act."

2. The Legislature hereby finds and determines that the proliferation of chemicals in the workplace and the community poses a growing threat to the health of employees and community residents who are or may be exposed to these chemicals; that the number and variety of these chemicals makes effective monitoring of these potential health hazards by governmental agencies difficult and expensive; that employees and community residents themselves are often in the best position to detect evidence of effects of exposure to hazardous substances, provided they are aware of the nature of the chemicals to which they may be or have been exposed; that employees and community residents have an inherent right to know the dangers to which they may be exposed in their workplace and their community so that they may make knowledgeable and reasoned decisions concerning their employment, living conditions, and the need for corrective action; that local fire, safety, and health officials need detailed information about the characteristics and quantities of chemicals stored and used within their jurisdictions so that they can properly plan for and respond to emergencies; that county and municipal executive and legislative officials, and members of planning boards, need detailed information about the

characteristics and quantities of chemicals handled and stored in their communities; that law enforcement officials need detailed information about the characteristics and quantities of chemicals handled and stored in their communities to enable them to enforce compliance with applicable laws and regulations; that the presence of chemicals in the workplace often serves as an early warning mechanism for potential exposure of the public to those chemicals; that containers of chemicals and chemical mixtures should be clearly labeled at all times with their chemical contents; and that a policy of identification of chemicals facilitates the prevention of the adverse effect of chemical exposure by requiring identification of chemicals before they have been proven to be hazardous.

The Legislature therefore declares that it is in the public interest for employees and community residents to have access to information about chemicals which are stored in or emitted from their workplace and communities.

3. As used in this act:

a. "Chemical" means any material listed in the latest edition of the National Institute for Occupational Safety and Health's Registry of Toxic Effects of Chemical Substances, but shall not include chemicals unintentionally present in a compound in a concentration of less than 0.5% by weight or chemicals contained in packages offered for sale at retail stores.

b. "Material safety data sheet" means a written document prepared by the manufacturer of a chemical which shall conform to the format of, and contain the information required by, the United States Department of Labor form OSHA-20, material safety data sheet (latest edition). The material safety data sheet shall contain the name, address, and telephone number of the person responsible for preparing it, and the date on which the sheet was prepared, and shall provide, at the minimum, the following information:

(1) The specific chemical name which conforms to the Chemical Abstract Service rules of nomenclature, the Chemical Abstract Service number, the trade name, and all common names of the chemical and of each of the component chemicals contained in any mixture;

(2) A reference to all relevant information on the chemical from the most recent edition of the National Institute for Occupational Safety and Health's Registry of Toxic Effects of Chemical Substances;

(3) The chemical's solubility in water, vapor pressure at standard conditions of temperature and pressure, and flash point;

(4) The hazards posed by the chemical, including its toxicity, carcinogenicity, mutagenicity, teratogenicity, flammability, explosiveness, corrosivity and reactivity, including specific information on its reactivity with water;

(5) A description, in non-technical language, of the acute and chronic health effects and risks from exposure, including the medical conditions that might be aggravated by exposure, and any permissible exposure limits established by the Occupational Safety and Health Administration;

(6) The potential routes and symptoms of exposure;

(7) The proper precautions, handling practices, necessary personal protective equipment, recommended engineering controls, and other safety precautions necessary or beneficial, including specific information on how to fight a fire that involves the chemical;

(8) The appropriate emergency and first aid procedures for spills, fires, disposal, potential explosions, and accidental or unplanned emissions involving the chemical;

c. "Public information data sheet" means a written document prepared by an employer which lists all the chemicals existing or being emitted from his facility for which material safety data sheet forms are required. The public information data sheet shall provide the following information for each chemical listed:

(1) The chemical's specific chemical name conforming to the Chemical Abstract Service rules of nomenclature and the Chemical Abstract Service number of the chemical and of the component chemicals contained in any mixture;

(2) The total amount in weight of the chemical handled at the facility during the previous 12 months;

(3) The types of containers used to contain the chemical and the street-address locations at which the chemical is used, stored, handled, or generated;

(4) The maximum rate of emission of the chemical into the air, the annual total amount of emission, and the location of the source of the emission;

(5) The on-site location of either the chemical or the wastes resulting from the use, disposal, or handling of the chemicals;

d. "Discharge" means the emission of a chemical into the air or water, or onto the land, whether accidental or intentional, which is not part of a normal manufacturing process and which is not otherwise reportable under this act and which involves more than 500 pounds or 55 gallons of the chemical, or any quantity of a chemical that has been listed by the Department of Environmental Protection as a special health hazard chemical.

e. "Employer" in addition to its usual meaning means any individual, corporation, state or local government or any agency, authority, department, bureau or instrumentality thereof, but shall not include employers who employ only domestic servants.

f. "Container" means a container used to store or otherwise hold chemicals, and shall include pipelines.

g. "Facility" means the contiguous area, building, and equipment used by any employer at a single location in the conduct of business.

h. "Special health hazard chemical" means any known or suspected carcinogen, mutagen or teratogen as defined by the department, any chemical assigned a toxicity hazard rating of 3 in the most recent edition of N. Irving Sax's Dangerous Properties of Industrial Materials; and any other chemical so designated by the department.

i. "Department" means the Department of Environmental Protection.

4. a. Every employer shall obtain a material safety data sheet for each chemical or chemical component of a mixture existing or emitted at his facility which is a special health hazard chemical, and for every chemical or chemical component of a mixture which is regularly stored or handled in the facility in amounts in excess of 500 pounds, or 55 gallons, whichever is less, during a 24 hour period, except that a single material safety data sheet may be obtained for a chemical mixture if the mixture has been submitted to sufficient analysis and testing to justify a valid judgment of its properties, and the mixture label identifies the mixture's constituent chemicals. Every employer shall annually update any material safety data sheet required pursuant to this section.

b. Every employer shall prepare and annually update a public information data sheet for each facility and transmit it to the department.

c. Every employer shall establish and maintain an up-to-date material safety data sheet and public information data sheet file at his facility. Employers shall post the public information data sheet for the facility and a notice of the availability of the material safety data sheets on bulletin boards readily accessible to employees, and shall provide employees with any material prepared by the department designed to inform employees of their rights pursuant to this act. Employers shall provide their employees with access to a material safety data sheet within 24 hours of a request therefor.

d. Employers shall establish an education and training program for all current and future employees, which shall inform employees

of the nature of the chemicals to which they may be exposed in the course of their employment, the potential health risks which the chemicals pose, and the proper and safe procedures for handling the chemicals under all circumstances. Employers shall provide current employees with the education and training program within 120 days of the effective date of this act, and annually thereafter, and, for employees hired thereafter, within the first month of employment and annually thereafter. Employers shall provide all prospective employees with notice of the availability of the public information data sheet and the material safety data sheets.

e. Employers shall label containers which contain more than 500 pounds or 55 gallons of a chemical or any quantity of a special health hazard chemical. Labels shall be fixed on containers at all times and shall clearly identify the common name, Chemical Abstract Service number, and the health and safety dangers posed by the chemical.

f. Employers shall report any discharge to the department within 48 hours of the occurrence of the discharge.

g. Beginning 120 days after the effective date of this act, no employer shall store, generate, handle, or emit any chemical unless he is in compliance with the provisions of this section.

5. If any employer claims that the provision of the information required for a public information data sheet would disclose a trade secret or otherwise put him at a competitive disadvantage, he may request the department to conduct an administrative hearing to determine the legitimacy of the claim. The department may, after such a hearing, consider a public information data sheet, or a portion thereof, to be confidential, and not to be made available to the public, if the employer can show that the public information data sheet, or a portion thereof, if made public, would divulge processes or production methods unique to the employer or would otherwise adversely affect trade secrets. No employer may make a claim of confidentiality concerning emission or discharge data pertaining to chemicals which are potentially toxic in the environment. The department may release information subject to a claim of confidentiality to a licensed physician or osteopath when the information is needed for a medical diagnosis or the treatment of a person exposed to a chemical. The department may require the physician or osteopath to sign an agreement protecting the confidential information from public disclosure.

6. a. Except as otherwise provided in this act, any employee, including an employee of the State or any political subdivision thereof, or any collective bargaining agent of an employee, may

request, in writing, from his employer a copy of a public information data sheet or a material safety data sheet filed pursuant to this act for the facility at which he is employed. The employer shall provide any public information data sheet or material safety data sheet so requested within 24 hours of the request. If the request for a public information data sheet or material safety data sheet is not honored, any worker shall have the right to refuse to work with a chemical for which a request was made without loss of pay or any other right or privilege until the request is honored.

b. Any employee or an employee's representative who believes that an employer has not complied with the provisions of this section may file a complaint with the Commissioner of the Department of Labor. Upon receipt of the complaint, the commissioner shall investigate the allegations contained in the complaint and, if the commissioner deems that the employer is in violation of the provisions of this section, he shall initiate a civil action by summary proceeding under "the penalty enforcement law" (N. J. S. 2A:58-1 et seq.). Any employer violating the provisions of this section shall be liable to a penalty of not less than $2,500.00 and a prison term of not less than 30 days for each offense. If the violation is of a continuing nature, each day during which it continues shall constitute an additional and separate offense.

7. a. No employer shall discharge, or cause to be discharged, or otherwise discipline or in any way penalize or discriminate against any employee because the employee or the employees collective bargaining agent has filed any complaint, or has instituted, or caused to be instituted, any proceedings related to the provisions of this act, or has exercised any right provided in this act. If any employer takes any disciplinary action against a worker within 90 days after the worker has exercised any right provided in this act, there is a rebuttable presumption that the employer's action was in retaliation to the worker's exercise of these rights.

b. Any employee who believes that he has been discharged, disciplined, or otherwise penalized or discriminated against by any employer in violation of subsection a. of this section may, within 30 days of the violation, or within 30 days after he first obtains knowledge that a violation occurred, file a complaint with the Commissioner of Labor alleging such a violation. Within 30 days of receipt of a complaint, the Commissioner of Labor shall conduct an investigation and determine if the complaint is frivolous. If the commissioner does not deem the complaint frivolous, he shall refer the complaint to the Office of Administrative Law, which shall conduct a hearing on the complaint pursuant to the provisions of P. L.

1978, c. 67 (C. 52:14F-1 et seq.). This hearing shall be an adjudicatory proceeding, and shall be conducted as a contested case pursuant to the "Administrative Procedure Act," P. L. 1968, c. 410 (C. 52:14B-1 et seq.). If the Commissioner of Labor or employee introduces evidence that prior to the alleged violation the employee engaged in activity protected by this act, the employer shall have the burden to show just cause for his action by clear and convincing evidence. The administrative law judge's action on the complaint shall be considered the final agency action thereon for the purposes of the "Administrative Procedure Act," and shall be subject only to judicial review as provided in the Rules of Court.

8. Any person shall have the right to inspect and reproduce material safety data sheets and public information data sheets, which shall be available at reasonable hours and reasonable costs at the office of the department and at each county health department or at the county clerk if no county health department exists.

9. Any person may bring a civil action in law or equity on his own behalf against any employer for a violation of any provision of this act or any rule and regulation promulgated pursuant thereto or against the Department of Environmental Protection or the Department of Labor for failure to enforce the provisions of this act or any rule or regulation promulgated pursuant thereto. The Superior Court shall have jurisdiction of these actions, and it shall not be necessary to the maintainance of the action that the person bringing the action prove that he has suffered or will suffer personal loss or damage. The court may award, whenever it deems appropriate, costs of litigation, including reasonable attorney and expert witness fees.

10. The department shall:

a. Maintain a file containing a material safety data sheet for each chemical existing or emitted at facilities within the State and a public information data sheet for each facility in the State. If the department is unable to obtain a material safety data sheet from the manufacturer of a chemical, the department may obtain the material safety data sheet from an employer who listed the chemical on a public information data sheet required pursuant to this act. The department shall assure the quality of the material safety data sheets and public information data sheets required by this act.

b. File with each county health department, or with the county clerk if no county health department exists, the material safety data shet for each chemical used, stored, generated, handled or transported in the county, and an up-to-date public information

data for each facility located within the county.

c. Inspect facilities for compliance with the provisions of this provisions of this act and respond to complaints alleging violations of this act.

d. Initiate, when it deems appropriate, legal action in the Superior Court to enforce compliance with this act or any rule or regulation promulgated pursuant thereto. The Superior Court shall have the power to issue injunction relief for violations of this act, and to assess civil penalties of up to $10,000.00 for each violation.

e. Provide, upon request, copies of material safety data sheets and public information data sheets to fire fighters, ambulance squads or companies, hospitals and other emergency service personnel within 48 hours of such a request. In an emergency situation, the material safety data sheets or public information data sheets shall be made available immediately. A material safety data sheet or public information data sheet requested from the department by other persons shall be provided within 10 business days, except that a material safety data sheet or public information data sheet requested by the governing body of a municipality shall be provided within five business days.

11. Nothing in this act shall be deemed to limit the powers of local governing bodies to enact ordinances consistent with the intent of, but more stringent than the provisions of, this act.

12. Within one year of the effective date of this act the department shall prepare and submit to the Governor and the Legislature a report analyzing the implementation of this act, assessing the feasibility and estimating the cost of devloping and maintaining a computerized data storage and retrieval system containing the material safety data sheets and public information data sheets required by this act, which individuals having the necessary computer equipment could have access to, and identifying any ways of improving the implementation of this act.

13. The Commissioner of the Department of Environmental Protection and the Commissioner of the Department of Labor shall, within 90 days of the effective date of this act, promulgate any rules and regulations deemed necessary to effectuate the provisions of this act.

14. This act shall take effect immediately, but sections 1 through 12 of this act shall remain inoperative for 90 days.

STATEMENT

This bill requires employers at facilities where chemicals are stored, handled, or emitted to prepare information sheets on the chemicals indicating the nature of the chemicals and the health risks which they pose. These information sheets would be kept on file at the facility, where employees would have access to them, and at the offices of the Department of Environmental Protection and at county health departments, where members of the community could have access to them.

This bill also requires employers to label containers of chemicals indicating the chemical's health dangers, and to provide employees with education and training programs concerning the safe handling of dangerous chemicals. In addition, this bill establishes procedures to protect employees who exercise the right to information concerning chemicals provided by this bill.

SENATOR DANIEL J. DALTON (Chairman): Ladies and gentlemen, I would like to call this meeting to order. This is the third and the last in a series of, as I said, three public hearings, dealing with Senate Bill 1670, the Worker and Community Right to Know Act.

Before we begin the formal presentations, I would like to set up some ground rules, if I could. You should be aware that Route 295 from Trenton to about Burlington is presently closed due to, as I understand, some type of an accident which is preventing some of the people from the various departments from getting here in an expeditious way for testifying. When those people arrive, they will be given some precedence, as far as their testimony, because they are representing the different departments within the State and will be testifying relative to their department's position on the bill.

Secondly, let me recommend, and recommend very strongly but respectfully, that each speaker, regardless of which position he is taking, pro or con, relative to the bill, be given your undivided attention, and also be given the opportunity to be heard. I am going to stress that as much as possible because in speaking with both sides of the issue, I am aware of their enthusiasm with which they hold their convictions relative to this issue, and as a result, I am going to give everyone the opportunity to speak and to be heard.

Additionally, once the departmental speakers are completed, we will go into an agenda which will hopefully allow two proponents of the bill to speak and two opponents to speak, and keep going like that until we are finished with the list. However, you should note that this meeting will be adjourned at 10:30. If, in fact, you want to-- If you are not called and you want to submit testimony, you will have an opportunity to submit that testimony in writing to: Senate Energy and Environment Committee, Room 305, State House Annex, Trenton, New Jersey 08625.

Lastly, we would like you, if you can, in order to accommodate as many people as we can this evening, to hold your remarks to between five and no longer than ten minutes. I hope everyone will abide by that.

The first speaker we have this evening is a friend of mine and a friend to many of the people in the hall this evening. He is going to speak on the bill, a subject matter which he has been intimately involved in through his work in Washington. I would like to call to testify, the Congressman from the 1st Congressional District, Jim Florio. (applause)

C O N G R E S S M A N J A M E S J. F L O R I O: Thank you very much, Senator, and ladies and gentlemen of the audience. I do appreciate the opportunity to speak on this bill and perhaps from a different perspective, that is, from a Federal perspective, to emphasize why I think it is relevant to be talking about the subject and accept the framework within which we are dealing with, particularly with regard to the different levels of government that could, should, and may even be involved in this whole question of workers' safety in general.

In fact, it is fair to say that the workers' right to know about chemical hazards in the workplace is the single most important occupational health issue to emerge since the passage of the Occupational Safety and Health Act - OSHA - ten years ago.

There can be little doubt at this time about the need for this basic right to be carried for in a meaningful and forthright manner. Moreover, the evidence of occupational harm resulting from uninformed or uncharacterized toxic exposure, which prompted the enactment of OSHA, has mounted year-by-year.

I will give you just a couple of the studies:

In 1972, the National Institute for Occupational Safety and Health - NIOSH - found that 25 million American workers, or one in every four, were exposed daily to 8,000 identifiable chemical hazards;

in 1977, a Bureau of Labor Statistics survey confirmed that 59.2% of all occupational diseases that resulted in time off from work were caused by exposure to toxic chemicals;

in 1978, the existing chemicals inventory under the Toxic Substances Control Act documented that 55,000 chemicals were in commercial production and use. About 1,000 new chemicals have been added to that inventory each year, most of which had no health and safety test at the time of their entry into the market;

in June of last year, the Office of Technology Assessment, a bi-partisan arm of the Congress which conducts assessments of complex legislative issues involving technology, estimated that occupational exposures alone account for approximately 10% of the nation's cancer occurrence each year.

That is to say we know that workers are impacted. Well, what we are saying is, in the workplace, an exposure occurs which has an impact beyond that workplace. Of course, the best example of this relationship is in the area of asbestos. In several instances, community residents who had no connection to a given asbestos facility other than geographic proximity, experienced statistically significant rates of a rare form of cancer caused solely by asbestos.

There is also a growing awareness of the adverse impact that other chemicals may have on the community at large. Of particular concern are the significant number of chemicals that potentially affect or impair reproductive capacity in men and women.

At the Federal level, there has been considerable activity on two separate elements of this issue, although the nature and direction of this activity leads one to question who the actual beneficiaries will be. The first is a proposed rule to establish a so-called workplace hazards communication system. The second is a series of proposed amendments to the regulations currently governing employee access to exposure and medical records.

At present, there is no hazard communication or worker right to know system under OSHA. Of the 39,000 chemicals on the latest NIOSH registry of toxic substances, requirements for chemical identification or warnings are in place for only 20 of these substances. Exposure limits have been set for only 450 of the 39,000 chemicals.

Regarding worker access to exposure and medical records, present regulations guarantee workers the right to access upon request for records maintained by the employer. These records include listing chemical identity, but there is no affirmative requirement under OSHA or the Toxic Substances Control Act that employers obtain or generate hazard information or warn employees of the dangers of exposure.

There is a right to the records, and nobody has to keep comprehensive records. So, one wonders about the validity of the right.

Because of the similarities in the nature and fate of these two workplace information elements, I would like to discuss them jointly, and outline my concerns with the Administration's - that is the Federal Administration's - proposals, which would in effect gut all previous efforts to establish a meaningful right to know system and undermine present worker access to medical and exposure records.

The context that I would like to discuss this in is my understanding of the representations made by opponents of the bill, that there is no need for State action because Federal action would be more appropriate, and some representation that Federal action is already there to sufficiently protect workers.

I am going to suggest to you in some detail that that is not the case, and whatever regulatory systems exist now, they are under threat of being watered down or dismantled. So, if there was an argument that could be made that the Federal system is a system that should prevail, that argument doesn't really have too much force at this point. One can argue that the State approach and the Federal approach is not there.

Let me give you a couple of changes that are being contemplated right now in the rule-making process:

Definition of Employees -- under the existing regulations -- The proposals would substantially curtail the definition of employees by limiting it only to workers with "significant toxic exposures." This proposed definition ignores the experience of many individuals employed by companies involved with toxic substances who have developed health problems although those employees may not be working directly with the substance. Dr. Selikoff of the Mount Sinai School of Medicine testified before my Subcommittee regarding his research on the severe impact of indirect occupational exposure in the area of asbestos contamination.

Definition of "Toxic Substance" - The proposals, which are being advocated by the Administration, would similarly reduce the number of toxic chemicals covered by the proposals from the 39,000 recognized by NIOSH to only 3,500. The folly of this arbitrary approach is manifested in the fact that cyanide, one of the most abundant and acutely toxic substances known to man, is not included in the list of 3,500.

Affected Firms - The right to know proposal -- at the Federal level -- would only include manufacturing firms under this new definition, thus excluding workers in the construction, transportation, warehousing, service and agricultural industries. There is no justification for this exclusion of non-manufacturing employers. For example, some of the most significant asbestos exposures have occurred in construction and in the trades, where asbestos insulation workers experience cancer rates far in excess that which would otherwise be expected.

Another modification, The exemption for "Experimental Research" - The proposals would allow records of "experimental toxicological research" to be withheld from the employee or to be discarded. The apparent rationale for such a proposal is that disclosure might act as "a disincentive to employers who are inclined to conduct research in the occupational area beyond routine measuring and monitoring of toxic exposure." Such concern about research disincentives, I don't think is a serious proposal. Where is the concern for

the worker who is disabled? I am confident that the vast majority of good faith employees who feel that the (inaudible) because of their apprehensions and their concerns about what they are exposed to. They will go forward and will not stop research because of their concerns that may grow out of the existing law.

Record Retention - The proposals would also alter the length of time for which a firm would have to retain medical records on their employees. Given the long latency periods of many chronic irreversible illnesses, any abbreviation of this retention period would be tantamount to destruction of evidence.

Chemical Identity not Required - At the heart of every state and local right to know initiative is the requirement for information on chemical identity. By using hazard information as a surrogate, there is no way to independently verify the recommended handling procedures or exposure precautions. Furthermore, diagnosis and treatment of a disease resulting from exposure and the conduct of epidemiological studies are severely impaired by a lack of chemical identity.

These are but a few of the many problems and pitfalls of the worker information proposals that are currently undergoing notice and comment in Washington. That means that these are not (inaudible) these are (inaudible) purposes of comment, and the intention is accent on some modification. But these types of proposals will go into law in the regulatory system.

It almost goes without saying that these proposals are a sham, whose sole purpose is to limit corporate liability, and at the same time attempt to give the appearance of a meaningful system of worker information and access rights.

The only thing worse than having no statute or system at all is having one which functions in name only. Without substantial redirection of these proposals, that is all the workers of this country will have for the foreseeable future -- protection and access in name only.

It is this perverse form of leadership at the Federal level that places added significance on State and local right to know initiatives such as S-1670, that is and says we don't need that type of proposal, that we will take care of it at the Federal level and then proceeds to dilute and water down the already existing weak proposals that we have at the Federal level.

When a meaningful national worker right to know proposal was first introduced in January, 1981, it was opposed by most industry groups. But now that several states and jurisdictions have responded to the Administration's sham by enacting their own versions of worker and community right to know proposals, industry, and most notably the Chemical Manufacturers Association, supports OSHA's national right to know proposal. They make no secret of the fact that the Administration proposal will, "thwart a lot of activities in the states."

Let me just conclude by saying that I happen to believe that under ideal circumstances, it might even be more desireable to have a national system. But, I don't see a national system (inaudible) proposals emerging. As a matter of fact, I see emerging a dilution of the already weak system that we have. In the absense of that national consensus, I think it is appropriate that states respond in their obligation to insure a safe workplace and a safe community. As I have indicated, this entails not only workers, it entails indirect exposure to individuals in the community.

I commend you and the sponsors of this proposal. I am sure, within the legislative process, that there will be a need for and an opportunity for modifications so as to perfect the legislation.

But, the main thrust of insuring a higher degree of worker safety in the workplace is one that I think that all people of good faith can identify with. I am hopeful that your deliberations will result in a higher degree of safety from chemical exposure in the workplace. Thank you.

SENATOR DALTON: Thank you very much, Jim. (applause) The next speaker is the Commissioner of the Department of Public Advocate, Mr. Joseph Rodriguez.

C O M M I S S I O N E R J O S E P H H. R O D R I G U E Z: Mr. Chairman and members of the Committee:

I thank you for allowing me this opportunity to appear before you today to share my strong concern about the right of employees and citizens to know what chemicals they are or may be exposed to in the workplace and in the community. I applaud your action in introducing this important piece of health and safety legislation at a time when the Federal Administration is abandoning past commitments and industry has failed to take meaningful voluntary action on these issues.

Let me begin by stating that I am in strong support of S-1670, for the Public Advocate has a long history of active involvement in health, safety, and environmental issues. Through our Division of Public Interest Advocacy, we have participated in and initiated actions before administrative agencies and in court concerning toxic chemicals, hazardous wastes, and air pollutants and their effect on New Jersey's environment and the health of its citizens. Very recently I submitted comments opposing the Environmental Protection Agency's proposal to allow oil companies to increase the level of lead in gasoline because of its being an especially serious health hazard to children. Fortunately, EPA reconsidered and withdrew this regulation. The Division of Public Interest Advocacy was also involved in assuring that protective measures were taken at Rahway Prison following the lead poisoning of three workers. This activity included sending information on lead poisoning to the prisoners after the prison administration refused to properly inform them of the exposure risks and of the need for blood tests. Obviously, our support for right to know legislation is an important step consistent with these past activities.

Additionally, our participation with the health planning process and health care rate setting process has shown that the health care delivery system is focusing mainly on curing or treating symptoms of disease, and places very little emphasis on preventing disease, especially occupational disease. This approach is penny wise and pound foolish, and the result is that one dollar out of every ten is being spent on health care in our country. Indeed, a substantial amount of this money is being spent on the care and treatment of cancer patients. Cancer is the second leading cause of death in New Jersey. Salem County, New Jersey led the nation in bladder cancer for white males between 1950-1969. Bladder cancer is strongly associated with chemical exposure. Twenty-nine percent of the work force in Salem County is employed in the chemical industry.

It has been demonstrated that occupational exposures to certain chemicals can cause cancers that are rare in the general population and increase the more common types of cancer. For example, plastic workers exposed to vinyl chloride are at 200 times greater risk of liver cancer, four times greater risk of brain cancer, and two times greater risk of lung cancer than the general population.

There are 2,300 specific chemicals that are suspected carcinogens. However, without knowledge of the chemical at the workplace, little can be done to protect workers from exposure to known carcinogens, nor can epidemiologic research be conducted to uncover other chemicals which place workers and the community at risk.

Unfortunately, efforts to uncover these risks and reduce their cost in terms of health care, pain and suffering and lost productivity, have been thwarted by the refusal of industry to provide necessary information to employers, employees, unions and researchers so that they may develop solid evidence about other dangerous substances. The National Institute of Health and the American College of Preventive Medicine, in 1976 and 1977, made the strong statement that many of the deaths -- the causes of deaths -- went unreported or unrecognized because the etiology of many of the diseases is unknown.

This is still true today.

Obviously, S-1670, by naming specific chemicals, provides a basis for uncovering substances that are health risks and allows for the development of preventive strategies. In fact, if S-1670 had been in place, we might have avoided situations like Blue Spruce, Inc., also known as TIFA Ltd. In that case, the owner of these companies employed young adults and teenagers in his factory in Bound Brook. They were employed to mix chemicals for pesticides for export overseas. None of the mixtures were labeled with their chemical compositions, nor were the employees given adequate protective equipment.

When asked if these chemicals were safe, their employer answered, "yes." A complaint was filed with the regional health center and the Department of Environmental Protection by some employees of a neighboring factory. The subsequent investigations uncovered carcinogenic and other dangerous substances such as DDVP, a phosphate that penetrates the skin, arsenic, aldrin, and nerve poisons. Testing of employees at Blue Spruce uncovered significant levels of these pesticides in their bodies. These employees also complained of headaches, nausea, and rashes.

Another situation involved an individual who worked in a laboratory. He operated a Ball Mill Evaporator vat that spins and cooks chemical mixtures into powder. His employer told him to run the machine without the appropriate glass cover. When he did, the vat spilled and the chemicals poured out. He was overcome by fumes and passed out. He was found by a fellow employee and rushed to the hospital. He suffered lung damage from the chemicals. He was never informed of its composition. He presently suffers from soreness in the chest, a daily cough, morning wheeze, and shortness of breath. His physician has diagnosed his condition as acute chemical and chronic bronchitis. His employer fired him. If this Act had been in effect, the employee might have refused to operate this machine, could have avoided his injury, and would have been protected from retaliation.

In Paterson, complaints were made about odors from a warehouse in a residential area which was also within 1,000 feet of a high school. The Paterson Health Department investigated and uncovered 3,000 to 4,000 unlabeled drums of hazardous wastes. Air samples disclosed dangerous carcinogenic substances such as chlorides, benezenes, acetates, and toluene.

Obviously, if an individual wanted to uncover the chemicals to which he was exposed, it would require quite an investigation. Placing the chemical names on labels will allow for immediate response to emergencies, thereby reducing delay and decreasing the risk of further health damage. It would allow for action on the part of employees to protect themselves from exposure to potential hazardous substances, and would provide information for studies to uncover substances that are dangerous to man and his environment.

Moreover, the chemical name will give added protection to the community and to the 73% of the working population that is not protected by unions or employee associations, and which has had few routes available to uncover information about potential chemical hazards. S-1670, by requiring chemical names and other protections, will reduce the present piecemeal approach to the right to know and will not permit playing "hide the ball" with health and safety.

Effective right to know legislation must at least contain the following elements: 1. broad coverage of chemicals which must be labeled; 2. accessibility of records to all affected persons; 3. job protections for those who choose to exercise their rights under the bill; and, 4. a comprehensive enforcement scheme.

S-1670 meets many of these requirements. The choice of the National Institute for Occupational Safety and Health, or NIOSH, Registry of Toxic Effects of Chemical Substances as the basic list of chemicals covered by this act ensures comprehensive record-keeping. Other states, such as New York, already rely on this standard list as the basis for their right to know laws. The NIOSH registry has been compiled by an agency whose primary concern is workplace health and safety, and the chemicals listed in the registry reflect that agency's interest in actual chemical exposures. Thus, this list is not an unedited compendium of substances bearing no relationship to actual industry usage, but is comprehensive in scope. The requirement that Material Safety Data Sheets be furnished even for some chemicals of unknown toxicity is a reasonable one, since it is not known which of these substances may later prove to have long-term health effects. Such records are extremely important in health studies which rely on hindsight.

The provision which requires all "special health hazard chemicals", a list much shorter than the NIOSH registry, to be labeled regardless of container size, is the key to the bill's effectiveness. This feature of the bill alerts workers to the presence of hazardous substances in their workplace and informs them of preventive measures available so as to avoid needless exposure. I approve of the way the bill specifically designates a standard list of such special health hazards as the basis of this provision and then grants the enforcing agency the discretion to add to the list based on its expertise and new information. To strengthen this section, I suggest that the Annual Report on Carcinogens issued by the National Toxicology Service be designated as another source for the list of special health hazard chemicals. In addition, the phrase "reproductive toxins" should be added to the list of health effects which would trigger the special health hazard designation.

Another commendable feature of this bill is its application to all employers. This provision is at the heart of S-1670 and should be kept as it is. Chemical substances in the workplace are not handled only by employees of chemical manufacturers; oftentimes it is the non-manufacturing business and its employees which has the least access to important information on chemical names and health risks. Some members of the chemical industry have testified that they already comply with the requirements of S-1670 through their preparation of Material Safety Data Sheets, and that therefore this legislation is unnecessary. While some chemical manufacturers compile these sheets, they are under no obligation to disclose chemical identities or health risks, or to transmit this information with the chemical after manufacture down the commercial chain. For example, manufacturers of benezadine based dyes may take precautions in their manufacture because of the carcinogenic nature of benezadine. However, when dyes such as Direct Black 38 are shipped to factories for use, the labeling, if present, is often removed or changed to a trade name. Thus, even if the chemical manufacturers all compiled safety data sheets, sufficiently detailed to meet the requirements of S-1670 -- and they do not -- the information would rarely be accessible to the worker handling that chemical in these factories. S-1670 insures that such workers are uniformly protected, without regard to the size or type of their employer or whether they are represented by a union.

I applaud the strong protections for employees who exercise their right to know. In particular, the protections that guarantee employees' right to refuse to work with an unknown substance when pertinent information is not made available, and the protection that keeps the employer from retaliating against inquisitive employees and whistleblowers, highlights the preventive nature of the Act and encourages its use. The private right of action is equally important to enforce the Act. It is granted to all citizens of the State, from concerned community organizations and unions to the Department of Public Advocate. These protections will insure that the law will be effective in practice as well as theory.

Despite these excellent features of S-1670, it has some structural problems which threaten to make much of the bill ineffective. In addition, there are some changes I would suggest which would strengthen the bill as a means of monitoring worker and community health in the future.

1. Trade Secrets Exemption - There is an exemption from this bill's requirements where employers can prove a "trade secret". This exemption has the potential to nullify much of the Act. The most important part of this legislation is the requirement that employers reveal the chemical identity of substances used in the workplace. Yet, businesses, in testimony before this Committee and before the Federal Occupational Safety and Health Administration -- OSHA -- have repeatedly claimed that revealing chemical names and identification numbers would reveal "trade secrets". Federal legislation and State case law clearly favors revealing a chemical identity where there is a conflict between an important State interest in disclosure and the employer's desire to maintain a competitive advantage. In such a balancing process, the interest in protecting worker and community health and safety outweighs the employer's desire to keep such information secret. Moreover, even though companies have claimed as trade secrets whatever they feel gives them a competitive advantage, the notion of trade secrets in New Jersey case law is generally restricted to secret manufacturing processes, not lists of ingredients.

Yet, S-1670 neither defines nor limits claims of "trade secrets" to instances where there is no conflict with the overriding health and safety considerations of the bill. In fact, the bill opens the door to a very broad definition of trade secrets by permitting exemptions from the bill's disclosure requirements for claims of "competitive disadvantage." Although the legislation does place the burden of proof on the employer to establish the existence of a trade secret at an administrative hearing, that hearing has the potential to become a time-consuming vehicle for procrastination and obstruction by those regulated. This potential is due to the fact that the bill does not establish guidelines for either determining the scope of such claims or for resolving conflicts between actual trade secrets and health considerations.

The bill should be amended to prevent employers from claiming trade secret protection for substances designated as "special health hazard chemicals". Such an amendment would bring this bill into conformance with Federal and State policy, and would serve to effectuate the overriding purpose of the legislation. Without such an amendment, the special labeling requirements for these especially toxic chemicals could be largely avoided or postponed. The current provision which permits treating physicians to overrule trade secret exemptions comes too late for many employees and contravenes the goal of providing accurate data for health studies, which may be on-going or retroactive. The idea is to prevent health problems by avoiding or minimizing exposure to toxic substances.

If there is to be a trade secret exemption at all, the term "trade secret" should be defined to refer specifically to manufacturing processes which cannot be discovered by reverse engineering. Also, the language "competitive disadvantage", is vague and overbroad in this context and should be striken entirely.

2. Enforcement Responsibilities - Although S-1670 is comprehensive in its provisions for citizen enforcement through lawsuits, the bill does not provide a comparable scheme of inspections and enforcement actions by State agencies. Inspections are to be conducted by the Department of Environmental Protection. This agency currently has 3.5 enforcement personnel in the Office of Cancer and Toxic Substances Research and clearly would not be capable of carrying out the responsibilities required of it by the Act. It is not clear why the bill taps the DEP for this function rather than the Department of Labor or the Department of Health. These Departments may be better suited to workplace enforcement duties. However, whichever agency is chosen, it is vital that it be provided with sufficient authority, personnel and money to actually carry out its mission. Although citizen actions are important, they cannot substitute for on-going inspections and enforcement. S-1670 should either be amended to specifically establish or designate a division of these agencies to carry out such duties.

In addition, the bill does not grant the Department of Health authority to inspect workplaces and records in the course of carrying out health inspections and studies. A key benefit of right to know laws is the collection of what was once unavailable data for use in health studies. S-1670 should be amended to permit the Department of Health access to the workplace to take advantage of this data.

3. Record Retention and Access for Former Employees - Related to the compilation of data for health studies is the need for employers to retain records. This would enable current and former employees, as well as researchers,

to trace individual exposures over the span of a worker's employment history as well as the long latency period for many occupational diseases. S-1670 makes no mention of either record retention or access for former employees. These omissions should be rectified. The definition of "employee" should be amended to include "former employees" and employers should be required to keep workplace and the public disclosure statements for at least 30 years, the time period recommended by many researchers engaged in retroactive health studies. In addition, if an employer discontinues use of a particular chemical, the disclosure statements for that chemical nevertheless should stay on file so that employees and researchers can check for past exposures.

4. Exclusion of Chemicals Unintentionally Present in a Compound - The bill excludes from the definition of "chemical", and thus from all requirements of the Act -- disclosure statements and labeling -- those substances "unintentionally" present in a compound in a concentration of less than 0.5% by weight. This exclusion serves no valid purpose and could severely undermine the protections of the Act. Whether a substance is present intentionally or unintentionally is really beside the point; the question is whether it is toxic or hazardous. If so, it should be identified and labeled as such. Many chemical substances are exceedingly toxic even in very small amounts. Sometimes these substances are unavoidable by-products of a chemical manufacturing process and will be found in trace or small quantities in that product. An example of such a substance is PCB's, which are extremely toxic even in trace quantities and which commonly are produced in certain manufacturing processes. Since the manufacturer is aware of the presence of these substances, they should be revealed whatever the percentage of the total amount of the compound. S-1670 should be amended to incorporate this change.

5. Labeling Containers - The labeling provision should be amended to be more specific and to include smaller containers. First, "container" should be defined to clearly include a wide range of receptacles including bags, bottles, vats, cartons and tanks as well as pipelines. Second, the labeling requirement for substances which are not "special health hazard chemicals" should at the very least be amended to include the standard 55-gallon drums. Otherwise, there would be very little labeling of any chemicals except for the special health hazards. In addition, the Committee should consider extending the labeling requirement to all chemicals on the NIOSH registry, regardless of toxicity and size of container. Finally, the bill should require the labels on the special health hazard chemicals to be conspicuously attached and to include a warning exclamation or symbol in bold type.

6. Preparation of the Material Safety Data Sheet - The information required on the Material Safety Data Sheet should include "potential" health risks and the wording should be amended so that acute or chronic health risks are covered -- not "acute and chronic", as now worded. In addition, the definition of this sheet, which designates manufacturers as responsible for preparing the disclosure statements, should be amended so that repackagers, importers, and other distributors of chemicals are required to provide the disclosure statements with any chemical shipments.

7. Employee Training Program - Each employer should be required to set forth in writing and maintain in records the elements of the employee training program, so that employees and their representatives will be able to assure that the programs are carried out.

In conclusion, S-1670 takes up the Federal Administration's suggestion that states run their own affairs. In view of the Federal abdication of programs that protect worker and community health and safety, S-1670 is essential and important legislation. With the passage of this law, New Jersey will have the opportunity to strengthen its traditional commitment in this area. Obviously, this is a first step toward re-establishing a statewide occupational safety and health program which was abandoned when OSHA was established. For too long, we have tried to cure our environmental and health ills after the disease has spread. We have done relatively little to prevent these ills from occurring in the first place. Because S-1670 gives workers, communities and government agencies, like my own, the information they need to take responsibility for assuring workplace and community health and safety, S-1670 is a good, strong dose of needed preventive medicine.

Thank you for allowing me to testify. (applause)

SENATOR DALTON: Commissioner, I have no questions, but I want to thank you very much, in light of your, from what I understand, arduous journey from Trenton this evening. I appreciate your coming down and taking the time.

COMMISSIONER RODRIGUEZ: Okay, thank you.

SENATOR DALTON: The next person to testify is Mr. Paul Arbesman, Deputy Commissioner, Department of Environmental Protection.

P A U L H. A R B E S M A N: Senator Dalton and members of the Committee on Energy and Environment, I thank you for inviting us to attend this Committee hearing to offer comments on this important bill, S-1670, concerning hazardous substances in the workplace and the community.

The Department supports the concept of disclosure embodied in the recently introduced Worker and Community Right to Know Act with recommendations for changes in the approach proposed to implement the law. The bill has the potential to provide improvements in the occupational and environmental health in New Jersey. A more complete understanding of hazardous substance exposure would be an important tool in the epidemiological evaluation of New Jersey's health problems to both employer and employee.

For the environmental portion of the bill, the Department is required to perform five major tasks under the bill. First, to maintain files of Material Safety Data Sheets and Public Information Data Sheets; second, to inspect facilities to determine compliance. This will require a large field and clerical support staff, the number dependent on the number of affected work sites. Third, initiate legal action to ensure compliance; fourth, report to the Governor and the Legislature on implementation of the Act; and fifth, develop regulations to carry out the Act.

We are recommending a change in the roles of government agencies in the implementation of the Act. First, rather than the Department of Environmental Protection being charged for these responsibilities, we would recommend that the counties be given responsibility for the majority of the information gathered and publication activities.

We have come to a point in time where we have talked a great deal about the role of counties in the area of environmental protection. Gradually, the Legislature has directed more and more responsibilities to the counties as

the most logical level of government for implementation. The County Environmental Health Act and the Solid Waste Management Act are two key examples.

It makes sense to us in the review of the responsibilities under this Act that the county interface with their own residents on information related to the chemical substances used in plants located within that specific county. Rather than having one funnel for all this information in a state agency, there would be 21 organizations, which in our mind would more fully implement the intent of public disclosure. But the county should be more than a repository, it should take an active role in dealing with their residents and facilities with respect to this type of information.

There are several roles for the Department. One would be to have access to the information collected for research and regulation purposes, as necessary, where that information may differ from data already available. Secondly, we could on a request basis by the county be asked to verify information as necessary, where technical complexities exceeded the capabilities of the county agency. Thirdly, we should investigate how much the existing emission data informati already available to the public from our Department, meets the intent of the bill if made available through county offices. And the Department's role versus the counties' in policing the information from industry needs to be delineated.

A state-county working group might be a proper forum for recommending such a breakdown of responsibilities. Implied in this proposal is a designated source of funding for county agencies and the Department to discharge their responsibilities. Along these lines, I would recommend the following approach based on our experience with fee collection programs. We believe the counties should have the ability to collect directly from the industries to enforce this program. However, we are finding more and more that as the Legislature has given us fee collection powers, we are spending enormous amounts of our time establishing fee rules which do nothing for environmental improvement. We have been working on environmental discharge fees for two years and the problem only gets worse as general appropriation funding becomes limited.

We would recommend a new approach in this bill, and that is the establishment in the Legislature of the fee level by industrial facility. In that manner, the agencies would have a certain source of revenue provided by statute that would be available for the purposes of the Act. Previous bills considered by the Legislature for the solid waste industry, for instance, have established a set business fee which could be used to fund regulatory programs. A fee associated with the size of the industry, perhaps by the number of workers, and established by statute would allow this program to begin quickly.

We see no reason why many of the responsibilities in the environmental area specified in this Act could not be carried out at the county level with the proviso that the Department could be called in to verify information and assist in technically complex cases, where appropriate. We believe that a partnership structured in this way would further support our current efforts to see the counties become more directly responsible for the solutions to environmental problems.

In addition, to evaluate the level of resources necessary, if we were to enforce the environmental portion of this legislation, our fiscal office has conducted a preliminary analysis of the cost of the bill as introduced.

For Fiscal Year 1984, the estimated cost of meeting the responsibilities under the bill would be $9.3 million based on administering a program covering an initial list of 1,000 chemical substances. The Department has made assumptions that 20,000 facilities would be required to submit a minimum of two documents for our review.

We understand that the list of substances referred to in the bill could require that we deal with up to 40,000 substances. The cost of such a program, while not linear, would be astronomical. We have stopped short of an analysis of the full cost of the bill due to the present budgetary climate and the limited amount of funds that would be available to appropriate for this program. Legislation without financial support would unjustifiably raise the public's expectations.

We therefore recommend that the Committee focus on the following areas in considering refinements to develop a program that the counties and State could implement which would begin to address the laudable goals of the bill.

1. Number of chemical substances covered;
2. number of industries;
3. other State and county agency responsibilities; and,
4. existing environmental regulations.

The Department has been conducting a survey of manufacturing industries throughout the State regarding the manufacture, use, storage, emission and disposal of 154 toxic and carcinogenic substances. These substances were selected on the basis of overall use and toxicological information indicating potential human health hazards. Approximately 15,000 industries have been surveyed, although less than one half have recorded use of these substances. The Department has compiled an extensive data base from the survey results enabling us to map and statistically analyze this information. The Department has adopted regulations requiring reporting of this information for the Industrial Survey pursuant to its statutory power to "conduct and supervise research programs for the purpose of determining the causes, effects, and hazards to the environment and its economy". Industry compliance with the survey has been good. I have attached to my prepared statement, a copy of the regulations and a list of substances included in the survey.

We are suggesting that the Committee consider the option of using this already developed data along with publicly available emission information as the first phase of a public disclosure program. While such an option would certainly limit the scope of the bill, it would provide the public with information immediately on those chemicals which are the major potential source of environmental problems. I am dealing with the portion of the bill which deals with the outside environment, not the inside environment - the workers exposed indirectly. Furthermore, this approach would more realistically reflect the ability of the government to verify information provided by employers and has the advantage of improving an already existing attempt to gather such data and make it available. The responsible agency should have the authority to add to the list through a rulemaking process as the program develops and the need arises.

We have certain other areas covered in our testimony, which are related to the number of industries covered, and we have recommendations on that. We also have recommendations on agencies inside a plant.

In summary, we believe the Department of Health should have specific rules with respect to the responsibilities inside a plant for worker health and safety. They have the expertise in that area. They can assist the Department of Labor, and I believe that together, a partnership could be created to make a workable program for both employer and employee.

We also note that there are existing environmental regulations on the books. Some of those regulations are in conflict with the intent of this law. I have prepared a statement which identifies some of those Federal and State laws, the Pesticides Law and Spill Compensation and Control Act, and others which we think require some clarification.

The bill would provide a 90 day period to adopt regulations under the Act. Due to the need of developing a new regulatory program in accordance with the due process requirements of the Administrative Procedure Act, a more realistic time period should be provided. Knowing the Committee's desire for full public involvement in the legislative process, the 90 day period is insufficient and should be expanded to provide ample opportunity for public involvement in the rulemaking process.

Finally, I would like to point out that "right to know" is the first step in a much more resource intensive process that could be known as "right to regulate". Once all this information is known, we will be asked to make some very complex public health and economic decisions. Few federal standards exist for the substances cited, and the standard setting process will be extremely complex and of long duration. We should not raise expectations that "right to know" will make us any smarter, overnight, in reaching those judgments, and we have not factored into our presentation any resource estimate of what be required to set standards and apply them; but we know it would be expensive.

Thank you very much.

SENATOR DALTON: Thank you. We were going to be supplied with the-- where the bill is a duplication of Federal standards. Is that still in the works?

MR. ARBESMAN: That is in the testimony.

SENATOR DALTON: That's right in the testimony?

MR. ARBESMAN: Yes.

SENATOR DALTON: Okay, I appreciate that. Thank you very much. Are there any other members of the Executive Branch who are here to testify this evening? (no response) I would like to call Mr. Charles Morris, Chairman of the South Jersey Committee, Right to Know Coalition, and Chairman of the Health and Safety Committee, Chemical Workers Association.

C H A R L E S M O R R I S: Thank you, Senator Dalton. I, too, would like to thank you for this opportunity to appear before you to present some input into these hearings.

I am not, nor do I pretend to be, a biochemist, a toxicologist, a lawyer, or even an authority on safety and health. What I am is a lifelong citizen of the State of New Jersey who has spent 27½ years working in a chemical plant, a citizen who refuses to believe that it is either coincidence or necessity to have a high rate of cancer, tumors, birth defects, miscarriages, and other toxic-related problems that now exist with my co-workers and my community neighbors.

On October 6th of this year, Mr. Hal Bozarth of the Chemical Industry Council spoke to the Committee in Trenton and presented many industry facts, facts which when we deal with them in their true light, turn out to be, in truth, fiction. To expose some of these so-called facts, I would call tonight on Mr. Bozarth or any other representative of the Chemical Industry Council, to answer some of the following questions.

Mr. Bozarth started out by pointing out that there are 130,000 people employed by the chemical industry in the State of New Jersey. I would ask Mr. Bozarth, what about the 7½ million citizens in the State of New Jersey who are not employed by the chemical industry? Do they not have any rights?

Mr. Bozarth points out that in the National Safety Council's report in 1981, that the chemical industry is ranked number one in safety. I would ask Mr. Bozarth, what about health? Why don't we ever see the figures on health? Where does the chemical industry rate in that field? I believe this is not directed at cuts, bruises, and broken bones; I believe we are talking about cancer, lung disease, and birth defects.

He goes on to state that the chemical industry now supports a strong national program for hazards communication, when, in fact, what the chemical industry is endorsing is a very weak "right to know nothing" program, which is cited by their own publication, namely, "Chemical Week." Incidentally, anyone who wants to read these, they are on the table there. In the "Chemical Week", in their viewpoint, it is stated, "Even today's imperfect knowledge of the long-term health effects of exposure to chemicals makes it clear that workers are entitled to be protected by much tougher standards in many workplaces. There are some signs that OSHA may be unwilling to impose these standards."

The company by which I am employed stated in a 17-page document -- which they have submitted to OSHA. I believe last Thursday it was actually submitted, for the record. The Right to Access Standard is currently under review down there. -- "duPont believes that it is inappropriate to make distinctions on disclosure requirements, based on the fact that a chemical is a carcinogen, a mutagen, or a teratogen. The appropriate criteria for determining whether disclosure is necessary should be whether the information is needed by a physician who has medical responsibility for an employee." Now isn't that beautiful? In other words, you have to wait until you have cancer, you have to wait until in the reproductive process you have created a child that has a mutation, or, you have to wait until something else happens to your children before duPont finds out what you were exposed to.

The next statement, which I will take exception to, was where they had stated that the manufacturer will assess the hazards of the chemicals which they produce. That, gentlemen, is just exactly what the problem is. You are hiring the fox to watch the hen house.

I will point out one other copy of "Chemical Week Magazine." This is their publication again. They did an article on the Right to Know, and in that article, they say, "There is an important item involved in industry's rather grudging support of OSHA standards. Within the framework, chemical manufacturers would wield considerable power. The proposed standard covers only hazardous substances, and the manufacturer determines what is hazardous." That difference appeals to many executives in the chemical industry. So much for their strong standards.

He goes on further, in his next paragraph, to talk about the member companies of the Chemical Industry Council, that they have a cooperative program. I would ask, what about the non-members? Does the Chemical Industry Council think it is okay for them to do as they please? I will also ask, is the established cooperative program which he is referring to-- There is one that is commonly referred to as Chemtrack. I believe one of our people is going to address his experience with Chemtrack a little later in this program.

Then they go on to say that they oppose S-1670 for a multitude of reasons. Basically, they start naming the different pieces of legislation that currently exists on the Federal, State, and local levels. This is the same industry, I would remind you, that is now talking about the Occupational Safety and Health and Clean Air Act, and what have you, who lobbied extremely heavy in Washington to have $310 million cut from the Environmental Protection Agency, and an additional $50 million cut from OSHA. Is this because they want an effective regulation?

We now find out, through this piece of business that was prepared, that not all chemicals are hazardous. So, I would assume that since not all chemicals are hazardous, as it is referred to in here, the industry's viewpoint is that we should exempt all.

Along those lines, I will point to, again, the testimony of the National Institute of Occupational Safety and Health, which they presented on June 15, 1982 at an OSHA hearing, in which they state, "A recent analysis of the first National Occupational Health survey indicates that of 64,891 identified products encountered in that survey, and 90% of the trade-name product cases encountered, neither the employer or the employee knew the identity of the chemicals in the product." Which ones do they propose to be classified? Ten percent that they knew what was in there, or 90% that they didn't even know themselves what was in there?

They also talk about their trade secrets, about how detrimental this is going to be, when they talk about the process by which a product is manufactured. I have been through this bill, which you have prepared, on many occasions, and I have not seen any provisions in that bill where industry would be required to reveal their process. That is not part of the bill, to the best of my knowledge.

Next, they are talking about the enormous cost of preparing the paperwork which goes to the State and to the companies. I would assume, by this, that since they are saying there is an enormous cost in preparing the paperwork, that they presently do not have the paperwork. In other words, they have us working with chemicals, and they don't even know what is in them and they have no reason to believe that they should know what is in them. Otherwise, I am sure that they would certainly have Material Safety Data Sheets available.

Mr. Bozarth went on to state that with regard to the 24 hours granting the right to refuse and the presumption of company guilt until proven innocent, and states that this is a very detrimental portion of the bill-- He states that this is a very detrimental thing in this bill.

I would point out that industry-- Being a Grievance Chairman of a union, I would point out that I am well aware of the fact that being guilty until proven innocent is exactly the stand that industry takes in the grievance procedures now. I don't know a single employee who has ever been terminated, and then they say, "Well, you stay on the job until we hear this case is in arbitration, because we want to make sure you are guilty." The man is fired, and then it is up to him to

prove his innocence and get his job back.

Lastly, I will refer to the statement, "It is our position that the last thing the corporate managers want are incidents whereby workers will be adversely affected by toxic materials. It is in our best interest to do everything possible to ensure that the workers in a community are adequately safeguarded against exposure." God bless them.

I wonder where these same people who are preparing these statements were in 1939, when the first reported deaths due to asbestos exposure became known. They sort of went into hiding, I believe, until 1972, or in some cases, 1979, and in some cases even later. They stuck their heads in the sand. We don't tell the people what is there, so therefore, they won't know.

I would ask them about PCB's. They still can't make up their minds about PCB's. One day they want them to be a carcinogen, and the next day they don't. I guess it depends on who is handling them and who is manufacturing them.

I would point to formaldehyde. Here again, they can't make up their minds which way they are going to go. When are we going to know just exactly what industry has in mind?

I implore you not to be swayed by those of industry who will be attempting to undermine this bill by making a cost-benefit comparison. A problem of this nature that is equated by the exact size of mathematics is far too impersonal. It does not weigh life, health, suffering, and death of workers against profits; it weighs only numbers against numbers. It depends on those costs that are supplied by industry. I would be willing to bet my bottom dollar that the findings of these analyses would change drastically if the executives supplying those cost figures were taking the same risks as those whom I represent. (applause)

When was the last time you ever heard of a company executive standing next to a pipefitter who was breaking in a product line when the worker didn't know what was in that product line? When was the last time you saw a company executive build or buy a house in close proximity to their plant? They know what is inside their gates and pipes, and therefore, they make damn sure they live and keep their families as far away from their plants as possible.

Mr. Senator, we must have a right to know for combined labor and community. The exclusion of either group can only lead to hysteria amongst the unknowing.

Senator Dalton, on behalf of the Labor, Environmental and Community group, represented by our coalition, I commend you for the compassion you have shown to all mankind in the State of New Jersey, by your drafting of S-1670, the Worker and Community Right to Know Act. Thank you. (applause)

SENATOR DALTON: Thank you. The next speaker will be Ms. Carol Barrett from the Sierra Club. This is the second speaker, speaking -- I am presumptuous here -- on behalf of the bill. After Ms. Barrett speaks, two opponents, or two people who feel the bill should be changed in some way will speak. Carol?

C A R O L B A R R E T T: Thank you, Senator Dalton. I will be brief, but by my brevity, do not underestimate our support for this legislation.

My name is Carol Barrett, and I am the Chairman of what is called the West Jersey Group of the Sierra Club. I represent the members of the seven southern counties in New Jersey.

Our number has grown since we began, in 1975. We started out with 260 members, and since September of 1982, we have a total of 951 members. The largest gains have been since 1980. This demonstrates to us that many previously unconcerned people no doubt feel insecure that their government would reflect their environmental health, not become alarmed, and want to be part of the Sierra Club's goals, with regard to human beings as an integral part of the environment.

The (inaudible) conservationists and environmentalists strive only to protect, conserve land, air, water, and wild life (inaudible). Consequently, because we are part of this human chain, the Sierra Club's encompassing goals would heartily endorse this legislation.

S-1670, popularly known as the Right to Know Bill, has shed light on the troubling mystery of most of our citizens. That is, "what is in it?" Because people are asserting the right to know what they ingest, touch, and inhale, the contents of this bill are rightly targeted.

Section 2 in the introduction explains clearly why this information is essential to both the worker and the community. Considering dreadful illnesses discovered, caused by a myriad of chemicals and their carcinogenic effects, everyone is entitled to know what is in what.

People in responsible positions -- such as firefighters -- must have the best possible information to carry forth their jobs. Prevention is surely a good cure in the case of chemical contamination. In fact, we do not know how to cure many of the ills resulting from improper use of these chemicals.

It is imperative to note that a mix of organizations and individuals are working together on the Worker and Community Right to Know Act. Sierra Club members have been affiliated with workers' unions for some time in order to share knowledge and experience in this particular field. We can also obtain results by pooling our efforts.

Carrying philosophy further, people from all walks of life have in common concern and responsibility for their health and well-being. Everyone -- not just union members in a workplace -- will benefit from receiving the results of this bill.

It is so inclusive in its provisions, without being intrusive into industries' rights that it is difficult to understand why there should be resistance to its passage.

We hope there will be no objections to the main purpose of the bill, and if any reasonable changes are offered, we are sure cooperation will be forthcoming. However, this is really tactical legislation, serving the populace at large. The provisions must be retained in the present strength in order to fulfill the purpose of protecting human health.

The time is right for this legislation, and we urge this Committee to pass it on to New Jersey legislation promptly. We also urge you to follow through with vigorous support for this legislation. Thank you.

SENATOR DALTON: Thank you, Carol. (applause)
The next speaker will be Mr. Hal Bozarth of the Chemical Industry Council of New Jersey.

H A L B O Z A R T H: Good evening, Mr. Chairman, members of the Committee, I am Hal Bozarth, Director of Governmental Relations and Public Affairs for the New Jersey Chemical Industry Council.

As you are aware, the 70 members of the Chemical Industry Council make up a significant portion of the industry which is the State's largest. Nationally, as I said before, New Jersey ranks second in total chemical production.

At your request, Mr. Chairman, we are presenting the third segment of our testimony tonight. At the first hearing we laid out our general concerns of S-1670. As you will remember, I testified at that time that the responsible members of the industry conceptually support effective hazards communication programs to ensure the proper protection for the health and safety of our workers. Our members have spent, and continue to spend, significant sums of money pursuing this goal.

At the second hearing, I endeavored to show the overlap of existing Federal, State, and local regulations regarding certain sections of S-1670. Unfortunately, I was unable to complete my testimony at that second hearing, and I am willing to try again tonight.

Also at your request, Senator Dalton, the New Jersey Department of Environmental Protection has requested our assistance in assessing that overlap, which does, in fact occur. We are pleased to announce that we have begun working with the Department on this issue.

I would now like to provide for the Committee a review of some of those acts and regulations which overlap certain segments of S-1670. It is our opinion that after careful review of this presentation and the information we provided to the Department, you will recognize that some of the concerns addressed in S-1670 are already being effectively dealt with.

My colleague, Cliff Hellings will hold the chart up, and this is, again, a general way to show you where in the sections of S-1670 we feel have an overlap in existing Federal, State, and local regulations.

(demonstrates charts)

You see, at the first part-- I apologize to the members of the community here who have not seen this. We will definitely give them a chance to see it later on.

The first section deals with the Community Right to Know.

Very briefly, it is our considered opinion, Senator, that the acts listed on the left side of the chart covers certain sections of the Community Right to Know portion of the bill, under discharge reporting, public information, or emergency information.

I might point out just a few of those two:

Research Conservation and Recovery Act covers all three; Food and Drug and Cosmetic Act touches on public information, as do many of these acts on the Federal level.

At the State level, we in the chemical industry have been, in an on-going fashion, involved with the State regulation of the Department to effectuate these regulations.

You can see that the regulations cited here to the left, Senator, do touch on specific portions of the Community Right to Know, either discharge reporting, public information or emergency information.

Down on the bottom are the issues on which we feel there is an overlap in the Employee Right to Know section of the bill. You will see that there are individual x's here on the chart where we feel the overlap does exist.

I have ready to submit to you, Senator, extremely detailed information related to the chart, and we will cite by cite where the x's fit in. As I said, we are more than willing to work with the Department to see exactly where the overlaps occur in other areas that we have not yet been able to ascertain.

You will notice here, the hazardous material, as we do indicate, that the Occupational Health and Safety Act is at this date a proposal. It is our understanding that although it is not in effect now -- as Congressman Florio indicated -- it will be in effect within the first month or so of the new year. (inaudible) We are covering all employees in the nation with effective means for comunicating hazards in the workplace. As I say it too many times, Senator, our companies do an extraorindary job of communicating those hazards.

I would like to take a second to show this second graph, very quickly, so I can get to the rest of my prepared testimony.

This is one company's example, in flowchart form, of exactly the length to which they go to, again, effectively communicate their hazards in the workplace.

We have information to submit to you, which you will be able to see. But suffice to say that the MSD sheet, which runs at least five pages long, is included in accessible places within the workplace for workers to go to.

It includes hazardous materials, it tells the warnings, it tells the hazardous ingredients, it tells the health hazard information, what first aid to use, and what the effects of overexposure may be.

Our point, again, being that our companies are taking an effective role in making sure that if a worker suspects he has been exposed to a substance, that he knows what the symptoms are, he knows what precautions should be taken, and he knows what remedies to take.

(Continues with charts)

This label down here, Senator, appears on a drum. That label lists, in brief form, again, the standard information that a company MSDS lists. So, every drum you will find in the vast majority of the companies in the chemical industry, is what you will see in a warehouse, with that information on the barrels. I think you saw that when you visited a plant here in Gloucester County.

Very quickly, again, this is the actual sign that appears on all transporting vehicles when they contain substances which is reactive, corrosive, or meets other definitions of the Federal Department of Transportation laws.

I think that is a very good point. If we had 50 individual statutes to cover transportation in the country, we would have an unworkable system. What we are saying is, while we support the effective communication of hazards for the workers, to do it on a piecemeal basis rather than a broad basis, strong Federal standard, is going to cause some problems and not, in effect, do the kind of job that you are trying to do, and which we agree with.

We will, again, give you this information when we finish testifying. I do want you to see these two things that our people took the time to put together.

As you are aware, Senator, the issue of confidentiality of proprietary information is of great concern to our members. Everyone says, yes, it is a great concern, and frankly, we submit that it is.

There is no sufficient protection, we submit, in S-1670, for the protection of this vital information, and I will tell you why.

We see absolutely no protection for any information included on the MSDS, a basic document required of everyone in the bill. Keep in mind that the MSDS requirements under S-1670 include a listing of all chemicals and components of every mixture. Frankly, competitors of our companies are just waiting for this information to be divulged. I must try to impress to this Committee, and to you, Senator, that this confidential information is the basis for individual companies to ensure the competitiveness of their products. Competitors generally cannot learn the makeup of products through analytical processes alone. S-1670 would help these competitors to take advantage of companies' efforts which may have, and probably did, cost millions of dollars on their research and development of the products. We submit that by divulging this proprietary information will add nothing to the effective communications of hazards in the workplace. That is the issue. It is not what is in a person's process or what is in their product which they make, but is, as we agree, to effectively communicate any hazard involved.

S-1670 purportedly gives some protection for the information released under the Public Information Data Sheets - PIDS. The bill states, "If any employer claims that the provision of the information required for a PIDS would disclose a trade secret or otherwise put him at a competitive disadvantage, he may request the department to conduct an administrative hearing to determine the legitimacy of the claim."

Our interpretation, Senator, is that we must put this information in proper form 120 days after enactment of the bill. Here is a copy, Senator. Our people had indicated that this is approximately one-third of the information for one plant that PIDS required. So, expedientially, it is easy to say that maybe an additional two-thirds would bring it up to here.

I will refer to this again in a minute, but let me say that this is the information we would have to put together within a short period of time, and, by S-1670's definition, must request and obtain an administrative hearing to review each chemical on this list which represents, we believe, confidential information. It also appears that there is no possibility for appeal from a decision of an administrative hearing pursuant to section 5 of S-1670 on a given substance. Will this administrative hearing be public? The bill is silent.

We believe that there are ways of effectively protecting workers as part of comprehensive hazards communication programs. S-1670 is not the way.

Even with what was presumed to be good confidentiality protection at the Federal level, I would like to cite one example where a disastrous situation developed. A CIC member company -- located in South Jersey -- under the Federal Insecticide, Fungicide and Rodenticide Act - FIFRA - released confidential information as required to the Environmental Protection Agency - EPA. The EPA inadvertantly disclosed this proprietary information to one of my member company's competitors. It is obvious that this competitor will use this disclosed information, either out of state or in another country, to duplicate the product. This product happens to make up 40% of the company's total profit. This is the type of situation which the CIC members must avoid here in New Jersey. They must have adequate and sincere protection so that the type of situation I have outlined does not happen again.

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By carrying this line of thinking further -- I submit this in all due respect -- this type of information is extremely dangerous in time of a national emergency. I don't think I have to elaborate on that. Again, we suggest that the release of this type of information will do little to effectively communicate the hazards of a situation to emergency response teams, but could cause great danger if it falls into the wrong hands.

Keep in mind that there is a liability issue involved should such an extortion, as I have just described, take place in New Jersey. Who will the remaining members of the community and/or the company sue for improper release of confidential information?

Let me come back now to what a PIDS requires. Again, this is a third of materials that would be required on the Public Information Data Sheet. This document is much less than the total information S-1670 would require. It requires chemical name, CAS#, components of mixtures, annual weight of substance, types of containers used, rates of emissions, and locations of the source. Together with this information, in an emergency situation, a MSDS should be made available immediately to emergency response teams. We submit that this information would be less than useful to emergency response teams at the time of an emergency. The volume and kinds of information required under S-1670 is not what emergency response teams need in order to respond to an emergency at a facility. In fact, in a town where their facility is located, and happens to be in New Jersey, a company met with the emergency response teams from that town and decided -- they decided, the emergency response teams -- that this was the information they felt was what they would need in an emergency response, rather than carrying something much larger around for every plant location within a municipality.

I submit to you, as I said, that companies already are working closely with emergency response teams to effectuate workable programs in case of emergency. I bring to you a point of information, what the Denville Volunteer Fire Company did in 1980 for their hazardous materials emergency plan. It is rather detailed and rather specific on what actions may be taken, and yet, it doesn't include, nor did they want it to include, the information that S-1670 would require.

This shows that certain emergency response teams need much less information than S-1670 calls for. This example is for only one facility. Each emergency response team will need different sets of data to respond to different locations. This type of procedure should be established on a case by case basis. There should not be one set of requirements for all the thousands of locations, each one distinctly different.

I would like to read very briefly from a letter from a fire chief who comes from across the country, California. That state is recently undergoing the Right to Know situation also, and voluminous amounts of materials were sought by members of some of the factions there that some of these people should have.

This is a letter in response to the Assistant Director of Health Services as to what emergency response people really need. I will just quote a few lines.

"Our suggested provisions were attempting to provide what we felt to be a clarification for the proposed right to know, and should not be interpreted as a worker right to know ordinance. The reason for our concern is that the 'public need to know' has more validity than the 'public right to know,' because of the possibility this information may fall into the hands of" -- this is not my quote -- "'radicals', who might be using information in a matter called dangerous and detrimental to the public. I feel the citizens of this county would be better served by having these plans developed and upgraded by both the industrial community and the need to know agency on a case by case basis."

I will be happy to give you a copy of that letter, Senator.

We have endeavored, during this public hearing process, to list for you the reasons we cannot support S-1670. We would, again, like to inform you that the Chemical Industry Council of New Jersey does support strongly the concept of effective hazards communication for both workers and communities through their emergency response teams. In fact, we continue to strongly support the soon to be promulgated Federal Occupational Safety and Health Act regulations on hazards communication.

We would again like to make a strong statement in opposition to the use in S-1670 of the NIOSH list of substances. This list is much too cumbersome, contains many substances of no hazards, and will add little in effectively communicating the hazards of those substances which are used in the workplace.

As I end my testimony, I would like to extend an invitation to any Committee member who cares to do so, to visit facilities of CIC member companies to see in person how effectively our industry is now handling the job of effective hazards communication. We would be glad to take you on a plant tour to show you exactly, and everything that you would like to see, and I would be glad to facilitate such tours.

Senators, thank you, again, for the opportunity to present the views of the chemical industry at these three hearings -- or two and a half, in my case -- on S-1670. We look forward to working with you in the future on this and other issues. We would be glad to do so. Thank you, Senator. (applause)

SENATOR DALTON: Thank you, Hal. The next speaker is a gentleman who caused a great deal of concern, not only about my stance on the issue, but also his own stance on the issue, because of his last name. (laughter) His name is Bill Dalton. He represents the Fragrance Materials Association.

B I L L D A L T O N: Thank you, Senator. The members of the Fragrance Materials Association manufacture fragrance chemicals and compounds which their customers -- manufacturers of household and personal care products -- incorporate into their consumer products. Over thirty-five FMA members have plants in New Jersey, and many more ship products into the State. Fragrance compounds are highly complex mixtures of materials such as natural oils from flowers and other plants and their synthetic counterparts. The members of FMA manufacture a substantial proportion of the fragrances used in the United States and their products provide distinctive qualities to such products as perfumes, soaps, colognes, cosmetics, deodorants, air fresheners, shampoos, detergents, after-shave lotions, and cleaning products. The distinctive qualities contributed by fragrances help create product identities responsible for the success of many well-known products. Most fragrance compounds are custom made and make that particular customer's product unique.

FMA members' concern for the safety of our workers and products is second to none. An independent review of the occupational safety and health conditions of the flavor industry which was recently conducted concluded that:

"There is no factual evidence of a significant risk of occupational disease associated with . . . fragrance manufacturing."

The fragrance industry must be excluded from the scope of this bill which would unnecessarily threaten trade secret ingredients which are essential to the existence of the industry.

Since 1980, the industry has had a stay of certain provisions of the Federal Occupational Safety and Health Administration's records access standard.

The development of the fragrance that will make a meaningful contribution to the success of a personal care or household product is a painstaking and expensive process. Perfumers, who are well compensated for their training, experience, creativity, and olfactory acuity, labor to create the true asset of the fragrance manufacturer, the trade secret formula. Such a formula may take years to develop and, in some cases, be worth hundreds of thousands of dollars and lacks the protection of the basic patent law.

Because of their value, secret formulas are carefully guarded by such measures as coding, use of subformulas, safes, secured computers, and the addition of ingredients to mask the presence of other ingredients. Contrary to popular belief, history shows that reverse engineering does not occur in this industry. This is due at least in part to the fact that fragrance compounds are highly complex mixtures typically consisting of hundreds of ingredients. A fragrance compound may consist of as many as 1,500 ingredients. The difficulty of "cracking" such a formula, with many constituents present at very low levels, is obvious.

In short, our industry is built upon creativity, which can only be protected by maintaining trade secrets. If this bill is enacted in its present form, the ability of fragrance manufacturers to continue compounding operations in New Jersey would have to be seriously evaluated.

The fragrance industry, for the most part, is typified by small companies who compete with one another, and often, with their own customers. It is a highly safety conscious industry. The safety of compounds is essential to the successful fragrances since they are intentionally applied to the human body. To assure the safety of fragrance materials, the fragrance industry formed the Research Institute for Fragrance Materials, Inc. - RIFM - in 1966. RIFM conducts safety research and

provides expert safety evaluation of fragrance materials. Studies on primary irritation, percutaneous absorption, immediate and delayed hypersensitivity and photoallergic, phototoxic responses and systemic toxicity have all been evaluated by the RIFM Expert Panel. Since 1972, RIFM has regularly published monographs on particular materials in Food and Cosmetics Toxicology. They contain data on chemical and physical properties, health effects data, and provide a comprehensive safety evaluation. RIFM has also done epidemiologic investigations of certain populations of fragrance users.

In addition to responsible self-regulation, the safety of this industry is also assured by extensive regulation pursuant to Federal and other laws. Manufacturers of fragrances used in cosmetics are required by the Federal Food, Drug, and Cosmetic Act to ensure that their products do not contain any poisonous or deleterious substances, and that they have not been processed or stored under unsanitary conditions that might lead to contamination. Fragrance manufacturers must also comply with the Occupational Safety and Health Act, the Consumer Product Safety Act, Federal Hazardous Substances Act, and the Toxic Substances Control Act. All fragrance compounds which are shipped are subject to Department of Transportation regulations. State and local laws also regulate fragrance manufacturing. Fragrance manufacturers are subject to inspection by FDA, OSHA, and other regulatory authorities.

An important characteristic of the fragrance industry is the enormous variety of materials used and the complex array of product formulations. This enormous variety and the fact that fragrance compounds are custom made and therefore not in constant production limits exposure. Ours is an ever changing workplace environment with formulas consistently going in and out of production. Closed vessels and systems are used to prevent cross-contamination and conserve valuable materials. Exposures in our industry are brief, intermittent, and low in intensity. Thus the situation is one of low exposure to substances whose safety to humans is assured because they are intended for application to the human body.

It is common knowledge that the fragrance industry survives because of its ability to preserve the identity of trade secret ingredients. Fragrances are the artistic creation of geniuses known as perfumers. They devise the secret formulas that permit fragrance houses to be successful.

In the fragrance industry, it is clearly not the case that "a rose is a rose." Subtle differences in the aroma of a particular mixture within a generic class of fragrances such as rose are responsible for some fragrance mixtures being far more successful than others. Other fragrance mixtures succeed because they are totally different from other fragrances. It is the presence of traces of trade secret ingredients or unique combinations of ingredients that make these fragrances successful. History shows that the formulas of leading perfumers have been maintained as trade secrets for decades, such as Chanel, which was launched in 1926, in the middle of the last depression. For the fragrance industry's continued success, this information must be kept confidential.

The loss of trade secrets that would occur under this bill threatens the continued existence of the fragrance industry in New Jersey.

In view of the foregoing, the industry should not be included under this legislation. However, as presently drafted, the bill would include the industry and present difficult trade secret problems.

I will skip over these reasons, Senator, because I think we have discussed these in the past.

The availability of Material Safety Data Sheets and Public Information Sheets to any person severely endangers industry trade secrets. The bill's trade secret provision -- section five -- is inadequate since it is limited to information on Public Information Data Sheets only. No protection whatsoever is provided for trade secret information that would be required on Material Safety Data Sheets or on labels. Even if the present provision were extended to include such information, trade secret protection would only be extended after a hearing before the Department of Environmental Protection. A single fragrance manufacturer would likely have hundreds of trade secrets he would want protected. Multiply this by the thirty-five members of FMA in the State and add the rest of industry in New Jersey, and the magnitude of the problem becomes apparent. The Department would absolutely be swamped with requests for trade secret protection and the legislative intent to protect legitimate trade secrets would not be attained.

In conclusion, conditions of occupational exposure to chemicals in the fragrance industry justify an exemption for this industry from the Worker Right to Know provisions of this bill. FMA seeks an exclusion from this legislation for the manufacture of fragrance materials and compounds and the incorporation of those materials and compounds into finished products. While we do not object to the concept of a public information data sheet, the criteria for the substances that would be required to be listed on such sheets are overbroad and would place an unnecessary data compilation burden on employers. The trade secrets provision of the bill is inadequate to protect the trade secret formulas which are the lifeblood of the industry. We would appreciate the opportunity to work with the Senate of New Jersey to develop a bill which would accomplish Senate Bill 1670's stated legislative intent while protecting the industry's legitimate interests. Thank you. (applause)

SENATOR DALTON: Thank you. The next speaker will be Mr. Kenneth Estes of the Independent Oil Workers.

K E N N E T H E S T E S: Thank you, Senator. It is an honor to be here. Thank you for introducing the bill which I feel is long overdue in the State of New Jersey.

I share dual concerns. I share the concerns of the citizens, the residents of this State. We all hear about the Love Canals and the contaminated wells, and it seems that most of the time we all say it won't happen here. Well, New Jersey is known as "cancer alley," and is known for its industrial areas, and in no way am I bragging. The fact of the matter is, it is happening here.

As a kid, I used to swim in a lake not too far from here, Alcyon Lake. That lake has since been contaminated because of a nearby landfill. It may probably never be used again for swimming or fishing.

I am in support of your legislation, primarily because I work around chemicals. I can't depend on my employer giving me the information that I feel I need, especially with all of the research that has shown more signs of birth defects. My wife is pregnant now. Thank God I have two healthy children at home - I hope as much for my third one.

I first got involved in the area of health and safety about three years ago, when I was appointed as the Chairman of the Health and Safety Committee in our union. I really had no background and I didn't know about it, so I started

reading. The more I read, the more alarmed I became, because I thought we had a problem in the plant. The problem I thought we had was the asbestos insulation that was hanging off the pipes. Then I learned the problem had changed. The problem we were having was that I was being notified of increased cases of (inaudible) which was because of the inhalation of asbestos.

First, I just heard of a few people, then, eventually the number started mounting up. Then it came to light that there were government documents which stated there were 380 cases at the Department where I work.

I didn't know what to believe, so I went to the company, and the company said, "Don't be alarmed, there is no problem." The more information I got, the more furious I got. Finally, the company did come out and say that there were 17 cases of asbestos-related disease in my workplace.

I had to file OSHA complaints to get basic information that I was allowed to have by Federal law, and some of that basic information, like the names of employees who have been affected and do have asbestos-related disease, took me two years and several OSHA complaints to get. There was no sense to it.

A year and a half later, now, Mobil has finally listed 48 cases of asbestos-related disease on the Bureau of Labor Statistics Illness and Accident Log. But, I have a pretty good assumption that there are a lot more cases.

I just got a ruling out of Washington and the Department of Labor, OSHA's Regional Office down there, which says that my company is in violation of the record-keeping standard, and they are going to be required to list all of the deaths, the diseased people, and the retirees who have asbestos-related disease. I have no idea what kind of numbers we are talking about.

By the way, we had two mesothelioma deaths. One we just had recently. Mesothelioma is cancer of the chest cavity and the stomach. It is supposedly a rare disease, but we had two known cases of it in our plant. The last one just died last month. I believe he was a supervisor in the plant. I don't think he lasted more than nine months. I worked with his son and he said his father was in constant pain.

My involvement with chemicals, I guess in a way, came from my company doctor, who in one of our conversations over the telephone told me there is no asbestos problem here. "You ought to jump on the bandwagon and get involved with chemicals." I assured him just as soon as I was done with asbestos that I was going to go into chemicals. That's what I am doing now.

I work around chemicals, and I have friends who work around chemicals. I don't work that much around them, exactly with them, because I am an electrician, but I work very close to them. Employees near the area where I work have to dump chemicals out of 55-gallon drums into a little vat where they blend acid into motor oil. There's a ventilation system there. I approached the company. I took off the door and showed them that it was all caked up in there and there was no way that this ventilation system could be drawing the fumes down rather than let them come up. Also, there are no scrubbers or fillers in them. When you go up on the roof, whatever is coming out of there comes up out of the stack and it is all (inaudible) - inadequate ventilation.

I started going around and I found some labels of products in my plant. I realized that I worked for Mobil Oil and Mobil does get a lot of other

chemicals too. They get chemicals-- They have their own chemical company, but they also buy chemicals from Exxon, Amoco, and several other companies.

So, I came across an interesting label, right in the area where they blend the motor oils, and I saw it was from the Ethyl Corporation, and it is Ethyl N Oxident 735. We usually don't go by these numbers. The employees know the stocks that they are working with, only by stock number. The stock number, I believe, is 1421.

Half of the problem is that our employees have to heat this because it is thick. When you heat additives or chemicals, you have more of a chance of vapors and more severe problems.

This says 85% of a 2, 6 diturp butal phenol, 15% active poly substituted phenols. Without trying to put Mr. Bozarth on the spot, he speaks of how the companies that he represents do an extraordinary job of communicating hazards in the workplace. I don't know whether he represents my company or not, but if you want to look for application, the application is in industrial oils to inhibit oxidation. The warning labels, you can see right here, say "exercise ordinary care in personal cleanliness." That tells me to be careful and wash my hands.

I looked up, just today, as a matter of fact, phenol, which this contains phenols. I did not know phenols-- I did not know what protective equipment I was supposed to wear. I didn't know the first thing about protective equipment, I did not know the first aid measures, and I don't know the short and long-term health affects from this label.

In any occupational disease book put out by the U.S. Department of Health, Education, and Welfare, I saw that I was supposed to wear impervious protective clothing and goggles, and in heavy vapor areas, I am supposed to wear a full face mask with a forced air supply. If I get it in my eyes it could cause damage or blindness. Phenol also causes liver and kidney damage, and a whole variety of other things from paleness, weakness, sweating, and headaches, to ringing ears on up to dark colored urine, frothing of the nose and mouth, and even death. I didn't know that.

If Mr. Bozarth wants a tour of my workplace, I would be glad to take him in there. It won't be a tour where they paint the lines and they put up the nice little chains and they run the buses full of the big shots through there and show them just what they want to show. I'll take him, and I will show him chemicals that are not labeled. (applause) I will take him and I will show him chemicals, right now, that the name of the product and the name of the manufacturer has been spray painted over. This is typical. I'm not trying to-- This is where it is at. It's not a painted picture like other people say.

I have two concerns with your bill. First is the enforcement. From having to deal with the Federal government, with OSHA, the Occupational Health and Safety Administration, and seeing how-- I'm not trying to push it. I don't want to act like I have a lot of power, but you have to push that agency to do its job. That is still my concern. I hope there is enforcement, because I think when this bill is passed, we are going to need the enforcement.

The other thing was that it had to be 55-gallons or 500 pounds. I also would advocate that we reduce the amount of chemicals required in the workplace before it is considered to have to be labeled and be under legislation,

because I was led by workers to-- Forty-six pound bags of, I believe, an additive-- These bags-- This was the only information on the entire bag. Internationally, this-- Additive 30 is the name of it, and it was made in Germany. It says absolutely nothing else except, I guess, that it came through New York. It did bear some caution signs on it, though: "Avoid contact with eyes and skin; avoid breathing dust; wash after handling, and for more information, see your Material Safety Data Sheet." Well, I tried to get Material Safety Data Sheets on the job site at my place, and the only way I can get Material Safety Data Sheets for my company is to go up there on my time off and use their xerox machine.

Some companies don't supply this information the way that we wish they would. If they did, then there wouldn't be any problems, and there wouldn't be people here tonight trying to support your legislation.

It also says, "In case of an emergency, call Chemtrack." Well, I had absolutely no idea what Chemtrack was, and it had a toll free number you could call, so I called Chemtrack. I said, "Hey, we just got a bag of stuff in the plant, and I think it is an additive. Its name is Additive 30, and I would like some information on it." They said, "Excuse me, sir, is this an emergency?" I said, "No, sir, it is not." I said, "I want to find out what it is so I could prevent an emergency." He says, "I'm not allowed to tell you anything about it unless it is an emergency." Well, I feel that that is not the time to find out the information, after somebody is affected. It seems like that is always the case.

When do you put a light up at a main intersection? After 10 people are killed. When do we introduce legislation that is needed? After so many people are affected. That is not the time. The time to be concerned is before things happen.

I know we are on a time schedule, but the only thing I would like to say is that I feel passage of this legislation is, to me, probably one of the most responsible pieces of legislation to become law since Congressman Florio's Superfund. I thank you very much. (applause)

SENATOR DALTON: Thank you very much. Everyone should be aware that we will be hearing testimony until 10:30. That is approximately 40 minutes from now. So, please be advised to give your testimony accordingly so we can get to as many people as possible.

The next speaker is Mr. Joseph Lario from the New Jersey Federation of Senior Citizens.

J O S E P H L A R I O: Good evening, Senator.

SENATOR DALTON: Good evening.

MR. LARIO: I'm glad to be here tonight, but the only bad part about it is, nobody knows how the ball game is going.

SENATOR DALTON: The latest report I got, Joe, was nothing to nothing in the bottom of the fourth. (laughter) But, I'm not concerned either.

MR. LARIO: Thank you. That is under the Right to Know. Thank you, Senator.

As you know, my name is Joe Lario, and I am from Pennsauken Township, New Jersey. I am here tonight representing the Pennsauken Township Environmental Commission, of which I am the Vice Chairman, also Assistant Representative of the Coordinators of the Pennsauken Seniors. I am also happy to report that I am on the

Legislative Committee of the New Jersey Federation of Senior Citizens, of which I am Chairman.

First, I want to tell you a little story about Pennsauken Township.

We have a lot of industry now, in Pennsauken Township, and it took the Environmental Commission about five years to get some action.

First, as you know, volunteer firemen-- I have heard some stories about the firemen, and I have heard stories about the Right to Know -- not to give trade secrets. We have firemen throughout the State of New Jersey who, mostly in townships, are volunteer firemen. They range from the ages of 15 to 65 years old. I am happy to say that I am a volunteer fireman in Pennsauken Township, but since I had a heart attack about seven years ago, I had to give up all of my activities as a volunteer fireman, but I am still a member of the fire company.

My concerns about the volunteer firemen are, when they go to a fire, they go to 17, 20, 25, 40, 60, or over-- They are nothing but our own senior citizens who volunteer to be firemen. When they go to a fire, they go in blind. They do not know what they are getting into when they go to these fires. Therefore, the Right to Know law is very important to the firemen.

We had many fires in Pennsauken, where we even had to go to our surrounding communities in Camden and help them out when they had, as you know, a rash of fires throughout not only Pennsauken, but all around.

When we go to these fires, we might find it to be just an ordinary grass fire, we might find it to be a house fire, we might find it to be a big fire at some chemistry plant. We never know before we get there just what we are going to find.

What I am trying to point out is, it took us five years-- We tried to get our township to pass the Right to Know law, and they just kept saying, "We really don't need ," until about a year ago. We had an explosion and fire in Pennsauken at one of our chemical plants. It not only injured, but it killed a couple of firemen. It injured a dozen of them. They were standing right on top of the drums while they were exploding. If they knew what was in them, they wouldn't have gone near those drums.

There is a case where if the firemen knew what was in the plants-- They do go to school. They are taught how to fight a fire, but none of them are taught how to fight a chemical fire. So, they don't know what it is until they get there.

Therefore - Pennsauken finally came to their senses and said-- After that, the fire had not only injured firemen, or killed people, but it caused the fumes to hit the surrounding area. People got sick from the fumes. It ruined I don't know how many thousands of dollars of equipment. The fire hoses, after they picked it up, had to be discarded because of the chemicals. These firemen back here can verify that. It ruined their equipment, ruined their fire hoses, even the coats and hats that they wore. The chemical got all over them and you couldn't do anything more with them except destroy them. They couldn't even clean them. They had to destroy them.

Therefore, the township got wise, got their heads together, and said, "We do need a Right to Know law." And the Environmental Committee really kept after them.

I am happy to say that Pennsauken is the only township in the State of New Jersey that now has a Right to Know law.

With that, I want to say that we thought we needed this law to protect our citizens and volunteer firemen. For this, they are now meeting and passing a resolution that will support your law, Senator, S-1670. They did pass one resolution, and I am happy to say they tabled the second one to wait and see how your law was worded. They wanted to get more input before they-- They are behind you 100%.

Now, to get back to the New Jersey Federation of Senior Citizens, which I am Chairman of, and you know that we will help you and the Committee, and the whole legislative staff, and the whole State of New Jersey.

We are happy that you are supporting us, on I will say 90% of our issues. We helped you with your 975, and we are wholeheartedly backing this one.

Now, the Southern Region has already had a meeting that through me, they passed a resolution that the southern section of New Jersey will support you in this bill.

We are having a meeting up in Trenton within the next few weeks. I am pretty sure-- I have had assurances that the Federation of New Jersey and the whole State will get behind you, and anything we can do to support you, feel free to call on us, as we are behind you.

SENATOR DALTON: Thank you, Joe. (applause) The next speaker is Mr. Thomas Chizmadia of the CIBA-GEIGY Corporation.

T H O M A S A. C H I Z M A D I A: Thank you, Senator. I am Thomas A. Chizmadia, Manager of Public Affairs, for CIBA-GEIGY Corporation. CIBA-GEIGY Corporation is a diversified company engaged in the discovery, development, manufacture, and marketing of a wide range of chemical, pharmaceutical, and consumer products throughout the United States. We employ over 12,000 people in 25 states. In New Jersey, facilities are located in Toms River, Summit, Hightstown, Carlstadt, Teterboro, Harmon Cove, and Paramus. Over 3,500 employees work in New Jersey.

Senator, I am here this evening to oppose S-1670. I want to state emphatically that while CIBA-GEIGY is committed to the informed use of chemicals in the workplace, and has had an open door to public inquiries about our facilities and operations, we oppose the bill as unnecessary legislation that to a large degree duplicates existing Federal, State, and local regulations, and safety programs already operating.

While mention has been made about cancer-causing chemicals, you should also remember that many chemicals help cure it. Chemicals also protect us against other diseases, make automobiles and airplanes lighter and safer, preserve foods, and control pests. The chemical industry touches all aspects of our daily life -- the water you brushed your teeth with this morning was purified with chemicals and the comb you used to comb your hair was probably plastic. Aspirins are chemical compounds. Until the 60's, society had viewed chemicals as a positive force. If there was one industry that perhaps best epitomized progress, it was the chemical industry. Plastics, synthetic fibers, miracle drugs, elimination of pests, decline in disease, all resulted in cleaner, healthier, more comfortable and more convenient living. So, what happened? First, the environmental movement coupled with Rachel Carson's 1962 book, "Silent Spring," awakened our fears. Her book created a doubt

not so much on the efficiency of chemicals, but about their safety. But the environmental movement, and the spread of chemophobia -- the fear of chemicals -- would never have been so rampant had there not been a dramatic shift in the public's attitude toward business. The public very simply lost confidence in business. In 1968, a Yankelovich, Skelly and White study showed 70% of people surveyed thought business struck a fair balance between profit and public interest. By 1977, the figure was 15%. Sadly, coupled with the perception of business, the perception of the chemical industry is a poor one. It should not be. With regard to your bill, and based on our commitment to the informed use of chemicals, we are supporting a strong national program for hazards communication through the Occupational Safety and Health Act. While encompassing many of the provisions in S-1670, it would provide one standard program for CIBA-GEIGY and the rest of the chemical industry to comply with such issues as assessing hazards of chemicals produced by any one manufacturer and communicating that information to our employees. Regarding the community aspects of your bill, I mentioned earlier that we already have an open door policy on requests by community residents. Staff has been available for response on a 24 hour basis, and residents in the immediate vicinity of our plants are informed in advance of activity taking place at the plants that would affect their community or daily routine. We have cooperative programs already established with emergency response teams - fires, police, hospitals - to ensure maximum protection against emergencies involving hazardous materials.

Senator, in the interest of time, I will just hit on important aspects of my statement regarding the bill itself, and try to conclude within the timeframe.

You state in Section 2 that "the proliferation of chemicals in the workplace and the community poses a growing threat to the health of employees and community residents..." Senator, presence should not imply threat to anyone. If anything, the "threat" you refer to is diminishing due to the enforcement of existing regulations and the training programs currently in place on working with chemicals and chemical products.

Section 2 further states that "employees and community residents are often in the best position to detect evidence of effects of exposure". That essentially, presumes everyone is sufficiently versed in the sciences to make such a determination. The MSDS -- required by this Act to be available to anyone -- indicates symptoms from extreme exposure, which vary greatly from very low, allowable levels of exposure to which the community might be exposed. For example, warnings on almost every organic solvent say that inhalation may cause headaches. That of course refers to high concentrations. The last thing we would want would be to have this information, have people react to a simple headache and start blaming a chemical plant and warning their vicinity.

Finally in Section 2, "It is in the public interest for employees and community residents to have access to information about chemicals which are stored in or emitted from their workplace and communities." As I already mentioned, such information is already available to our workers for reference on the chemicals they work with. This clause,though, is extremely inflammatory with regard to the community. Such information will often not be understood by people not versed in the sciences. The uncertainty of what the information means will serve no one's best interests. And since a MSDS deals in symptoms associated with high concentra-

tions, the public could be unnecessarily alarmed because they would never be exposed to anything resembling the levels described in the MSDS.

Section 3a refers to definition of chemical as anything appearing in the NIOSH list. While this has been covered before, I would like to remind you that that list contains over 85,000 substances, including salt and beach sand. The book also states clearly that materials are listed only because they have had toxicity tests performed on them. Inclusion does not presume them to be hazardous, and not being included does not presume materials to be non-hazardous.

Section 3b(1) requiring the listing "of the component chemicals contained in any mixture" specifically goes against TOSCA-14B, which states mixtures can remain confidential when a trade secret is threatened by the identity of component chemicals.

Section 3f refers to the definition of containers as including pipelines. This is not practical. Material in a pipeline can change daily, weekly, etc.; thereby rendering useless the labeling procedure this bill requires on "containers". The OSHA Federal proposal accounts for this by using a placard system for pipelines. Placards could interchange with the material in the pipeline.

In Section 4c, reference is made to employers providing an MSDS to employees within 24 hours of the request. Not every employee needs an MSDS. We do already provide such information to our workers. At CIBA-GEIGY, we have internal documents on every product used at our plant. They are known as green safety sheets. Not only are they more comprehensive than the MSDS, but they are available for reference while working with such material to all employees and operators at their work station. That provides the same goal as your bill, essentially, but I think the bill in its present form will not allow such documents, because there is no allowance for--

At this point, I want to review briefly, some of the training programs we already have in effect. It will be a brief description due to time, but I do want to describe what we already have.

Examples of just some of our programs include:

(a) Safety training for supervisors and employees.

(b) Process Operations (PROP) - a team hazards analysis using managers, supervisors, and production personnel to identify processes that have potential for fire, explosion, or any release of toxic materials. Once identified, preventive action is taken. You may be interested in knowing that CIBA-GEIGY is a leader in the field of explosion prevention technology.

(c) First Aid - not only is it a very practical training tool, but this training enhances overall safety awareness, which is critical at a chemical plant.

(d) Fire Prevention - In addition to once-a-month training to our own emergency squads, we have cooperative programs with community firefighters. Such programs have included our own employees' participation in a local squad's training program, and our instructing community teams in handling hazardous materials during an emergency. Fire chiefs also tour our facilities at least once a year.

(e) Booklets on materials stored and used at our facilities are already made available to physicians in advance, should they need to treat an emergency.

I could continue with more programs and their details, but I hope this brief outline helps communicate our concern and commitment to worker and community safety.

Continuing with certain aspects of the bill, in 4f, employers shall report any discharge to the Department of Environmental Protection within 48 hours of the discharge. Under this Act, therefore, a company would have to report spilling a 55-gallon drum of salt or sand on a dirt road during the winter to prevent their vehicles from slipping. I don't think that really fulfills the intent of the bill. The existing New Jersey spill control regulations - N.J.A.C. 7:1E-4 et seq. - already require immediate notification of spills of 150 substances. Also, the Federal Superfund law - P.L. 96-510 - requires notification on at least 660 chemicals, whether the discharge is to the air, water, or land. This section of your bill makes no reference to excluding discharges already allowed under current State and Federal laws and operating permits.

In Section 10a, the Department of Environmental Protection is empowered to obtain a MSDS from an employer who may not necessarily be the manufacturer of the chemical. My only comment here is similar to that regarding Section 4a. If the employer buys the product from an out-of-state manufacturer who does not provide or prepare an MSDS sufficiently under this Act - i.e., claiming trade secret - how does the department get the information from the employer? More importantly, would the penalties proposed by the bill in such a situation against a New Jersey employer be fair? I don't really think so.

Senator, the points I have covered just touch the surface of the flaws of this bill. The intent and purpose we applaud. At the same time, however, we stress our willingness for a national standard which, as we are informed, are due to be promulgated in 1983. As others before me have mentioned, we as an industry are very highly regulated already at the Federal, State, and local level. Laws such as Superfund, TOSCA, RCRA, FIFRA, Spill Compensation and Control Act, Water Pollution Control Act, Clean Air Act, and hazardous waste management regulations. These regulations do an extremely thorough job in protecting the worker and community. Access to information is already available to the community not only by our own response to requests but, if necessary, under the Freedom of Information Act. Under the Freedom of Information Act, any person can request information from any agency, and the agency must respond to the request within ten days. Requests may be denied only if the data falls within one of nine exemption categories, dealing primarily with internal personnel documents, national security documents, or trade secret information. As with Federal agencies, most similar information filed under New Jersey statutes are available to the public on request.

The impact of over-regulation takes its toll, Senator, on all of us. Not only is the dollar impact significant, but you also pay another price. For example, fewer new drugs. In 1960, the U.S. Pharmaceutical Industry produced 50 new medicines that were new chemical entities. In 1980, the industry produced 12. I don't believe I need to draw the parallel between the dramatic increase in regulatory activity during that span, the dollars needed to comply with them which led to a marked decline in research and production of new products. We literally cannot produce, package, transport, sell, or dispose of a product without falling under a myriad of regulations. Excluding capital expenditures and existing taxes, this bill, as written, is one of the most expensive regulatory programs I have ever seen, including Right to Know laws in other states.

CIBA-GEIGY, Senator, is concerned and committed to effective hazard communication. It is in our best interests to protect our workers and the communities in which we operate, from adverse exposure to toxic materials. If we didn't, you can bet we would soon be out of business, which helps no one. We have been responsible and look forward to continuing our safe and reliable operations. I look forward to a continuing dialogue with you on this bill.

Thank you for the opportunity to speak on behalf of CIBA-GEIGY Corporation. Thank you.

SENATOR DALTON: Thank you. The next speaker will be Mr. Tom Wood of Shell Chemicals.

T H O M A S W O O D: Thank you, Senator Dalton. My name is Tom Wood. I live in Woodstown, New Jersey, and I am the plant manager of the Shell Chemical Plant in West Deptford, New Jersey.

I appreciate the opportunity to speak to you tonight about my concerns on your bill, S-1670.

The Shell Plant in West Deptford produces polypropylene, one of the more common thermoplastics. We employ 260 people in our operation. We handle, as many employers do, materials which are considered hazardous. I can therefore speak with some degree of knowledge.

I wish for you to know that I have a personal commitment to our safety program and to our efforts to keep all of our employees informed, educated and trained concerning their work and the materials they use in their work.

I feel that I am in somewhat of a unique position to speak at this hearing, since you, Senator, and Mark Connelly visited our plant on April 27th of this year, with a specific purpose of discussing the Right to Know issue.

At the Shell Plant, we work to ensure that all of our employees have a clean, safe, and healthy place to work. We are pleased that you and Mr. Connelly had an opportunity to witness and discuss our safety programs. As you saw, the Material Safety Data Sheets were available at specific locations in each work area. We do provide formal training in the handling of all chemical materials as well as routinely monitoring for any exposure.

In the area of community responsibility, we discussed on occasion our emergency response programs, which we work directly with our local fire companies and emergency squads. Periodically, we host drills, like the one we held last fall, where seven fire companies and four ambulance squads were invited in the plant. During the full day of activity, they toured the facilities, received orientation on the plant's operation, coaching on how to safely handle various plant chemicals should an emergency ever arrive. They also participated with our employees in various simulated fire fighting exercises and personal rescue operations. The media was invited and also attended.

We are proud of our plant's safety and health programs, and equally so in our performance in these areas.

We know that our efforts are effective and are contributing positively to the chemical industry's safety performance, which you are aware is one of the best of any industry in America.

Frankly, I do not like the approach taken thus far on this bill. I do not feel there has been a positive response in the efforts which have been made by myself and representatives of the major companies to communicate with you on the

Right to Know issue. I do not like what happened in Newark last week. The reasonable views could not be openly expressed. I believe there is an urgent need for the Committee to fully understand the real and the positive efforts the chemical industry has under way already, a satisfied chemical right to know.

Senator Dalton, you stated in a discussion, Monday, before a meeting with the Chemical Industry Council of New Jersey, very emphatically, that there would be a law. I ask you, why? If so, it would be redundant because several laws, both Federal and State, already provide for the stated purpose. If so, it should be a Federal law because we compete on a national level. If so, it should be done in a cost-effective manner because S-1670 has many technical problems, especially the encompassing nature of the bill that will lead to unnecessary operating costs both within industry and government. I will note that most of these problems have been clearly defined by previous testimony and in written communications which I have sent to Senator Dalton.

However, we share a common objective of safety. This bill, I believe, is not the best way to achieve that objective. I see it as another area where New Jersey is exceeding other states in imposing laws and regulations, as well as exceeding even Federal laws and regulation, without the corresponding need or benefit to justify the action. It seems to be a kind of one-upmanship.

Time and time again we have seen New Jersey regulations remove exemptions which existed in Federal regulations, tightening up, adding onerous, unnecessary burdens to our operations. There sometimes seems to be a disregard for the vital interest of business in this State at a time when industry is essential to the economic health of the State.

If this is so, it will lead, unnecessarily, to higher cost of operation. In fact, I believe this is already translating into lack of competitive ability, higher consumer cost and will undoubtedly lead to loss of jobs within the State.

In my opinion, the only good thing about this particular bill is that it is properly titled, "The Right to Know." We all believe in that right.

This issue is apparently a union issue; it is most certainly a political issue, and it is absolutely a business issue. I implore all of us to make it a knowledgeable issue so that you can realistically and honestly evaluate the efforts that presently are under way within the industry and at the Federal level that I believe make S-1670 unnecessary and redundant.

Thank you, Senator. (applause)

SENATOR DALTON: Thank you. The next presentation will be by a panel composed of Mr. William Kammen, Treasurer of Local 788, Camden City Fire Fighters, International Association of Fire Fighters; Mr. Roland Kandel, Firemen's Mutual Benevolent Association; and, Mr. Paul Hartstein, Volunteer Fire Fighter, Assistant Fire Marshal, Camden County.

P A U L H A R T S T E I N: Senator, thank you very much for allowing the members of the emergency response team to be here tonight to offer testimony.

My name is Paul Hartstein, and I am the Assistant Camden County Fire Marshal. I am a member of the Camden County Firemen's Association, Hazardous Material Committee.

I am here tonight representing the Executive Committee of the Camden County Firemen's Association and their stand on S-1670. It has been a long time coming and it has been well worth its efforts.

The topic of our exposure to hazardous chemicals has already been brought to discussion, thus forming the Hazardous Material Committee, Firemen's Association.

S-1670 has been reviewed and discussed by the Committee, and has been brought before the general membership.

At the most recent meeting of the Camden County Firemen's Association, it was voted unanimously to support S-1670 and encourage the current legislation to pass this bill.

We believe this bill will be to our benefit, as one of the first respondents, should there be an emergency occurring. You will hear testimony from fellow fire fighters next to me who support the legislation by facts and actual experiences.

Page 10 of this bill reads: "In an emergency situation, Material Safety Data Sheets shall be made available immediately to the fire companies." We hope this information will be made available to the 24 operation systems, that a first-in-chief, or first-in-responding apparatus will have the availability of what is in crisis.

I understand on page 1, there is a pre-planned attitude which we appreciate. I am sure much pre-planning in the chemical industry and fire response team will be done.

Also in the bill, I believe the annual reporting will be made to the EPA on this bill. We feel that as chemicals change, we should have it updated so that the first aid/fire fighters will be aware of what they are up against.

I would like to thank Mr. Lario from Pennsauken for his concern about fire fighters. I am sure Mr. Lario has served many years of fire service in a time when we didn't have the chemicals, or, when we had the chemicals, and we weren't aware of them. At this point, the chemicals are very much popular in Camden County. We have chemical plants creeping up, which you will hear testimony from actual experiences from other fire fighters.

Mr. Ray Evans is the Chairman of the Camden County Hazardous Materials Committee for the Camden County Firemen's Association.

R A Y E V A N S: Senator Dalton, it is a pleasure to be here tonight to represent the Hazardous Materials Committee, which works very closely with you in proposing this legislation.

Fire fighting today is the most dangerous occupation in the country. As pointed out in the Occupational Health Programs Report, issued just last month by the New Jersey State Department of Health, this statement alone shows the need for the Right to Know bill to become law in New Jersey.

The reason for this bill is not only limited to the fire service, they apply to the chemical industry, employees, truckers, and of course, the general public. However, this information is vital to the emergency response person. These people must know quickly what type of chemicals or gases are or were involved in the incident to reduce the potential injury or damage to the public and its property.

A prime example of this is an incident which happened in March of 1981, in a township of Gloucester County, Camden. At approximately 1:00 in the afternoon, the fire department received a call for a chemical spill (inaudible). Upon arrival, we found approximately two gallons of formaldehyde, which in testimony earlier this evening, the chemical industry doesn't even know how to classify it. The spill in turn mixed with sodium carbonate and sodium sulfate. Myself, as a Lieutenant in that fire department, and the other officers there, are not scientists. We did not know what to do. We checked with the books we had available to us, and we checked with Chemtrack. That information comes slowly when you have to call Washington for the answers.

A total of 15 persons were injured during the incident. Approximately 33 emergency response people reponded, and were all on the scene for approximately three hours. The most important point to make is that one child and an adult did not have any symptoms until after they returned home that evening. We were not aware of their problem until the next day when they reported it to us.

This legislation is vital in our need to serve the community. Our idea is not to close down the chemical industry. This affects us, the public, in which we in turn protect. Waiting until an emergency happens, to learn the compounds involved, is like putting the cart before the horse. Thank you.

SENATOR DALTON: Thank you.

G E O R G E Z A H U L S K I: Senator, thank you very much for inviting us tonight. My name is George Zahulski. I am a member of Local 788, and the Camden City Fire Fighters. I am also the Delegate to the State Association of the Fire Fighters Association of New Jersey.

As my brother fire fighters have said, we work in the most hazardous occupation in the United States right now. We lose 16.86 fire fighters per 100,000 every year. I have heard a lot of people here speaking tonight about S-1670, the Right to Know legislation, because they work or live near a facility where hazardous or toxic materials are stored, used, or manufactured. I can appreciate that. I live and work in these communities also.

Now, I would like you to try to imagine a situation my fellow fire fighters are in when they are called to these facilities. It is most of the time that these people deal with hazardous materials in an uncontrollable situation. Granted, there might be a spill, or something like that, but it is controlled.

When we go into these situations, they are not controlled. They are on fire, there are flames, heat takes over. Thermal chemicals react within the first three to five minutes of a fire, and that is when we are of most importance - that's any fire fighter. We must know what to do in those first three to five minutes. What is this chemical? Can it be absorbed into the skin? Can we inhale it? Does it react with water? These are the things we have to know.

When a chief or a chief's aid, or captain, or the first man approaches the situation, he is looking for this information. Without the Right to Know, we won't have the information half the time.

A perfect example happened about five or six months ago. I was the Acting Captain of a company. I walked in and I asked, "What's on fire?" They said, "We got some stuff back there." I asked them, like watchmen. I said, "Well, what is it?" They said, "We don't know." I asked, "Well, what do you mean you

don't know?" They replied, "There are drums and bags of chemicals."

Well, Senator, this "stuff" kills, and my wife does not look good in black.

While 5.6% of our fires are in storage areas, and 5.6% in manufacturing areas, the fatalities and injury rate in this area is 26% of fires. Thirty-six percent of our men die of cancer. Yes, 11% more than the national rate right now, probably because they are exposed to toxic and hazardous materials.

We have Chemtrack's books. We have books on hazardous materials. We go through training. That's great. But, we have to have a point to start. If we don't know what we are getting into when we are going in there, we are dead, we are sick, or we are hurting, maybe five, ten, 15 years down the line, or maybe even that night.

Fire fighters are not only exposed to unknown chemicals in a fire, but also in non-fire fighting incidents. We got a call when one of the industrial processes goes awry, and the emergency response teams begin. We have combustible vapor, we walk into mists, phenols, and fires. Half the time we don't know what is in it. We must know. That seems to be the big concern of most people. The fact is, most of the time on our team, we have to go in and--

The Worker and Community Right to Know bill also provides for a study to be made assessing the feasibility and estimating the cost of developing a computer data storage system. We understand this cannot be locally financed. It is impossible for us to do it. This is why we need a statewide program for a number we can call, that we know we can get a hold of someone at that present time.

We are engaged now, in the State of New Jersey, luckily to a sister local in Jersey City. We have an exposure reporting system, which is great. We will have a record of things that happened at fires so that five years down the line, something happens to you and we can go back and say, "Yes, because of this," but it is also after the fact. We need something before the fact.

Senator, when we go to a fire, the odds are already against us. We are going into a fire that is started. We want to cut the odds down a little bit in our favor. I don't feel like going up after the taps have been blown, and the flag has been folded, and I present the flag to the widow, and she says, "Why?" And I say, "I don't know, honey, its a trade secret." That's not the way it should be handled.

The only part of the bill, Senator, that we find we would like for you to consider changing now-- 55-gallons can kill a city. Several ounces of dioxin in the Philadelphia water system would wipe out most of that city.

Senator, thank you very much.

SENATOR DALTON: Thank you. (applause)

J A M E S C O N R O Y: Senator, I would like to thank you for inviting us here. To save a little time, I was asked to come up with the fire fighters. I feel very good about that. I am Jim Conroy. I have been a law enforcement officer for more than 26 years. I am a member of the New Jersey State Chapter of Federation of Policemen. I am on the Executive Board, and I am also on the Legislative Committee for State FOP.

We support S-1670 as part of the emergency response team.

The hazards during an emergency to fire fighters is obviously a little more so than the hazards of the police officers, who deal with things such as traffic control, crowds to control, etc.

Proper labeling, as S-1670 requires, picks up this responsibility at the scene of an emergency, to be advised of any chemical or toxic substance, will be more quickly defined. This will enable the police to function more efficiently at such emergency situations. Even more so are hazards that exist during investigation, after the emergency situation has ceased to exist.

One such incident that I personally was involved in occurred several years ago, after a suspicious fire in Pennsauken in a chemical facility. At that time, I was a member of the Camden County Arson Task Force as a result of my proficiency as a Camden detective in the Office of the County Prosecutor.

This was a spectacular fire, a perfect scenario, referring to tonight. There were metal prongs flying hundreds of feet into the air. It took the combined efforts of a lot of fire fighters for several hours, many hours, to extinguish that fire.

Once extinguished, personnel from the Camden Fire Marshal's Office and myself began conducting an indepth investigation at the scene to determine the cause and origin of this suspicious fire, mainly to determine if it was, indeed, arson.

We spent several hours after the fire had been extinguished, sloshing around in the water, other liquids, moving metal drums, other debris, searching for a timing device, some fuse-type materials, or something else that would indicate to us that this could have been arson.

After several hours of investigating, and prior to concluding our investigations, personnel of the Department of Environmental Protection arrived at the scene. They immediately shut down our investigation because of possible hazardous resins. They didn't stay, after our exposure for several hours. Who knows what kinds of chemicals we could have ingested into our systems during this time? They might not even reveal symptoms in our bodies for many years to come.

The police forces in New Jersey are most happy to join with our fire fighter brothers in supporting your Right to Know bill, and to assure you, Senator, of our continued support for this and any similar legislation you should choose to sponsor. Thank you. (applause)

SENATOR DALTON: Thank you.

W I L L I A M K A M M E N: I am last. I am William Kammen. I thank you for inviting us to testify tonight. I am the State Secretary for the Fire Fighters of New Jersey.

My problem with-- I went outside to talk to some of the guys. They keep saying it is so expensive and it is redundant. We have the information, but it is so large, we can't get it to you. It is in our computers, but we can't give it to you. My problem is, if it is there, if it is in place, what is the problem with allowing us to have it? I understand that one computer can read to another. Not being a very smart fellow, I think, maybe, our county could fix theirs up. I am sure that if we plugged our computer to theirs, the information would be in that computer.

I will call over the radio and say to the County Board, "We are going to such and such a place. What's involved?" I'm sure the County will tell me, without anybody learning any trade secrets. I am sure that our guys in the County aren't going to sell them because they probably don't know what they are.

One more time, our jobs are the same anywhere in the United States. I have asked for information about their bills. I don't know what kind of emergency response they have, but when I walk into a building, I don't know what's in there. I'm sure that little black book isn't going to tell me. I'm sure, positive,that if them things are this thick, that little black book would have them all, and somebody in Denville is in trouble, because he will walk into a situation which he knows nothing about.

If they have so much information that they can't pass it to us, that little black book they keep shoving around here is not enough. I need more. Thank you. That's all I have to say. I told you the story about the little brown sugar drum that leaked and turned into sulfuric acid after we got done with it. Things like that kill us guys. All I want is a chance. That's all. Thank you.

SENATOR DALTON: Thank you. For those people who didn't have the opportunity to testify this evening, I apologize. We tried to accommodate as many people as possible. They now have the option of either providing their written testimony to Mark Connelly right now, or, to prepare their written testimony and provide it, as I said before, to: Senate Energy and Environment Committee, Room 305, State House Annex, Trenton, New Jersey 08625.

Thank you very much for your participation.

(Hearing Concluded)

TOSCA)
FIFRA) These two laws are not pollution "control" laws but are "product" control laws. They regulate the manufacture, distribution and sale of: a) toxic chemicals or b) pesticide substances. In both cases advance notification (in advance of marketing of new chemical substances) must be provided to EPA relating to properties, manufacture, intended uses and hazards. FIFA also has an ongoing review process to determine the harmfulness of specific pesticides.

While both of these laws attack the so-called "hazards communication problem", under both TOSCA and FIFRA notification is to the EPA, not to the workplace or to the community. The only way much of this information might be obtained would be through an FOIA. Under FIFRA, all information would have to be obtained by way of FOIA requests.

RCRA) RCRA is in part designed to be a national manifest system. It has a mechanism to keep track of all toxic materials, "from laboratory to grave". RCRA is also a pollution control act under which actions can be filed to halt the dumping and pollution of toxic materials.

Information under RCRA is available to a worker of a community only after a lengthy request process. The process is a cumbersome one which may not provide the necessary information concerning properties or dangers of toxic materials.

SUPERFUND)

Set up to deal with spills and disposal. There is nothing in the Act which would readily supply the type of information Bill 1670 is being established to provide.

CLEAN AIR ACT)

Has not been used to effectively control toxic substances.

Public Advocate Appendix

	What Is It	Work Place Effect	Community Effect
TOSCA TOXIC SUBSTANCES CONTROL	Product Control Law (Toxic Chemical Manufacturing	No Effect	TOSCA generally requires EPA to be notified in advance before new chemicals are manufactured. However, no notice to community or workplace.
RCRA Resource Conservation and Control Act	Pollution Control Law (National Manifest System to Keep Track of Toxics)	No Effect	RCRA is designed to keep track of the movement of toxic materials by a manifest system. RCRA is only pre-emptory as to standards, not as to notification to the public.
FIFRA The Fungicide and Rodenticide Act	Product Control Law (Pesticide Law)	No Effect	FIFRA does not provide any information on the location or amounts of pesticides distributed. Even an FOIA request would not provide such information to a worker or community under FIFRA.
SUPERFUND Comprehensive Environmental Response, Compensation and Liability Act	Response to Pollution Law. Funding for Spill Clean-up.	No Effect	Superfund is designed to deal with the problems existing after a spill or to effectuate a cleanup. This does not provide any information on toxic materials which are legitimately being kept at a particular place. It also does not provide workers with any information.
CLEAN AIR ACT	Designed to Ensure Cleaner Air by 1987.		The Clean Air Act has been an abysmal failure at dealing with Toxic materials. To date only 4 substances are regulated, meaning that most of the toxic emissions are left unregulated. Certainly, there is no notification process.

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ADMITTED ALSO *VA. +MD.

October 20, 1982

Dear Senator:

Enclosed are statements on Senate Bill 1670, the Worker and Community Right-to-Know Act by our clients the Flavor and Extract Manufacturers' Association and the Fragrance Materials Association. We request that these statements be made a part of the official record of the Senate Committee on Energy and Environment for this legislation.

Respectfully submitted,

BONNER, THOMPSON, O'CONNELL & MIDDLEKAUFF

by Daniel R Thompson /mws
Daniel R. Thompson

DRT/ng

Enclosures

4x

STATEMENT OF THE

FLAVOR AND EXTRACT MANUFACTURERS ASSOCIATION

ON

SENATE BILL 1670

THE WORKER AND COMMUNITY
RIGHT TO KNOW ACT

October 20, 1982

5x

I. Introduction

The Flavor and Extract Manufacturers Assoication (FEMA) represents the majority of the flavor manufacturers in the United States who produce the vast majority of flavors used by the food and beverage industries. Over thirty FEMA member companies have facilities in New Jersey and there is little doubt that many more ship their products to food and beverage manufacturers in New Jersey. Approximately half of FEMA's member companies have annual sales of less than $3 million dollars. Many of these are small, family-owned enterprises whose products are highly specialized.

FEMA members' products consist of flavoring materials for incorporation into manufactured foods and beverages, food service menu items and, to a lesser extent, flavors, extracts and spices for sale to the consumer. FEMA members create the flavor formulations which are the secret of success of many popular foods and beverages found in households throughout the country. Some of our products include syrups, seasonings, spices, flavorings, extracts, concentrates and dried products derived from fruits, vegetables, meats and other natural sources. Flavorings are also produced using synthetic counterparts to constituents found in natural products. They are all used in foods such as baked goods, beverages, candies, condiments, meat and poultry products, soups and sauces.

FEMA members' concern for the safety of our workers and products is second to none. An independent review of the occupational safety and health conditions of the flavor industry which was recently conducted concluded that:

> [T]here is no factual evidence of a significant risk of occupational disease associated with flavor. . . manufacturing." 1/

The flavor industry must be excluded from the scope of this bill which would unnecessarily threaten trade secret ingredient identities which are essential to the existence of flavor manufacturers.

Since 1980, the industry has had a stay of certain provisions of the Federal Occupational Safety and Health Administration's records access standard. 29 C.F.R. § 1910.20 see, 46 Fed.Reg. 40490 August 7, 1981). On June 3, 1982 the Cincinnati City Council passed a right-to-know bill which was amended to exclude ingredients used in the production of food which are regulated by the Federal Food, Drug and Cosmetic Act. (See, Section 1246-05(A)(1) of Cincinnati Ordinance No. 210-1982, attached).

II. Overview of the Industry

A. Trade Secrets

The creation of a new flavor by a flavorist is a delicate and artistic operation by an inventive, highly trained and highly paid professional. His product, the flavor formula, is the principal asset of the flavor manufacturer. This is what he sells to the customer, not simply the ingredients which go into a mixture.

The success of many well known food and beverage products dear to the hearts of American consumers is attributable in large measure to distinctive flavors produced by FEMA members. We all know the names

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1/ Occupational Health Review of the Flavor and Fragrance Industries, Environ Corporation, August 31, 1982 p. 48.

of national fast food franchises whose success and advertising campaigns are based upon their unique proprietary flavor formulations. Soft drinks are yet another well known example of products of whose secret flavor formulas are jealously guarded.

In flavor manufacturing, it is the chemical identity of ingredients - not just the process - that constitutes the trade secret. Flavor compounds are complex mixtures of dozens of ingredients. Minute quantities of "notes" and "keys" give a particular flavor the unique characteristic that makes it distinctive and successful. Reverse engineering of these complex formulations does not occur. No clearer evidence of this exists than the fact that the flavor manufacturer is in competition with his customer. Many food and beverage companies have their own flavor divisions which, due to the economies of scale, can sometimes produce simple flavors more cheaply than flavor houses. They could also produce the special and distinctive flavors they now purchase if they had the trade secret formulas which cannot be protected by patents.

The security precautions taken by flavor manufacturers to prevent the disclosure of trade secrets is convincing evidence of the economic value of flavor formulations and their significance to the industry's continued viability. Common security precautions include the use of subformulas, storage of formulas in safes or secured computers, limiting access to formulas to a need-to-know basis and keeping extensive records of those who have access to formulas. Security precautions are costly and complicate flavor production, but are viewed as necessary costs because of the need to protect the manufacturer's

stock in trade, his formula. If this bill is enacted in its present form, the ability of flavor manufacturers to continue compounding operations in New Jersey would have to be seriously evaluated.

B. Safety Consciousness

The flavor industry has always had a high regard for safety and health. One of our obvious goals is the production of wholesome and unadulterated flavors. This requires the use of safe ingredients, clean facilities and equipment, ample ventilation and good work practices by our employees. This concern for our products leads naturally to a concern for our employees and their work practices.

C. Regulatory Environment

FEMA's members are quite familiar with safety and health regulations, and we support those regulatory programs which help assure the wholesome nature of our products and the health and safety of our employees.

Most materials used by the flavor industry are generally recognized as safe (GRAS) within the meaning of the Federal Food, Drug and Cosmetic Act. To qualify for this status there must be general recognition that they are safe among experts qualified by scientific training and experience to evaluate the safety of flavors under conditions of use.[2/] FEMA sponsors an independent expert panel of scientists who review flavor materials to determine whether they are GRAS. The conclusions of this panel are published in the scientific literature. The Food and Drug Administration also reviews materials,

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2/ 21 U.S.C. § 201(s).

including flavors, to determine whether they are GRAS.[3] FDA has accepted the evaluations of the Expert Panel and incorporated many of them into its regulations. Materials used in meat and poultry products are also regulated by the U.S. Department of Agriculture. Thus, no flavor materials are incorporated into our products without a searching examination of their safety as is appropriate for foods to be consumed by human beings.

Finished flavors are labeled in accordance with FDA regulations[4] and Department of Transportation regulations when shipped. Flavor manufacturers are also subject to all applicable OSHA, EPA and state and local health and safety regulations.[5]

D. Operations

Our workplaces are characterized by an extremely large number of starting materials and product formulations. Flavor formulations go in and out of production, in some cases, several times per day.

The processes used in the manufacture of food and beverage flavorings consist mainly of mixing and packaging flavor formulations. Other operations include the drying, cutting, grinding and packaging of herbs and spices; extraction, distillation, concentration, and packaging of natural or true fruit juices such as raspberry, cherry, lemon, and others. The manufacture of synthetic chemical counterparts

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3/ This review is based on a scientific literature review designated to uncover, among other things, articles which report occupational hazards. See, e.g. 47 Fed.Reg. 40448 (September 14, 1982) at 40449.

4/ 21 C.F.R. § 101.22(g)(2).

5/ FEMA shares the views of the New Jersey Business Industry Association and others that the bill would unnecessarily duplicate the requirements of other state and Federal regulatory laws.

to natural constituents also occurs. Fruits and vegetables are often dried, cut or ground, and then packaged.

In flavor compounding, closed vessels and systems are used to prevent cross-contamination and conserve valuable materials. Clean facilities with ample ventilation are necessary for the production of acceptable food products. For these reasons, chemical exposures in this industry are brief, intermittent and low in intensity. They are exposures to safe food ingredients.

The production of a flavor compound with delicate sensory characteristics requires skilled and knowledgeable workers. We provide intensive on the job training to new employees in carefully developed standard operating procedures. By this method we assure the safe production of complex products meeting precise specifications.

The production of flavors complies with FDA's current Good Manufacturing Practices regulations which are designed to assure the delivery of pure and wholesome food into commerce.[6/] These regulations address such issues as the personal hygiene of employees, the educations and training of employees necessary for the safe production of food, plant construction and design, sanitary facilities and controls, the safety of detergents and sanitizers, the use of insecticides or pesticides in food plants, the sanitation of equipment and utensils in plants, restrictions on the use of PCB's in plant equipment, and precautions to avoid contamination of food with harmful chemicals. Our plants are inspected by FDA to assure compliance with these and other regulations. Flavor manufacturers carefully monitor the quality of products leaving their plant to avoid the

6/ 21 C.F.R. Part 110.

unlawful introduction of adulterated products into interstate commerce. Downstream employers who incorporate flavors into finished products must similarly adhere to good manufacturing practices.

III. The Importance of Trade Secrets to the Industry

The flavor industry consists of a large number of very small, competitive companies. These companies are only able to survive because they are able to produce unique individualized flavors for particular customers which cannot be duplicated without the formula. The paramount importance of trade secrets to the industry can therefore be readily appreciated. As one New Jersey flavor company executive has stated in connection with the OSHA access rule:

> The very existence of the industry depends upon the confidentiality of trade secret information.

The loss of trade secrets that would occur under this bill threatens the continued existence of the flavor industry in New Jersey.

Given the devastating impact of this bill on the industry's ability to protect its vital trade secrets, and the safety of the industry's workplaces, an exemption for fragrance manufacturers is both justified and necessary.

IV. Comments on Senate Bill 1670

As presently drafted, the bill would apply to the industry and threaten its viability by forcing the disclosure of essential trade secrets as set forth below.

A. The Bill's Definition of Chemicals is Overbroad

Senate Bill 1670 would apply to all chemical substances listed in the latest printed edition of the NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) except those unintentionally present in compounds at less than 0.5%. Material safety data sheets would apparently have to be prepared for all mixtures containing such chemicals unless testing justified the mixture's classification as non-hazardous and all constituents were labeled. This is unreasonable since many mixtures contain substances in RTECS yet they are known to be safe (e.g. vinegar).

The use of RTECS as a criterion of hazardous substances is inappropriate. The NIOSH compendium is not a registry of toxic chemicals but a registry of toxic effects of chemical substances. The distinction is important because, as man has known for centuries, "the dose makes the poison." In other words many chemicals are toxic at extreme doses.

RTECS is a compendium of all chemical substances for which there is published toxicity data. It contains such innocuous ingredients as salt, vanilla, lemon oil, distilled water, mustard oil, tea, cane sugar, orange oil, cinnamon oil, and vitamins A through P (excluding only E, F, I, J, and O). All of the natural constituents contained in raspberries which are listed in RTECS are denoted in the attached list. It is ironic that, because food ingredients are carefully tested for safety, toxicity data exists and they are listed in RTECS.

The authors of RTECS acknowledge that the presence of a substance in RTECS does not signify that it is hazardous in common use.[7/]

Moreover, in recent testimony before the Federal Occupational Safety and Health Administration an official of NIOSH stated that the studies relied upon to list a substance are not evaluated by the agency for their validity nor are they necessarily conducted in accordance with contemporary scientific standards.[8/] He also stated that RTECS does not evaluate the relevancy of test conditions to occupational or environmental conditions. That official's testimony was given in a rulemaking proceeding to modify the agency's records access standard so that the mere listing of a substance in RTECS does not result in its being classified as "toxic".[9/]

The definition of special health hazard chemical (Section 5.h.) must be revised to apply only to known carcinogens, mutagens or teratogens because mere suspicion is not a sufficient basis for regulatory action.

Because of the overbreadth of the definition of chemical we seriously doubt whether our industry can comply with many of the requirements of the bill. Flavor manufacturers use thousands of ingredients and combine them into many more thousands of formulations. Obtaining material safety data sheets for the chemicals and mixtures we purchase and annually updating them will be tremendously difficult.

7/ NIOSH Registry of Toxic Effects of Chemical Substances (1980) p.xi.

8/ Testimony of James Melius, Branch Chief, Division of Surveillance, Hazard Evaluation and Field Studies, NIOSH, before the Occupational Health Administration, October 5, 1982.

9/ See 47 Fed.Reg. 30420 (July 13, 1982).

Labeling all containers in our plants is infeasible since their contents change in many cases. Preparation of public information listing all such materials does not provide useful information to the public since so many innocuous ingredients like sugar and peanut oil would be listed.

B. Trade Secrets

The availability of material safety data sheets and public information sheets to any person (See Section 8) severely endangers industry trade secrets. The bill's trade secret provision (Section 5) is inadequate since it is limited to information on public information data sheets only. No protection is provided for trade secret information that would be required on material safety data sheets or on labels. Even if the present provision were extended to include such information, trade secret protection would only be attended after a hearing before the Department of Environmental Protection. A single flavor manufacturer would likely have hundreds of trade secrets he would want protected. Multiply this by the thirty members of FEMA in New Jersey and add the rest of the businesses in the state and the magnitude of the problem becomes apparent. The Department would absolutely be swamped with requests for trade secret protection and the legislative intent to protect legitimate trade secrets would not be attained.

V. Conclusion

Conditions of occupational exposure to chemicals in the flavor industry justify an exemption for this industry from the worker right-to-know provisions of this bill. FEMA seeks an exclusion from this legislation for the manufacture of flavor materials and compounds and the incorporation of those materials and compounds into finished products. While we do not object to the concept of a public information data sheet, the criteria for the substances that would be required to be listed on such sheets (i.e. listing in RTECS) is overbroad and would place an unnecessary data compilation burden on employers. The trade secrets provision of the bill is inadequate to protect the trade secret formulas which are the lifeblood of the industry. We would appreciate the opportunity to work with the Senate of New Jersey to develop a bill which would accomplish Senate Bill 1670's stated legislative intent while protecting the industry's legitimate interests.

Flavoring Ingredients So Far Found to Occur Naturally in Raspberries

Hydrocarbons

* naphtalene
* 2-methylnaphtalene
* acenaphthene

Alcohols

* methanol
* ethanol
* 2-methylpropan-1-ol
* 1-butanol
* 2-butanol
* trans-2-buten-1-ol
* 2-methylbutan-1-ol
* 3-methylbutan-1-ol

  3-methylbut-2-en-1-ol

  3-methylbut-3-en-1-ol
* 1-pentanol

  trans-2-penten-1-ol

  1-penten-3-ol
* 1-hexanol
* cis-3-hexen-1-ol
* 1-heptanol
* 2-heptanol
* 1-octanol

  cis-2-octen-1-ol
* 1-nonanol
* geraniol

Carbonyls

* acetaldehyde
* propanal
* 2-propenal (acrolein)
* 2-methylpropanal

  3-methylbut-2-enal
* 3-methylbutanal
* 2-pentenal
* hexanal
* 2-hexenal

  cis-3-hexenal
* geranial
* neral
* benzaldehyde

* 2-propanone

  3-hydroxybutan-2-one
* 2,3-butanedione (diacetyl)
* 2-pentanone
* 3-pentanone
* 2-heptanone
* 2-nonanone

  menthone
* carvone

  1-(4-hydroxyphenyl)-butan-3-one
* camphor
* α-ionone

* Materials in Registry of Toxic Effects of Chemical Substances

Flavoring Ingredients So Far Found to Occur Naturally in Raspberries

(continued)

* nerol
* linalool
* cyclohexanol
* benzyl alcohol
* 2-phenylethanol

4-hydroxyphenylethanol (tyrosol)

* menthol

2-methen-1-ol

* α-terpineol

terpineol-4

3-methylbut-2-ol-2

* β-ionone

β-dihydro-ionone

epoxy- -ionone

α-irone

acetophenone

1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (damascenone)

piperitone

* furfural

5-methylfurfural

Esters

* methyl acetate
* ethyl acetate
* butyl acetate
* amyl acetate
* isoamyl acetate
* hexyl acetate

3-hexenyl acetate

butyl propanoate

* ethyl propenoate
* ethyl butanoate

ethyl 3-methylbutanoate

methyl hexanoate

Acids

* formic
* acetic
* propanoic
* 2-methylpropanoic
* butanoic

3-methylbutanoic

* pentanoic
* hexanoic

2-hexenoic

* 3-hexenoic
* octanoic
* 9-octadecenoic (oleic)

* Materials in Registry of Toxic Effects of Chemical Substances

Flavoring Ingredients So Far Found to Occur Naturally in Raspberries

(continued)

ethyl hexanoate

ethyl octanoate

* ethyl salicylate

* benzoic

4-hydroxybenzoic

5-hydroxyhexanoic acid lactone

* 5-hydroxy-2-hexenoic acid lactone

5-hydroxyoctanoic acid lactone

4-hydroxydecanoic acid lactone

5-hydroxydecanoic acid lactone

Miscellaneous

* 1,1-dimethoxyethane

* 1,1-diethoxyethane

* 4-methylphenol

dimethoxyallylbenzene

* coumarin

* 1,2-dihydroxybenzene (catechol)

theaspirane

* Materials in Registry of Toxic Effects of Chemical Substances

STATEMENT OF THE

FRAGRANCE MATERIALS ASSOCIATION

ON

SENATE BILL 1670

THE WORKER AND COMMUNITY
RIGHT TO KNOW ACT

October 20, 1982

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I. Introduction

The members of the Fragrance Materials Association (FMA) manufacture fragrance chemicals and compounds which their customers (manufacturers of household and personal care products) incorporate into their consumer products. Over thirty-five FMA members have plants in New Jersey and many more ship products into the state. Fragrance compounds are highly complex mixtures of materials such as natural oils from flowers and other plants and their synthetic counterparts. The members of FMA manufacture a substantial proportion of the fragrances used in the U.S. and their products provide distinctive qualities to such products as perfumes, soaps, colognes, cosmetics, deodorants, air fresheners, shampoos, detergents, after-shave lotions and cleaning products. The distinctive qualities contributed by fragrances help create product identities responsible for the success of many well-known products. Most fragrance compounds are custom made and make that particular customer's product unique.

FMA members' concern for the safety of our workers and products is second to none. An independent review of the occupational safety and health conditions of the flavor industry which was recently conducted concluded that:

> [T]here is no factual evidence of a significant risk of occupational disease associated with . . . fragrance manufacturing." 1/

The fragrance industry must be excluded from the scope of this bill which would unnecessarily threaten trade secret ingredient

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1/ Occupational Health Review of the Flavor and Fragrance Industries, Environ Corporation, August 31, 1982 p. 48.

which are essential to the existence of the industry.

Since 1980, the industry has had a stay of certain provisions of the Federal Occupational Safety and Health Administration's records access standard. (29 C.F.R. § 1910.20 see, 46 Fed.Reg. 40490 August 7, 1981).

II. Overview of the Industry

A. Trade Secrets

The development of the fragrance that will make a meaningful contribution to the success of a personal care or household product is a painstaking and expensive process. Perfumers, who are well compensated for their training, experience, creativity and olfactory acuity, labor to create the true asset of the fragrance manufacturer, the trade secret formula. Such a formula may take years to develop and, in some cases, be worth hundreds of thousands of dollars and lacks the protection of patent law.

Because of their value, secret formulas are carefully guarded by such measures as coding, use of subformulas, safes, secured computers, and the addition of ingredients to mask the presence of other ingredients. Contrary to popular belief, history shows that reverse engineering does not occur in this industry. This is due at least in part to the fact that fragrance compounds are highly complex mixtures typically consisting of hundreds of ingredients. A fragrance compound may consist of as many as 1,500 ingredients. The difficulty of "cracking" such a formula, with many constituents present at very low levels, is obvious.

In short, our industry is built upon creativity, which can only be protected by maintaining trade secrets. If this bill is enacted in its present form, the ability of fragrance manufacturers to continue compounding operations in New Jersey would have to be seriously evaluated.

B. Safety Consciousness

The fragrance industry, for the most part, is typified by small companies who compete with one another, and often, with their own customers. It is a highly safety conscious industry. The safety of compounds is essential to the successful fragrances since they are intentionally applied to the human body. To assure the safety of fragrance materials, the fragrance industry formed the Research Institute for Fragrance Materials, Inc. (RIFM) in 1966. RIFM conducts safety research and provides expert safety evaluation of fragrance materials. Studies on primary irritation, percutaneous absorption, immediate and delayed hypersensitivity and photoallergic, phototoxic responses and systemic toxicity have all been evaluated by the RIFM Expert Panel. Since 1972 RIFM has regularly published monographs on particular materials in Food and Cosmetics Toxicology. They contain data on chemical and physical properties, health effects data, and provide a comprehensive safety evaluation. RIFM has also done epidemiologic investigations of certain populations of fragrance users.

C. Regulatory Environment

In addition to responsible self-regulation, the safety of this industry is also assured by extensive regulation pursuant to Federal and other laws. Manufacturers of fragrances used in cosmetics are required by the Federal Food, Drug and Cosmetic Act to ensure that their products do not contain any poisonous or deleterious substances, and that they have not been processed or stored under unsanitary conditions that might lead to contamination. Fragrance manufacturers must also comply with the Occupational Safety and Health Act, the Consumer Product Safety Act, Federal Hazardous Substances Act and the Toxic Substances Control Act. All fragrance compounds which are shipped are subject to Department of Transportation regulations. State and local laws also regulate fragrance manufacturing. Fragrance manufacturers are subject to inspection by FDA, OSHA and other regulatory authorities.[2/]

D. Operations

An important characteristic of the fragrance industry is the enormous variety of materials used and the complex array of product formulations. This enormous variety and the fact that fragrance compounds are custom made and therefore not in constant production limits exposures. Ours is an ever changing workplace environment with formulas consistently going in and out of production. Closed vessels and systems are used to prevent cross contamination and conserve

2/ FMA shares the views of the New Jersey Business Industry Association and others that the bill would unnecessarily duplicate the requirements of other state and Federal regulatory laws.

valuable materials. Exposures in our industry are brief, intermittent and low in intensity. Thus the situation is one of low exposure to substances whose safety to humans is assured because they are intended for application to the human body.

There are additional characteristics of fragrance compounds which militate against adverse effects from chemical exposures in the industry. The end product of fragrance compounding is a complex mixture having delicate organoleptic characteristics. Duplicating these characteristics in a mixing operation requires the precise execution of carefully thought out standard operating procedures. There is little tolerance for carelessness. Clean facilities with ample ventilation are essential to prevent cross-contamination. These factors further reduce the potential for employee exposure.

The complexity and the delicacy of fragrance compounding requires skilled workers. Our employees typically have extensive formal education and considerable practical experience that enables them to recognize and avoid potentially significant exposures. Intensive on the job training is provided to assure that new employees are capable of the safe and accurate completion of their assigned tasks.

Thus, in the fragrance industry we find insignificant exposures to ingredients whose safety is already assured by a rigorous safety evaluation program and knowledgeable workers.

III. The Importance of Trade Secrets to the Industry

It is common knowledge that the fragrance industry survives because of its ability to preserve the identity of trade secret ingredients. Fragrances are the artistic creation of geniuses known as

perfumers. They devise the secret formulas that permit fragrance houses to be successful.

In the fragrance industry it is clearly not the case that "a rose is a rose." Subtle differences in the aroma of a particular mixture within a generic class of fragrances such as rose are responsible for some fragrance mixtures being far more successful than others. Other fragrance mixtures succeed because they are something totally different from other fragrances. It is the presence of traces of trade secret ingredients or unique combinations of ingredients that make these fragrances successful. History shows that the formulas of leading perfumes have been maintained as trade secrets for decades. For the fragrance industry's continued success, this information must be kept confidential.

The loss of trade secrets that would occur under this bill threatens the continued existence of the fragrance industry in New Jersey.

Given the devastating impact of this bill on the industry's ability to protect its vital trade secrets, and the safety of the industry's workplaces, an exemption for fragrance manufacturers is both justified and necessary.

IV. Comments on Senate Bill 1670

In view of the foregoing, the industry should not be included under this legislation. However, as presently drafted, the bill would include the industry and present difficult trade secret problems for the reasons set forth below.

A. The Bill's Definition of Chemicals is Overbroad

As presently drafted, Senate bill 1670 would apply to all chemical substances listed in the latest printed edition of the NIOSH Registry of Toxic Effects of Chemical Substances except those unintentionally present in compounds at less than 0.5%. Material safety data sheets would apparently have to be prepared for all mixtures containing such chemicals unless testing justified its classification as non-hazardous and all constituents were labeled. This is unreasonable since many mixtures contain substances in RTECS yet they are known to be safe, for example, vinegar.

The use of RTECS as a criterion of hazardous substances is inappropriate. The NIOSH compendium is not a registry of toxic chemicals but a registry of toxic effects of chemical substances. The distinction is important because, as man has known for centuries, "the dose makes the poison." In other words, many substances can be toxic at extreme doses.

RTECS is a compendium of all chemical substances for which there is published toxicity data. It contains such innocuous ingredients as orange oil, lemon oil, and rose oil. It is ironic that because fragrance ingredients are tested for safety, toxicity data exists and they are listed in RTECS.

The authors of RTECS acknowledge that the presence of a substance in RTECS does not signify that it is hazardous in common use.[3/] Moreover, in recent testimony before the Federal Occupational Safety and

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3/ NIOSH Registry of Toxic Effects of Chemical Substances (1980) p. xi.

Health Administration an official of NIOSH stated that the studies relied upon in listing a substance in RTECS are not evaluated by the agency for their validity nor are they necessarily conducted in accordance with contemporary scientific standards.[4/] He also stated that RTECS does not evaluate the relevance of test conditions to occupational or environmental conditions. That official's testimony was given in a rulemaking proceeding to modify the agency's records access standard so that the mere listing of a substance in RTECS does not result in its being classified as "toxic".[5/]

The definition of special health hazard chemical (Section 5.h.) must be revised to apply only to known carcinogens, mutagens or teratogens.

Because of the overbreadth of the definition, the industry will be unable to comply with many of the requirements of the bill. Fragrance manufacturers use thousands of ingredients and combine them into many more thousands of formulations. Many of these ingredients are listed in RTECS. Obtaining material safety data sheets for all of the many chemicals and mixtures we purchase and annually updating them will be virtually impossible. Labeling all containers in our plants is infeasible since their contents are constantly changing in many instances. Moreover the preparation of lists of all chemicals in a plant does not provide useful information to the public since many common innocuous ingredients such as orange oil and lemon oil would be included.

4/ Testimony of James Melius, Branch Chief, Division of Surveillance, Hazard Evaluation and Field Studies, NIOSH, before the Occupational Health Administration, October 5, 1982.

5/ See, 47 Fed.Reg. 30420 (July 13, 1982).

B. Trade Secrets

The availability of material safety data sheets and public information sheets to any person (See, Section 8) severely endangers industry trade secrets. The bill's trade secret provision (Section 5) is inadequate since it is limited information on public information data sheets only. No protection whatsoever is provided for trade secret information that would be required on material safety data sheets or on labels. Even if the present provision were extended to include such information, trade secret protection would only be extended after a hearing before the Department of Environmental Protection. A single fragrance manufacturer would likely have hundreds of trade secrets he would want protected. Multiply this by the thirty-five members of FMA in the state and add the rest of industry in New Jersey and the magnitude of the problem becomes apparent. The Department would absolutely be swamped with requests for trade secret protection and the legislative intent to protect legitimate trade secrets would not be attained.

V. Conclusion

Conditions of occupational exposure to chemicals in the fragrance industry justify an exemption for this industry from the worker right-to-know provisions of this bill. FMA seeks an exclusion from this legislation for the manufacture of fragrance materials and compounds and the incorporation of those materials and compounds into finished products. While we do not object to the concept of a public information data sheet, the criteria for the substances that would be

required to be listed on such sheets (i.e. listing in RTECS) is over-broad and would place an unnecessary data compilation burden on employers. The trade secrets provision of the bill is inadequate to protect the trade secret formulas which are the lifeblood of the industry. We would appreciate the opportunity to work with the Senate of New Jersey to develop a bill which would accomplish Senate Bill 1670's stated legislative intent while protecting the industry's legitimate interests.

TESTIMONY ON SENATE BILL 1670

BY

GLOUCESTER COUNTY HEALTH DEPARTMENT

Suomitted: October 20, 1982

Bob Smith, Director
Gloucester Co. Health Dept.
845-1600

31x

BOB SMITH, DIRECTOR, GLOUCESTER COUNTY HEALTH DEPARTMENT. I AM HERE THIS EVENING TO TESTIFY IN SUPPORT OF SENATE BILL 1670, CITED AS THE "WORKERS RIGHT TO KNOW ACT". THIS BILL ALTHOUGH PERHAPS HAVING SOME TECHNICAL PROBLEMS CLEARLY ADDRESSES AT LEAST TWO IMPORTANT AREAS OF CONCERN.

FIRST THIS LEGISLATION WILL PROVIDE INDIVIDUAL BENEFIT BY SERVING THE HEALTH INTERESTS OF THE WORKER AND HIS FAMILY. SECOND A BROADER SPECTRUM OF BENEFIT WILL BE PROVIDED BY MAKING INFORMATION AVAILABLE THAT WILL PROTECT THE HEALTH AND ENVIRONMENT OF THE ENTIRE COMMUNITY.

ADDRESSING FIRST THE ROLE OF THIS LEGISLATION IN PROTECTION OF THE INDIVIDUAL WORKER - THE COUNTY HEALTH DEPARTMENT THROUGH THE COURSE OF A YEAR IS INVOLVED IN A VARIETY OF INVESTIGATIONS WHERE ALLEGATIONS ARE STATED CONCERNING THE ROLES OF CHEMICALS AND THEIR RELATIONSHIP TO BIRTH DEFECTS, AND CANCER MORBIDITY AND MORTALITY. OUR FIRST STEP IN EVALUATING THE POTENTIAL HEALTH RISK IS TO VERIFY THE ACTUAL INVIDENCE OF MORBIDITY OR MORTALITY, THEN NEXT MOVING ONTO THE MOST CRITICAL STEP, WE GATHER INFORMATION THROUGH INVESTIGATION AND INTERVIEW. A MAJOR PART OF THE VALIDITY OF OUR INVESTIGATION BEARS DIRECTLY ON THE QUALITY AND DEPTH OF KNOWLEDGE AS IT RELATES TO PERSONAL AND OCCUPATIONAL EXPOSURE OF ENVIRONMENTAL FACTORS.

A RECENT CASE IN POINT IS THE JOINT INVESTIGATION CONDUCTED BY THE GLOUCESTER COUNTY HEALTH DEPARTMENT AND THE NEW JERSEY STATE DEPARTMENT OF HEALTH INTO THE INCREASED NUMBER OF ANENCEPHALIC BIRTHS OCCURRING IN GLOUCESTER COUNTY OVER THE PAST SEVERAL YEARS. DURING THE COURSE OF THIS INVESTIGATION 18 FAMILIES WERE CONTACTED AND INTERVIEWED IN AN ATTEMPT TO IDENTIFY A FACTOR OF SIGNIFICANCE. OF PARAMOUNT IMPORTANCE IN THAT INVESTIGATION WAS ANY HISTORY OF ENVIRONMENTAL AND/OR OCCUPATIONAL EXPOSURE TO THE FAMILIES. A DEPTH OF KNOWLEDGE BY THE INDIVIDUAL AS PROVIDED BY THE "WORKER RIGHT TO KNOW BILL" WOULD HAVEBEEN A GREAT VALUE IN EXPEDITIOUSLY AND PROPERLY IDENTIFYING THE POSSIBILITY OF TERATOGENIC AGENTS THROUGH OCCUPATIONAL EXPOSURE.

THE IMPLEMENTATION OF A MATERIALS SAFETY DATA SYSTEM (MSDS) (AS PROPOSED IN THIS BILL) WILL IDENTIFY HAZARDOUS CHEMICALS USED BY THE WORKER AND WILL LIST INFORMATION PERTINENT TO THE WORKERS IMMEDIATE HEALTH AND SAFETY, AS WELL AS PROVIDING DATA NECESSARY FOR VALID INVESTIGATION AND CORRELATION OF POSSIBLE CAUSATIVE FACTORS PRESENT IN THE WORK ENVIRONMENT.

PROVISIONS OF S-1670 REQUIRING THAT EMPLOYERS ESTALBISH AN EDUCATION AND TRAINING PROGRAM FOR ALL CURRENT EMPLOYEES AS IT RELATES TO THE POTENTIAL HEALTH RISKS OF CERTAIN CHEMICALS AND PROPER HANDLING PROCEDURES FOR CHEMICALS, WILL ESTABLISH A BETTER KNOWLEDGE OF THE MATERIALS BEING WORKED WITH. THIS INCREASED AWARENESS ON BOTH THE PART OF MANAGEMENT AND THE WORKERS WILL MINIMIZE IMPORPER AND INDISCRIMINATE US AND DISPOSAL OF CHEMICALS.

THE SECOND MAJOR VALUE OF THIS LEGISLATION LIES WITHIN THE REQUIREMENTS FOR A "PUBLIC INFORMATION DATA SHEET". IMPLEMENTATION OF THIS PROVISION WILL GIVE THE STRENGTH OF KNOWLEDGE NEEDED BY COMMUNITIES TO PLAN AND DEAL EFFECTIVELY WITH FIRE AND DISASTER SITUATIONS.

ANOTHER RECENT CASE IN POINT, ONE WHICH ILLUSTRATES THE NEED FOR KNOWLEDGE IN DEALING WITH CHEMICAL DISASTERS, OCCURRED IN LOUISIANA WHERE AN OVERTURNED TANKER EXPOSED RESIDENTS TO TOXIC CHEMICALS. WITHOUT IDENTIFICATION OF THE SUBSTANCE A RATIONAL AND PLANNED APPROACH COULD NOT HAVE BEEN UNDERTAKEN IN DEALING WITH THE DISASTER. IN THIS INSTANCE EMERGENCY PERSONNEL WERE ABLE TO APPROACH THE SITUATION USING PROPER METHODS AND EQUIPMENT.

A MORE SUBTLE BUT ALSO VERY IMPORTANT ASPECT OF OBTAINING A CHEMICAL INVENTORY IN THE COMMUNITY IS FOR THE PROTECTION OF CHRONIC OR LONG TERM EXPOSURE BY DISCHARGE OR EMISSION OF CHEMICALS TO THE WATER SUPPLY AND AIR.

INFORMATION GATHERED THROUGH PUBLIC INFORMATION DATA SHEETS WOULD ENABLE COUNTY HEALTH DEPARTMENTS TO PROPERLY ESTABLISH MONITORING WHERE NEEDED AND ALLOW PRIORITIES TO BE ESTABLISHED THROUGHOUT THE COUNTY, BASED UPON THE CHEMICAL IN-

VENTORY INFORMATION. ALTHOUGH MY MAJOR EMPHASIS AND THRUST IS TO ENDORSE AND SUPPORT THIS LEGISLATION THERE ARE SEVERAL PROBLEMS THAT MUST BE RESOLVED BEFORE UNMITIGATED SUPPORT CAN BE GIVEN.

I WOULD RECOMMEND THAT THE FOLLOWING AREAS BE CLEARLY ADDRESSED:

1. THE NEED FOR PROPER FUNDING. INORDER TO PROVIDE FOR ADEQUATE PERSONNEL FOR THE ENFORCEMENT OF THE PURSUANT REGULATIONS.
2. A CLEAR STATEMENT THAT DEP WILL NOT TRANSFER ANY FUNCTIONS OR RESPONSIBILITIES UNDER THIS LEGISLATION WITHOUT THE ACCOMPANIMENT OF ADEQUATE FUNDING.
3. A BETTER DEFINITION OF CHEMICAL GENERATORS THAT WOULD REDUCE WHAT COULD CONSTITUTE UNWIELDLY PROBLEM WITH ENFORCEMENT AND REPORTING.
4. ELIMINATION OF THE REQUIREMENT FOR 48 HOUR REPORTING OF EMISSIONS OR SPILLS OF CHEMICALS THIS IS TOO LONG AND SHOULD BE REQUIRED IMMEDIATELY SO AS TO BE CONSISTENT WITH OTHER STATE REGULATIONS.

AS STATED AT THE OUTSET TECHNICAL PROBLEMS SHOULD BE RESOLVED WITHIN THE EXISTING BILL. THESE PROBLEMS SHOULD NOT BE USED AS A BASIS FOR REJECTION OF THE LEGISLATION. THE NEED FOR THIS LEGISLATION CAN BE DEMONSTRATED BY THE MOVEMENT OF OTHER STATES AND CITIES WHO HAVE INTRODUCED SIMILAR LAWS.

THE NEED IN NEW JERSEY HAS BEEN SHOWN NOT ONLY BY THE VAST AMOUNTS OF CHEMICALS PRODUCED, STORED AND HANDLED IN THE STATE, BU T BY THE ADOPTION OF LOCAL ORDINANCES. IF THE PROBLEM IS TO BE ADDRESSED IN AN ADEQUATE WAY STATE LAWS ARE NECESSARY.

PERHAPS THE GREATEST SINGLE ELEMENT OF THIS LEGISLATION - FOR WHICH GREAT EFFORT SHOULD BE MADE - IS THE STRENGTH OF KNOWLEDGE THAT IT GIVES TO THE INDIVIDUAL WORKER AND COMMUNITY ALIKE.

IN ORDER THAT THIS LEGISLATION RECEIVE THE SUPPORT IT NEEDS TO BECOME LAW, I REQUEST THAT REASONABLE CONSIDERATION BE GIVEN TO THIS AND OTHER STATEMENTS. PRESENTED THIS EVENING.

TESTIMONY FOR DELIVERY BEFORE THE NEW JERSEY SENATE ENERGY AND ENVIRONMENT COMMITTEE CONCERNING DRAFT BILL S-1670 "CONCERNING CERTAIN HAZARDOUS SUBSTANCES IN THE WORKPLACE AND THE COMMUNITY," CHAIRED BY SENATOR DANIEL J. DALTON, OCTOBER 20, 1982 AT THE WASHINGTON TOWNSHIP MUNICIPAL BUILDING IN TURNERSVILLE, NEW JERSEY

My name is Gardner Cox. I am Executive Director of the Environmental Improvement Committee (EIC) of the PENJERDEL Council, a body comprising some 500 industrial plants or firms in Pennsylvania, New Jersey and Delaware. Because of my lateness in preparing these comments and lack of time to clear them with the appropriate members of an EIC subcommittee, I am presenting these remarks on my own behalf only.

I have attended the two previous hearings conducted by your Committee -- the initial one in Trenton on October 6th and the subsequent one at Newark on October 13th.

What you probably want from me -- or anyone -- I believe, is some assessment of the results of similar legislation functioning and in gear somewhere else. New York State might be one place to go. Philadelphia is another. I will move fairly rapidly to an assessment of the Philadelphia experience, as I see it and as I have been able to learn about its workings from talking to people charged with carrying it out.

A few comments about draft bill S-1670 should come first, however. It is not a well thought-out draft. As it now stands, even if the NIOSH-Registry listing of 35,000 substances were shrunk down, it would be expensive for a State Government facing deficits or for any State Government, expensive for companies of whom compliance is required, and -- most importantly -- so unwieldy and uncompartmented as to make it for some time an impossible task for the DEP as regulators to get a system which is clogged from the outset to move off the ground and become functional.

If charged with carrying out provisions of S-1670 as drafted the DEP would, I think, be left perpetually open to criticism for its inability to operate an overblown, self-clogging system which appears to promise to the bill's proponents much more than the DEP (or any comparable body in its place) can or could deliver. Others in the two previous hearings have covered this in moderate detail. Some issues I won't dwell on are:

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- The problems of any list, especially the NIOSH Registry comprising some 35,000+ substances.

- Mixtures, need for uniformity, overlapping regulations.

- Costs, certain legal considerations, etc.

What I particularly have noticed in pro-Bill testimony in the previous two hearings is:

-- the repeatedly expressed belief that MSDSs will provide a wealth of information about exposures below the acute-exposure level, which generally they do not and cannot do -- even when held in the hands of an outstanding toxicologist or epidemiologist.

-- The conviction that PIDSs will provide a wealth of brand new and valuable information for fire-fighters especially, for planners, or for community residents.

-- The mistaken belief that no constructive regulations of any kind are in place or about to be put in place on State regulatory or federal initiative, and that Bill S-1670 is starting, in effect, from "square one" or from a tabula rasa. The preamble and the Bill itself as drafted seem to encourage those beliefs or convictions.

Advocates of the Bill, a number of whom came from Philadelphia to testify before you at Trenton or to assist as floor organizers there, surprised me by omissions in their testimony. They failed to point to the Philadelphia regulations, which they had helped pass there. And they failed to claim that the Philadelphia regs had already accomplished or were giving promise of accomplishing a great deal for which there had been a crying need before.

So let us look at the Philadelphia experience.

The substances of interest there are contained in two listings: L&I/ Fire Dept., and Air Management Services (AMS).

Regs covering store, handle, etc. are administered by the Commissioner of Licenses & Inspections (L&I) and the Fire Department, under Bill #475 using the OSHA Subpart Z listing of some 450 or 475 substances. These substances are primarily seen with special focus on conditions of fire or spillage or both.

The L&I computerized listings developed from replies received after some 1,500 forms were mailed out (with a cutoff reply date of September 25, 1981) are roughly the equivalent of the PIDSs envisaged in draft Bill S-1670. They are available from L&I on request, and now cover some 350 plants having one or more of the listed materials on premises.

The second or AMS listing started out as a total of 64 substances and grew to a total of 99. These substances range from ones having high toxicity to moderate toxicity. Some occur as particulates but, with some exceptions (such as PCBs, PBBs), the bulk of them can readily volatilize to a vapor at normal temperatures or are a gas capable of being inhaled, with attendant risk strongly dependent on the level of concentration and the duration of exposure. There is an existing AGGIH (or OSHA) Threshold Limit Value (TLV) for a fair number of those substances. About 45 on the Philadelphia list of 99 are ACGIH-listed.

(TLV-TWA -- "the time-weighted average concentration for a normal 8-hour workday and a 40-hour work-week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect." (ACGIH definition, p. 3, TLV Threshold Limit Values handbook.))

Short Term Exposure Limits (STELs) supplement the TLVs.

AMS was directed to go further and calculate community exposure levels which are deemed safe, using an appointed unpaid Ad Hoc Advisory Committee of professionals which has been hard at work over a year with strong support from AMS staffers. It now has established Air Quality levels (AQLs) or guideline numbers expressed as low parts per billion for some 72 of 99 listed substances. Furthermore it is estimated only about half of the 99 substances -- say 48 of them -- actually are emitted within Philadelphia. I do not have an estimate for the presence or absence of the 450-475 L&I/Fire Department substances listed from Subpart "Z".

Of the estimated 48 substances emitted in Philadelphia -- covered by AMS Regulation VI pursuant to Bill #270 -- some 18 or 37.5% have been dispersion modelled. Dispersion models acceptable to the EPA have been applied by private entities to the fugitive or other emissions of the 18 substances, and their maximum annual average ground-level concentrations have been calculated. The concentrations in air are, for the great majority of those substances, not detectable in air by the most sophisticated means of sampling and analysis available today.

The modelling results are below 100 parts per billion in all cases, below 20 parts per billion in all but two cases, and below 6 parts per billion in all but three cases. Thirteen of them are modelled to be in the parts per trillion range, from highs of 970, 620 and 460 down to lows of 4.8, 3.2, .5 and .2 parts per trillion. One additional substance for which no TLV exists models in at 3.2 parts per trillion.

The 18 modelled substances average ≤2.9% -- possibly less -- of the respective Air Quality Level (AQL) guideline numbers which it is anticipated AMS will be establishing for them. AMS's intent is to scrutinize carefully any substance with a properly modelled annualized average ground level concentration which is 90% or more of its AQL guideline number. None of the 18 substances falls in the above 90% range. (The AMS guideline numbers are, generally speaking, based on 1/420th of the TLV-TWA numbers in the ACGIH listings used by OSHA, while Wisconsin, for example, seems inclined to use 1/300th of the TLV).

New York State, under Chapter 551 of 1980 and subsequent regs has been working on the basis of Acceptable Ambient Levels (AAL) for some 260 substances in categories of "very", "moderate", and "low" toxicity. Of "over 1000" evaluations statewide thus far conducted for permitting purposes there have been "3 or 4 referrals" according to Mr. Tom Cashman, Chief, Toxics and Radiation Section, NY Department of Environmental Conversation, speaking by phone with me yesterday. The State is taking a closer look at these 3 or 4, following "the conservative approach" (as laid down in "Air Guide-1 revised 12/4/81" of the DEC) according to Cashman.

Two Temple University Law Review articles by attorneys Jerome Balter and Robert Vogel are also attached. The two articles describe the mechanism and the evolution of the Philadelphia L&I/Fire Department and AMS regulations in considerable detail.

The twin regulatory mechanisms provide more than adequate controls for the listed substances. Vogel's 10/7/80 testimony before Philadelphia City Council (attached) indicates the practices and activities of a conscientious major company -- already in place -- which promised to be largely duplicated by the then-pending Philadelphia regulations, and were.

Local or parochial labelling requirements have not been undertaken.

Continuing with a description of the Philadelphia experience, you might think that with open public access there would be many people or groups requesting data from L&I and Fire Department on the one hand (about the plant down the street), or on the other hand from AMS. Figures on inquiries, like tabulations of complaints in another context, are highly subject to manipulation. However, I don't feel this has occurred at all. You perhaps will agree. The totals which include requests from the leadership of various interested groups (of course including one request to AMS from our own EIC) are:

Requests for data from L&I/Fire Department — 80 in 12 months

Requests for data from AMS — 17 in 8 months

Some of the AMS requests -- I don't know how many -- were from students wanting the data as the basis for papers they were writing.

Costs: There are available some cost figures from L&I, from the Fire Department and from AMS as listed below. Inability at this time to separate out some second-year capital costs (Fire Department) from operating costs makes it not a complete picture. In any case Philadelphia cost figures are not analagous to those of a possible statewide system of any sort in New Jersey. Interfering factors are New Jersey's greater size, lesser population densities (as a clue to industrial plant density), distances which complicate any arrangement envisaging centralized, speedy dissemination of information, and New Jersey's considerable greater number of plants and firms etc.

Approximate costs for Philadelphia are:

	first year	second year	Firms canvassed by mailed notices	firms regulated
Fire Department, per Commissioner Joseph R. Rizzo letter of 10/7/82 to G. Cox	$107,140	$574,985*	see L&I	see L&I
Licenses & Inspections (L&I) per Deputy Commissioner Henry G. Hurling letter of 10/15/82 to G. Cox	$ 51,856	$ 45,646	1500	300
Air Management Services (AMS per its Chief, Wm. Reilly	$457,000	$355,000(Approx)	750	175
	$615,996	$975,631*		

(* includes - 2nd year - one-time capital cost, not separated out, of computerized dispatching system and computerized system for providing locational information at plants to first-in and (probably) to backup fire companies, while at the scene of a fire, by telemetry or RF link).

It is my belief that New Jersey's costs for performing regulatory activities comparable to Philadelphia's would far outstrip Philadelphia costs for reasons of geography, distances, etc. to name only a few.

	Philadelphia	Six most populated NJ Counties* 2000 population per square mile & above (1970 census)
square miles	129	13,086
population	1,688,210	4,272,030
Pop/sq. mile	13,086/sq. mi.	4,620/sq.mi. (i.e. compactness)

* Passaic, Bergen, Hudson, Essex, Union, Camden.

Attempting to assess the Philadelphia Experience early last July I circulated a two-page memorandum on the subject to EIC members and to some others on 7/6/82. The key paragraph reads:

> "In an area of such diversity there is no guaranteed absolutely clear crystal ball. Nevertheless an EIC combing of the unverified emissions forms which were submitted to AMS (and the AMS summary sheets which present the same data) leads towards the conclusion that among the principal and modelled substances there are no 'surprises' or grounds for alarm waiting out there."

On 7/13 I wrote to the Philadelphia Commissioner of Health, Deputy Commissioner of Health, Assistant Health Commissioner for Air Management Services, Director of the Air Quality Division of AMS and Manager of the (Philadelphia) Toxic Air Pollutant Study (TAPS), and a key staff member of AMS involved in staff support of AMS's ad hoc Advisory Committee enclosing the 7/6/82 memorandum containing the paragraph quoted above. I asked "If you would like to suggest changes or corrections which would factually help to shape anything I might write later on this subject, I would certainly appreciate receiving them from you." There have been no suggested emendations or amendments received from those addressees. I cannot draw large conclusions from the absence of suggestions, corrections or comment; but I construe absence of comment to indicate there is no gross overstatement in my assessment.

Going beyond the 18 modelled substances to look at all 99 of them, the following Q&A exchange took place at a panel discussion about Bill 270 and Regulation VI held June 17th, 1982 under the auspices of the Environmental Improvement Committee (EIC) at the Engineers' Club of Philadelphia. Panelists were Mr. Clemens Lazenka of AMS, Mr. Nicholas Ciciretti of AMS and Dr. Gary Lage of the Ad Hoc Advisory Committee to AMS. Q: Have the preliminary screenings thus far shown any cause for alarm in a Public Health sense? Ans: None has been observed yet, and none is anticipated from the (unverified) emission quantities reported to AMS.

As for the L&I/Fire Department side of it, Deputy Fire Chief Patrick McGinley indicated to me by telephone in June and more recently that certain information regularly gathered in FD inspections is somewhat more readily forthcoming and available now that a burden of proof or responsibility has been more squarely placed, through Bill #475, on the shoulders of plant managers of industrial facilities large and small in the City. I do not believe this is necessarily true of large, sophisticated plants but I do believe it is quite likely the case for medium and smaller sized facilities. This is information which for over 10 years has been set down on pink form 72-112 -- "Hazardous Materials Storage Form" and for more than 25 years on form 76-80 -- "Vital Building Information" Form. These are kept with the first-in fire company engine, at the first-in company's station for benefit of the second-in company, and with the battalion chief, in looseleaf ring-binders.

The forms carried in ring-binders covering each fire company's "local area" will always be pertinent and reliable, I believe. Satellite communications and other pieces of telemetry will be slow to replace them or outdo their reliability and usefulness. This is a gut feeling of mine rather than being based on any really solid understanding of the reliability or capabilities of the latest communications devices and systems.

(Attached are samples of both form #72-112 and #76-80 plus the Philadelphia Fire Department's Forms Directive on how to fill out Vital Building Information forms.)

It thus seems to me that the changes brought about by Bill #475 in the Fire Department context are, at most, matters of degree. I must add here that throughout the two previous S-1670 hearings the claims of non-firemen and of some firemen testifying have been that fire companies approach a burning plant with no information, no knowledge. The National Fire Protection Association Inc. at Quincy Massachusetts and a number of other professional, educational, safety and administrative-training institutions have for decades been promoting a high level of professionalism, information, knowledge (and wisdom if you like). This body of knowledge as well as the professionalism of firefighting officers in general has received short shrift throughout most public discussions about (storage, handling, transport of) toxic materials at given facilities. It sells firefighting knowledge short.

After the Allied plant in Philadelphia had its big fire earlier this year a prominent City official complained in a meeting that he had arrived on the scene and had no idea what the products of combustion were etc. and that this was a poor situation. But it is more than likely he didn't know where to go, at the scene of the fire, to take a look at the forms 72-112 and 76-80 which were there at the scene (first-in company, second-in company) or to ask the question on the appropriate FD radio channel. I am willing to believe that some of the testimony you have received in the previous two hearings exemplify a communications gap similar to the one I have just now described.

In conclusion, I don't believe the draft S-1670 gives evidence of

- knowing what is being done now (by larger responsible companies, by medium sized or small sized ones)

- knowing whether perceived deficiencies represent aberrations or are chronic.

- knowing clearly what you want to do or what needs to be accomplished and at what probable costs to the various agencies and entities which would carry the freight.

Unless the Committee comes to know the answers to some or all of these questions it will probably come up with a flawed bill which will be extremely difficult for regulators to carry through. A good bill should appraise accurately what is in place or about to be put in place and fill in the gaps or crevices which need to be filled in in order to provide a desired and do-able level of true coverage or protection -- in a workplace sense, in a firefighter's sense, from a community health standpoint and from the difficult standpoint of balance and of setting priorities with recognition of societal costs.

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Attachments

7/13/82

MEMO

THE PENJERDEL COUNCIL

To: Dr. Stewart Shapiro, Mr. A.J. Henley, Mr. Wm. Reilly,
Mr. Clemens Lazenka, Mr. Nicholas Ciciretti, Dr. I.M. Levitt.
Dr. Gary Lage.

Gentlemen,

Enclosed is EIC's attempt to assess the relationship between 18 modelled substances and the tentative or likely "Guideline Numbers" in the process of being established by AMS's Ad Hoc Advisory Committee - relative to City Council Bill # 270 and AMS REGULATION VI.

If you would like to suggest changes or corrections which would factually help to shape anything I might write later on this subject, I would certainly appreciate receiving them from you.

EIC (Environmental Improvement Committee) hopes to set up another panel (like that of June 17th, with the same panelists) for its monthly meeting(at the Engineers Club of Philadelphia) of November or December 1982 (third Thursday). Topic (again, almost the same as before): Bill 270 - A Look at its First 9 or 10 months of Operation."

Sincerely yours,

Gardner Cox

Gardner Cox, Exec.Dir.
EIC.

Attached: 7/6 packet.

Identification of addressees:

Dr. Stewart Shapiro; Commissioner of Health
Mr. A.J. Henley: Deputy Commissioner of Health
Mr. Wm. Reilly, Assistant Commissioner of Health for Air Management Services(AMS)
Mr. Clemens Lazenka: Director of Air Quality Division, AMS, and Manager of the (Philadelphia) Toxic Air Pollutant Study (TAPS)
Mr. Nicholas Ciciretti: AMS staff
Dr. I.M. Levitt: Executive Director,Mayor's Science and Technology Advisory Committee and Chairman of the Air Pollution Board of the City.
Dr. Gary Lage: Director, Toxicology Programs and Professor of Toxicology at the Philadelphia College of Pharmacy and Science.

THE PENJERDEL COUNCIL

TO:

Gentlemen,

The attached packet of materials deals with the presumption of community exposure to airborne toxic substances or gases which is central to Philadelphia City Council Bill #270, also called the "Right to Know" Bill.

Our conclusion, based on examination of 18 major substances from among the 99 listed in the Bill and the ensuing Regulation VI is contained in the "background" statement of our Environmental Improvement Committee (EIC) preceding its most recent monthly luncheon meeting of June 17, 1982. It states:

> "In an area of such diversity there is no guaranteed absolutely clear crystal ball. Nevertheless an EIC combing of the unverified emissions forms which were submitted to AMS (and the AMS summary sheets which present the same data) leads towards the conclusion that among the principal and modelled substances there are no "surprises" or grounds for alarm waiting out there."

AMS stands for Air Management Services - within the City's Department of Health. It is a professionally competent body which has been in existence here for more than a decade.

We looked at the 18 substances' modelled ground level concentrations as percentages of their tentative or anticipated "guideline" numbers. There is a pair of alternatives as to how to treat chloroform, carbon tetrachloride, dioxane and methylene chloride in developing "guideline numbers": (a) as substances for which considerable human data is available in which case they may well merit application of a factor of 1/42 x TLV(TWA)(which Threshold Limit Value being the ACGIH or OSHA workplace level which is "without adverse effect") and (b) as substances lacking in human data and for which only animal data is available, in which case the AMS rule-of-thumb factor for arriving at a safe annualized average concentration is 1/420 x the TLV(TWA). 1/420 is thought to be a somewhat conservative number and compares with 1/300th for animal data only which has been the conversion factor recommended by Ad Hoc Advisory groups in several states.

No modelled substance was within 10% of its provisional guideline number, i.e. none was at 90% or more.

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(a) The 18-substance group averaged 5.4% of (100% of) its respective provisional guideline numbers.

(b) The 18-substance group averaged 12.9% of (100% of) its respective provisional guideline numbers.

We feel that Philadelphia has been something of a "test-market" for "Right to Know" legislation. Because of this I felt it would be of interest for you to have some idea of how the modelled ground level concentrations (annualized average) have been unfolding in this industrialized city.

Many of the substances occur in ambient air at levels so low that they cannot be sampled or analyzed by any of the sophisticated techniques in use today; thus their concentrations can only be modelled or calculated. The AMS tentative or provisional guideline numbers generally tend to be falling in the area of 24 parts per billion (ppb) and downwards.

The figures thus far developed help provide a clearer perception or perspective of what is out there in this City's ambient air?* It falls far short of the sinister forecasts made by activists in the year-long time when the "Right to Know" bill was being aggressively touted in many TV talk-shows and in the press, and in public hearings on the floor of City Council as the bill was coming up for consideration.

Sincerely yours,

Gardner Cox

Gardner Cox, Executive Director
Environmental Improvement Committee(EIC)

GC/lm

Attachments:

FOCUS article about EIC (2/4/81)
June 17, 1982 EIC meeting notice
Questions prepared for 6/17/82 monthly meeting, with notations on the degree to which they were brought up or answered.
Additive Effect of Multiple Sources (Handout at 6/17/82 EIC meeting)

* This is not to say that passage of Bill No. 270 prompted a checkout of ambient-air levels of toxic substances in Philadelphia for the first time.

In point of fact 13 of the 18 substances thus far computer-modelled here had been modelled in 1979 (2 3/4 years ago) and the results were publicly made known in June 1980 - well prior to drafting of the bill, public hearings on it, or its passage.

The pattern of trace-amounts-only concentrations set forth for the initial 13 substances has continued firm in the case of the 5 substances modelled subsequently.

G.Cox gc

EMERGENCY GUIDE TO HAZARDOUS MATERIALS STORAGE

PHILADELPHIA FIRE DEPARTMENT

NAME OF FIRM

CHEMICAL COMPANY

ADDRESS

(ACTUALLY LOCATED ON . BETWEEN & RAY.)

TYPE OF CONTAINER

ABOUT 40 DRUMS OF POWDER 250 LBS EA.

LOCATION ON PREMISES

EAST WALL - SOUTHEND OF BLDG.

NAME OF PRODUCT

REYNOLDS ALUMINUM POWDER & PASTE

REMARKS, I.E. NUMBER OF CONTAINERS, AMOUNT, ETC.)

NUMBER OF DRUMS VARY - MATERIAL IS BEING RECEIVED & SHIPPED DAILY

FLAMMABLE

4 – Extremely flammable.
3 – Ignites at normal temperatures
2 – Ignites when moderately heated
1 – Must be preheated to burn.
0 – Will not burn.

HEALTH

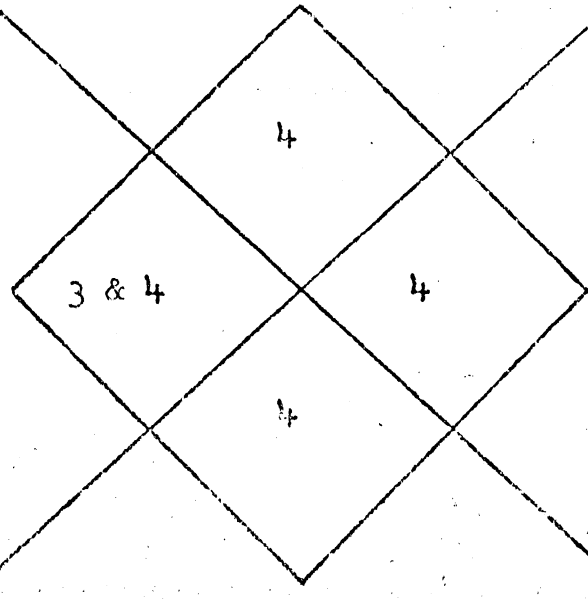
4 – Too dangerous to enter vapor or liquid.

3 – Extremely dangerous. Use protective clothing.

2 – Hazardous – use breathing apparatus.

1 – Slightly hazardous.

0 – Like ordinary material.



REACTIVE

4 – May detonate – vacat area if materials are exposed to fire.

3 – Strong shock or heat detonate – use monit from behind explosion sistant barriers.

2 – Violent chemical cha possible. Use hose streams from a distan

1 – Unstable if heated. U normal precaution.

0 – Normally stable.

EXTINGUISHMENT HAZARD

4 – Do not use water.
3 – Radioactive.
2 – Water spray only.
1 – Use ansul powder.
0 – Use water.

VITAL BUILDING INFORMATION	CITY OF PHILADELPHIA FIRE DEPARTMENT	DATE AUGUST 2tth,1979

ADDRESS [redacted] HUNTINGDON STREET

OWNER [redacted]	EMERGENCY NAME [redacted]
OCCUPIED BY [redacted] Printing Co. / PHONE [redacted]	EMERGENCY ADDRESS 2456 Tulip Street
OCCUPIED AS Commercial Printing	EMERG. PHONE [redacted] / DIMENSIONS 125 FT. X 150 FT.
FIRM NAME [redacted] Printing & Label Corp.	CONSTRUCTION General: Brick; Floors: Wood & Concrete; Roof: Slag
CONTENTS Paper Stock & Machines / STORIES HIGH 1 & 3	

FIRE DEPARTMENT STANDPIPE	SPRINKLER
LOCATION OF INTAKE(S)	TYPE ☒ Wet ☐ Dry / WATER SOURCE ☒ City Main ☐ Other
LOCATION OF RISER(S)	LOCATION OF Main Shutoff: East side of heating rm. 1st floor.
FIRST AID STANDPIPE	
ARE ADAPTERS NEEDED ☐ Yes ☐ No	
LOCATION OF ADAPTERS	DEPT. CONNECTION Cedar Street

MISCELLANEOUS DATA

AUTOMATIC ALARM Type: AFA Waterflow — Annunciator:

HEATING UNIT Type: Oil — Location: 1st.floor center off Cedar St.

LOCATION OF

ELECTRIC SHUTOFF 3rd floor Huntingdon St.Side	PASSENGER ELEVATOR NONE
GAS SHUTOFF Cedar St.side,1st floor center	FREIGHT ELEVATOR NE side,center of building
INDICATOR	STAIRWAY Fire tower NWC of 3 Story Building
AIR CONDITIONER	FIRE ESCAPE
COMPRESSOR 2nd floor south side	FIRE TOWER NWC
DUCTS 1st floor at ceiling level	RADIOACTIVE MATERIAL NONE
BLOWER At compressor	AMMONIA TANKS NONE
SHUTOFF 2nd floor at elevator	OTHER REFRIGERANT

REMARKS Conveyor belt 1st to 2nd floor,east side,center of building.

Toluene9LACQUER THINNER) used in operation on 1st floor and stored in vault on 1st floor warehouse section.

46x

Inspecting Officer: Lieut. [redacted] E. 6

TITLE:	Vital Building Information
FORM NUMBER:	76-80
PREPARATION:	To be prepared by the first in company for every building in the local district containing a Fire Department standpipe, first aid standpipe, sprinkler, or automatic alarm with an annunciator. However, any large or unusual buildings in the district will be covered by this form even though such buildings are not sprinklered.
NUMBER OF COPIES:	To be completed in quadruplicate.
ROUTING:	1st copy - kept in VBI book on apparatus of 1st in company. 2nd copy - kept in VBI book at watch desk of 1st in company (for use by cover up company). 3rd copy - kept in VBI book on apparatus of 2nd in company. 4th copy - kept in VBI book at watch desk of 2nd in company (for use by cover up company).
RETENTION:	To be retained until superseded.
METHOD OF ENTRY:	To be completed in the typewriter.
1. DATE:	Enter date of preparation of form.
2. ADDRESS:	Enter numbered address if possible - if not available, use corner address.
3. OWNER:	Enter name of owner.
4. EMERGENCY NAME:	Enter name of person who can be contacted in event of emergency.
5. OCCUPIED BY:	Enter name of occupant.
6. PHONE:	Enter phone number of occupant.
7. EMERGENCY ADDRESS:	Enter address of person who can be contacted in event of emergency.
8. OCCUPIED AS:	Enter type of business.

9. EMERGENCY PHONE:	Enter phone number of person who can be contacted in event of emergency.
10. DIMENSIONS:	Enter approximate size of building.
11. FIRM NAME:	Enter name under which firm does business.
12. CONSTRUCTION:	Enter specifications alongside applicable categories.
13. CONTENTS:	Describe contents of building.
14. STORIES HIGH:	Enter number of stories.
15. FIRE DEPARTMENT STANDPIPE:	
(a) location of intake (s):	Give exact location (s); e.g., West side of building, 10 feet South of Race Street.
(b) location of riser (s):	Give exact locations; e.g., S.W. corner of building in fire towers.
16. SPRINKLER:	
(a) type:	Check "wet" or "dry".
(b) water source:	Check "City Main" or "Other" - if "Other", explain in Remarks section at bottom of form.
(c) location of main shutoff:	Self-explanatory.
(d) branch shutoff:	Self-explanatory.
(e) department connection:	Enter size and type.
17. FIRST AID STANDPIPE:	
(a) Are adapters needed:	Check "Yes" or "No".
(b) location of adapters:	Give exact location (s); e.g. Watchman's Desk.
18. MISCELLANEOUS DATA:	
(a) automatic alarm, type:	e.g., rate of rise water flow, etc.
(b) annunciator:	Enter exact location.
(c) heating unit, type:	Self-explanatory.
(d) location:	Enter location of heating unit.

19. LOCATION OF:	
(a) electric shutoff:	Enter location (s), and how many.
(b) passenger elevator:	Enter location (s).
(c) gas shutoff:	Enter location (s), and how many.
(d) freight elevator:	Enter location (s).
(e) indicator:	(Indicator valves) Enter location (s).
(f) stairway:	Enter location (s).
(g) fire escape:	Enter location (s).
(h) fire tower:	Enter location (s).
(i) radioactive material:	Enter type and location (s), if any.
(j) ammonia tanks:	Enter size and location (s), if any.
(k) other refrigerant:	Enter type and location (s), if any.
20. AIR CONDITIONER:	
(a) compressor:	Enter location.
(b) ducts:	Enter type (e.g., vertical/horizontal) and location (s).
(c) blower:	Enter location.
(d) shutoff:	Enter location.
21. REMARKS:	To be used to convey information not covered elsewhere in form.
22. INSPECTING OFFICER:	Officer completing inspection will type in name, rank, and company, and will sign immediately above typewritten name.

NOTE: REVERSE SIDE OF FORM

The reverse side of the form is printed in graph form. This section is to be used to draw the layout of the building to scale as closely as possible, using the blocks. For example, one block could represent 5 feet, 10 feet, etc. When making drawings, show various characteristics of the building; i.e. elevators, standpipes, intakes, doorways, stairways,

open shafts, gas and electric meters, chemical tanks, etc. In addition, streets should be shown with relation to the building together with an arrow indicating "North". Where a building has more than one floor, which is/are unlike the diagram of the first floor, it is necessary to make diagrams for other floors. A note will be made on the top of each page indicating the floor, building name, address, etc. Where more than one diagram is necessary for a building, vital information need be typed only on the front of the drawing of the first floor.

Where buildings are occupied by more than one occupant, common sense should be used when making up forms with necessary notes indicating just what the diagrams pertain to.

GENERAL PROVISIONS

1. If building has supervisory guardian service (Owl, Robinson ADT, etc.), list name, address and phone number in the "Remarks" section.

2. To be prepared only by assigned Company Officers.

3. To be updated yearly during Block Check Inspection. If sufficient changes warrant, new forms will be completed. If no changes have occurred, the officer making the inspection will make entry "No change" in the "Remarks" section, and will place his initials and date of inspection.

4. Should company local districts change for any reason, Captains of affected companies will be responsible for the reallocation of existing forms.

5. Coordination of this program will be the responsibility of "C" Platoon Battalion Chiefs.

6. Forms will be filed in loose leaf books, in the following manner:

   a. All street addresses will be filed alphabetically; i.e., "A" Street, Almond Street, Belgrade Street, Boudinot Street, etc. If more than one form exists for a given street, the lowest address will be on top.

   b. Where a corner address is given, the form will be filed by the north and south Street; i.e., NEC "A" and Lehigh. Form would be filed at the beginning with the letter "A".

   c. Numbered Streets will follow lettered streets. Assuming that Westmoreland Street is the last alphabetically listed street to exist in a book, then 2nd Street, 4th Street, etc., would be filed next.

7. During mild weather, standpipe and sprinkler connections on buildings are to be checked on weekends. Where standpipes only feed sections of a building, all members of the company should be made aware of this.

CITY OF PHILADELPHIA

FIRE DEPARTMENT
Fire Administration Building
3rd & Spring Garden Streets, Philadelphia, Pa. 19123-2991

JOSEPH R. RIZZO
Commissioner

October 7, 1982

Mr. Gardner Cox, Executive Director
Greater Phila. Chamber of Commerce
Environmental Improvement Committee
Suite 800
1346 Chestnut Street
Philadelphia, PA 19107

Dear Mr. Cox:

In response to your letter regarding cost figures on Council Bill #475, please be advised that first year expenditures for this program amounted to $107,140 (Fiscal Year 1982). Subsequent year expenditures will amount to $574,985 (Fiscal Year 1983), and will include purchase of hardware and software required to implement this program.

If you require any further information, please let me know.

Sincerely,

Joseph R. Rizzo
Fire Commissioner

JRR: jw

72-112 HAZARDOUS MATERIALS FORM
76-80 VITAL BUILDING INFORMATION FORM 9p

CITY OF PHILADELPHIA

DEPARTMENT OF LICENSES AND INSPECTIONS
Municipal Services Building Philadelphia, Pa 19107

RAYMOND M. TATE
Commissioner

HENRY G. HERLING
Deputy Commissioner

October 15, 1982

Gardner Cox, Executive Director
Greater Phila. Chamber of Commerce
1346 Chestnut Street, Suite 800
Philadelphia, PA 19107

Dear Mr. Cox:

The following is an estimated cost related to the development and implementation of the City Council bill #475 as it relates to the Department of Licenses and Inspections. No other Department's costs have been included and it is suggested that contact be made with the individual Departments. Factors included for consideration are as follows: Research & Development, Community Contact, Administrative, Licensing, Responses to Information Requests and the Inspectional Activity.

It is estimated that the Department of Licenses and Inspections spent approximately 2,030 work hours to accomplish all of the above listed items except for inspectional activity at an estimated cost of $30,768. It is estimated that the inspectional activity is approximately 1,232 work hours at a cost of $20,575. The total cost to the Department of Licenses and Inspections for these two categories is $51,343.

In addition to the above items the Department has other costs such as, Space, License Issuance Administration Cost, Departmental Administrative Costs, City Wide Administrative Costs and Costs of Supplies. The cost of these items as they relate to the Hazardous Chemical License are approximately $513 for a total of $51,856 total Department Cost.

Projected Costs to administer the Hazardous Chemical License is approximately $45,646. There will be a considerable increase in the amount of inspectional cost with the increase in the number of licenses presently on file and with an estimated increase of 100 licenses to be issued. Annual inspections will be required and will be the major cost factor. Once all have been licensed the cost of an issuance will be reduced considerably.

It is estimated that inspectional activity will require approximately 2,400 WK/HRS. at a cost of $40,080 and the issuance of the anticipated new license will be approximately $5,053. Additional sundry costs of approximately $513 for a total estimated cost of $45,646.

All of these costs are estimated costs and reflect only costs incurred by the Department of Licenses and Inspections. It is hoped that the information provided will provide you with what you sought. If additional information is necessary, feel free to contact me.

Sincerely,

Henry G. Herling

Henry G. Herling
Deputy Commissioner

HGH/er

9/28/82 Cox

AIS dollar costs/ manyear costs for first year, annual costs thereafter in connection with "Right to Know" Bill # 270.

Source: William Reilly, Assistant Health Commissioner (Chief, AIS) per telephone with G.Cox Monday 9/27/82. I consider the info to be straightforward and reliable.

Councilman David Cohen asked us for figures for (purposes of) the budget for Fiscal Year 1983.

Estimated amount $457,000 (portion of) or 18 man-years, includes Right to Know and TAPS for FY 1983. Excludes amounts received (from EPA) for GC/Mass Spec equipment worth $200,000.)

Includes (18 man years) positions as follows:

	A) 7 direct positions directly related to Bill #270 as follows: (7 positions)	B) Within TAPS project, but deals (directly) with Bill #270 requirements): (5 positions)
Engineers	3	2
Chemists	1	2
Inspectors	2	1
Clerk-Stenographer	1	
	7	5

Additional support: the equivalent of 6 more person-years - comprising "some engineers, meteorologist, chemists, inspectors, and administration. 7 plus 5 plus these 6 = 18 person years.

Additional breakdown

Staff (within the $457,000 total)	$383,000 ← [@ 21,277 Average]
Purchased services	$ 32,000
Materials and supplies	$ 16,000
Equipment	$ 25,000
(Still excludes $200,000 for GC/MS gear)	
	($456,000) i.e. close agreement with $457,000 figure given.

Subsequent year or years: "There may be some cutback. But I don't see any major cutbacks in a couple of years...EPA is getting more involved in toxic air pollutant matters"(and the idea was that this should result in various EPA requests for info from AIS which would consume AIS staffers/employees time to some degree).

A slacking off (if it takes place) might be on the order of 20% (which would be a cutback of $91,200 to $365,800) in yearly cost. he said later.

One could (for example) "spend a little more" on B(a)P alone. There is some potential that there would be the raising of questions (in Philadelphia) as to (1) what the air quality levels are (ambient air levels I assume) and (2) whether the Air Quality Guidelines (arrived at by Ad Hoc Advisory Committee

55x

The Public Interest Perspective:

By Jerome Balter*

On January 22, 1981, Philadelphia became the first community in the United States to grant the public the right of access to complete information about toxic substances stored in or emitted from all community workplaces. Philadelphia's so-called right-to-know ordinances, unanimously passed by its City Council, require employers to notify the Health Department of all emissions of toxic substances and to notify the Fire Department of all toxic chemicals stored inside their facilities. This information will be made available to the public along with information about the adverse health effects of each of the toxic chemicals and the precautions to be observed under normal or emergency situations. Additionally, in order to protect public health, the right-to-know ordinances require the city agencies to establish regulations controlling emissions and the storage of these toxic chemicals.

I. Evolution of the Demand for Right-to-Know

Philadelphia's Right-to-Know laws were achieved through the sustained efforts of a coalition of trade unionists, community residents, environmentalists and health care workers who had come to realize that toxic pollution of the workplace, the community and the general environment had a common origin. They had also come to realize that knowledge about the existence of industrial toxics was an essentional prerequisite to meaningful public action to abate toxic pollution and that gaining the right to such information would require the combined efforts of all groups actively concerned with the problem.

The demand for right-to-know started strictly as a trade union goal. In 1976 the Philadelphia Area Project on Occupational Safety and Health (PHILAPOSH), a union sponsored group, and Ralph Nader's Health Research Group (HRG) petitioned the Occupational Safety and Health Administration (OSHA) for a regulation to require employers to inform their employees of the toxic substances which they were being exposed to in the workplace. These groups were concerned that, without knowledge of what toxic substances existed in their workplaces, workers were not assured of job safety. Moreover, employers that withheld such vital information frustrated the purpose and policy of Congress to "...assure so far as possible every working man and woman in the Nation safe and healthful working conditions...". Occupational Safety and Health Act of 1970, §2, 29 U.S.C. §651(b).

In 1979, three years after PHILAPOSH and HRG had petitioned OSHA for a right-to-know regulation, they resorted to court action in an attempt to get OSHA to act. Their efforts were thwarted by the Federal District Court for the Eastern District of Pennsylvania which held that the Occupational Safety and Health Act did not mandate such a regulation but merely gave the Secretary of Labor[1] discretionary

(Continued to page 9.)

* Jerome Balter is an attorney, and director of the Environmental project, at the Public Interest Law Center of Philadelphia.

1. OSHA is a part of the Department of Labor.

The Negotiations for and Evolution of Philadelphia's Right-To-Know Laws

The Industrial Perspective:

By Robert Vogel*

PART I

As Chief Regulatory Counsel of Rohm and Haas Company, I was asked to testify as spokesperson for industry on the Right-to-Know Bill which had been introduced into Philadelphia City Counsel in June, 1980. After a 7-month legislative process, I, along with representatives from the Philadelphia City administration and the Delaware Valley Toxics Coalition (DVTC) contributed to the formulation of the law that was finally enacted in February, 1981.

Rohm and Haas had no quarrel with the concept of, right-to-know. We believed it was our responsibility to disclose safety and health hazard information to our employees: to those involved in using, transporting or disposing of our materials; to the government agencies which regulate our industry; and to any others who might be affected.

We inform our employees of the potential harmful effects of the materials with which they work and instruct them on how to handle these chemicals properly. Material Safety Data Sheets, which summarize all relevant health and safety information on a chemical, are available in all workplaces and are shared with our customers and government agencies upon request. Products that leave our plant are properly labeled with information detailing how the product should be handled, how to avoid exposure, and what to do in the event of an accident. Our plant's air emissions and water discharges are permitted, monitored, and regulated by city, state, and federal regulatory agencies. We carefully dispose of all our wastes using a cradle-to-grave tracking system to assure accountability. Air emission data, water discharge information, the nature and quantity of our wastes, and plant licenses are all available for inspection by the public.

Rohm and Haas does, in fact, practice the right-to-know. We did not believe, however, that the original right-to-know amendments represented a good way to legislate that general principal, into law.

The bill was intended to provide individuals who live or work in the City with the opportunity and the right-to-know the names and characteristics of the substances to which they may be exposed and the potential hazards these substances pose to their health. The bill, however, had a number of serious defects. Before analyzing these defects, the political and social background of the bill's inception, will be discussed.

PART II

Although Philadelphians have benefited greatly from the technological advances of our society, many of them have questioned whether these benefits have been bought at too high a cost to public health and to the environment. Many are concerned about pollution, carcinogens, Love Canals and toxic waste disposal, yet they are confused and apprehensive about many of the solutions. Despite the omnipresent threat of cancer, the public remains

(Continued to page 10.)

* Robert Vogel is Chief Regulatory Counsel of Rohm and Haas Company. Rohm and Haas is a worldwide producer of specialty industrial and agricultural chemicals and plastics. It employs over 6,000 workers in the Delaware Valley.

BALTER

36,000 +

The Public Interest Perspective:
(Continued from page 8.)

authority to promulgate a regulation of this type.[2] Ten years after the passage of the (OSH Act) and after tens of thousands of public petitions for right-to-know legislation had been presented, any right-to-know about the toxic substances to which one was exposed, remained a matter of unexercised bureaucratic discretion.

People were becoming more concerned about the existence of toxic substances not only where they worked but in the communities where they lived. Newspaper stories about Love Canal and Cancer Alley were sensitizing the public to the unseen health hazards in the environment.

In Bridesburg/Richmond, an industrial section of Philadelphia some 25,000 individuals live in close proximity to an assortment of chemical industries, copper smelters, industrial coke ovens and sewage treatment plants. Motorists using interstate I-95 recognize the area by its smell. Area residents are accustomed to the dirt and grime as well as the assortment of noxious odors.

Early in 1979, a group of Bridesburg/Richmond residents organized the Bridesburg Civic Council and decided to do something about their air pollution problem. With assistance from the Environmental Cancer Prevention Center (ECPC) of the Public Interest Law Center of Philadelphia (PILCOP), the council organized community educational meetings to inform community members of the connection between air pollution and public health. They learned that air pollution was more than dirt and odors, and that the air pollution included toxic chemicals and carcinogens which might not be detectable to the eye or nose but which caused serious health problems including cancer. They learned that local industries were probably polluting the air with cancer-causing chemicals, and that the cancer death rate in their community was twice as high as the average cancer death rate for the United States as a whole.

It was not long before residents of Bridesburg/Richmond began demanding to know about the toxic chemicals being stored and emitted from local industries. Residents wanted the toxic information for medical diagnosis and treatment of illnesses; and for meaningful public involvement in legislative and regulatory proceedings to protect public health. Some industries volunteered some of the information, but most were uncooperative.

Sensing the growing concern with the health effects of toxic substances in the environment ECPC and PHILAPOSH co-sponsored a "Chemical Killers" Conference in March, 1979. The Conference attracted over 350 participants including representatives from 29 unions and 63 environmental and community organizations. This conference brought an end to the isolated actions of these various interest groups and the start of a coalition movement, the creation of the Delaware Valley Toxics Coalition (DVTC).

II. Evolution of Philadelphia's Right-to-Know Legislation

A study was conducted of existing Philadelphia city ordinances, and the City's authority to enact local legislation under state enabling legislation. The study indicated that the best possible means for developing right-to-know was through an amendment to the City's Air Management Code. This ordinance had enabled the City to derive authority from state to regulate air pollution emissions from industrial establishments. Since one of the goals of right-to-know was to have access to information about toxic emissions from industry the use of the Air Management Code was compelling.

Unfortunately, the Air Management Code did not provide authority to regulate toxic chemicals inside the workplace and DVTC's labor groups were particularly concerned with workplace toxic information. To overcome this artificial barrier between "inside the workplace" and "outside the workplace," DVTC included in its proposed amendment to the Air Management Code a legislative finding which recognized that "the presence of a toxic substance inside a workplace is a potential source of toxic emissions into the air of the community." This legislative finding provided the rationale for requiring employers to report on toxic substances inside the workplace as well as toxic substances emitted outside of the workplace, all under the auspices of the Air Management Code.

Once DVTC determined that it could satisfy the information needs of its constituent groups through an amendment to the Philadelphia Air Management Code, the right-to-know committee had to finalize its legislative proposal. DVTC selected the OSHA list of 450 toxic substances as the list of toxic substances to be covered by Right-to-Know. DVTC rejected a suggestion to use the list of 15,000 chemicals compiled in the Registry of Toxic Effects of Chemicals Substances (National Institute for Occupational Safety and Health [NIOSH]) because the enormity of enforcement of 15,000 substances would give opponents a field day in ridiculing this local initiative. The OSHA list of 450 toxics was defensible on several grounds. First, these toxics were all internationally recognized to be human toxic substances. Second, all employers were already obligated to protect workers from over-exposure to the OSHA listed toxics. Third, local employers would not be overly burdened because of the collateral OSHA requirements in respect to the OSHA list of toxics.

DVTC experiences had indicated that considerable opposition might be forthcoming from small companies, employing but a few workers. To minimize this opposition, DVTC proposed to exempt from coverage employers with 10 or fewer employees, thereby reducing coverage from 27,000 workplaces to under 7,000, though the latter number included 80 percent of Philadelphia's workforce.

Achieving right-to-know through an amendment to the Air Management Code also obviated certain legal attacks. right-to-know was not framed as a workers health and safety issue and thus avoided possible claim of OSHA or Labor Laws pre-emption. The right-to-know law could not be attacked by claims of pre-emption from the federal Clean Air Act or the State Air Pollution Control Act because these laws specifically authorized administrative authorities to enact more stringent laws and regulations.

DVTC completed its draft of right-to-know legislation in May, 1980 and immediately launched its political campaign. Consultations with sympathetic members of City Council resulted in the selection of Council member Joan Krajewski to be the lead sponsor.

By the time Ms. Krajewski formally introduced right-to-know as Council Bill #270 in June, 1980, some 13 Council members had become co-sponsors. Though the sponsors made up 75% of the total Council membership, DVTC was not assured of the degree of commitment.

The introduction of Bill #270 generated an unusual amount of media interest and coverage of right-to-know which was continued up to the time of the Council hearings on the bill in October, 1980. Newspaper articles and editorials, mostly supportive of the principle of right-to-know, appeared fre-

(Continued to page 54.)

2. Public Citizen Health Research Group v. Marshall (C.A. 79-2581) (D.D.C. February 14, 1980).

The Industrial Perspective:
(Continued from page 8.) VDGRL

skeptical of warnings about saccharine, coffee, and grilled steaks.

Unfortunately, our knowledge of what causes or promotes cancer is incomplete and imperfect. Responsible scientists can agree on almost nothing in this area—whether cancer rates are going up or down, whether animal tests on rats and mice are legitimate predictors of effects in man, whether there is or is not a "threshold level" for carcinogens.

Environmental dangers are complex; the causes and effects largely unknown. People however remain alarmed. They want easy solutions—now.

This state of affairs has often been compounded by an unsatisfactory political response. Our elected representatives find it difficult to resolve environmental issues, because they also are not certain where they want to go or how to get there. They have become highly sensitive to changes in public opinion; willing to follow the polls and react to them quickly, if not thoughtfully. Nevertheless, they tend to translate apparent concern into demand for quick action.

Compounding this problem is the imperfect performance of our regulatory agencies. Stumped by scientific ambiguities, overwhelmed by the infinite number of highly technical and complex issues, paralyzed by litigation brought by both industry and public interest groups, and impaled on impossible mandates and deadlines set by legislators, our regulatory agencies have found it impossible to work efficiently.

Public interest environmental groups have played a major role in shaping the political and social milieu described above. We are all better off as a result of their efforts. Cleaner air and water, safer workplaces, more responsible handling of toxic materials, and an increased awareness of the fragile ecology we all share are just some of their important achievements.

Environmentalists often use a principal weapon their easy access to the mass media, especially television. Television, however, often turns complex issues into slogans. As *Time Magazine* recently commented, "T.V. concentrates almost exclusively on confrontations, statements and counter-statements, all reduced to brief segments of video tape. T.V. also demands filmable ritual . . ."[1] i.e. gas-masked protestors waving placards and signs.

This type of media coverage provides little time or impetus for thoughtful debate or analysis of the difficult technical issues. Unfortunately, some segments of self-styled public interest groups are irresponsible. They feed the media's need for confrontation and confusion. We believe that this was the setting into which the Right-to-Know Bill was introduced.

PART III

From our point of view, there were five principal deficiencies with the original bill—(A) that the bill's basic health premise was inaccurate; (B) its failure to deal with notions of concentrations and negligible amounts of toxic substances; (C) the inappropriate list of toxics; (D) lack of trade secret protection; and (E) confustion of the proper roles of the legislature and the administrative agencies of government. The following is an exploration of these deficiencies.

(A) *The Basic Premise of th Right-to-Know Law was Incorrect*

The basic health premise underlying the Right-to-Know Law was that industrial air emissions are a primary cause of measurable and elevated levels of cancer in Philadelphia. That premise was never demonstrated; rather, evidence before the City Council was to the contrary.

Dr. William Weiss, Professor of Medicine at Hahnemann Medical College, whose major research interest for over 20 years has been the epidemiology and causes of lung cancer and whose 1978 study of lung cancer mortality rates in Philadelphia health districts is the leading scholarly publication on the subject to date, concluded in his testimony before City Council on the Right-to-Know bill that:

> ". . . the scientific evidence currently available is not sufficient to draw [the] conclusion [that pollution] is the cause of higher cancer mortality rates in the more polluted parts of the City.
>
> Recent published scientific papers fail to support the hypothesis that ambient air pollution accounts for elevated cancer rates. A large study of half a million men by the American Cancer Society [published in 1980] shows that 'general air pollution at present has very little effect, if any, on the lung cancer death rate. . . .'
>
> While the hypothesis that industrical emissions might cause cancer in the community is plausible, all the studies I am aware of to date either fail to provide evidence or, if an association is found, the evidence is inconsistent and unsupported by ancillary data sufficient to conclude that the relationship is one of cause-and-effect."

(B) *Concentrations and De Minimis (Negligible) Amounts*

Though the Right-to-Know Bill was concerned with the exposure of citizens to toxic substances, the original bill would have required the City to be notified whenever a so-called toxic substance was merely introduced into the workplace. The bill contained no exclusions for low level concentrations or for negligible amounts that posed no threat to the public health.

This was bad law and even worse science. There was no recognition anywhere in the bill that the "toxicity" of a material is inextricably linked to its concentration. Discussing chemicals without stating their amounts, levels and concentrations, is basically valueless from a public health point of view.

The bill's proponents used the term 'toxic', as if there were something magical about designating a substance as toxic. Any substance can be considered toxic under certain circumstances. All living organisms show increasig adverse responses to increasing amounts of exposure above some threshold limit. That something at a high enough level of concentration is toxic says nothing about the hazards presented, if any, at levels approaching the concentrations in the ambient air. Oxygen in too high a concentration is a deadly poison; in the right amount it is essential for life.

(C) *The OSHA List of Toxics was Inappropriate*

The original Right-to-Know Bill defined a toxic air pollutant as one of the 450+ substances on a workplace list used by OSHA. The list was complied by the American Conference of Governmental and Industrial Hygienists based upon occupational exposures to chemicals. Most of these materials were on this list not because they posed any significant health hazard, but because, in high level concentrations sometimes found in the workplace, they could be respiratory or skin irritants.

There is little or no evidence that in low concentrations expected to be found in the ambient air the great majority of these substances posed any significant risk to health. The lack of concentration information in the bill was particularly ironic, because the OSHA list itself recognizes that safe levels of all these substances do exist and, in fact, detailed the acceptable concentrations and time-weighted averages.

The list of toxic substances was far too broad and mostly irrelevant to air pollution. Listing such common substances as carbon dioxide, alcohol,

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1. *Time Magazine*, February 23, 1981, page 39.

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quently. Almost a dozen radio and TV debates were held. Talk shows found considerable interest among their listeners for right-to-know and several nationally recognized authorities participated. The controversy over right-to-know provided an unparalleled opportunity to educate the residents of Philadelphia about the pollution/disease connection.

The Greater Philadelphia Chamber of Commerce led the opposition to Bill #270. The Chamber embarked on a campaign of overkill. They charged that right-to-know was unnecessary since it merely duplicated information available under federal laws and regulations. Then they charged that local industry would be unfairly disadvantaged because they would be required to divulge information, which out-of-town competitors would not and that local industry would therefore leave town. The Chamber even went so far as to claim that right-to-know would prohibit the use of all toxic chemicals in the City of Philadelphia. Thatcher Longstreth, the Chamber's president, stated he was opposed to right-to-know because a little bit of knowledge is a dangerous thing.

Not all industry, however, took the know-nothing approach of the Chamber of Commerce. Some of the larger chemicals companies in the City agreed in principle with right-to-know. DVTC had sampled industry responses by means of two surveys which requested industry to voluntarily supply the names of carcinogens and toxic substances used in the workplace. Seventeen percent of these surveys were returned, a good result for a mailed survey. Big industry, however, did not fully support right-to-know. Their main objections were related to the omission of trade secret protections, and the inclusion of a list of toxic substances within the Code rather than a general definition of a toxic substance by which the regulatory agency, on a case by case basis, could adopt a list of specific chemicals.

Air Management Services (AMS), which would have the job of enforcing right-to-know, supported its principle but worried about incorporating the OSHA toxic list into the Code and expressed concern about the cost of enforcement.

The City Solicitor recommended that DVTC's proposal be replaced by a legislative package which would give the City authority to regulate hazardous wastes in general. Impetus for this recommendation arose from an incident with highly toxic polychlorinated biphenyls (PCB's). A few months before the right-to-know debate, the Philadelphia Inquirer carried a report about the relocation of several thousand drums of PCB contaminated oils, being shipped to a General Electric warehouse in Philadelphia on orders from the state Department of Environmental Resources. City officials were embarrassed to have to learn of this through a newspaper report, and expressed an interest in obtaining authority to regulate the storage of PCB's, and other toxic wastes. The City Solicitor's recommendations in respect to right-to-know therefore were really aimed at achieving the city administration's goal of regulating toxic wastes.

The City Solicitor also objected to DVTC's inclusion of the OSHA list of toxic chemicals in the legislation, the ommission of trade secret exceptions, and the attempt to cover workplace toxics with the Air Management Code.

As time for Committee hearings approached, right-to-know assumed national significance when Ralph Nader endorsed it as a national model at a press conference.

Committee hearings on October 6 and 7, 1980 were attended by hundreds of right-to-know advocates. More than 60 witnesses testified for the proposal and about 20 industry representatives appeared in opposition. Witnesses ranged from college professors and medical experts, to shopworkers and housewives. The testimony of workers discussing their health problems from being overly exposed to toxic chemicals were in sharp contrast to the statements of industry representatives who minimized or denied the adverse health effects of toxic pollution.

The representative of the City Solicitor testified in support of the principle of right-to-know but proposed that a "package of proposals" be substituted for DVTC's proposed amendment to the Air Management Code. He admitted, however, that the "package" had not yet been formulated.

Committee hearings were closed without a vote by Committee members. DVTC concluded that the city administration had induced Council to try to kill right-to-know. They knew that maintaining pressure on Council was essential if right-to-know was to be saved.

Over the next 8 weeks DVTC sustained and intensified its efforts to force a committee vote on right to-know. DVTC organized two protest demonstrations at the office of the Mayor and two at City Council meetings. These demonstrations received considerable media coverage and kept the issue alive.

In November the City Solicitor finally produced his "package of proposals." It contained an amendment to the Air Management Code plus an amendment to the City's Fire Code. The Air Management Code modification was closely patterned on DVTC's proposal but it substituted a general definition of a toxic substance instead of the specific list of substances that DVTC has proposed. It kept the employer's duty to report toxic air emissions from his workplace but eliminated the need to report about toxic substances inside the workplace. It eliminated the exemption for employers with 10 or fewer employees.

DVTC has no problem including all employers within right-to-know, but DVTC strongly objected to the removal of the specific list of toxic substances from the ordinance. The Air Pollution Control Board (APCB) had failed to take any action on toxic air pollutants in its entire 10 year history. DVTC had no confidence that the APCB would undertake meaningful action now unless there was a specific list of substances to work with.

The City's proposed amendment to the Fire Code would require employers to obtain a license from the City's License and Inspection Department for toxic substances located inside the workplace. This license information would be accessible to the public. This requirement was the City's substitute for DVTC's requirement that employers report on all toxic substances through the Air Management Code.

The City's Fire Code amendment defined toxic substances in general rather than in specific terms. It required licensing only if more than 500 pounds or 55 gallons of a toxic substance were present in the workplace. It provided for trade secret exceptions to the public access provision. DVTC expressed exception to all these limitations on public access to information respecting toxic substances within the workplace.

DVTC's continued pressure on City Council resulted in the reconvening of the Committee on Public Health and Welfare, on December 2, 1980, to consider the DVTC proposal and the City substitute "package." DVTC supporters came to the hearings in large numbers. Industry expressed its preference for the City "package," while DVTC stressed its inadequacies. The debate concluded but the Committee did not find a majority in favor of either the DVTC or City proposals. To resolve the impasse, Committee members requested DVTC, industry, the City administra-

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tion, to attempt to negotiate an agreement within 10 days.

Within DVTC there was a debate as to how far they were willing to bargain. The question of whether to absolutely insist on the inclusion of specific lists of toxic substances in the code amendments was the central focus. DVTC's advisory group concluded that it had more to gain by reaching an agreement with industry and the City administration than by holding out and jeopardizing the entire right-to-know effort.

The negotiators for the three parties had all been involved in the right-to-know proceedings for at least six months. All negotiators realized that the principle of right-to-know had won overwhelming public acceptance. They all had an awareness of each party's political strengths and weaknesses. Under these circumstances it appeared that the negotiators would reach agreement. The negotiations proceeded on this assumption. In the course of three sessions the negotiators were able to resolve the three main issues.

The first issue concerned the inclusion of a specific list of toxic substances within the Air Management Code and the Fire Code. The negotiators agreed that the Fire Code should encompass the entire list of 450 substances listed in the OSHA regulations; but that a list of 64 chemical substances concerning approximately 150 different chemical compounds was sufficient for toxic emissions under the Air Management Code. The compromise reached by the negotiators incorporated the two lists into a special City Council resolution to be adopted when the ordinances were adopted by the full City Council. DVTC felt that public agreement by the negotiators plus the imprimatur of the City Council would make it politically impossible for the City regulatory agencies to avoid the mandate to promulgate the necessary regulations. Additionally, the inclusion in the Codes of a time limit of six months for the issuance of the toxic substance lists would prevent unnecessary delays.

The second issue was the trade secrets issue. Industry agreed that no trade secret exceptions were to be allowed with respect to air polluting emissions. They were insistent, however, that a narrow exception be allowed for in-plant toxic substances where an employer "can show cause that...if made public, it would divulge...trade secrets." The industry negotiator stated that such exception would occur in less than one case out of a 1000, but agreed to disallow the trade secret exception where the information was "needed for the purpose of medical diagnosis or treatment of a person exposed" to the chemical. DVTC agreed to this compromise with some trepidation; only experience will reveal whether the "narrow exception" is in fact a wide loophole.

The third issue concerned the scope of coverage of the ordinances. In criticizing the DVTC proposal, the City administration had made much of DVTC's exemption from coverage for employers of 10 or fewer employees. The City's criticism was valid since the size of the work force did not obviate the possession or emission of toxic chemicals. DVTC had included such a proposal as a matter of political strategy; now it was no longer necessary for DVTC to cling to its self-created compromise. Instead DVTC used the City's logic to attack the City's 500 pound or 55 gallon minimum in respect to licensing under the Fire Code. This provision would overlook extremely hazardous materials, such as dioxins, which could exist in certain industries in quantities of less than 500 pounds or 55 gallons; and therefore the Fire Code, as negotiated, authorizes the Fire Department to require licensing of a toxic chemical no matter how small the quantity.

The negotiators returned to the City Council Committee on December 12, 1980. The DVTC representative, on behalf of all the negotiators, reported that the negotiators had reached agreement on a right-to-know package. DVTC supporters as well as the members of City Council greeted the announcement with great relief and enthusiasm. Unanimous adoption of the agreement quickly followed and was reported out to the full City Council.

On January 22, 1981 City Council chambers were once again filled by supporters of right-to-know. Banners announced Philadelphia as "Number One" in toxic substance legislation and champagne corks popped as City Council unanimously passed right-to-know. Congratulations were exchanged in all directions.

Right-to-know was big news. Not only in Philadelphia but across the country. It was reported in the New York Times, the Wall Street Journal, the chemical industry news magazines, and the national environmental publications. For the first time in history the public had won the right to be informed about the toxic substances which existed where they worked and where they lived.

The right-to-know victory had another symbolic significance. Adopted just two days after Ronald Reagan had been inaugurated President, the passage of right-to-know pointed the way for other local efforts to overcome the dismantling of occupational and environmental protections at the national level. On February 12, 1981, President Reagan's Secretary of Labor, Raymond Donovan, as his first official act of office, recalled OSHA's proposed labelling (Right-to-Know) regulation. He did so before receiving comments or holding hearings on the measure. This regulation would have given all employees throughout the country the right-to-know about toxic substances in their workplaces. The move, however, did not affect Philadelphia workers because they already had won the right-to-know.

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nicotine, iodine, oil, quartz, and graphite fails to advance the air pollution solution. Moreover, it brings within the law's ambit such innocuous businesses as bars, restaurants, liquor stores, department stores, supermarkets, offices, hardware stores, garden supply centers, schools and hospitals.

(D) *Trade Secrets*

The original Right-to-Know Bill provided that the regulated industries supply the City with information on the toxic substances they used. The City would then make this information public. No protection was to be afforded industry for confidential information—trade secrets—that gave one company an advantage over its competitors.

Industry did not object to sharing information with the government, but, rather, to having this valuable information turned over to business competitors. How a company makes its product, what precise mix of ingredients gives its material those characteristics found so desirable in the marketplace, are trade secrets, often unprotected by patents. These trade secrets are sometimes *the* most valuable asset a company has, more valuable than its real estate, plants, goodwill, or personnel. For example, what makes Coca-Cola "Coca-Cola" is a trade secret, and making this information available to Pepsi-Cola for whatever benevolent purpose is just as unfair and unconstitutional as if you took the Coca-Cola plant and gave it to Pepsi-Cola.

The City administration joined industry in supporting limited trade secret protection in the bill. The regulators realized that a narrow trade secret exception was necessary to protect government's interest in the uninhibited flow of information necessary to do its job. Without some assurance that a company's competitive edge, often obtained a great expense, time, money and manpower, would not be offered free of charge to its business rivals, the government would find that getting the information it desired to regulate would be much more difficult.

(E) *The Role of City Council vs. the Role of the Administrators*

No piece of legislation, no matter how carefully crafted, complex, or complete, can cope with the infinity of particulars that the real world of environmental control presents. Legislative bodies do not have the scientific competence necessary to decide complex pollution control problems. Problem-solving is best left to the regulators.

Environmental control laws define the general outline of pollution control programs. The regulatory process then supports these programs by filling in the specifics. That is why almost all environmental control laws establish regulatory programs to be enforced and administered by regulatory bodies within the executive branch of government. Thus, although the Clean Air Act defines 'hazardous air pollutant,' the Environmental Protection Agency (EPA) Administrator must prepare the list of particular air pollutants and establish emission standards for them. Although Congress defined what occupational safety and health standards are, it gave the responsibility for creating such standards to the Secretary of Labor.

One of the defects of the original bill was that it not only defined 'toxic air contaminant' in general terms, but it also contained a specific list of 450+ toxic substances to be regulated. We felt that any list of particular toxics should be promulgated by the regulatory body administering the program. City Council cannot be expected to decide whether Chemical A or Chemical B should be regulated; that is beyond its expertise and proper responsibility. This is precisely the type of scientific decision that regulatory bodies are designed to make.

The regulatory process of publishing proposed regulations, soliciting comments, and holding public hearings before the Air Pollution Control Board (composed of technically trained people intimately aware of the requirements of the program), is the appropriate way for resolving the complex issue of whether Chemical A or Chemical B should be listed.

PART IV

The bill finally signed into law by the Mayor was a compromise hammered out in lengthy negotiations. During the months of negotiations, the three factions, DVTC, industry, and city government did not always cooperate; out of this creative tension, however, a better bill emerged. The final package may not be a model piece of legislation, but it is a more workable law.

The law as promulgated contains *de minimis* limitations on the storage requirements and Fire Code storage amendments that limit reporting obligations.

No specific list of toxic substances was enacted into either the Air or Fire Codes. A workable and scientifically supportable general definition of 'toxic substance,' similar to the definition found in major federal environmental protection laws, is included. The task of establishing lists of particular toxic substances was returned to where it rightfully belongs—the administrative agencies: the Air pollution Control Board and the Fire Department. The ordinance provides those agencies with the appropriate criteria for establishing such lists, including the important concept of "concentrations."

The City Council passed a resolution, "as evidence of their sentiments," urging the Fire Department to adopt the entire OSHA list of 450+ substances in the Fire Code storage amendments. Additionally, the resolution urged the Air Pollution Control Board to adopt as its list of toxic air contaminants a much shorter list of 61 substances, consisting mainly of known human or animal carcinogens. Only those substances specifically named by the Air Pollution Control Board became subject to the right-to-know notification provisions.

Reasonable protection for legitimate trade secrets was also enacted. Trade secret information shall be released to medical personnel, however, "for the purpose of medical diagnosis or treatment of persons exposed to a hazardous chemical."

CONCLUSION

Government, industry, and the public are like the three legs of a milking stool. Without any one of the legs, the stool falls: each one needs the support of the other two.

In the Right-to-Know debate, each participant provided essential input. The public interest group focused attention on the problem. Industry provided its expert knowledge to define the problem more precisely so that solutions could be found. The regulators had practical experience in administering similar environmental protection laws.

Debates on new legislative proposals between environmental advocates and industry representatives are inevitable. During this process, however, both parties must be careful not to merely win debating points at the government's expense. It is often difficult, if not impossible, for government to implement the legislative programs that emerge from the debates. When a bill is passed in Congress, in a state legislature or in a city council, the real problems have just begun. Administrative agencies have to convert legislative intentions into workable programs and understandable policies. The apprehensions of the public can best be put to rest by insuring that the institutions of government are competent and are perceived to be competent. It has become fashionable to be critical of government. It is more responsible to try to make it work.

VOGEL

ROHM AND HAAS COMPANY
INDEPENDENCE MALL WEST
PHILADELPHIA, PENNSYLVANIA 19105

STATEMENT BEFORE CITY COUNCIL COMMITTEE ON PUBLIC HEALTH & WELFARE ON THE "RIGHT-TO-KNOW" -- BILL NO. 270, OCTOBER 7, 1980

MY NAME IS ROBERT VOGEL AND I AM CHIEF REGULATORY COUNSEL OF THE ROHM AND HAAS COMPANY HEADQUARTERED HERE IN PHILADELPHIA. ROHM AND HAAS IS A WORLDWIDE PRODUCER OF SPECIALTY CHEMICALS AND OPERATES A PLANT IN PHILADELPHIA IN BRIDESBURG. ROHM AND HAAS EMPLOYEES OVER 6,000 WORKERS IN THE DELAWARE VALLEY.

THE HEALTH AND SAFETY OF OUR EMPLOYEES AND OF ANYONE WHO COMES IN CONTACT WITH OUR PRODUCTS IS IMPORTANT TO US. OUR COMPANY EXPERIENCED A GREAT TRAGEDY. THE SUFFERING AND SADNESS WHICH RESULTED FROM OUR EMPLOYEES' EXPOSURE TO BIS-CHLOROMETHYL ETHER CANNOT BE FULLY EXPRESSED. THIS TRAGEDY HAS MADE ALL OF US AT ROHM AND HAAS EVEN MORE SENSITIVE TO THE NEED FOR GOOD HEALTH AND SAFETY PRACTICES.

ROHM AND HAAS COMPANY SUPPORTS THE RIGHT-TO-KNOW IN PRINCIPLE AND BELIEVES THAT IT IS OUR RESPONSIBILITY TO DISCLOSE ANY SAFETY OR HEALTH HAZARDS THAT MAY BE PRESENTED BY OUR PRODUCTS OR OPERATIONS TO OUR

EMPLOYEES, TO THOSE INVOLVED IN USING, TRANSPORTING OR DISPOSING OF OUR MATERIALS, TO THE GOVERNMENT AGENCIES WHICH REGULATE OUR INDUSTRY, AND TO ANY OTHERS WHO MAY BE AFFECTED. WE DISCHARGE THIS RESPONSIBILITY IN A NUMBER OF WAYS:

(1) ROHM AND HAAS INFORMS ALL OF ITS PLANT EMPLOYEES OF THE POTENTIAL HARMFUL EFFECTS OF THE CHEMICALS WITH WHICH THEY WORK. WRITTEN OPERATING INSTRUCTIONS, WHICH MUST BE READ AND UNDERSTOOD BY OUR WORKERS IN ORDER TO MAKE OUR PRODUCTS, EACH CONTAIN A SAFETY AND HEALTH SECTION THAT LISTS ALL THE MATERIALS USED AND PRODUCED, THEIR POTENTIAL HAZARDS AND TELLS WORKERS HOW THEY CAN HANDLE THEM SAFELY.

(2) MATERIAL SAFETY DATA SHEETS, WHICH SUMMARIZE ALL RELEVANT HEALTH AND SAFETY INFORMATION ON A CHEMICAL ARE AVAILABLE IN ALL WORKPLACES WHERE A CHEMICAL IS PRESENT. THEY PROVIDE THE INFORMATION NEEDED TO HANDLE THE MATERIALS PROPERLY AND DESCRIBE HOW TO REACT IN THE EVENT OF AN EMERGENCY. THESE SAFETY DATA SHEETS ACCOMPANY ALL OF OUR BULK AND HAZARDOUS PRODUCTS SHIPMENTS AND ARE AVAILABLE UPON REQUEST TO ALL OF OUR CUSTOMERS. THEY ARE ALSO OPEN FOR INSPECTION BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE GOVERNMENT AGENCY THAT IS

CHARGED WITH THE RESPONSIBILITY OF INSURING SAFE WORKPLACES.

(3) IN ADDITION TO THESE WRITTEN MATERIALS, WORKERS AT OUR BRIDESBURG PLANT ATTEND MONTHLY SAFETY MEETINGS WHERE SAFETY AND HEALTH RELATED TOPICS ARE DISCUSSED. SPECIAL MEETINGS ARE CALLED WHENEVER NECESSARY TO RELATE ANY NEW HEALTH INFORMATION OF SPECIAL CONCERN.

ROHM AND HAAS RECOGNIZES THAT ITS OBLIGATION TO INFORM EXTENDS FAR BEYOND ITS PLANT GATES AND WE DISCHARGE THIS OBLIGATION IN A VARIETY OF WAYS AS WELL:

(1) ALL PRODUCTS THAT LEAVE OUR PLANT ARE PROPERLY LABELED. IN STRAIGHTFORWARD LANGUAGE, WE PROVIDE THOSE PERSONS WHO WILL BE HANDLING OUR PRODUCTS, WHETHER THEY BE A TRUCKER OR A LONGSHOREMAN AT THE PHILADELPHIA PORT OR OUR CUSTOMERS' EMPLOYEES, WITH SUFFICIENT INFORMATION TO UNDERSTAND HOW THE PRODUCT SHOULD BE HANDLED, HOW TO AVOID EXPOSURE AND WHAT TO DO IN THE EVENT OF AN ACCIDENT.

(2) AIR EMISSIONS FROM OUR PLANT ARE REGULATED BY THE PHILADELPHIA AIR MANAGEMENT SERVICES (AMS). AMS, PURSUANT TO THE AUTHORITY THEY ALREADY HAVE IN THE CODE, REQUESTED AND RECEIVED FROM ROHM AND HAAS A COMPLETE LIST OF THE IDENTITY AND AMOUNTS OF EMISSIONS FROM OUR PLANT

OF CHEMICAL SUBSTANCES CONSIDERED POTENTIALLY HAZARDOUS BY AMS. THIS INFORMATION UNDER THE PRESENT LAW IS AVAILABLE TO THE PUBLIC.

(3) OUR PLANT DISCHARGES TO THE WATER ARE CONTROLLED AND PERMITTED UNDER THE FEDERAL CLEAN WATER ACT. WE SAMPLE AND ANALYZE OUR DISCHARGES AND REPORT THESE RESULTS QUARTERLY BOTH TO THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY AND THE STATE DEPARTMENT OF ENVIRONMENTAL RESOURCES. WE ARE SUBJECT TO REGULAR AS WELL AS SURPRISE SAMPLING BY THE EPA AND DER AT ANY TIME. ALL THIS INFORMATION ON THE IDENTITY AND AMOUNT OF OUR DISCHARGES IS BY LAW AVAILABLE TO THE PUBLIC.

(4) ROHM AND HAAS CAREFULLY DISPOSES OF ALL PLANT WASTES BOTH SOLID AND LIQUID. TRASH IS TAKEN TO SANITARY LANDFILLS IN PENNSYLVANIA AND NEW JERSEY. INNOCUOUS PROCESS WASTES ARE TAKEN TO PERMITTED AND INSPECTED SANITARY LANDFILLS IN PENNSYLVANIA. WASTE SOLVENTS THAT CANNOT BE RECOVERED FOR USE IN MAKING OUR PRODUCTS ARE BURNED AS A FUEL IN OUR BOILERHOUSE IN ORDER TO RECLAIM ENERGY.

SINCE PENNSYLVANIA PRESENTLY HAS NO HAZARDOUS WASTE DISPOSAL SITE PERMITTED BY THE STATE, OUR HAZARDOUS CHEMICAL WASTES ARE TRANSPORTED TO APPROVED LOCATIONS IN OTHER STATES WHERE THEY ARE BURIED IN DEEP BEDS

OF IMPERMEABLE CLAY. THESE FACILITIES ARE APPROVED BY THE STATES IN WHICH THEY ARE LOCATED AND MUST ALSO PASS PERIODIC INSPECTION BY ROHM AND HAAS PERSONNEL.

ROHM AND HAAS HAS FOR THE LAST TWO YEARS USED A MANIFEST SYSTEM TO TRACK OUR WASTES FROM ITS GENERATION AT OUR PLANT THROUGH THE TRANSPORTER TO ITS FINAL TREATMENT OR DISPOSAL SITE. THIS SYSTEM IS NOW REQUIRED OF ALL WASTE DISPOSERS BY BOTH THE FEDERAL RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) AND THE RECENTLY ENACTED PENNSYLVANIA SOLID WASTE MANAGEMENT ACT. THIS MANIFEST PROVIDES A WRITTEN RECORD OF THE IDENTITY, CHARACTER AND AMOUNT OF EACH WASTE SHIPPED AND INDICATES HOW AND WHERE IT WAS TAKEN AND DISPOSED. THE NEW PENNSYLVANIA BILL WHICH COMPREHENSIVELY REGULATES HAZARDOUS WASTE REQUIRES THAT WE INFORM THE DER OF THE NATURE AND QUANTITY OF WASTES WE GENERATE, STORE, TRANSPORT, TREAT OR DISPOSE. UNDER THE PRESENT LAW, THIS INFORMATION IS ALSO AVAILABLE TO THE PUBLIC.

(5) ALL SPILLS OF ANY OF OUR PRODUCTS WHICH OCCUR WHILE TRANSPORTED FROM OUR PLANT TO THEIR ULTIMATE DESTINATION ARE IMMEDIATELY REPORTED TO THE U.S. COAST GUARD NATIONAL RESPONSE CENTER, THE EPA, THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES AND APPROPRIATE CITY

DEPARTMENTS. THE IDENTITY AND QUANTITY OF THE MATERIAL SPILLED IS PROVIDED AS WELL AS TECHNICAL INFORMATION AND SUPPORT TO AID IN ITS PROPER CLEANUP. IN ADDITION, THE FEDERAL DEPARTMENT OF TRANSPORTATION REQUIRES THAT ALL SIGNIFICANT SHIPMENTS OF HAZARDOUS SUBSTANCES BE IDENTIFIED AND PROPERLY LABELED.

(6) UNDER THE TERMS OF THE PHILADELPHIA FIRE CODE, NO PERSON CAN STORE, HANDLE OR USE FLAMMABLE LIQUIDS AND HAZARDOUS CHEMICALS IN AMOUNTS ABOVE 500 POUNDS UNLESS THEY HAVE OBTAINED A LICENSE FROM THE CITY OF PHILADELPHIA. THE STORAGE OF THESE MATERIALS ARE THEN REGULATED BY THE FIRE CODE. WE ARE PERMITTED AND LICENSED TO STORE AND PROCESS THESE MATERIALS. UNDER THE TERMS OF THE FIRE CODE WE ARE SUBJECT TO INSPECTION AT ANY TIME BY THE FIRE DEPARTMENT OR THE DEPARTMENT OF LICENSES AND INSPECTIONS. ALL APPLICATIONS, LICENSES AND PERMITS ARE AVAILABLE FOR INSPECTION BY THE PUBLIC.

IN ADDITION, THE PHILADELPHIA PLANT HAS MAINTAINED CLOSE RELATIONS OVER THE YEARS WITH THE PHILADELPHIA FIRE DEPARTMENT. WE HOLD TRAINING SESSIONS WITH EACH PLATOON OF THE FIRST RESPONSE COMPANIES TO INFORM

THEM OF THE CHEMICALS WHICH WE HANDLE. WE TOUR THE PLANT WITH THEM SHOWING THEM STORAGE FACILITIES, FIRE FIGHTING APPARATUS, SPRINKLING SYSTEMS, FIRST AID FIRE FIGHTING EQUIPMENT AND DISCUSS HOW THEY MIGHT RESPOND IN CASE OF AN EMERGENCY.

AS I HOPE YOU CAN READILY SEE, ROHM AND HAAS DOES NOW, IN FACT, PRACTICE THE RIGHT-TO-KNOW. WE BELIEVE IN THE RIGHT-TO-KNOW. WE DON'T BELIEVE, HOWEVER, THAT THE PROPOSED AMENDMENTS TO THE PHILADELPHIA AIR MANAGEMENT CODE REPRESENT A GOOD WAY TO LEGISLATE THE PRINCIPLE INTO LAW.

(1) THE BILL IS DUPLICATIVE OF MAJOR CURRENT AND PROPOSED FEDERAL REGULATORY PROGRAMS. OSHA NOW PROVIDES THAT EMPLOYEES, THEIR DESIGNATED REPRESENTATIVES, SUCH AS A UNION,AND REPRESENTATIVES OF THE GOVERNMENT ARE ENTITLED TO ACCESS TO ALL EMPLOYER-MAINTAINED EXPOSURE AND MEDICAL RECORDS RELEVANT TO EXPOSURE TO TOXIC SUBSTANCES. OSHA IS ALSO IN THE LAST STAGE OF ISSUING THEIR LONG AWAITED CHEMICAL IDENTIFICATION PROPOSAL WHICH WILL REQUIRE EMPLOYERS TO DISCLOSE TO THEIR EMPLOYEES AND THE GOVERNMENT THE SPECIFIC IDENTITY OF HAZARDOUS CHEMICALS PRESENT IN THE WORKPLACE. IT WILL ALSO REQUIRE THAT ALL CONTAINERS OF THESE CHEMICALS BE LABELED WITH THEIR SPECIFIC IDENTITY.

MOREOVER, OSHA WOULD REQUIRE THAT EVERY SHIPMENT OF SUCH MATERIALS BE ACCOMPANIED BY A HAZARDOUS WARNING LABEL AND AN MSDS.

THE EPA UNDER THE TOXIC SUBSTANCES CONTROL ACT IS ALSO VERY CLOSE TO ISSUING THEIR RULES REQUIRING THAT ALL SHIPMENTS OF HAZARDOUS CHEMICALS LIST BOTH ACUTE AND CANCER HAZARD WARNINGS ON THEIR LABELS. MOREOVER THE EPA RECENTLY PROPOSED ITS POLICY FOR THE IDENTIFICATION AND CONTROL OF AIRBORNE CARCINOGENS AND OSHA HAS IN PLACE ITS PROGRAM TO CONTROL CARCINOGENS IN THE WORKPLACE.

AS YOU CAN SEE THIS IS AN AREA THAT IS NOT WANTING FOR GOVERNMENT REGULATION. ADDING ANOTHER LAYER OF GOVERNMENT REGULATIONS ONTO THESE FEDERAL PROGRAMS WHICH PROVIDE SUBSTANTIALLY SIMILAR PROTECTION TO EMPLOYEES AND THE PUBLIC AS THOSE PROPOSED IS WASTEFUL, INFLATIONARY AND UNNECESSARY.

(2) THOUGH THE RIGHT-TO-KNOW BILL IS CONCERNED WITH EXPOSURE OF CITIZENS TO TOXIC SUBSTANCES, IT REQUIRES NOTIFICATION WHENEVER A SUBSTANCE MERELY EXISTS IN THE WORKPLACE. THE BILL, AS PRESENTLY WRITTEN, CONTAINS NO EXCLUSIONS FOR LOW LEVELS OF CONCENTRATION OR FOR DE MINIMIS AMOUNTS WHICH POSE NO PUBLIC HEALTH THREAT.

(3) THE LIST OF TOXIC SUBSTANCES CONTAINED IN THE BILL HAS BEEN INAPPROPRIATELY TAKEN FROM A WORKPLACE LIST USED BY OSHA. MOST OF THESE MATERIALS WERE ON THE LIST BECAUSE IN HIGH LEVEL WORKPLACE CONCENTRATIONS THEY COULD BE RESPIRATORY IRRITANTS NOT BECAUSE THEY POSED ANY SIGNIFICANT HEALTH HAZARD. THERE IS LITTLE OR NO EVIDENCE THAT IN LOW CONCENTRATIONS IN THE AMBIENT AIR THE GREAT MAJORITY OF THESE SUBSTANCES POSE ANY SIGNIFICANT RISK TO HEALTH.

(4) THE BILL WOULD REQUIRE AMS TO PERMIT THE EMISSIONS OF APPROXIMATELY 400 SUBSTANCES IN EACH AND EVERY WORKPLACE. THIS IS BOTH A FOOLISH AND IMPOSSIBLE TASK. AMS CURRENTLY HAS THE AUTHORITY TO CONTROL THE EMISSIONS OF TOXIC SUBSTANCES AND DOES SO ON A CAREFUL CASE-BY-CASE BASIS. IT IS UNWISE TO LIMIT AMS' SCIENTIFIC AND REGULATORY DISCRETION AND TAX ITS ALREADY LIMITED RESOURCES BY REQUIRING THEM TO PERMIT THIS LAUNDRY LIST OF CHEMICALS WHERE THERE IS, IN FACT, NO KNOWN OR EXPECTED PUBLIC HEALTH CONCERN.

(5) FINALLY, THE BILL PROVIDES NO PROTECTION FOR LEGITIMATE INDUSTRY TRADE SECRETS, THE DISCLOSURE OF WHICH WOULD NOT BE NECESSARY TO PROTECT HEALTH OR THE ENVIRONMENT.

HOW CAN WE THEN BEST ADDRESS THE LEGITIMATE CONCERNS RAISED BY THE PROPONENTS OF THIS LEGISLATION? FIRST, I THINK THESE HEARINGS THEMSELVES SHOULD GO A LONG WAY TOWARDS ANSWERING MANY OF THE CONCERNS RAISED. THEY SHOULD PROVE USEFUL IN INFORMING THE PUBLIC THAT ITS RIGHT TO KNOW IS ALREADY ACKNOWLEDGED IN THE LAW AND THAT THERE ARE LOCAL, STATE AND FEDERAL AGENCIES THAT HAVE MECHANISMS IN PLACE TO REGULATE INDUSTRY, TO PROTECT THE PUBLIC HEALTH AND TO PROVIDE THE PUBLIC WITH THE INFORMATION NECESSARY TO INSURE THEIR SAFETY AND HEALTH.

SECOND, AMS SHOULD BE ADEQUATELY FUNDED AND STAFFED SO THAT THEY CAN CONTINUE TO EFFECTIVELY REGULATE AIR EMISSIONS. THEIR RECEIPT OF A SPECIAL GRANT FROM THE EPA OF NEARLY HALF A MILLION DOLLARS WILL INCREASE THEIR CAPABILITY TO MEASURE AND CONTROL TOXIC AIR POLLUTANTS.

THIRD, THE AIR POLLUTION CONTROL BOARD SHOULD SPECIFICALLY DEFINE THE TERM "TOXIC SUBSTANCE" BY REGULATION. THIS WOULD INSURE THAT THE PROCESS WOULD BE ACCOMPLISHED IN AN ORDERLY FASHION WITH ADEQUATE OPPORTUNITY FOR COMMENT BY ALL PARTIES CONCERNED AND WOULD ALLOW AIR MANAGEMENT SERVICES TO PROCEED IN A MEANINGFUL SCIENTIFIC WAY RATHER THAN BE STRAIGHTJACKETED

WITH AN INAPPROPRIATE LAUNDRY LIST OF SO-CALLED TOXIC SUBSTANCES.

FOURTH, THE EXISTING FIRE CODE JURISDICTION OVER THE STORAGE AND HANDLING OF HAZARDOUS CHEMICALS COULD BE SPECIFICALLY EXPANDED TO INCLUDE "TOXIC SUBSTANCES" PROVIDED AGAIN THAT THERE IS A COMMON SENSE DEFINITION OF "TOXIC SUBSTANCES" AND SOME REASONABLE QUANTITY LIMITS ARE ESTABLISHED.

ROHM AND HAAS BELIEVES STRONGLY THAT ALL REPRESENTATIVES OF THE PUBLIC - WORKERS, CUSTOMERS AND THE COMMUNITY - HAVE THE RIGHT TO BE INFORMED AND AWARE WHERE A THREAT TO THEIR HEALTH MAY EXIST. WE ALSO BELIEVE THIS RIGHT IS FAIRLY AND ADEQUATELY PROTECTED TODAY.

WE DO NOT BELIEVE CITY COUNCIL ENHANCES OR IMPROVES THAT RIGHT WITH AN ORDINANCE WHICH DUPLICATES EXISTING LAWS, REPLACES THE ADMINISTRATIVE AND SCIENTIFIC JUDGMENT OF PROFESSIONALS WITH AN INAPPROPRIATE SHOPPING LIST AND ADDS YET ANOTHER REQUIREMENT FOR EXPANDED MUNICIPAL GOVERNMENT SERVICE.

ROHM AND HAAS IS PROUD OF ITS CONTRIBUTIONS TO THIS CITY AND ITS GOVERNMENT IN OUR 70-YEAR HISTORY AND WE WOULD BE GLAD TO WORK CLOSELY WITH THE COUNCIL IN ANY WAY THAT YOU THOUGHT WOULD BE HELPFUL TO LEND

WHATEVER EXPERTISE AND EXPERIENCE WE HAVE IN DRAFTING SOUND LEGISLATION THAT ADDRESSED THIS ISSUE IN A COST-EFFECTIVE AND REASONABLE FASHION.

THANK YOU.

THE PENJERDEL COUNCIL

10/19/82

Subject: ubiquity of PCBs at trace-amount levels

1) From Environmental Science & Technology, Volume 15 No. 9 of September 1981, titled "Polychlorinated Biphenyls in Effluents from Combustion of Coal/Refuse" (RDF or refuse-derived fuel) by John J. Richard and Gregor A. Junk of Ames Laboratory at Iowa State University, Ames, Iowa.

Article says coal/RDF combinations - even though RDF contained an average of 8500 ug/kg (ppb) of PCBs shows these PCBs in the RDF as being "almost completely destroyed, leaving less than 1% (of that concentration) to be distributed in the environment via stack emissions and disposal of grate and fly ash." A portion of the ES&T article follows:

One group of organic pollutants of concern is the polychlorinated biphenyls (PCBs). Although the use of PCBs has been restricted since 1971, high levels still occur in many paper products, especially paperboard (2, 3). This is caused by the repeated recycle of waste paper which contains PCBs. For example, levels as high as 7% were in carbonless copy paper in 1971 (4). These PCBs, as Aroclor 1242, were purposely added as microcapsules. The carbonless copy paper then became a component of waste paper which was recycled. Inevitably the PCBs were introduced into various other products by the recycle process. Thus many paper products contaminated with PCBs and some of the original carbonless copy paper eventually end up as components of municipal refuse. In addition to paper products, other common materials in refuse such as plasticized paint, adhesives, plastic fireproofing agents, and discarded electronic equipment contain PCBs.

Table II. Concentration of PCBs in Local Paper Products and Processed Refuse (RDF)

product	concn, μg/kg	product	concn μg/kg
Des Moines Register (DMR)	16	computer printout's	10
colored sport section (DMR)	19	cardboard	39
colored comics (DMR)	31	paper towels	130
computer cards	24	RDF	8500
magazine covers	140		

= ppb

2) Berkshire Eagle, 3/24/80 is the only writeup I have seen of the O'Brien & Gere 1979 study of seven newspapers, Fed. Register, boxes from Kellogg's corn flakes and Cheerios, Scott paper towels (PCB-free), and one-dollar bills (PCB-free). O'Brien & Gere appear to have done PCB analysis on 24 consecutive issues of various newspapers as follows: Atlanta Constitution 10.5 ppb; Federal Register 14.3 ppb; Hartford Courant 17.6 ppb; Washington Post 21.0 ppb; New York Times 11.4 ppb (but zero for nine other days or issues analysed).

Attachment: 3/24/80 Berkshire Eagle article.

G.Cox

THE DELAWARE VALLEY STATE ASSOCIATION OF BUSINESS, INDUSTRY & PROFESSIONS SERVING THE DELAWARE VALLEY
Suite 1700 - Western Savings Bank Building - Broad & Chestnut Sts. - Philadelphia, PA 19107

Newspaper, cereal boxes have PCBs, study finds

By Judy Katz

The New York Times and the Atlanta Constitution are cleaner than The Berkshire Eagle.

But the Eagle is cleaner than the Lakeville (Conn.) Journal and the Washington Post.

Those are some of the findings of a 1979 study of seven newspapers — and of the Federal Register, boxes from Kellogg's corn flakes and Cheerios, Scott paper towels and one-dollar bills.

The study, conducted by Syracuse, N.Y., consulting engineers O'Brien & Gere, was not concerned with editorial content. It measured PCB (polychlorinated biphenyl) content in parts per billion (ppb).

General Electric Co. in Pittsfield commissioned it as part of what GE spokesman Jack T. Batty described as continuing company-sponsored research into where the toxic PCBs may be found and where — other than GE — they came from.

O'Brien & Gere concluded that "in general, one can expect to find PCB levels in newspapers ranging from non-detectable to 200 ppb, and an average of between 20 and 30 ppb."

A spokesman for the federal Environmental Protection Agency, asked about the study, said he did not see "any way that could be injurious."

Don't eat it

The only caution he could give a newspaper reader, he joked, is that "he shouldn't eat his daily paper."

But Paul G. Keough, director of the EPA's Boston public awareness office, had a different reaction to another O'Brien & Gere finding.

Tests on the cereal boxes and liners, 24 of each brand purchased from a Syracuse market, yielded a mean PCB content — halfway between the highest and lowest values — of 518 ppb for the corn flakes packages and 1,795 ppb for the Cheerios boxes.

"I think that's something they would want to turn over to the Food and Drug Administration," Keough said, because PCBs can migrate from packages into the foods they contain. Then he added, "Did they test the Cheerios?"

Just the paper

The consultants did not. The study was a straight PCB count of the various paper products. O'Brien & Gere state that anything else — such as whether newspaper readers or cereal eaters should be worried — is beyond its scope.

PCBs were used in Pittsfield by GE for about 40 years as a component of its special fireproof transformer insulating fluid, Pyranol. Then, beginning about 1966, scientists reported that PCBs may cause a variety of problems in animals and perhaps in humans.

The federal government banned PCBs in 1972. But for fire safety reasons, the electrical industry was given an extended deadline.

As a result, Batty said GE believes "the electrical industry has had a bum rap because we were the last to use it." He referred to a government consultant's report that stated that "although the electrical industry accounts for nearly 65 percent of total domestic PCB sales from 1930 to 1971, it is responsible for only 35.5 percent of PCBs present in the environment."

In the environment

The research program shows, he said, that even if it were possible to totally destroy all PCBs ever used by GE "they would still be in the environment."

Keough said, "GE has been accused of being the PCB king of the Hudson and Housatonic rivers. I guess what they're trying to say (through the research program) is, 'We're not the only ones who are guilty.' "

The study, he continued, "reaffirms something everyone in the scientific community knows — there are millions of pounds still in circulation, because PCBs were used in so many things. They were in TVs, radios — they were even used to oil roads down."

GE has compiled a much longer list. It includes adhesives, hydraulic fluids, inks, sealants and caulking compounds, among many others.

Over the past two years, Batty estimates that Pittsfield GE has invested about $500,000 in PCB research by its own laboratories, independent consultants and the corporate research and development center in Schenectady.

Pittsfield GE pays

Through an internal company billing system, Pittsfield GE is assessed by the corporate center for work done there.

"The ones who need the information are the ones who pay for it," Batty explained. "There is no free ride inside the company. Pittsfield operations are funding a good portion, although not all, of the research on PCBs."

GE research has produced a list of all 295 U.S. companies that used PCBs between 1957 and 1971. It has compiled evidence that the almost indestructible PCB molecules turn up in unlikely places. But it has not contributed original research to the continuing controversy over the health hazards of PCBs.

Laboratory studies over the years have established links between PCBs and cancer, birth defects, liver disease and reproductive failure in animals. Scientists are debating whether those links also hold for people.

According to the O'Brien & Gere study, Scott paper towels and U.S. currency (printed on paper manufactured by Crane & Co. in Dalton) are exceptions to the PCBs are everywhere rule.

Using instruments sensitive enough to detect PCBs at the 5 ppb level, the consultants concluded that "there is little chance of finding any PCB contamination in these particular products."

But the PCBs turned up regularly in the 24 consecutive issues tested of each newspaper — although The New York Times went nine days without a detectable level of PCBs.

The mean level of PCBs in 24 issues of The Berkshire Eagle tested in June, 1978, was 16.4 ppb.

The corresponding figure for The New York Times was 11.4; for the Atlanta Constitution, 10.5; the Federal Register, 11.3; the Hartford Courant 17.6; the Washington Post, 21; the Lakeville Journal, 4.8, and the Rome (N.Y.) News Tribune, 91.5.

But when 13 separate copies of the Post purchased six months later, in December, were tested, the PCB content had dropped to 5.3. "It may," the engineers surmised, "reflect some change in the printing process, source of paper or ink" — or "other."

The Syracuse, N.Y., firm said it chose papers from "as wide a distribution of locations as practical." Batty made a point of saying that inclusion of The Eagle — or, for that matter, the two Connecticut papers (which have run stories laying PCBs in Housatonic River sediment and fish at GE's door) — was not retaliation for stories about PCBs that have appeared in its PCB-spiked pages.

GE has shared some of its corporate research with technical journals, Batty said, adding to the general body of knowledge about PCBs.

He called the study of PCBs in paper one of several that evolved from the company's original mission — finding and cleaning up PCBs in its plant.

"We are trying to solve one part of a world-wide problem," he said. "The only logical way to solve the problem is to find out more about it — not only how to get rid of PCBs, but how they are dispersed."

STATEMENT OF DR. J. ROBERT GRAY

AMERICAN CYANAMID COMPANY

Representing The

National Agricultural Chemicals Association

Before The

New Jersey Senate

Committee on Energy & Environment

October 20, 1982

My name is Dr. J. Robert Gray and I am Program Administrator for the Agricultural Division of American Cyanamid Company in Princeton, New Jersey. I'm here to speak on behalf of the National Agricultural Chemicals Association (NACA).

NACA is a national trade association of manufacturers and formulators of pest control products employed in agricultural production. NACA membership is composed of the companies which produce and sell virtually all of the technical pesticide materials (active ingredients) and a large percentage of the formulated products registered for use in the United States. Many of our members are headquartered or maintain plants, research facilities, sales offices and distribution centers in New Jersey.

These members represent a substantial investment both in dollars and jobs in the economy of New Jersey. Agricultural operations conservatively represent $2-1/2 billion to the economy of New Jersey. When you consider that farmers and agricultural services are also covered under this bill, you can see the importance of addressing the agricultural sector in these hearings.

The agricultural chemical industry supports the right of workers to know about the substances they are working with. We take pride in the record of safety and training our members represent. Many of our members have a hazards communication program as proposed by OSHA. NACA joins others in the chemical community in support of a strong and uniform national program for hazards communication. The proposed OSHA standard will mandate a performance based standard for communication with workers through the use of labels, placards, Material Safety Data Sheets, information and training and access to records. It's important to recognize that on-going worker safety programs often include employee

exposure studies, employee training programs, comprehensive labelling policies, safety/loss prevention programs, and product safety policy for hazard communication for employees and customers. This can be accomplished through many mechanisms other than the single compliance route outlined in S. 1670.

For example, in my company we have specialists in each division, including physicians, nurses, industrial hygienists, safety engineers and toxicologists and an Occupational Health Committee. The company's top medical, toxicological and industrial hygiene professionals formulate sound policy and procedures protective of employee health on existing materials in the workplace. We do produce and revise Material Safety Data Sheets (MSDSs) on materials used in our plants. These sheets contain all pertinent information as to what the material is and all aspects of health hazards and proper handling information. All production employees are trained in safety and health procedures and materials hazards from the day they join the company. As a pioneer of Job Safety and Health Analyses (JSHA), most company jobs are broken down into component tasks, each of which is described in detail as to potential hazards and precautions to be taken. Maintained in writing, each JSHA is reviewed with the appropriate employees. Heavy reliance is placed on audio visual aids for training employees. These are but a few of the details of our programs of safety for workers. The bottom line is that these employees know what they are working with, the levels they are being exposed to, and what the potential hazards are. I believe that this is one of this Committee's major legislative intents.

NACA believes S. 1670 is duplicative and therefore unnecessary both for worker and community right to know. Our general concerns, I'm sure, mirror those of other manufacturing, research and user establishments.

We believe the NIOSH list as a basis for the definition of "chemical" is unworkable. It is simply a listing of 40,000 chemicals for which toxicity data exists. According to OSHA, the majority of substances on this list do not present a significant degree of hazard to human health. It even includes water, salt and vinegar.

Another implication of S. 1670 is that exposure of the general public and employees to chemicals is unsafe. This supposition is untrue since it does not recognize differences in chemical toxicity, reactivity, duration of exposure and concentration. The intent of the bill is to communicate hazards therefore the deciding factor on what compounds should be covered should depend on individual chemical properties.

While the agrichemical industry shares all of the concerns to date expressed by the Chemical Industry Council of New Jersey we see some additional concerns very specific to our business.

We have a very strong concern for the potential of S. 1670 to jeopardize protection of trade secret and proprietary data. General disclosure of these trade secrets is not necessary to the protection of workers and the community. Our industry has and does provide proprietary data to authorized state and federal agencies where proper safeguards for this information exist. We do not believe that S. 1670 properly safeguards these data.

The amount of each chemical on site and its location must be given under S. 1670. This information should only be provided to emergency organizations such as fire departments since it is confidential in that it can reveal the method of production and the production volume.

Depending on the interpretation of chemicals to be excluded (Article 3a) "Chemicals contained in packages offered for sale at retail stores," the entire pesticide chain from manufacturer to use by the

farmer and homeowner could come under the restrictions of this Act. Laboratory investigations and field trials also appear to be covered. Based on this same definition, oil distributors, gas stations, dry cleaners, paint stores, hardware stores and other retailers dispensing bulk chemicals would be restricted by this Act.

The PIDS covers storage and chemicals "being emitted." Does emission include evaporation of a solvent or carrier used in a pesticide applied to a farmer's field? Conceivably, the farmer-grower would be required to include those chemicals which evaporate. This would mean that every time a farmer sprays to protect a crop and cannot comply with the reporting provisions of S. 1670, he would be subjected to a $25,000 a day penalty.

Section 4 provides for a small quantity exemption which doesn't help a great many agriculturalists including commercial applicators. Every employer, except those who employ only domestic servants, is covered if for any 24-hour period during the year he has in his possession more than 500 lbs. or 55 gallons of any one chemical which appears on the NIOSH list. Many growers, research facilities, universities, schools, and even most swimming pools exceed this limit.

In Section 4(a) the bill allows one MSDS for a mixture only if the label identifies its constituent chemicals. To protect proprietary pesticide formulations, only the identity of the active ingredient is shown on the label. For pesticides these mixtures are adequately evaluated and identification of its components is not necessary to other regulatory agencies.

Section 4(e) requires employers to label containers, with certain information which includes the Chemical Abstract Service (CAS) number.

Section 24(b) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) clearly preempts a state from such a requirement on pesticides regulated by that Act.

In Section 4(a) experimental facilities are clearly under the jurisdiction of this Act. Laboratories could rarely comply with the provisions of this Act because of the sheer numbers of chemicals in use. Usually very small quantities of these chemicals are used. In fact it would be a "catch-22" situation where MSDSs must be prepared on the basis of data and these laboratories are in the process of generating those data.

Employers cannot always predict at early stages in process development the exact material requirements for a preparation. Therefore, it may be necessary to increase quantities during a preparative or piloting procedure when an unexpected result is obtained. S. 1670 limits the flexibility available to R&D facilities. Full implementation of S. 1670 would be sufficiently burdensome to some high technology industries to encourage them to leave New Jersey.

In Section 4(f) reporting of a discharge is required within 48 hours. Quantity requirements to define a discharge are not given. Development of analytical technology to define all the chemical components of any potential discharge from a process in advance of such an incident would place an undue economic burden on an "employer." Such a discharge can only be evaluated after examining the status of the process at the time of discharge.

In Section 4(g) compliance is required 120 days after the effective date of the Act. In addition in Section 13, 90 of these days are given to regulation promulgation. This gives only 30 days to institute major programs required by the bill.

Section 5 provides for an administrative hearing to determine the legitimacy of a claim concerning information for a PSDS which may disclose a trade secret or create a competitive disadvantage. No timing is indicated for this process. Assuming at least initially there will be a large number of such requests, serious production delays could be a consequence. Production delays would in turn have an adverse effect on the state's economy including that of the farmer.

Section 6, 7, 8 and 9 get into burdensome personnel and paperwork handling situations. This could be especially devastating to small businessmen including farmers.

Section 8 allows "any person" to inspect PIDSs at sites where MSDSs will also be maintained. The very next section then allows "any person" to bring civil action against "any employer" including state agencies. Such a person need not prove that he has suffered or will suffer personal loss or damage. In a densely populated state such as New Jersey, consider the potential impact of this provision when the non-agricultural public disapproves of what the agricultural community might be doing.

Section 10 charges the DEP with assuring the "quality" of the MSDSs and the PIDSs. How can this be done, and does this imply that some form of approval is forthcoming? This could bring about an even greater paperwork burden on the part of all employers covered by this Act.

Section 11 would allow local governing bodies to enact more stringent provisions. This provision seems to appear in many New Jersey bills. It is our opinion that Section 24(b) of FIFRA would preempt localities from such action as it might relate to pesticides.

In summary, S. 1670 is duplicative of other regulations which provide for worker and community safety, including the Federal Insecti-

cide, Fungicide and Rodenticide Act and the New Jersey Pesticide Control Act which specifically regulate the pesticide industry. More to the point, S. 1670 will not accomplish its legislative intent and will instead seriously threaten New Jersey agriculture and all of its supportive industries. Therefore we must oppose the bill.

COALITION AGAINST TOXICS

223 Park Avenue
Atco, New Jersey 08004

654-4963 767-1110

Public Hearing on S #1670 Oct. 20, 1982
Washington Township, N.J.

DAVID C. COPELAND, CHAIRMAN
JANE NOGAKI, CORRESPONDING SECRETARY
KATHLEEN BELL, RECORDING SECRETARY
WYNNE FALKOWSKI, TREASURER

Thank you, Senators, for this opportunity to voice our support for S - 1670, the Worker and Community Right to Know Act. I am David Copeland, Chairman of the Coalition Against Toxics, a chapter of the N.J. Coalition for Alternatives to Pesticides. Our group heartily endorses the "Right to Know Act" because we think it will sensitize people to the hazards of certain chemical exposures and enable them to reduce these exposures where possible.

It is the express goal of our group to help people protect themselves from unnecessary or unwanted chemical exposure in the community.

We have members from fifteen southern New Jersey towns. They joined our group because they were concerned about community exposure to the chemical Sevin, commonly used in aerial spray programs for gypsy moth control. The "Right to Know bill" will further our cause by informing communities about the risks as well as the benefits of pesticides like Sevin, so that decisions which affect the health of the community can be made responsibly rather than on the basis of economics. Acting without this information mortgages the lives of our children and grandchildren.

We have documented the negative effects of Sevin spraying on the health of residents in our towns. We submit these to you in hopes that you will see why this information needs to be in the hands of the public, not just in the hands of the DEP, EPA, DOA, and the manufacturer.

Here is an example of label information that is not readily available to the public. (David shows the label from the 55 gal. drum of SEVIN-4-OIL). Town Councils who make the decision to use this material on their residents do not see this information.

Speaking next will be Pat Sherf, who experienced a tragedy she feels certain was caused by a chemical exposure. She suspected this exposure was dangerous, but her neighbors felt it was innocuous.

Pat's testimony....

Thank you. People nned to have in their hands information about chemicals they are exposed to. Please move favorably on the Right to Know Bill.

David C. Copeland
Chairman, Coalition Against Toxics

84x

Patricia Sherf
263 Chestnut Avenue
Evesham Twp., Atco, N.J. 08004
Oct. 20,1982
768-1720

Good Evening!

The following letter to the editor was written by me and published on September 16 by the Courier Post.

Dear Editor:

I wrote to you the first week of June expressing my concern over the irresponsible spraying of Sevin in Evesham Township by private pilots. I was especially concerned because I was 5 weeks pregnant and had read that exposure caused a higher incidence of miscarriages, stillbirths and birth defects. On September3, I delivered a 5-month stillborn baby. NOone can ever understand the heartache and grief this tragedy brought to my husband and myself. We had 2 perfect pregnancies before this baby, and I feel Sevin is the cul prit . In a 1977 draft decision memo, the EPA admitted carbaryl (Sevin) was a weak mutagen and teratogen, but the data base was not strong enough to cance l the chemical.

Must we have another Thalidomide-like tragedy before we decide to investigate fully and stop the spraying of this frequently used chemical? I urge residents to let their townships and neighoors know that they don't want Sevin sprayed anymore and perhaps spar e other couples a devastating experience like ours. Thank you,

Pat Sherf

Pat Sherf

85x

As the result of a short article in the Courier Post which appeared May 15, 1982, the following phone calls were received by Jane Nogaki, 223 Park Ave., Atco, N.J. 08004, 767-1110. Some detail a specific physical complaint, and some were calls to protest spraying without notification or permission of private property. All callers were mailed a form to register their complaint and mail back to Kathy Bell, 202 Redman Ave., West. Berlin, 18091.(768-0452).

date	caller	symptoms	notification
5/15/82	Joan Schaeffer 12 Henley St. Sturbridge Lakes Voorhees,N.J. 08043	runny eyes, head congestion, heavy chest cough	twp. sponsored program - not-DOA.
5/15/82	Ann McDonald 70 /Victoria Lane Waterford, N.J. 08089	nausea	no notification: lives near farms and Wharton Tract Doesn't know if she was sprayed.
5/15/82	Sara Weikle 259 Raritan Ave. Atco, N.J. 08004	dizzin ess, diarhea	Doesn't know if she was sprayed.
5/15/82	Robert Grundlock 8 Independence Ct. Berlin, N.J. 08009 (Centennial Square, adjacent to twp. sponsored spray program - non DOA.)	nausea, diarhea whole family sick the day after spraying (5/12)	no notification
5/16/82	John McPeak 343 Lincoln W.Berlin, N.J. 08091	severe diarhea: directly exposed while working in back yard 3/15	Twp. sponsored program - non-DOA.
5/16/82	Mrs. James DeSimone 332 E. 3rd St. Moorestown, N.J. 08057	3½yr. old son congested and runny nose	Twp. sponsored program - non-DOA. was notifie Sprayed May 13, symptoms noticed May 14.
5/17/82	Connie Brooks 2216 Bosworth, Lindenwold, N.J. 08021	daughter, 2 yrs. old: runny nose, fever, night cough	Lives near the Berlin area that was sprayed May 15, thinks that exposure caused symptoms (Mt. Carmel School area)

5/18/82	Karen Hochsworth 1250 Venezia Vineland, N.J. 08360 (609) 692-0732	Sprayed aerially by Downstown, a private contract made with neighbors; w/out notification or permission Was assured a 200ft. buffer zone which was not respected.
5/18/82	Marge Corbett Cherry and Walnut Rd. Atco, N.J.	headache experienced after Berlin Boro sprayed near Mt. Carmel school, where she teaches. No notification or caution to school chilodren.
5/20/82	Karen Rhoda 2110 Mays Landing Rd Millville, N.J. 08332	Sprayed without notificatio n in her trailer park. 7 a.m. 5/20/82 No one knew who authorized spraying.
5/20/82	Carol Pepe 5 Diana Dr. Erial, N.J. 08081	Felt sluggish and aching after twp. sponsored spraying. No notification, or permission given to be sprayed. Sprayed twice, 5/18, 5/20.
5/21/82	Sue Scott 4E McKendimen Rd. Indian Mills Vincentown,N.J. 08088	children sprayed on bus stop while waiting for school bus - no notification
5/21/82	Alice Weisbecker 4th Street (632) Absecon, N.J. 08201	Sprayed without permission. Left town for a week when spraying was scheduled because she is pregnant. Spraying did not occur while she was gone, and she had to leave again. Her children are highly allergic to pesticides.
5/21/82	Madeline Gladstone 26 N. Riding Dr. Cherry Hill,N.J.08003	Sprayed three times by helicopter, twp. sponsored program.
5/24/82	Lou Testa 271 Clementon Rd. Berlin, N.J. 08009	Directly exposed, without notification, on May 15. Spraying of a nearby Scout camp drifted on to his property.; a jogger who usually runs ten miles /day, Lou said he felt his breathing was affected for a week, and during that time he could run only half his usual distance.

87x

Note: All these incidents involved the spraying of sevin. I received two complaints concerning the spraying of Bt. in Marlton Lakes - both times it was sprayed around 9 a.m. when children were out on bussto No health effects noted, but it was not something we'd like repeated.
Dates:May 12, 24; contractor - Downstown.

5/25/82	Kathy Huntsinger 4 Ann Drive Tabernacle, N.J.	Neighborhood private contract. Sprayed 2 times with sevin without permission, and a third spraying was scheduled to occur the next day. Next door neighbor is in first tri-mester of pregnancy. Referred to public advocate
5/26/82	Janet Ganther W. Branch St. Pine Hill, N.J. 08021	Sprayed by private contractor without notification or permission. Neighbors assured pilot they had 100% cooperation, but Janet was not even consulted about the issue.
5/26/82	Geri Berger 140 W. Branch Pine Hill, N.J.08021	Neighbor of Janet Ganther. Most upset at being sprayed without notification or permission.
6/3/82	Carol Vannais Fox Chase development Tabermacle, N.J.	Requested Downstown not to spray her property when a neighborhoodd contract was made with that firm. Despite assurances she would be avoided, no balloons were placed on her property and she was sprayed twice, May 21, and June 3. She is in her first trimester of pregnancy.
5/28/82	Alice Phillips 177 E. Eleventh St. Pime Hill, 08021	Directly exposed while waiting for a bus, 11 am on 5/26. Vomiting, wheezing and coughing. Alice is late-middle-aged and has only one kidney. There was no way for her to get out of the spray path because she had no warning it was going to occur.
6/3/82	Rickie Stickel Chestnut Ave. Atco, N.J. 08004	Sprayed without permission at 11 a.m. Was assured her porperty would be avoided but it was not.
6/3/82	Ro Trombetta Poplar Road Atco, N.J. 08004	Sprayed without notification or permission by same two single eng ine planes who sprayed Rickie Stickel. Dave Thompson, 355 Holly Road, Atco, witnessed one of these planes srpaying pesticide over Flamingo Lake from a faulty spray nozzle that would not turn off. This spraying took one half hour to accomplish and I had many phone calls about it. Since our area had already been sprayed twice with Bt., and the foliage has very good protection, the private contract was completely un-necessary, especially considering the date.

Mrs. James Buckley P.O. Box 109 A. Commissioners Road Mulliva , Hill , N.J. 08062	Sprayed by air. She and several neighbors were sick for several days.
Janet Peterson R.D. #2 Lake Gilman Monroeville, 08343	Opposed to spraying being done in neighborhood by truck.
Joan Carson 13 Barbara Road Berlin, 08009	Was not sprayed but is very opposed to spraying.
Dan & Denise Cellers 8 Aster Drive Berlin Township, 08009	Since she is pregnant two doctors said she should leave town. Because of the delays in Berlin she was away for 11 days.
Brian Mosely 12 Delaware Ave. Berlin, o8009	After exposure 11 year old boy became ill. He experianced diarrhea , ran a fever, and had to be hospitalized. While in the hospital he had convultions
Connie Roberts 119 Huges Mills Road Atco	Called for friend who sprayes sevin in his Landscaping business and has experienced symptoms for a while. Dr. was not sure what caused his problems,
Kathy Billingsly 320 Minkh Avenue West Berlin, 08091	Dog became very aggressive after being outside. He did bite one of the children in the family.
Janet Wendorf 33 Columbia Avenue Pitman, 08071	Several neighbors ill after spraying.
Janet Gustafson 3 Laurelwoods Drive Berlin, 08009	Sprayed without notification. Wonders why more precautions are not made known to public.
Anthony Spokas P.O. Box 193 Atco, 08004	Very concerned about spraying. Feels spraying is not the best way to deal with the Gypsy Moth infestation.

Maureen Brown
6 Driftwood Way
Gibbsboro , 08026

Daughter walked on neighbors lawn after he had sprayed with Sevin. She developed a skin rash on the parts of her body that touched the lawn. She then developed diarrhea, ran a low grade fever, and was Hospitalized. She experienced convultions while in the hospital. Dr. felt that exposure to Sevin was the probable cause.

Bob Waters
60 Jackson Road
Berlin 08009

Was having a family picnic on Saturday evening when he and his guests and their food were sprayed by air. They had received no notification that he would be sprayed. Several people at the picnic later became ill.

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name MASTER ERIC CONSTANZO

Address 3 LAUREL WOODS DRIVE

BERLIN NJ 08009

Date of exposure to Sevin JUNE 15

How was Sevin applied? (aerial or other?) AERIAL

Symptoms you experienced VOMITING DIARRHEA, FEVER, LOSS OF APPETITE

How long after exposure did symptoms begin? 3 DAYS

Did you contact a doctor? YES

WHAT was his diagnosis? DIDN'T KNOW THE SYMPTOMS OF SEVIN

Results of urinalysis if done

91x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin. N.J. 08091

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name MR & MRS Thomas R. Shuf

Address 263 Chestnut Avenue
Evesham Twp, Atco, NJ 08004

Date of exposure to Sevin 5-18-82

How was Sevin applied? (aerial or other?) Aerial

Symptoms you experienced Aggravation of pollen allergy. Itchy eyes, Sneezing more frequently

How long after exposure did symptoms begin? within a few minutes

Did you contact a doctor? NO

WHAT was his diagnosis?

Results of urinalysis if done

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to: 92x
Kathy Boll

Sprayed w/out notification or permission 5/18/82

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name KAREN HOXWORTH

Address 1250 VENEZIA AVE.
VINELAND, N.J.

Date of exposure to Sevin 5/18/82

How was Sevin applied? (aerial or other?) AERIAL

Symptoms you experienced DIARRHEA

How long after exposure did symptoms begin? ABOUT 12 HRS

Did you contact a doctor? No

WHAT was his diagnosis?

Results of urinalysis if done

93x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin N J 08091

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name MARY ANN DeSIMONE (MRS.)

Address 332 E. 3rd. St.
Moorestown NJ 08057

Date of exposure to Sevin 5/13/82

How was Sevin applied? (aerial or other?) Aerial

Symptoms you experienced Extreme Runny Nose

How long after exposure did symptoms begin? 24 hours

Did you contact a doctor? Yes

WHAT was his diagnosis? Allergy - sinus infections

Results of urinalysis if done —

94x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin, N.J. 08091

2015 Creek Road
Hainesport,
Burlington County

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name Lucile P. BURIC Street address 2015 Creek Rd. Hainesport, NJ 0

Mailing Address RD 2 Box 2410
Mount Holly, N.J. 08060

Date of exposure to Sevin May 12, 1982 11 A.M. on

ow was Sevin applied? By airplane
(aerial or other?)
(was by helicopter or plane)

nptoms you experienced

ng after exposure did
toms begin?

contact a doctor?

; his diagnosis?

nalysis if done 95x

or the time spent in helping us gather information on
Sevin. Please return to;

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name MRS. Jo-Ann DiMatteo

Address 12 Park Ave
Berlin, N.J. 08009

Date of exposure to Sevin Wednesday - May 12

How was Sevin applied? (aerial or other?) aerial

Symptoms you experienced stomache cramps - diahrea
Myself + 3 children

How long after exposure did symptoms begin? 1 - 3½ days 6

Did you contact a doctor? yes - called the nurse

WHAT was his diagnosis? A stomache virus was going around. Sevin would probably not have caused cramps on 6th day.

Results of urinalysis if done —

96x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave W. Berlin N.J. 08091

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name ROBERT + MAUREEN BROWN

Address 6 DRIFTWOOD WAY

GIBBSBORO, NJ 08026 627-7419

Date of exposure to Sevin MIDDLE OF MAY

How was Sevin applied? (aerial or other?) [redacted] SPRAYER

Symptoms you experienced DAUGHTER RAN LOW GRADE FEVER FOR SEVERAL DAYS; EXPERIENCED CONVULSIONS AND SKIN IRRITATION

How long after exposure did symptoms begin? UNKNOWN

Did you contact a doctor? YES

WHAT was his diagnosis? ORDERED EEG, BLOOD WORK UP, AND CAT SCAN TEST. RESULTS WERE NEGATIVE. CONCURRED THAT CONVULSIONS COULD HAVE BEEN FROM EXPOSURE TO SEVIN

Results of urinalysis if done NOT DONE YET

97x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin. N.J. 08091

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name Janet M Wendorf

Address 33 Columbia Ave.
Pitman, N.J. 08071

Date of exposure to Sevin June 12th, 1982 Washington Twp.

How was Sevin applied? (aerial or other?) Aerial - Washington Twp.
(Glassboro is spraying certain streets, but not aerial) (Have Relatives there & visited) (Pitman Did Not spray)

Symptoms you experienced For a Couple of days
Feeling exhausted then moving difficulty breathing (like the Air was real thick) Nauseous then vomiting and abdominal pain and diarrhea

How long after exposure did symptoms begin? Started feeling bad the 14th
Monday the 14th was the worst for breathing - Had vomiting etc. that night

Did you contact a doctor? No - too costly for just feeling bad. Vomited 4 times at night and then once more.

WHAT was his diagnosis?

Results of urinalysis if done

98x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin. N.J. 08091

South Jersey Chapter of The Coalition for Alternatives To Pesticides.

Name Brian Mosely

Address

Berlin, New Jersey 08009

Date of exposure to Sevin May 12, 1982

How was Sevin applied? (aerial or other?) aerial

Symptoms you experienced vomiting, diarrhea, fever
became dehydrated, hospitalized, convulsions

How long after exposure did symptoms begin? 12 hrs.

Did you contact a doctor? yes

WHAT was his diagnosis? Hospitalized for several days.
Dr. said there was a good chance that it
could have resulted due to exposure

Results of urinalysis if done

99x

We thank you for the time spent in helping us gather information on the effects of exposure to Sevin. Please return to:

Kathy Bell
202 Redman Ave. W. Berlin. N.J. 08091

STATE OF NEW JERSEY)
) ss.
COUNTY OF SOMERSET)

AFFIDAVIT OF
JOHN R. NAYLOR

John R. Naylor, of full age, being duly sworn according to law, upon his oath deposes and says:

1. My name is John Robert Naylor. I was born in New Brunswick, New Jersey, on August 6, 1957. I attended public schools in North Brunswick, New Jersey, and graduated from Carroll High School in Ozark, Alabama in September 1975. From December 1975 until September 1978 I was an enlisted man in the United States Army, stationed in Bayreuth, West Germany. I was honorably discharged in September 1978. At that time I was a military police officer holding the rank of Specialist 4th Class. I have lived in New Jersey since returning to the United States and have lived at my present address, 310 Elm Street, Stirling, New Jersey, since December 1979.

2. From approximately the middle of April 1980 until October 22, 1980 I was employed as a factory worker by Arnold M. Livingston, who is known to me as general manager of TIFA, Ltd. and Blue Spruce International, Inc. During this period I worked in the plant of TIFA, Ltd. at 50 Division Avenue, Millington, Passaic Township, New Jersey, and in the plant of Blue Spruce International, Inc. located in the Brook Industrial Park, 100 West Main Street, Bound Brook, New Jersey.

3. Throughout the period of employment described above I was paid in checks written on TIFA, Ltd. At no time did TIFA, Ltd. withhold from my wages any amounts for federal or state income taxes, social security, unemployment compensation or other benefits.

4. When I was first hired at TIFA I was told that my duties would consist of general factory work in the Millington plant, mostly concerning the assembly of thermal fogging equipment made by TIFA, which is used for spray application of pesticides. I was shown how to assemble the thermal fogger units, and spent about three weeks at the Millington plant making them.

5. Sometime in the last half of May 1980 I was approached by my then supervisor at TIFA, Joseph Berry, and told to accompany him to the Bound Brook plant of Blue Spruce International. The purpose of this trip was to mix chemicals which included pesticides. We drove to the Bound Brook plant in a TIFA company truck. Joseph Berry had a list of chemicals to be mixed. He and I used a fork lift truck to load drums containing chemicals into two large elevated vats having a combined capacity of about 660 gallons when full (equivalent of twelve 55-gallon drums). The vats were equipped with two motorized mixing blades, which we used to agitate the mixture for about two hours. Finally, we drained the contents of the vats into 55 gallon drums.

6. On at least three other occasions between May and the middle of August 1980 I accompanied Joseph Berry to the Bound Brook plant to mix chemicals. While I was not told in so many words, I was made to understand that the work at Bound Brook mixing chemicals was to be considered part of my duties in connection with my employment at TIFA, Ltd.

7. Beginning about the middle of August, Mr. Livingston began sending me to the Bound Brook plant on a regular basis, usually

three or four times per week, sometimes every day. My usual work there consisted of mixing chemicals and packing them into drums or other containers, or work related to those tasks. Sometimes I would go there with other TIFA employees and sometimes I would be sent alone. Occasionally Mr. Livingston would be there personally supervising the work. When I worked alone or was in charge of other workers, I would first report to the Millington plant where Mr. Livingston would give me a list of the chemicals he wanted mixed and in what quantities. I would then go to the Bound Brook plant and carry out these instructions.

8. The chemicals that I mixed at the Blue Spruce plant I understand included pesticides and other kinds of chemicals. The names of some of the chemicals I recall working with include lindane, rotenone, aldrin, Lethane 384, DDVP, arsenic trioxide, acetone, Barbasco methanol extraction, and two chemicals known to me as HAL and "3404". The names of some of the finished products we made included Chem-phos T, Chem-Hex T, Chem-Fish Regular, Chem-Fish Special and Chem-Fish Synergized.

9. At no time during my employment at TIFA, Ltd. or Blue Spruce was I ever given any instruction about the health or safety hazards of working with pesticides or other chemicals. At no time was I given any special protective clothing or breathing protection, other than rubber, plastic or cotton gloves which were ineffective in keeping chemicals off the hands, except that during the last two weeks of my employment I was given a face mask, which was ineffective in keeping out fumes. On a few occasions I suffered from minor

skin rashes. Also, ventilation in the Bound Brook plant was extremely poor, and at times the fumes would cause me to get headaches and nausea. Although Mr. Livingston told us several times not to work with the door open, when he was not there we usually kept the front door open for air.

10. The usual technique in the Bound Brook Plant for dealing with spilled chemicals - depending on the quantity - was either to sweep them up with sweeping compound and deposit them in a dumpster for disposal along with the regular trash, or else to sweep the spilled material into the basement area at the rear of the building. These methods were shown to me by Joseph Berry, and no one ever told me not to do it that way. On at least one occasion Mr. Livingston was present and instructed me to dispose of spilled material by sweeping it into the basement.

11. Early in September, on a day when I was mixing chemicals at the Bound Brook plant, I observed vehicles belonging to a contractor, Fred Schann, that works for TIFA, Ltd. at the Millington plant, working behind the Blue Spruce plant. A work crew, using a backhoe and a dump truck, dug and scraped up a quantity of soil from behind the building and put it into the dump truck, which later was driven away. I do not know where this soil was taken.

12. On or about September 30, 1980, I went to the Bound Brook plant along with another TIFA employee, James Wrobel, to agitate some chemicals I had mixed three days earlier. While we were there I received a telephone call from Mr. Livingston, who ordered us to remove all the chemicals from a room nearest the front door and to

put them in other rooms. He further instructed us to wash down the front room with detergent to remove some pink stains where chemicals had been spilled earlier. We carried this out by pouring "Wisk" detergent onto the pink areas and filling the room with water, which we then pushed into the basement with pushbrooms.

13. I began to grow concerned about possible effects on my health from working with chemicals after talking with health officer Robert Kunze of the Middlebrook Regional Health Commission and with Dr. Peter Gann of the New Jersey Department of Health early in September, in connection with the inspections they were making at that time of the Blue Spruce plant. As a result I began looking for another job, and when I had found one I quit work at TIFA, Ltd. My last day on the job was October 22, 1980.

John R. Naylor

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 13th
DAY OF NOVEMBER 1980

STATE OF NEW JERSEY)
) ss.
COUNTY OF MONMOUTH)

AFFIDAVIT OF
VICTOR J. RIVERA

1. My name is Victor J. Rivera. I was born on December 24, 1954, in Manhattan, New York City. I attended public schools in New York and elsewhere, and Bayonne High School, Bayonne, N.J. I have lived at my present residence, 48 Carr Avenue, Keansburg, N.J., for the past two-and-a-half years.

2. From approximately March, 1979 until September 3, 1980, I was employed as a factory worker by TIFA, Ltd. This company is run by Arnold M. Livingston, who hired me and gave me my orders most of the time I worked at TIFA. Mr. Livingston also operates another company, Blue Spruce International, Inc.

3. When I was first hired at TIFA, I was hired to work on the assembling of thermal fogging equipment, which is used for the spray application of pesticide chemicals. These machines are assembled at the TIFA plant located at 50 Division Avenue, Millington, Passaic Township, New Jersey. For about the first month of my employment I worked exclusively at the Millington plant, building, testing and repairing the thermal fogging machines.

EXHIBIT C

4. After I had worked at TIFA for about month, Mr. Livingston began sending me to the plant of Blue Spruce International, located in the Brook Industrial Park, 100 West Main Street, Bound Brook, to work. The work I was assigned to do there included mixing chemicals, transferring chemicals between containers, loading and unloading trucks, moving materials and finished products, some cleaning and general maintenance, and other chores as ordered by Mr. Livingston or other supervisors who reported to him. I was sent to Bound Brook on an irregular basis, depending on when Mr. Livingston told me to go there. Sometimes I would work there every day for a week, and sometimes I would only work there once or twice a week or not at all.

5. The working conditions in this Bound Brook plant were extremely uncomfortable and, I believe, unsafe and unhealthy as well. Neither I nor the other people I worked with were ever given any special protective clothing, other than rubber, plastic or cotton gloves which were infrequently available and were ineffective in keeping chemicals off the hands in any case. Sometimes we were given dust masks, but these were not effective in keeping out fumes and odors. At no time during my employement was I ever given any instruction about the health or safety hazards of working with pesticides or other chemicals. In fact, on several occasions when I asked Mr. Livingston about whether any of the chemicals could harm my health, I was told they were harmless. Sometimes when working in the Bound Brook plant I would suffer peiods of headache and nausea from the fumes. Ventilation was extremely poor.

6. One of the jobs I was assigned to do at the Bound Brook plant was to transfer a product called "Rat 42" from the large, plastic-lined paper bags or fiber drums in which it was delivered to the plant into smaller plastic bags (usually 5 or 10 pound capacity) which I packed into small fiber drums. I was given a hand scoop with which to do this job. Rat 42, according to the label which I read, is a rat poison. The label said people working with it should avoid contact with it or breathing the dust. I was given no mask or protective clothing when I worked with this chemical.

7. On several occasions I assisted with the mixing of chemicals. This was done in two large vats located in a room near the front entrance to the building. Until about six months ago these two vats, which were equipped with motorized agitators or stirring blades, were located in the room nearest the door. About six months ago they were moved into the second room, in part, I believe, because the first room tended to flood a lot due to water leaking in from the roof and walls when it rained. Mixing chemicals involved pouring or dumping the contents of drums, bags or other containers of raw material chemicals into the vats and agitating them until the contents were throughly dissolved and fully mixed. The contents of the two vats, whose combined capacity was roughly 700 to 750 gallons, would then be transferred into drums or smaller containers, depending on what Mr. Livingston ordered us to do.

8. In addition to mixing chemicals, on many occasions I was sent to Bound Brook to transfer chemicals in order to fill orders for TIFA or Blue Spruce International. This involved transferring finished product mixtures from large containers, such as 55-gallon drums, into smaller ones, such as 5 gallon cans.

9. The chemicals that I mixed or transferred at the Bound Brook plant included pesticides and other kinds of chemicals. The names of some of the chemicals that I recall working with include lindane, rotenone, aldrin, malathion, DDVP, arsenic trioxide, acetone, and a chemical known to me as "HAN." The Chem-Phos T, Chem-Hex T, Chem-Fish Regular, Chem-Fish Special and Chem-Phos Synergized, Probe 75, and others.

10. The housekeeping in the Bound Brook plant was extremely sloppy. Small spills of chemicals were either left lying on the floor or absorbed with sweeping compound or sand and disposed of in a dumpster along with the regular trash. Larger spills were swept or washed into a basement area at the rear of the building. This basement area was subject to frequent flooding. It could only be kept dry with a sump pump which was kept going more or less continuously; the pump discharged through a hose that led out the back of the building. If the pump were turned off, the basement would fill with water, sometimes within the space of only a day or two.

11. An example of the housekeeping practices in the Bound Brook plant is the way we handled the mixing of a product called Chem-Fish. One of the ingredients sometimes used in Chem-Fish was a resin that was shipped into the plant in 55-gallon drums. Sometimes this was too hard to scoop out. In these cases, we would ~~After pouring most of the contents of the drum into the mixing vat, there would usually be some hardened material left on the bottom. To get at this remainder, we would cut out~~ the bottom of the drum and dump the hardened material onto the floor, and chop it up. This ~~of the drum, dump the hardened material on the floor. This~~ left some chopped pieces on the floor, which were usually just left there until the next time someone swept the floor.

12. Mr. Livingston frequently came to the Bound Brook plant and was aware of the way in which we handled spilled materials. On more than one occasion, he observed or instructed me to sweep spilled material into the basement.

13. Another one of ~~my jobs~~ the things I did on occasion at the Bound Brook plant was to load trucks with chemicals to be shipped out. On numerous occasions I saw the bills of lading given to the truck drivers. Although the containers we shipped out contained finished mixtures of pesticide products, the bills of lading usually identified the shipment as "cleaning compound". Drums and other containers of pesticide mixtures were also frequently shipped from the Bound Brook plant labelled as "cleaning compound".

14. Beginning about six months ago, and with increasing frequency, I began refusing assignments to go to work at the Bound Brook plant because conditions were so bad there, and I was afraid of getting sick. I felt, [redacted] VJR VJR [redacted], that I had been hired to build the fogging machines, not to work with chemicals. On these occasions when I would refuse to go to Bound Brook, Mr. Livingston would tell me to go home, and I would not be paid for that day. This treatment was also given to other TIFA employees who refused to work in the Bound Brook plant: they would be sent home, and not be paid for that day.

15. I began growing increasingly worried about my health this past summer. In the early part of the summer, Mr. Livingston ordered me to go into the flooded basement to clean out some partly-empty drums and other debris that were in there. He gave me a pair of hip-waders and sent me into the basement. The waders VJR [redacted] had a hole in them, because I got completely soaked. He had me do this on two other occasions, also. Whatever was in the water stained my clothes and underwear yellow, and I now have a rash that will not go away, which I believe was caused by exposure to chemicals in the water. Later in the summer I was told about some of the hazards of working with chemicals by officials from the State and local health departments who had begun to investigate the Bound Brook plant. Finally, I refused to work there at all.

16. My employment at TIFA ended on September 3, 1980. I was at the Millington Plant when Mr. Livingston called me into his office and requested I sign a paper saying I would stop refusing work assignments and not make any more trouble for him. I refused to sign it. He tried to encourage me to quit, but I would not do that because I knew if I did I would be unable to collect unemployment compensation. He told me to leave then, but I stayed in the plant. Finally he called the Passaic Township police; two officers came and escorted me off the premises. I took their names and badge numbers in case I needed witnesses for an unemployment compensation appeal, but since I soon found another job, I did not need unemployment compensation.

Victor J Rivera
Victor J. Rivera

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 18th
DAY OF NOVEMBER, 1980

B e S Schwartz
An Attorney-at-law of New Jersey

STATE OF NEW JERSEY)
) SS.
COUNTY OF MERCER)

AFFIDAVIT OF
PETER H. GANN

Peter H. Gann, of full age, being duly sworn according to law upon his oath deposes and says:

1. I am employed by the New Jersey State Department of Health, Division of Epidemiology and Disease Control, as a Senior Public Health Physician. I have been employed in this position since September 1979 and am currently Chief of the Occupational Health Program.

2. I received the degree of Doctor of Medicine (M.D.) in 1975 from the University of Pennsylvania and am licensed by the State of Massachusetts where I practiced for three years. I have completed the course requirements for an M.S. in Epidemiology, also from the University of Pennsylvania and was a post-doctoral fellow at that institution during 1978-79 under a grant from the National Institute of Environmental Health Sciences. My area of specialty is Occupational Medicine.

3. Since joining the Department of Health, I have been connected with the Occupational Health Program, investigating hazardous workplaces, performing epidemiologic studies and providing consultation to federal, state and local agencies.

4. I have known about the situation at the Blue Spruce International facility in Bound Brook since late August, 1980. I have

visited the site twice, reviewed the environmental sampling results, examined workers in businesses adjacent to Blue Spruce, examined Blue Spruce (actually TIFA) workers themselves, discussed the matter with officials from the local office of the Occupational Safety and Health Administration and supervised the collection and analysis of blood samples from exposed persons.

5. It is my opinion that employees at the Blue Spruce International facility have been working under extremely hazardous conditions. The protection offered to these workers was deficient in several areas:

a. Although workers were engaged in mixing pesticides with volatile hydrocarbons in open vessels, no additional ventilation was provided to reduce exposure to toxic vapors. HAN, one of the chemicals commonly used as a pesticide vehicle contains a mixture of straight chain and aromatic compounds which are toxic primarily to the skin, lungs, liver, and central nervous system. A major component of this mixture is benzene, an agent which has been shown to cause depression of the blood-forming organs and cancer in humans.

b. There has been inadequate or totally lacking availability of personal protective equipment. The mixing work was done without full-face respirators with appropriate cartridges, impervious clothing or adequate long gloves. Most of the pesticides and solvents involved can be absorbed through the skin as well as lungs, and skin contact appears to have occurred frequently. Showers and separate

eating facilities, which are highly recommended, were not provided.

c. Housekeeping practices were deplorable, allowing workers to be exposed to the danger of absorbing spilled chemicals or even losing balance on wet surfaces and debris.

d. Workers were exposed to two classes in particular of highly toxic pesticides. Arsenic trioxide, in powdered form, was handled infrequently, but without adequate precautions. This compound deserves separate attention because it is another established human carcinogen and is a potent systemic poison. Organochlorine pesticides, such as aldrin, lindane and chlordane, were handled routinely without adequate measures to prevent lung or skin absorption. These compounds are potent animal carcinogens and have been reported to cause severe damage to the central nervous system following massive acute exposure, leading to convulsions, coma, and death. Under the conditions prevailing in the Blue Spruce facility, massive exposure cannot be said to be unlikely.

e. Workers were not provided with adequate training as to the nature of the above hazards and the means to protect themselves. The presence of unmarked or trade name labelled containers on the site accentuates this problem.

6. Medical interviews with workers at adjacent businesses and with five pesticide workers revealed that transient health effects had resulted from exposure to chemicals in or emanating from Blue Spruce International. Adjacent workers had experienced nausea, dizziness, and

eye and throat irritation as a result of toxic vapors penetrating a shared wall. Pesticide workers described skin rashes, nausea, dizziness, numbness around the mouth and loss of taste sensation during and for some time after pesticide formulating. The two latter symptoms are unusual, and may be a specific neurotoxic effect of organochlorine exposure.

7. Analysis of serum samples from workers in adjacent businesses did not demonstrate unusual amounts of persistent pesticides. However, three out of five Blue Spruce/TIFA workers had detectable levels of lindane in their serum. Three out of five also had detectable levels of dieldrin (a metabolite of aldrin). One of these people had not been inside the Blue Spruce building for as long as one year. Based upon comparison of these results with historical data from the Department of Health Pesticide Program and the HANES Survey of the National Center for Health Statistics, I conclude that detection of lindane in the blood is unusual in the general population. Serum samples from these five individuals are also being examined by the Toxicology Lab of the Federal Center for Disease Control in Atlanta. Preliminary results indicate the presence of a di-cresol type compound in all five samples which is also highly unusual. Further definition of this compound and determination of its source are matters being pursued

Peter H. Gann

PETER H. GANN

Sworn and subscribed to
before me, this 21st day
of November, 1980

AFFIDAVIT

STATE OF NEW JERSEY:
COUNTY OF SOMERSET : ss.:

ROBERT KUNZE, of full age, being duly sworn upon his oath according to law, deposes and says that:

1. I am a Sanitarian for the Middle Brook Regional Health Commission and for the Borough of Bound Brook, Somerset County, N.J.

2. I have reasonable evidence to suspect a health hazard exists based on the following facts:

(a) On July 30, 1980, a Complaint was filed with the Health Department at 356-8090 by employees of Consolidated Steel Fabricators, 100 West Main Street, Bound Brook, N.J.

(b) Complainant and investigation by myself and Susan Sergey, another Sanitarian of the Commission and the Borough, revealed a purple substance which left a trail from the door of Tifa Company, 100 West Main Street, Bound Brook, around the building and towards the Raritan River.

(c) Seven (7) drums, with a fifty-five (55) gallon potential capacity, were stored adjacent to the door labeled "Chem-Sect Rice Seed Treater - Aldrin". The color inside the barrels was pruple and was the same color as the effluent.

(d) Merck Index ninth edition, page 32, lists Aldrin as requiring "Caution: Poisoning may occur by ingestion inhalation, skin absorption. Severe symptoms may result.....".

(e) Five (5) out of seven (7) employees of Consolidated Steel Fabricators had varied symptoms of nausea, headaches, dizziness and burning throat.

(f) Susan Sergey and Robert Kunze, Sanitarians for the Borough of Bound Brook, looked through an open window and were exposed to heavy fumes. During the following twenty-four (24) hours, said persons suffered from dizziness, nausea and blurred vision.

(g) Based on the inspection of July 30, 1980 and

subsequent reinspection on July 31, 1980, reasonable evidence of a public health hazard exists.

3. On only two (2) occasions in August, 1980, did I witness any clean up activity in progress. At both times this consisted of a few employees of TIFA wearing street clothes, shoveling contaminated soil into drums. It is my opinion that these employees were not adequately protected while removing soil which contained levels of aldrin as high as 3.7%.

4. During numerous spot checks of Blue Spruce Corporation, I have seen liquids of various colors leaking from the rear wall of the building and flowing towards the Raritan River.

5. On one occasion, I saw a bright red liquid leaking out from under the front door of Blue Spruce Corporation.

6. Susan Sergey and I both saw six (6) yellow barrels of contaminated soil being taken away from the Blue Spruce building. At that time, I asked Mr. Arnold Livingston where the barrels were going to be disposed and he said he didn't know yet.

7. An inspection conducted on October 28, 1980, revealed the following:

(a) Multi-colored soil still present at both the rear and front of the building.

(b) Bright red liquid covering the floor of the three first floor rooms (Mr. Livingston claimed he didn't have any idea what it was).

(c) Basement in the rear of the building was still flooded.

(d) Two (2) of the mixing vats were full of a liquid substance. David Munn asked Mr. Livingston what the vats contained and his reply was that he knew but would not tell us. David Munn and Bruce Schwartz took samples

(e) Gary Allen asked Mr. Livingston to show us the drums used to store the contaminated soil. Mr. Livingston showed us three (3) barrels which were mostly filled with debris. He stated that these were the only barrels NOTE: Susan Sergey and I saw six (6) barrels being taken away during clean-up.

(f) Liquid from the basement was seen flowing from the rear of the building.

(g) Bruce Schwartz and David Munn took an inventory of drums being stored.

(h) Bruce Schwartz and David Munn complained of headaches after being inside the Blue Spruce building for over one (1) hour.

8. For information purposes, the terms "TIFA" and "Blue Spruce Corporation" being used herein, refer to the building located at 100 West Main Street, Bound Brook, New Jersey.

ROBERT KUNZE

Sworn and Subscribed
to before me this 10th
day of NOVEMBER, 1980.

Schering-Plough Corporation

Comments on Worker and Community Right to Know

A. Over incluvive.

1. Need Research and Development exclusion.

2. Need Small Business exclusion.

3. Need exclusion for intermediate products.

4. Need redefinition of the scope of chemicals addressed by the act. Suggested coverage: all those substances included in the CERCLA - (Comprehensive Environmental Responses Compensation and Liability Act) definition of hazardous substances namely any under §311 of the Clean Water Act, any listed as or characterized as hazardous under RCRA, any toxic pollutant under 307(a) of the Clean Water Act, any hazardous pollutant under §112 of the Clean Air Act, and any imminently hazardous chemical substance as to which EPA has taken action under §7 of TSCA.

5. Overly broad and onerous in relation to the mangitude of the problem - i.e., only 4% of all lost time incidents are attributable to accidents involving chemicals, acids or dust and only 6% of all accident are so attributable. (Accident Facts, 1977 National Safety Council)

B. Duplicative.

1. See Exhibit A - List of regulations to which New Jersey industry is subject.

2. Schering Corporation among others has already spent two years developing an MSDS Manual, see sample Exhibit B. Need a more flexible standard to enable industry to develop its own means of meeting the intent of S-1670.

3. Most information supplied to EPA is open to public scrutiny by filing an FOIA request.

4. What the public needs to know vs. what Local Emergency Response Units need to know:

   a. Companies should be shielded from both industrial espionage and idle curiosity. Suggestion: Have health authorities act as intermediaries.

   b. Local Emergency Response Units may need MSDS sheets but more effective would be plans formulated on a facility by facility basis.

5. Trade secret exemptions: Industry should not be required to disclose its methods of operation or their specific chemical ingredients of products.

C. Time.

1. Ninety (90) days is far too short a time frame and would create an enormous hardship for industry. Even if it were possible to collect information in 90 days our experience has shown the information may be inadequate to meet the intent of the act, i.e., provide useful information to workers in the community.

2. Suggest:

   a. Companies should be required to show that they have formulated a plan to communicate essential communication their workers and the community within six months; and

   b. That they will be in compliance pursuant to that plan within 36 months.

EXHIBIT A

Law or Regulation	General Description
1. N.J. Air Pollution Control Code (NJAC 7:27-16)	Covers all compounds with a vapor pressure of 1 milimeter of mercury or greater; includes most emissions to the air.
2. Air Pollution Control Code (NJAC 7:27-17)	Covers volatile organic substances including asbestos and 11 compounds judged by DEP to be subject to stricter regulation than chapter 16 provides.
3. Spill Control Regulations (NJAC 7:1E-4)	Requires detailed submission of data on 160 chemicals used or stored.
4. CERCLA (Federal Comprehensive Environmental Response, Compensation and Liability Act)	Requires notice in the event of discharge of anyone of 660 different chemicals.
5. Selected Substances Survey (NJAC 7:1F)	Covers the collection of data on usage, inventory, production, sale and discharge of 160 chemicals.
6. Hazardous Waste Regulations (NJAC 7:26-8)	Requires a manifest for every shipment of hazardous waste. Treatment and disposal facilities are inspected weekly by the NJDEP.
7. Landfill and Surface Impoundments (NJAC 7:14A-10)	Covers the monitoring of hazardous waste impoundments.
8. RCRA (Federal Resource Conservation and Recovery Act)	Covers all storage, landfills and surface impoundments where hazardous wastes are present; regulates generators, transporters, and disposers.
9. Sludge (NJAC 7:14-4)	Covers the waste water treatment plants.
0. NEPA (National Environmental Policy Act)	Requires environmental impact statements to be prepared for projects involving federal agencies.

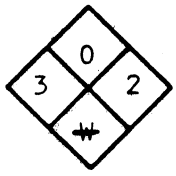
Law or Regulation	General Description
1. The Clean Air Act	Covers the development of standards for ambient air quality; provides for new source performance standards covers hazardous air pollutants. As implemented by the states, provides for source-by-source controls and an air emission permit procedure; covers the prevention of significant deterioration of air quality and provides for a preconstruction review of new sources. Covers both mobile and nonmobile sources and provides for inspections, record keeping and entry by governmental agencies into every facility.
3. The Clean Water Act	Provides new source performance standards; pre-treatment standards for control of toxic and nontoxic pollutants; sets forth standards for quality and permit programs.
4. TSCA (Toxic Substance Control Act)	Provides for the collection of data covering a broad range of chemical substances, including testing requirements, premanufacture notification, and the regulation of hazardous chemicals.
5. Other Laws Including: (a) the Consumer Products Safety Commission Act; (b) the Federal Insecticide, Fungicide and Rodendicide Act; (c) The Safe Drinking Water Act;	Any one of which may affect a particular industry within the state to a greater or lesser degree.

Law or Regulation	General Description
(d) the Noise Control Act of 1972; (e) OSHA; (f) various Energy Laws; (g) the Endangered Species Act; (h) Surface Mining Control and Reclamation Act; (i) Coastal Zone Management Act; (j) Deep Water Port Act; (k) Oil Pollution Act; (l) Intervention on the High Seas Act; (m) Federal Dissaster Relief Act; (n) Outer Continental Shelf Lands Act; (o) Atomic Energy Act; (p) National Historic Preservation Act; (q) Hazardous Materials Transportation Act; and (r) various state and local programs	

Schering-Plough

MATERIAL SAFETY DATA

This material safety data sheet is directed principally to manufacturers, processors, formulators, and users whose personnel may be exposed to this material. It is intended for use by managerial, safety, industrial hygiene and medical personnel. The description of physical, chemical and toxicological properties as well as the advice on handling is based on past experience and the best currently available information. It is intended as a starting point for the development of safety and health procedures appropriate to a work environment where exposure to the material may occur.



NO. 168

Aluminum Chloride

DATE: Dec. 1980

SECTION I – MATERIAL IDENTIFICATION

OFFICIAL CHEMICAL NAME	SCH. NO.	RIC CODE	CAS NO.
Aluminum Chloride	N/A	11508707	007446700

ALTERNATIVE NAME
Trichloraluminum

DESCRIPTION
$AlCl_3$ White when pure; ordinarily gray or yellow to greenish. Hydrogen Chloride odor.

SECTION II – HEALTH HAZARD DATA AND INFORMATION*

OSHA	ACGIH	IHGV
N/A	TWA-2 mg/m^3	N/A

TOXICITY REFERENCE N/A

Definitions provided in front of this manual. Consult with Division Safety or Corporate Industrial Hygiene for interpretation.

EFFECTS OF OVEREXPOSURE

Contact - Will cause burns on contact with skin and eyes.

Inhalation - Severe respiratory irritant.

EMERGENCY AND FIRST AID PROCEDURES – GET MEDICAL ATTENTION

Use full protective clothing under emergency conditions (spills, leaks, fires).
Contact - Flush with copious amounts of soap and water for at least 15 minutes (skin). Flush eyes with water.
Inhalation - If breathing stops give CPR and get immediate medical assistance.

SECTION III – SPECIAL PROTECTION INFORMATION

Minimum Eye/Face Protection: CONTACT LENSES NOT PERMITTED
■ Safety glasses/side shields ☐ Splash goggles ■ Face shield

Hand/Body Protection:
Clothing ■ Gloves ■ Impervious Footwear ☐ Apron ■ Chem. Suit ☐ Other (specify):
Type: ■ Neoprene ☐ Nitrile ☐ PVA ☐ PVC ☐ Disposable (specify):

Respiratory Protection Recommended:
Type: ☐ Dust Mask ■ 1/2 Face Cartridge ☐ Full Face ☐ Air Supply ☐ Other (specify):
Filters: ■ Acid ☐ Organic Vapor ☐ Combo ☐ Other (specify):

Train employees concerning hazards and precautions. Provide adequate local exhaust ventilation.
Avoid skin and eye contact, wear respiratory and protective equipment. Change cartridge when odor is detected or when breathing resistance occurs. Remove contaminated clothing at end of shift; dispose of or clean properly before reuse. Use good personal hygiene. Wash thoroughly before eating or drinking.

SECTION IV – PHYSICAL DATA

MOL. WT.	BOILING PT.	MELTING PT.	SPECIFIC GRAVITY	VAPOR PRESS	% VOLATILES	VAPOR DENSITY (AIR=1)	ODOR THRESHOLD
133.34	180.2°C	190 °C	2.44 @ 35°C	(100°C)-1.0 mmHg	N/A	N/A	N/A ppm

SOLUBILITY – ■ WATER ■ OTHER: organic solvents

SECTION V – FIRE/EXPLOSION DATA AND INFORMATION

FIRE

EXPLOSION – SEVERITY INDEX: ☐ WEAK ■ MODERATE ☐ SERIOUS ☐ SEVERE

FLASH POINT & METHOD	AUTOIGNITION TEMP.	MINIMUM IGNITION TEMPERATURE		MIN. IGNITION ENERGY CLOUD	MAX. PRESS. RISE RATE
N/A	N/A	CLOUD N/A °C	LAYER N/A °C	N/A (joules)	N/A (psi/sec.)

FLAMMABILITY LIMITS IN AIR		MAX. PRESSURE	MIN. CONC. FOR EXPLOSION	VOLUME RES.	RELAXATION TIME
LFL N/A	UFL N/A	N/A (psig)	N/A (oz./cu. ft.)	N/A (ohm-cm)	N/A (sec.)

EXTINGUISHING MEDIUM

☐ CO_2 ■ Dry Chem. ■ Foam ☐ Water ☐ Water Spray ☐ Other (specify):

Fire fighting procedures: Fight fire from safe distance or protected location. Use water spray to keep exposed containers and equipment cool and to disperse unignited vapor/liquids.

Attack fires in adjacent materials with dry chemical or foam. Do not use hose streams in vicinity of aluminum chloride.

UNUSUAL FIRE AND EXPLOSION HAZARDS – HEAVIER THAN AIR ☐ YES ☐ NO

Not explosive or combustible but may react slowly in a fire.

SECTION VI – REACTIVITY DATA ☐ STABLE ■ UNSTABLE

CONDITIONS/MATERIALS TO AVOID

Violent reaction will result if streams of water hit large quantities, because of formation of hydrogen chloride.

HAZARDOUS DECOMPOSITION PRODUCTS

Hydrogen chloride

HAZARDOUS POLYMERIZATION

OTHER COMMENTS

After long storage of $AlCl_3$ in closed containers, an explosion often occurs when opened.

SECTION VII – SPILL, LEAK AND DISPOSAL PROCEDURES

Steps to be taken in case material is released or spilled. Spills occurring outdoors near a storm water catch drain (yellow manholes) must be handled using the site spill control plan. The site plant engineer and the environmental engineer (with Domestic Engineering) must be contacted (New Jersey locations only).

Sweep, scoop or vacuum up spill. Minimize contact with spilled material. Shut off leak if safe to do so. Keep people away. Wear full protective clothing in spill area. Notify your supervisor immediately.

Waste disposal method.

Small quantities may be disposed of with normal plant solid wastes, after placement in a sealed container. Large quantities should be disposed of separately after consultation with Environmental Engineering.

SECTION VIII – SPECIAL PRECAUTIONS AND COMMENTS

SPECIAL STORAGE AND HANDLING

Storage in sprinklered buildings is not recommended.

STORAGE AREA TO BE USED

Should be in a cool, dry area protected from rain and direct sunlight.

STORAGE AREA TEMPERATURE RANGE REQUIRED

NOT BELOW	NOT ABOVE	NORMAL OUTDOOR/ROOM TEMPERATURE
N/A °C	25 °C	N/A ☐

SHIPPING LIMITATIONS

Other restricted articles, Class B, no label required, not acceptable (passenger), 12 kilograms (cargo).

DOT HAZ. CLASS: N/A

CONTAINER SPEC.: N/A

SPECIAL INVENTORY POLICY DUE TO ABOVE EVALUATION: N/A

D.O.T. HAZARD CATEGORY (LABEL)

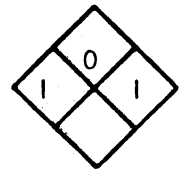
☐ Red (Flammable) ☐ Yellow (Oxidizer) ☐ White (Corrosive) ☐ Other: N/A

SAFETY	DATE	INDUSTRIAL HYGIENE	DATE	EMPLOYEE HEALTH	DATE
A. Priest	6/5/81	L. Taylor	6/2/81	[illegible]	6-4-81
LEGAL COUNSEL	**DATE**				
Barbara Manners 6/4/81 J Tenanova			5/28/81	J S Keith	5/28/81

Schering-Plough

MATERIAL SAFETY DATA

This material safety data sheet is directed principally to manufacturers, processors, formulators, and users whose personnel may be exposed to this material. It is intended for use by managerial, safety, industrial hygiene and medical personnel. The description of physical, chemical and toxicological properties as well as the advice on handling is based on past experience and the best currently available information. It is intended as a starting point for the development of safety and health procedures appropriate to a work environment where exposure to the material may occur.



NO. 170
Aluminim Hydroxide Gel dried
DATE: Dec. 1980

SECTION I – MATERIAL IDENTIFICATION

OFFICIAL CHEMICAL NAME	SCH. NO.	RIC CODE	CAS NO.
Aluminum Hydroxide Gel dried		10703603	021645512

ALTERNATIVE NAME
$Al(OH)_3$ Hydrous aluminum oxide, hydrated aluminuma, aluminum hydrate

DESCRIPTION
White, bulky amorphous powder

SECTION II – HEALTH HAZARD DATA AND INFORMATION*

	OSHA	ACGIH	IHGV
	Not established except as nuisance dust		
Total dust	15 mg/m3 PEL	10 mg/m3 TWA	N/A
Resp. dust	5 mg/m3 PEL	5 mg/m3 TWA	

TOXICITY REFERENCE N/A

*Definitions provided in front of this manual. Consult with Division Safety or Corporate Industrial Hygiene for interpretation.

EFFECTS OF OVEREXPOSURE

Mild skin irritant.

EMERGENCY AND FIRST AID PROCEDURES – GET MEDICAL ATTENTION

Remove to fresh air. Give CPR if stopped breathing. If ingested, give copious amounts of water, and induce vomiting (if conscious). If contact with skin or eyes, remove contaminated clothing and flush affected areas with copious amount water minimum 15 minutes or until medical attention provided.

SECTION III – SPECIAL PROTECTION INFORMATION

Minimum Eye/Face Protection: CONTACT LENSES NOT PERMITTED

■ Safety glasses/side shields ☐ Splash goggles ☐ Face shield

Hand/Body Protection:

Clothing ■ Gloves ☐ Impervious Footwear ☐ Apron ☐ Chem. Suit ☐ Other (specify):

Type: ☐ Neoprene ☐ Nitrile ☐ PVA ☐ PVC ■ Disposable (specify): Playtex/Latex

Respiratory Protection Recommended:

Type: ■ Dust Mask ☐ 1/2 Face Cartridge ☐ Full Face ☐ Air Supply ☐ Other (specify):

Filters: ☐ Acid ☐ Organic Vapor ☐ Combo ■ Other (specify): Single-use disposable mask

Train employees concerning hazards and precautions. Provide adequate local exhaust ventilation.

Discard dust mask after (4) continuous hours of use or when breathing resistance occurs. Use good personal hygiene - wash face, hands, prior to eating or leaving for home.

SECTION IV – PHYSICAL DATA

MOL. WT.	BOILING PT.	MELTING PT.	SPECIFIC GRAVITY	VAPOR PRESS	% VOLATILES	VAPOR DENSITY (AIR=1)	ODOR THRESHOLD
78	N/A °C	N/A °C	2.42 @ 20° C	@ N/A mmHg	N/A	N/A	N/A ppm

SOLUBILITY – ☐ WATER ■ OTHER:
Soluble in caustic soda and mineral acids. Insoluble in water or alcohol.

SECTION V – FIRE/EXPLOSION DATA AND INFORMATION

FIRE		EXPLOSION – SEVERITY INDEX: ☐ WEAK ☐ MODERATE ☐ SERIOUS ☐ SEVERE			
FLASH POINT & METHOD	AUTOIGNITION TEMP.	MINIMUM IGNITION TEMPERATURE		MIN. IGNITION ENERGY CLOUD	MAX. PRESS. RISE RATE
NON Combustible	N/A	CLOUD N/A °C	LAYER N/A °C	N/A (joules)	N/A (psi/sec.)
FLAMMABILITY LIMITS IN AIR		MAX. PRESSURE	MIN. CONC. FOR EXPLOSION	VOLUME RES.	RELAXATION TIME
LFL N/A	UFL N/A	N/A (psig)	N/A (oz./cu. ft.)	N/A (ohm-cm)	N/A (sec.)

EXTINGUISHING MEDIUM

☐ CO_2 ☐ Dry Chem. ☐ Foam ☐ Water ☐ Water Spray ☐ Other (specify): N/A

Fire fighting procedures: Fight fire from safe distance or protected location. Use water spray to keep exposed containers and equipment cool and to disperse unignited vapor/liquids.

UNUSUAL FIRE AND EXPLOSION HAZARDS – HEAVIER THAN AIR ☐ YES ■ NO

SECTION VI – REACTIVITY DATA ■ STABLE ☐ UNSTABLE

CONDITIONS/MATERIALS TO AVOID

N/A

HAZARDOUS DECOMPOSITION PRODUCTS

N/A

HAZARDOUS POLYMERIZATION

N/A

OTHER COMMENTS

NONE

SECTION VII – SPILL, LEAK AND DISPOSAL PROCEDURES

Steps to be taken in case material is released or spilled. Spills occurring outdoors near a storm water catch drain (yellow manholes) must be handled using the site spill control plan. The site plant engineer and the environmental engineer (with Domestic Engineering) must be contacted (New Jersey locations only).

Wear protective equipment, sweep into closed containers.

Waste disposal method.

May be disposed of with normal plant solid wastes.

SECTION VIII – SPECIAL PRECAUTIONS AND COMMENTS

SPECIAL STORAGE AND HANDLING	STORAGE AREA TO BE USED
Protect from physical damage. Store in standard containers.	Store in dry area.

SHIPPING LIMITATIONS	DOT HAZ. CLASS	STORAGE AREA TEMPERATURE RANGE REQUIRED		
		NOT BELOW °C	NOT ABOVE °C	NORMAL OUTDOOR/ROOM TEMPERATURE ■
N/A	N/A			
	CONTAINER SPEC.	SPECIAL INVENTORY POLICY DUE TO ABOVE EVALUATION		
	N/A	N/A		

D.O.T. HAZARD CATEGORY (LABEL)

☐ Red (Flammable) ☐ Yellow (Oxidizer) ☐ White (Corrosive) ☐ Other: N/A

SAFETY	DATE	INDUSTRIAL HYGIENE	DATE	EMPLOYEE HEALTH	DATE
A. Priest	6/5/81	L Taylor	6/2/81	[illegible]	6-4-81
LEGAL COUNSEL	DATE				
B. Manners	6/4/81	Terranova	5/28/81	J S Reith	5/28/81

POSITION STATEMENT OF ATLANTIC RICHFIELD COMPANY ON HAZARDS COMMUNICATION

The number and types of chemical substances manufactured, processed, and used in the United States have been increasing steadily in recent years. Since many of these substances may pose health and safety risks, the Atlantic Richfield Company recognizes the importance of identifying hazards and disseminating necessary information on precautionary measures to employees and consumers.

There already are many differing federal, state and local laws and regulations covering the identification and labeling of chemicals. Atlantic Richfield, a multistate employer, is concerned that further adoption of state and/or local hazards communication legislation and regulation will result in additional conflicting and technically inconsistent requirements among governing bodies. Such a situation would present significant difficulties for compliance without a noteworthy increase in protection. Further, resources required to meet a variety of unique and differing hazards communication requirements could actually detract from the orderly development and updating of basic health and safety information. Finally, states in which a number of local governing bodies develop their own hazards communication regulations could discourage industrial growth by multistate employers. The following points represent Atlantic Richfield Company's views on the composition of an effective, uniform hazards communication program.

HAZARDS COMMUNICATION TO EMPLOYEES

Atlantic Richfield Company acknowledges and supports regulatory efforts to ensure employee protection and believes the most effective program would be a performance-based rule at the federal level. State and local efforts to enact employee hazards communication laws should be deferred until the Federal Occupational Safety and Health Administration (OSHA) finalizes its hazards communication rule.

However, if state and local governments believe it is necessary to proceed with their own programs, they should:

- o strive for consistency with any existing local, state and federal laws, regulations and proposals;
- o limit initial coverage to specific, high priority concerns;
- o include provisions for reconsidering the need for their own programs if a governing entity with broader authority, such as OSHA, adopts similar regulations.

Any regulation should be based on a performance standard. Effective and enforceable performance standards should state a specific goal or end result to be achieved so that the regulated know what performance is expected and the regulators have a standard against which to measure achievement of the end result. A performance-based rather than a specification-language rule has the following advantages:

- o The most effective method or methods can be selected to alert employees about the varying hazards associated with chemical and physical agents in a particular workplace and to provide specific handling instructions.

- o An effective hazards communication program, which already may have been developed to meet the needs of a specific workplace, can continue to be used, encouraging a more efficient use of manpower resources and maximizing cost effectiveness.

An effective performance-oriented hazards communication program for employees could consist of some or all of the following elements:

1. Identification of Risk

   (a) Identify the chemical substances and physical agents in the workplace and the potential for exposure to the employee under normal work conditions and foreseeable emergencies. The potential for exposure could be characterized by a number of criteria, such as the route of exposure and presently available control measures.

   (b) In conjunction with (a), obtain from a supplier the inherent hazards of the substance or enough information on the properties of any purchased chemical substance, consistent with protection of trade secrets, to enable an employer's technical experts to assess adequately the material's hazards.

   (c) Systematically evaluate the inventoried substances to determine the risks they present in the workplace. This evaluation of risk should be based on the hazards and exposure information developed and collected by the employer and should recognize the varying relationships between the degree of hazard and the potential for exposure as well as the evolving nature of scientific evidence for establishing adverse effects.

   (d) Keep workplace risk evaluations, with supporting documentation, current and accurate. This could be accomplished by reviewing: significant new information from suppliers, the results of company testing and auditing programs, and published scientific data. Keep workplace inventories current and accurate in consideration of the industry and processes involved.

2. Communication to Employees

   (a) Communicate to employees the nature of the hazards and the safe handling procedures for substances found in the workplace. This process should allow for the use of one or more communication techniques to transmit effectively the potential seriousness of the hazard and the potential for harmful exposure.

   Communication techniques could include, but not be limited to, training programs, direct oral instructions by supervisors, and written material such as Material Safety Data Sheets (MSDS's), labels, placards, alphanumerical codes, color codes, pictures, drawings, and/or symbols.

(b) Employees should have access to information concerning the identity, general characteristics and harmful properties of the substances to which they may be exposed. When substances are known to have harmful effects and are classified as trade secrets, employees should be provided with enough information to ensure they know how to handle the substances safely and are aware of the harmful effects of exposure to the substances.

(c) Notify affected employees of new hazards information within a reasonable time.

(d) The confidentiality of trade secret information should be protected. However, it is recognized that there will be situations where disclosure to health professionals will be necessary. Special emergency circumstances may warrant disclosure to physicians or other health or safety personnel. However, confidentiality agreements will be required from third parties, where appropriate, in order to protect a company's trade secret information.

3. Education and Training of Employees

(a) A program should be developed to educate and train employees about hazards warning systems in the workplace, employee rights under applicable hazards communication laws and regulations, and the availability of hazards information concerning the substances and physical agents to which they are or may be exposed. This education and training program may include, or expand as necessary, existing company efforts.

(b) Records should be kept documenting the training sessions that are conducted. These records could include information about each training session such as attendees, subjects covered, copies of handouts, training aids, and date of session.

(c) Procedures should be established for updating educational and training programs in a timely manner.

4. Hazards Communication Program Review

(a) The Hazards Communication Program should be available for review by employees and regulatory bodies, such as the federal OSHA or comparable agencies at the State level.

(b) In addition, the Hazards Communication Program should undergo periodic internal review by employers to ensure its effectiveness. Records documenting employee training programs should be included in the review. Procedures for conducting such review should be developed, allowing for employee input and feedback.

HAZARDS COMMUNICATION TO CUSTOMERS

When selling to companies for workplace use, manufacturers should provide enough information on the properties of a chemical substance or product, consistent with protection of trade secrets, as discussed in Section 2(d),

to enable the purchaser's technical experts to assess adequately the hazards posed by the material and to determine the necessary precautions that must be taken to minimize any risks associated with the identified employee exposure to such materials.

Govt. Relations / Govt'l Issues
5/05/82

Testimony of

ATLANTIC RICHFIELD COMPANY

Before the New Jersey Senate

Energy and Environment Committee

on SB 1670

"Worker and Community Right to Know Act"

Atlantic Richfield Company appreciates this opportunity to comment on SB 1670, the "Worker and Community Right to Know Act."

This company recognizes the importance of identifying hazards and disseminating necessary information on precautionary measures to employees and consumers. We believe an effective program should contain three important elements:

(1) There should be a uniform program instead of many overlapping and potentially incompatible federal, state and local laws and regulations.

(2) Any program should be based on risk assessment and the communication of identified hazards; and

(3) Standards should be performance-based to maximize flexibility, effectiveness, and to reduce unnecessary costs.

Unfortunately, SB 1670 is deficient in all of these key areas.

The Need for a Uniform Program

On March 19, 1982, the Occupational Safety and Health Administration proposed a hazards communication rule on which extensive comment has been received from all sectors of the public. When made final in early 1983, OSHA's rule is expected to result in requirements that we believe will adequately address the majority of hazards communication issues. Atlantic Richfield Company fully supports OSHA's efforts to promulgate a federal hazards communication rule. As a multistate employer, we believe a federal rule is necessary in order to avoid the confusion and unnecessary costs of duplicative and conflicting requirements at the state and local level. In addition to industry costs, New Jersey taxpayers would bear the unnecessary costs of administering a new program that requires a great deal of paperwork.

Additionally, a proliferation of conflicting and technically inconsistent requirements at the federal, state or local levels presents significant difficulties for compliance at the expense of effective hazards communication. Thus, enactment of a New Jersey law now would be premature because of the potential for redundancy or inconsistency with federal requirements.

As an example of this potential for inconsistency, SB 1670 requires a material safety data sheet (MSDS) which "shall conform to the format of, and contain the information required by" OSHA Form 20. However, SB 1670 then specifies different information than that required by OSHA Form 20. As presently worded,

the bill would not only prevent the use of existing MSDSs containing information equilivent to OSHA Form 20, but would require the use of an entirely different form.

In addition, some of the basic definitions such as "chemical," "health hazard chemical" and "pipeline" in SB 1670 are inconsistent with the OSHA rule.

Another troublesome inconsistency between SB 1670 and the federal rule is in the area of trade secret protection. In developing its proposal, OSHA acknowledged the need to resolve the potential conflict between hazards communication and trade secret protection. Atlantic Richfield believes that trade secret information should be protected, except when special emergency circumstances warrant disclosure to physicians or other health or safety personnel. SB 1670 does not adequately provide for such protection. In Section 5 of the bill, trade secret application must be made by the New Jersey employer. There seems to be no recognition that trade secrets may belong to a supplier. Would our customers have to act as our agents to seek trade secret protection for our product formulations?

Moreover, the administrative hearing approach is too burdensome and should not be required. It is technically infeasible from the standpoint of the resources necessary to conduct numerous hearings. Because the trade secrets for many products are constantly changing, the hearing process would have to be repeated many times. A better approach would be to assume that trade secrets are valid unless challenged by way of an administrative hearing.

The Importance of Risk Assessment

An effective hazards communication program should be based on risk assessment and the communication of identified hazards. Section 3(a) of SB 1670 defines "chemical" as "any material listed in the latest edition of the National Institute for Occupational Safety and Health's (NIOSH) Registry of Toxic Effects of Chemical Substances ..."

However, this is inappropriate because the registry lists over 168,000 chemicals, including many common substances which are toxic or hazardous only at high doses, but which frequently are present in the workplace only at levels that are insignificant or that create no risk to the employee. Sodium chloride (table salt), sucrose (sugar) and ascorbic acid (vitamin C) are examples of such substances.

Mandatory identification of all chemicals in a workplace, regardless of the degree of risk involved, would likely result in ineffective communication or non-communication. Employers should be required to warn or inform employees about the hazards of a chemical only when that chemical is known to be in the workplace in a physical state, volume, or concentration which may cause substantial injury or illness during normal use or in a foreseeable emergency.

Section 3(b)(5) of SB 1670 requires the identification of "medical conditions that might be aggravated by exposure," a requirement that is impractical and should be eliminated. For example, it is impossible to identify every substance that could affect the common cold.

The Advantages of a Performance-Based Standard

OSHA advocates a "simple performance-oriented standard," and many companies already have in place effective hazards communication programs. The attached Atlantic Richfield Company position on hazard communication outlines some of the elements an effective performance-oriented hazard communication program could include.

As OSHA states, "There may be many ways to reach the goal of adequate hazard communication." Unfortunately, SB 1670 does not allow for this performance-oriented approach.

The Separate Issue of Community Right-to-Know

Section 4(a) of SB 1670 stipulates that every employer obtain an MSDS for a lengthy list of NIOSH chemicals in the workplace. According to Section 10 of the bill, copies of these MSDSs would be obtained by the state and distributed to affected localities. However, furnishing these communities with data on overly extensive inventories of chemicals could create an unwieldy volume of MSDSs, making it impossible for communities without sophisticated data handling systems to respond appropriately in an emergency.

Also in section 4(a), every employer is required to update annually every MSDS required by the bill. A meaningful annual review of all MSDSs would be impractical. Instead, employers should revise MSDSs on a timely basis as appropriate to the importance of any new information which would affect the contents of existing MSDSs.

Section 4(b) of SB 1670 also requires the submission of "Public Information Data Sheets" (PIDSs) to the New Jersey Department of Environment Protection. Much of the information sought in these PIDSs currently is available to the public or government agencies in data already submitted to public agencies under other federal, state and local laws. Section 112 of the Clean Air Act, Section 311 of the Clean Water Act, and Section 8(e) of the Toxic Substances Control Act are a few examples of such laws. We suggest that SB 1670 be reviewed on that basis and deferred until OSHA finalizes its hazards communication rule.

Material safety data sheets are already available for most hazardous chemical substances and mixtures, and many emergency response programs are already coordinated by industry and local emergency services. One such service, CHEMTREC, the Chemical Transportation Emergency Center, provides chemical emergency information 24 hours a day to carriers and public safety officials. ARCO Chemical Company and ARCO Petroleum Products Company, divisions of Atlantic Richfield Company, not only participate in CHEMTREC but also operate their own emergency response services.

Summary

Atlantic Richfield Company recognizes its responsibilities to its employees and consumers. As a multistate employer, we are concerned about the many conflicting federal, state and local laws and regulations covering the

identification and labeling of chemicals. We agree with OSHA that the most effective hazards communication program would be a uniform program at the federal level. It should be based on risk assessment and the communication of identified hazards, and the standards should be performance-based.

Therefore, we strongly oppose the enactment of a bill such as SB 1620 prior to the promulgation of the final OSHA rule.

CBC:cam
Govt. Relations / Govt'l Issues
10-29-82

Amway CORPORATION
7575 EAST FULTON ROAD, ADA, MICHIGAN 49355

TESTIMONY SUBMITTED BY AMWAY CORPORATION TO THE
NEW JERSEY SENATE ENERGY AND ENVIRONMENT COMMITTEE ON S. 1670,
THE WORKER & COMMUNITY RIGHT-TO-KNOW ACT

October 27, 1982

Honorable Members of the Senate Energy and Environment Committee:

Amway Corporation, an international corporation based in Michigan, with a Regional Distribution Center in Dayton, New Jersey, respectfully submits these written comments for the public record on S. 1670, the Worker and Community Right-to-Know Act.

Because of Amway's unique marketing plan and its facility employing 70 people in the state of New Jersey, the effects of this proposed legislation are of vital concern to it.

Amway, as a responsible corporate citizen, is in agreement with the concept of the proposed legislation. The protection of Amway's labor force and the community is a legitimate and necessary goal; however, S. 1670 is not the vehicle to achieve that goal. S. 1670 would create an unnecessary and counterproductive administrative burden on Amway to protect a work force from innocuous consumer goods to which that same work force will be exposed in their own homes.

Because a detailed discussion of the various changes necessary to create a responsible right-to-know statute would be very voluminous, these comments

UNITED STATES CANADA AUSTRALIA UNITED KINGDOM HONG KONG MALAYSIA
WEST GERMANY REPUBLIC OF IRELAND FRANCE NETHERLANDS JAPAN SWITZERLAND BELGIUM

will be limited to those concepts which would result in workable and effective legislation.

One of the least understood aspects of this legislation is the exemption of goods sold at retail stores. If the intent of S. 1670 is a broad exemption covering consumer goods, that exemption must be explicitly stated in the bill. Businesses in the direct selling industry should not be subject to requirements which are not imposed on their retail store counterparts. A box of laundry detergent appears to present the same degree of hazard whether in a grocery store or the home of a distributor of Amway products.

In addition to the inequitable treatment of consumer goods sold by location of sale, S. 1670 can be construed to require a direct seller offering a product to a customer to provide the customer with a Material Safety Data Sheet (MSDS) covering that product. This would result in a paper blizzard at the consumer level and seriously impair the competitive ability of the direct seller with no discernable benefit for the consumer. Under a variety of federal statutes and regulations, the warning language already present on the labels of consumer goods would be duplicated and additional information imparted, adding to consumer confusion, not consumer safety. Spilled laundry detergent in the home is swept up and discarded. However, S. 1670 would require the preparation of an MSDS to identify and address the amelioration of the "dust hazard." No person doing laundry in their home or in a laundromat will buy and use a respirator or dust mask to cleanup a minor spill of soap! Nor should they.

In the development of responsible "right-to-know" legislation, the definition of a "dangerous/hazardous" chemical or substance is of tremendous

concern if appropriate employee awareness is to be achieved and workers' unfounded fears are to be avoided. Overly broad definitions or lists lead to the inclusion of chemicals which clearly are not a threat in either a household or a manufacturing environment, while too narrow a definition or list results in needless risk to employees. S. 1670 falls into the former category. Inclusion by reference of NIOSH's Registry of Toxic Effects of Chemicals is not an appropriate approach to identification of "hazardous" chemicals. The Registry is an all inclusive bibliography of toxicological data published in the scientific literature worldwide. The chemicals listed in the Registry range from innocuous substances such as sodium chloride (table salt) and sucrose (table sugar) to vinyl chloride which can present a risk to workers not using appropriate protective equipment. S. 1670 additionally references Sax's Dangerous Properties of Industrial Materials which may provide some general information on chemicals but is seriously flawed in regard to specific and scientifically accurate information.

While the development of appropriate criteria to define a "hazardous" substance is a very difficult procedure and is the subject of intense scientific controversy, the development of physical and toxicological parameters to identify "hazardous" substances are absolutely necessary for effective right-to-know legislation. If the necessary scientific parameters cannot be developed and a list of "hazardous" substances must be used, then only those lists recognized and acknowledged by the scientific community are appropriate. Lists, such as the OSHA Supart Z or EPA's Priority Pollutant List, are appropriate to be used. Unless only those chemicals that present a clear risk are subject to regulation, industry will be forced to dilute its already considerable effort to protect the work force and, indeed, may become so overburdened as to seriously impair efforts already taken within the industry.

The employee training programs mandated by this legislation are a source of concern. The bill as drafted creates the possibility that all employees at a facility will be required to be trained. Training employees that are neither exposed or at risk is neither desirable nor necessary. If S. 1670 is to include training programs, it must explicitly state that only the population at risk is to be trained and educated.

Business confidentiality, a concept which immediately raises the hackles of the proponents of this type of legislation, must be addressed. Business has a legitimate right and obligation to keep from its competition information which provides a competitive advantage in the marketplace. S. 1670 does not provide any reasonable mechanism for the protection of confidential information. This deficiency must be corrected before legislation is enacted.

As a closing thought, I would like to comment on the necessity of a well conceived and drafted statute. As you are probably aware, New York passed sweeping "right-to-know" legislation in June of 1980. To date, the responsible state agency has been unable to promulgate regulations to implement that statute. Gentlemen, when you consider this type of legislation, be aware that unless rules can be developed to implement the statute, very little, if anything, is accomplished.

If I can provide any further information to either the Committee or staff, please contact me.

We wish to thank you for this opportunity to comment on S. 1670.

Respectfully submitted,

James W. Borcherding
Senior Advisor
Amway Corporation
(616) 676-7058

TESTIMONY
OF
DAVID J. DESOUSA
BEFORE THE
STATE OF NEW JERSEY
SENATE ENERGY & ENVIRONMENT
COMMITTEE
OCTOBER 20, 1982

THANK YOU AND GOOD EVENING.

MY NAME IS DAVID J. DESOUSA. I AM EMPLOYED BY TEXACO INC. AS A TOXICOLOGIST IN THEIR RESEARCH, ENVIRONMENTAL AND SAFETY DEPARTMENT. I HOLD A BACHELOR OF ARTS DEGREE IN BIOLOGY FROM COLGATE UNIVERSITY AND A MASTER OF SCIENCE IN BIO/TOXICOLOGY FROM NYU. I WISH TO THANK THIS COMMITTEE ON BEHALF OF TEXACO FOR THE OPPORTUNITY TO COMMENT ON SENATE BILL 1670, THE "WORKER AND COMMUNITY RIGHT TO KNOW ACT."

TEXACO SUPPORTS THE PREMISE THAT EVERYONE - WORKERS, COMMUNITIES AND CONSUMERS HAVE THE RIGHT TO KNOW THE HAZARDS TO WHICH THEY MAY BE EXPOSED IN THE WORKPLACE, HOME AND GENERAL ENVIRONMENT. THE PROBLEM IS HOW TO GUARANTEE THAT RIGHT IN THE MOST EFFECTIVE, PRACTICAL MANNER. TEXACO BELIEVES THAT THE CURRENT FEDERAL PROPOSAL BY OSHA ON HAZARD COMMUNICATION DATED MARCH 19, 1982 OFFERS THE BEST SOLUTION TO THIS PROBLEM FOR THE FOLLOWING REASONS:

FIRST, ONLY AT THE FEDERAL LEVEL CAN A HAZARD COMMUNICATION PROGRAM BE COORDINATED IN A MANNER THAT PROVIDES EQUAL COVERAGE TO ALL U.S. CITIZENS REGARDLESS OF THEIR WORKPLACE

OR RESIDENCE. A PROLIFERATION OF DIFFERING STATE AND LOCAL RIGHT-TO-KNOW BILLS WOULD PRODUCE CHAOS FOR EMPLOYERS WITH WORKPLACES IN DIFFERENT LOCATIONS, FOR CHEMICAL SUPPLIERS TO WORKPLACES WITH DIFFERENT HAZARD COMMUNICATION REQUIREMENTS, FOR WORKERS SWITCHING JOBS, FOR FIREFIGHTERS AND EMERGENCY PERSONNEL INVOLVED IN INCIDENTS WHICH HAPPEN TO OCCUR ACROSS LOCAL HAZARD COMMUNICATION RULES, IN SHORT, FOR MANY INDIVIDUALS WHO NEED TO MAKE JUDGMENTS BASED ON HAZARD INFORMATION.

SECOND, THE FEDERAL HAZARD COMMUNICATION PROPOSAL PROPERLY EMPHASIZES HAZARD COMMUNICATION OVER CHEMICAL IDENTIFICATION. WHILE CHEMICAL IDENTIFICATION IS SOMETIMES RELEVANT IN THE CASE OF PURE CHEMICALS WITH WELL KNOWN HAZARDS, IT IS COMMUNICATION OF HAZARDS SUCH AS FLAMMABILITY, CORROSIVITY AND TOXICITY, THAT SERVES THE PRIMARY PURPOSE OF HELPING INDIVIDUALS TO AVOID EXPOSURE TO HAZARDS. A MAJOR PROBLEM WITH SENATE BILL 1670 IS THE EMPHASIS IT PLACES ON CHEMICAL IDENTITY, PARTICULARLY IN THE CASE OF COMPLEX MIXTURES. THE REQUIREMENT THAT ALL CHEMICAL CONSTITUENTS OF A COMPLEX MIXTURE BE LISTED ON A LABEL IS TOTALLY IMPRACTICAL AS DEMONSTRATED BY THE CHEMICAL ANALYSIS OF THREE COMMON MIXTURES -LEAD-FREE GASOLINE, KEROSENE AND DIESEL FUEL. AN ANALYSIS OF THESE MIXTURES THROUGH A GAS CHROMATOGRAPH REVEALS SEVERAL HUNDRED CONSTITUENTS, EACH OF THESE COMPLEX MIXTURES HAS ANYWHERE BETWEEN 38 AND 55 CONSTITUENTS ABOVE 0.5% BY WEIGHT. PETROLEUM LUBRICANTS CONTAIN AN EVEN GREATER NUMBER OF CONSTITUENTS. IT SHOULD

BE OBVIOUS THAT IN THE CASE OF COMPLEX MIXTURES, IT IS BETTER TO COMMUNICATE THE HAZARDS OF THE OVERALL MIXTURE THAN TO LIST ALL CONSTITUENTS. ASIDE FROM THE SPACE LIMITATIONS ON LABELS AND MATERIAL SAFETY DATA SHEETS, IT IS KNOWN THAT COMPLEX MIXTURES OFTEN BEHAVE DIFFERENTLY THAN THE SUM OF THEIR CONSTITUENTS WITH RESPECT TO HAZARDS.

THIRDLY, THE FEDERAL PROPOSAL RECOGNIZES THAT EXISTING CORPORATE HAZARD COMMUNICATION PROGRAMS, WHICH ARE EFFECTIVE, SHOULD NOT BE DISMANTLED BY A RULE DESIGNED TO PROMOTE EFFECTIVE HAZARD COMMUNICATION. FURTHERMORE, WHILE IT IS APPROPRIATE FOR THE FEDERAL GOVERNMENT TO REQUIRE EMPLOYERS TO HAVE HAZARD COMMUNICATION PROGRAMS, IT IS IMPORTANT THAT THE EMPLOYER BE ALLOWED THE FREEDOM TO DESIGN THE MOST EFFECTIVE HAZARD COMMUNICATION PROGRAM FOR HIS SPECIFIC WORKPLACE. A COPY OF AN OVERVIEW OF TEXACO'S HAZARD COMMUNICATION PROGRAM IS AVAILABLE TO PROVIDE THE COMMITTEE WITH EXAMPLES OF VARIOUS MECHANISMS FOR HAZARD COMMUNICATION.

CONCERNING THE COMMUNITY RIGHT-TO-KNOW PORTION OF THE BILL, THE FEDERAL PROPOSAL INCLUDES A REQUIREMENT FOR A LIST OF HAZARDOUS CHEMICALS KNOWN TO BE PRESENT IN THE WORKPLACE USING AN IDENTITY THAT IS REFERENCED ON THE APPROPRIATE MATERIAL SAFETY DATA SHEET. IT IS REASONABLE TO PROVIDE SUCH A LIST TO THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL

PROTECTION. HOWEVER, THERE ARE TWO MAJOR PROBLEMS WITH SUCH A LIST:

1. SUCH A LIST WOULD FREQUENTLY BE OUT OF DATE SINCE OLD CHEMICALS WOULD REGULARLY BE USED UP, AND NEW CHEMICALS WOULD REGULARLY BE ADDED. THUS, AT ANY ONE POINT IN TIME, IT IS VERY UNLIKELY THAT A LIST WOULD BE ONE HUNDRED PERCENT ACCURATE, EVEN AFTER THE MOST CONSCIENTIOUS EFFORTS BY AN EMPLOYER. UPDATING IN LARGE FACILITIES WOULD PRESENT AN ADMINISTRATIVE NIGHTMARE TO BOTH THE EMPLOYER AND THE DEP.

2. THE MERE PRESENCE OF A HAZARDOUS CHEMICAL DOES NOT DICTATE THAT A HAZARDOUS SITUATION EXISTS. THE MANNER IN WHICH THE CHEMICAL IS HANDLED IN THE FACILITY, THE CALIBRE OF THE HAZARD COMMUNICATION PROGRAM, THE REQUIREMENTS OF APPLICABLE ENVIRONMENTAL LAWS GOVERNING AIR AND WATER QUALITY, TRANSPORTATION AND HAZARDOUS WASTE DISPOSAL, THE CHEMICAL/PHYSICAL CHARACTERISTICS OF THE CHEMICAL, AS WELL AS ITS PHYSIOLOGICAL AND TOXICOLOGICAL PROPERTIES ARE JUST SOME OF THE FACTORS WHICH INFLUENCE THE DEGREE OF HAZARD. IN OTHER WORDS, THE PUBLIC INFORMATION DATA SHEET WILL GIVE NO INDICATION OF THE DEGREE OF CHEMICAL EXPOSURE TO WORKERS OR THE ENVIRONMENT. IT IS THEREFORE OF CONCERN TO US ALL TO KNOW HOW A SPECIFIC LIST OF CHEMICALS WILL BE USED AND/OR ABUSED. ALONG THESE LINES, IT SHOULD BE

OBVIOUS THAT SUCH A LIST OF CHEMICALS IS USEFUL TO HEALTH AND SAFETY PROFESSIONALS AND POTENTIALLY MISLEADING TO NON-PROFESSIONALS.

OTHER PROVISIONS OF S-1670 AND UNWORKABLE, AND UNNECESSARY FOR THE PRIMARY GOAL OF HAZARD COMMUNICATION, SUCH AS MATERIAL BALANCE DATA FOR THE PIDS, AND CAS NUMBERS ON THE MATERIAL SAFETY DATA SHEET. HOWEVER, THE TIME WILL NOT ALLOW FOR DETAILED DISCUSSION.

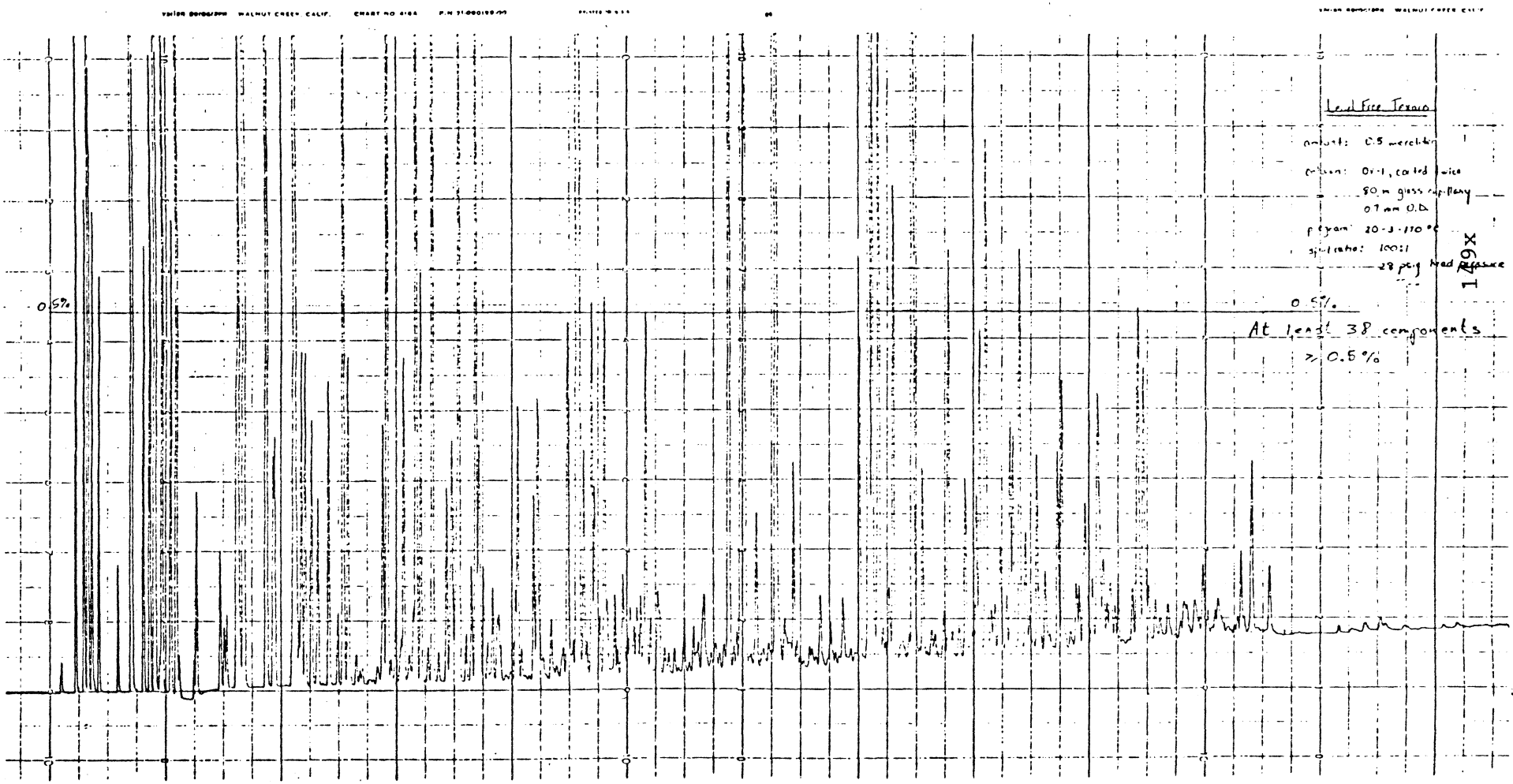
IN SUMMARY, I BELIEVE THAT THE CURRENT FEDERAL PROPOSAL BY OSHA ON HAZARD COMMUNICATION MORE EFFECTIVELY DEALS WITH ALL OF THE SPECIFIC ITEMS CONCERNING WORKER RIGHT-TO-KNOW, COMMUNITY RIGHT-TO-KNOW AND ENVIRONMENTAL HEALTH IN GENERAL IS ADDRESSED BY EXISTING LEGISLATION AND HEALTH AGENCIES AT THE FEDERAL, STATE AND LOCAL LEVELS WHICH HAVE EVOLVED FROM YEARS OF MULTIDISCIPLINARY THOUGHT TO THE COMPLEX PROBLEMS OF HUMAN AND ENVIRONMENTAL HEALTH PROTECTION.

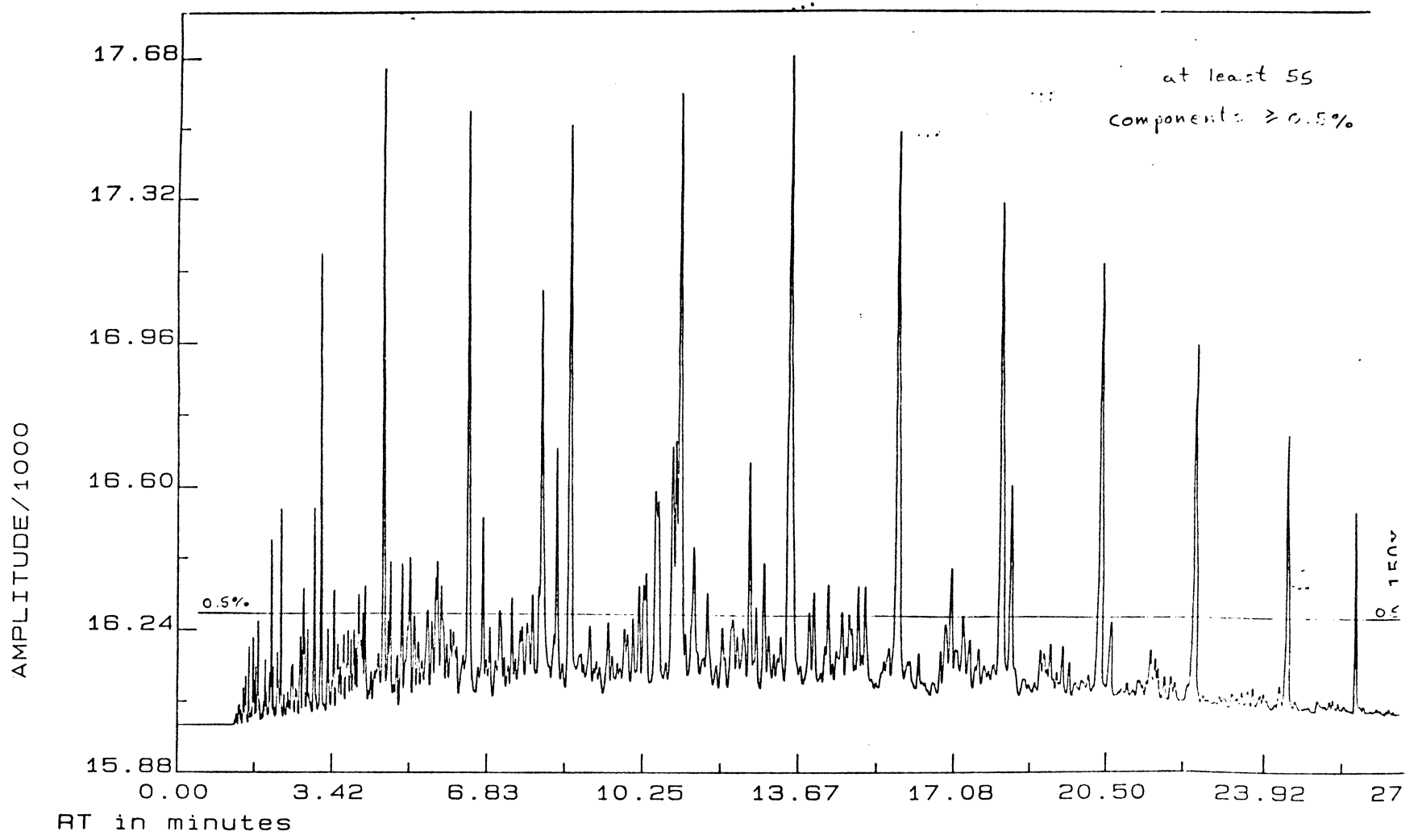
THUS, WE URGE YOUR VOTE AGAINST SB 1670.

AT THE VERY LEAST, IT IS HOPED THAT IF THIS COMMITTEE CONSIDERS IT NECESSARY TO DUPLICATE LEGISLATION COVERING WORKER AND ENVIRONMENTAL HEALTH, IT WILL MEET WITH THE VARIOUS REGULATORY AGENCIES AT THE FEDERAL AND STATE LEVELS TO ACHIEVE CONSISTENCY WITH EXISTING REGULATIONS.

I AM ALSO PROVIDING SUPPORTING INFORMATION FOR MY TESTIMONY.

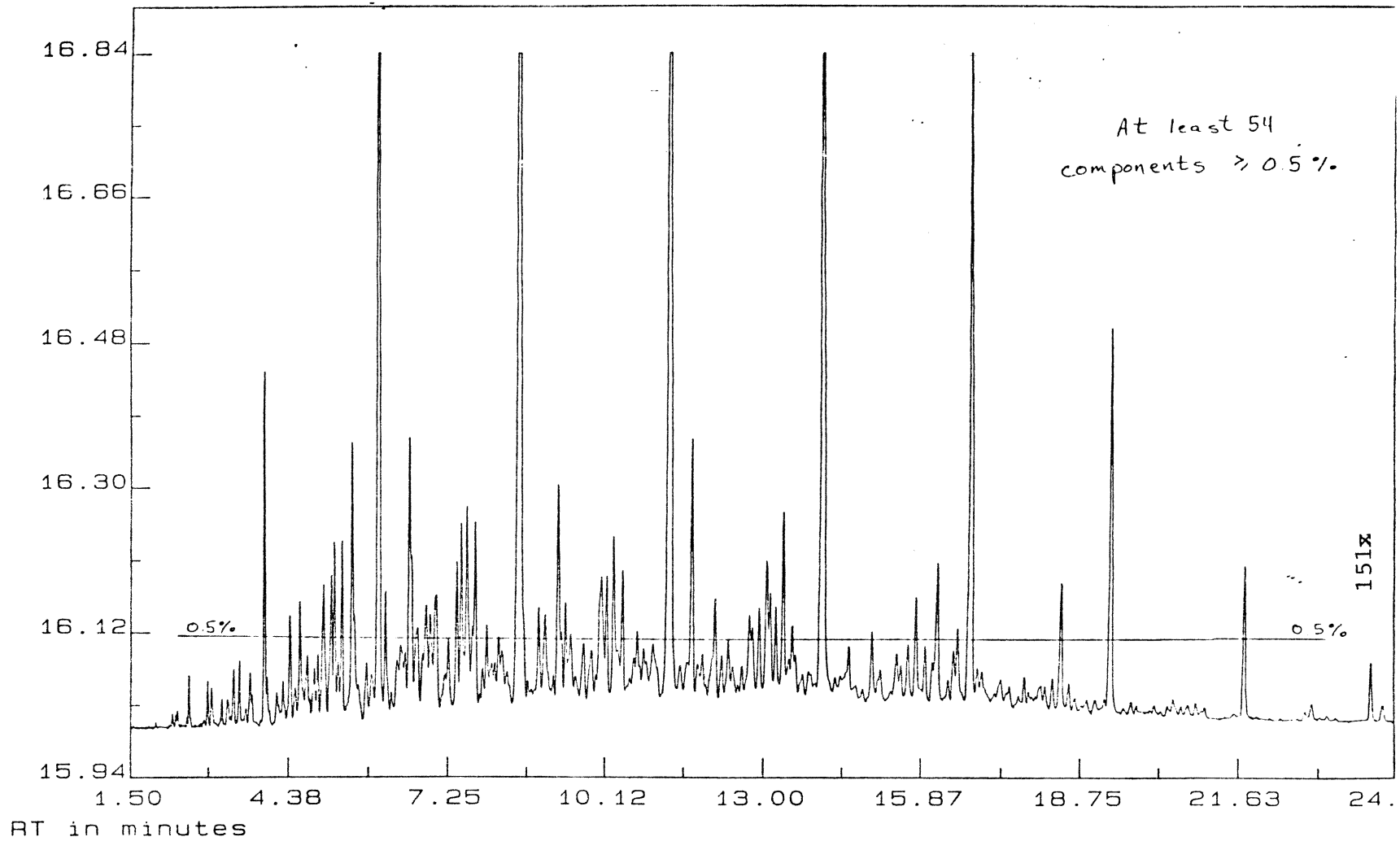
THANK YOU FOR THE OPPORTUNITY TO ADDRESS YOUR COMMITTEE. I WOULD BE GLAD TO ANSWER ANY QUESTIONS YOU MAY HAVE RELATIVE TO OUR POSITION.


Lead Free Texaco
0.5%
At least 38 components
≥ 0.5 %
179x



SAMPLE: Diesel Fuel INJECTED AT 9:19:08 ON OCT 12, 1982

Method: HP5880 Raw: *RAW32 Proc: *PRC32



SAMPLE: *Kerosene* INJECTED AT 15: 14: 36 ON OCT 8, 1982

Method: HP5880 Raw: *RAW32 Proc: *PRC32

IDENTIFICATION AND CONTROL OF HAZARDS IN THE WORKPLACE

TEXACO INC.

P. O. Box 509

Beacon, New York 12508

IDENTIFICATION AND CONTROL OF HAZARDS IN THE WORKPLACE

Hazard Communication Overview

The purpose of the Texaco hazard communication program is to provide Texaco employes, customers and customer employes with information on how to safely handle materials, products and processes which they may come into contact with during the workday.

Identification of workplace hazards and appropriate safe handling procedures is accomplished through a combination of precautionary labeling, Material Safety Data Sheets, signs, placards, special leaflets and training. Control of workplace hazards involves Safety, Industrial Hygiene and Engineering personnel.

Precautionary Labeling, Toxicity Data, MSDS and Additive Handling Precautions

For Texaco additives, chemicals and petroleum products, toxicity testing is performed at qualified contract laboratories. The acute testing results are then converted to a single digit toxicity classification (SDTC) as described on Attachment I. The SDTC for each type of exposure forms the basis (along with flammability information) for generation of precautionary label statements according to the 1976 ANSI standards. For chronic and special hazards, a special hazard code is included in the label assignment to systematically generate appropriate precautionary statements. Attachments II-IV are examples of special hazard codes and accompanying precautionary statements for a phenol-containing material, crankcase engine oil and Benzene, respectively. Currently there are 26 special hazard codes in use for precautionary labeling, several of which apply to cancer hazards. In some cases it is necessary to issue special information to Texaco employes and users of our products regarding hazards. As an example Attachment V is a hazard communication leaflet that has been distributed to Texaco employes and customers handling motor oils in addition to container labeling and the MSDS.

The SDTC is also utilized in the preparation of Material Safety Data Sheets (MSDS) on all Texaco products. The MSDS currently are provided to all customers on request. These sheets are the most complete hazard statement for a particular formulation and include expected physiological effects, from overexposure, industrial hygiene control procedures, first aid, special handling, and disposal instructions. These sheets are also available at all Texaco facilities for employe review. Efforts are underway to computerize the program and integrate toxicity data from various studies and suppliers. This will enable us to quickly provide and revise MSDS to customers, and will establish a system whereby MSDS are sent automatically to customers. Material Safety Data Sheets on Texaco products may be requested from the Manager, Environmental Conservation and Toxicology, P. O. Box 509, Beacon, N.Y. 12508.

For products purchased outside Texaco, the manufacturers are contacted for toxicity data, precautionary labels and Material Safety Data Sheets so that appropriate precautionary information and handling procedures may be developed. This information is summarized in a color-coded (according to severity of health hazard) in-house form known as an "Additive Handling Precautions Sheet" (AHPS) and these are available at Texaco facilities which handle these purchased materials.

Specific Chemical Identification

Although it has been our experience that most workers are concerned with hazards rather than specific chemical identities, specific chemical composition is available on MSDS and AHPS for materials handled at Texaco facilities. There are a certain number of components for which the manufacturer does not supply composition due to concerns about trade secrets. For these proprietary formulations complete characterization of hazards is adequate to develop safe handling procedures.

Industrial Hygiene

The corporate industrial hygiene plan includes development of industrial hygiene sampling strategies for operating divisions. Since these strategies are implemented by personnel of the operating divisions, a vigorous training program for division supervisory/technical personnel is an integral part of the corporate plan. Technical sessions are planned with operating personnel to accomplish updating of training programs.

Data from industrial hygiene sampling in the operating departments are computerized to facilitate analysis and program management. After review and evaluation of these data by the Industrial Hygiene Unit, recommendations for corrective action are generated. Recommendations may also result from walk-through industrial hygiene surveys conducted at operating locations by corporate personnel. All recommendations are reviewed periodically to follow the level of implementation within the operating departments.

It is Texaco's policy to follow the most stringent occupational exposure standards for all materials used at Texaco facilities. Thus, if a manufacturer recommends a more stringent standard than OSHA or ACGIH, the manufacturer's standard is applied. Employe and environmental monitoring provide data necessary to assure compliance with these standards and pinpoint any possible high exposure areas. Personal protective equipment and pertinent instructions for use of this equipment are provided to employes who are handling hazardous materials. Also, detailed written safety procedures are available for specific processes involving hazardous materials. Each plant keeps the manufacturer's precautionary label on containers in the workplace, and appropriate MSDS are requested as well. In addition, special hazard areas (caustic, acid, high noise, tetra-ethyllead) are visually identified through the posting of signs and in some cases there is restricted access to high-hazard areas. OSHA's rule on "Access to Employe Exposure and Medical Records" which became effective August 21, 1980 requires employers to provide employes access to their personal medical records and exposure records for toxic substances and harmful physical agents. All employes have been informed of their rights under this rule and of the location and procedures for reviewing such records. Prior to the implementation of this rule, employes received training regarding workplace hazards and were provided access to Material Safety Data Sheets.

Epidemiology

Texaco's epidemiology program was established to study patterns of disease and mortality in workers to: uncover any unusual patterns of morbidity or mortality and determine if they are related to workplace exposures; carry out studies of special employe cohorts who have been exposed to suspect chemicals or where questions have been raised; provide data in response to these questions to show what the morbidity and/or mortality experience of Texaco workers has been.

Several major projects are currently underway. The Texaco Mortality Study, a study of mortality in Texaco refining, petrochemical, and research workers from 1947 to 1977, is being completed by SRI International. Mortality patterns for specific plants, jobs, or processes will be examined. Preliminary results of this study are due in April 1982; these data will also be analyzed in-house for further follow-up. A similar study of producing and pipeline workers is being carried out in-house, and the feasibility of this type of study for marketing personnel is being examined.

An additional mortality study of workers exposed to ethylene oxide at the Port Neches Chemical Plant has been carried out by SRI International, and the results have been published. The overall number of deaths was significantly less than that expected, compared with the general population, and no significant excesses were seen for any specific cause of death.

Data from all epidemiology studies and additional data from the Comprehensive Personnel System for all current Texaco employes will be used to develop COMEXED - Computerization of Medical, Exposure, and Epidemiological Data. COMEXED will become a surveillance system which permits monitoring of health information, such as illnesses, causes of death, and physical examination results, and linkage of these data with work histories and industrial hygiene sampling results. This system will permit determination of workplace exposures which are causing adverse health effects so that early corrective action may be taken.

Training

Texaco has established several means of communicating information pertaining to potential health hazards in the workplace to employes. One of the most effective programs has been the one-day course "Industrial Hygiene Surveillance Seminar for Supervisory Personnel" which covers industrial hygiene, epidemiology, and toxicology. It is tailored to each location using specific examples of potential hazards and exposures of particular concern. The objective is for attendees to return to their units and train other employes. Training programs covering respiratory protection, noise exposure, hazardous materials, and industrial hygiene sampling have been successful in this regard (see Attachment VI). We expect to strengthen the training aids program for the Industrial Hygiene Surveillance Seminar in order for supervisory personnel to conduct effective training.

ATTACHMENT I

TABLE I

CONVERTING TEST SCORES TO SDTC SYSTEM

Ingestion	Acute Oral LD_{50} (rat, mg/kg)
0 Practically nontoxic	Greater than 5000
1 Slightly toxic	2000 - 5000
2 Moderately toxic	500 - 2000
3 Toxic	50 - 500
4 Highly toxic	Less than 50

Skin Absorption	Acute Dermal LD_{50} (rabbit, mg/kg)
0 Practically nontoxic	Greater than 3000
1 Slightly toxic	1000 - 3000
2 Moderately toxic	500 - 1000
3 Toxic	200 - 500
4 Highly toxic	Less than 200

Eye Irritation	Draize Scores, Rabbit	
0 No appreciable effect. Minimally irritating	0-15	All scores at 72 hours must be zero or raise to "1"
1 Slightly irritating	15-25	All scores at 72 hours must be zero or raise to "2"
2 Moderately irritating	25-50	All corneal scores must be zero at 7 days or raise to "3"
3 Severely irritating	50-80	Average corneal scores must be less than 10 at 7 days or raise to "4"
4 Extremely irritating	80-110	

Skin Irritation	Draize Scores, Rabbit
0 No appreciable effect	Less than 0.5
1 Slightly irritating	0.5 - 3
2 Moderately irritating	3 - 5
3 Severely irritating	5 - 6.5
4 Extremely irritating	6.6 - 8.0

ATTACHMENT II

1 - Flammability
2 - Ingestion
3 - Skin Absorption
4 - Inhalation
5 - Eye Irritation
6 - Skin Irritation
7 - Special Hazard code

G42-033-34PH

DANGER! CAUSES BURNS
HARMFUL IF SWALLOWED
HARMFUL IF ABSORBED THROUGH SKIN

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID BREATHING VAPOR OR MIST.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
WASH THOROUGHLY AFTER HANDLING.

CONTAINS PHENOLS

FIRST AID: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN. WASH CLOTHING BEFORE RE-USE. DISCARD CONTAMINATED SHOES.

IF SWALLOWED, INDUCE VOMITING IMMEDIATELY. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

ATTACHMENT III

G42-000-00UM

WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS

USED MOTOR OILS HAVE CAUSED SKIN CANCER IN LABORATORY ANIMALS WHEN REPEATEDLY APPLIED AND LEFT IN PLACE BETWEEN APPLICATIONS. IN CASE OF SKIN CONTACT, PROMPTLY WASH THOROUGHLY WITH SOAP AND WATER. OIL-SOILED CLOTHING SHOULD BE CLEANED BEFORE REUSE.

5/82

ATTACHMENT IV

G42-E00-10PB

BENZENE

DANGER! EXTREMELY FLAMMABLE
CANCER HAZARD
VAPOR HARMFUL
MAY CAUSE EYE IRRITATION
MAY AFFECT BLOOD FORMING ORGANS

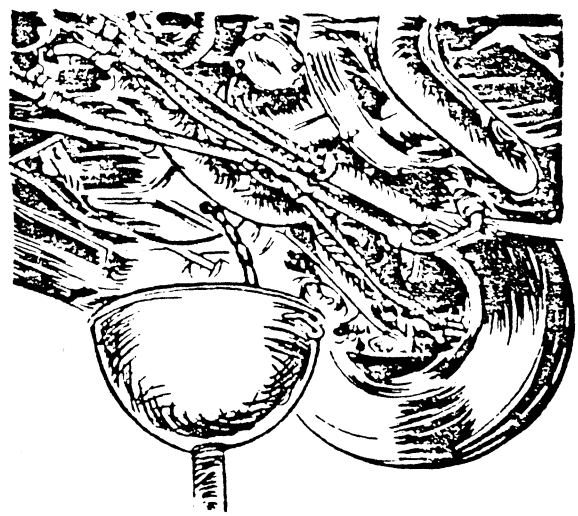
KEEP AWAY FROM HEAT, SPARKS, AND FLAME.
AVOID PROLONGED BREATHING OF VAPOR.
KEEP CONTAINER CLOSED.
USE ONLY WITH ADEQUATE VENTILATION.
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.
AVOID EYE CONTACT.
WASH THOROUGHLY AFTER HANDLING OR ANY SKIN CONTACT.

FIRST AID: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING, GIVE OXYGEN. CALL A PHYSICIAN. IN CASE OF EYE CONTACT, FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

IN CASE OF FIRE USE WATER SPRAY, FOAM, DRY CHEMICAL OR CO_2.

ATTACHMENT V

IMPORTANT INFORMATION FROM TEXACO ABOUT USED CRANKCASE ENGINE OIL



WHICH CAN HELP YOU

- **PROTECT YOUR HEALTH**
- **PROTECT THE ENVIRONMENT**
- **CONSERVE RESOURCES**

TEXACO

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HEALTH FACTS —
PROTECT YOURSELF

PROLONGED AND REPEATED SKIN CONTACT WITH USED MOTOR OIL MAY BE HARMFUL

Used motor oils have been shown in laboratory tests to cause skin cancer in mice. The mice developed skin cancer following repeated skin application of used motor oil, with no effort made to remove the oil between applications.
In view of these findings, there may be a risk to humans from prolonged and repeated skin contact in the absence of good personal hygiene.
You can protect your health by taking simple precautions when handling used motor oil.

PRECAUTIONS YOU SHOULD FOLLOW

- Avoid skin contact with used motor oil
- Remove motor oil from skin by washing thoroughly with soap and water: a waterless hand cleaner is an effective cleansing aid — Don't use gasoline, thinners, or solvents to remove oil from skin.
- Avoid prolonged skin contact with oil soiled clothing; wash soiled clothing before re-use.
- Discard oil-soaked shoes and unwashable clothing

PROTECT OUR ENVIRONMENT

DISPOSE OF USED MOTOR OIL PROPERLY— CONSERVE RESOURCES

DON'T POLLUTE

- Used oil, if dumped on the ground, into trash, ditches or storm sewers, can be carried off by rain and drainage to pollute streams and waterways.

CONSERVE RESOURCES

- Used oil can be processed for recovery to extend our natural resources

RETURN USED OIL TO COLLECTION CENTER

- Used oil collection centers can safely receive used motor oil for disposal. Some service stations, other automotive service centers, and retailers provide used oil collection facilities for transfer to recyclers.

For further information or additional copies contact:
Mgr., Industrial Hygiene and Toxicology
TEXACO Inc.
P.O. Box 509
Beacon, New York 12508

ATTACHMENT VI

SCHEDULE OF THE INDUSTRIAL HYGIENE TRAINING PROGRAM FOR 1982 (Tentative)

CONFINED SPACE ENTRY COURSE THREE (3) DAYS

The objectives of this three-day training course are for each attendee to become qualified as a Competent Person as defined in Subpart B, 29 CFR 1915.10 and be able to correctly test the atmosphere inside the confined space to determine the following: (1) oxygen content, (2) percent lower explosive limit, (3) toxic materials and assure that the permissible exposure limits of each are not exceeded, (4) physical hazards associated with the confined space, and (5) proper personal protective equipment required. The Industrial Hygiene and Safety Units are preparing recommended guidelines for confined spaces. Therefore, this training course would be extremely beneficial for supervisors issuing entry permits and other employes working in confined spaces.

January 26-29, 1982	New Orleans, Louisiana
March 16-19, 1982	Upon Request
April 20-23, 1982	Upon Request
May 18-21, 1982	Upon Request
June 8-11, 1982	Denver, Colorado
July 20-23, 1982	Los Angeles, California
August 17-20, 1982	Upon Request
September 21-24, 1982	Upon Request
October 19-22, 1982	Cherry Hill, New Jersey
November 2-5, 1982	Upon Request

HYDROGEN SULFIDE (H_2S) SEMINAR ONE (1) DAY

The objectives of this one-day course are for each attendee to become familiar with the characteristics and effects of H_2S, and to be able to (1) monitor for personnel exposure, (2) recommend the correct respiratory protection, and (3) recommend correct control measures to limit the exposure. Upon request, this seminar may be presented along with the Confined Space Entry Course.

INDUSTRIAL HYGIENE MEASUREMENTS COURSE
FOUR (4) DAYS

The objectives of this four-day course are to train selected personnel to collect the required samples, complete the Industrial Hygiene Sample Data Sheets, and interpret the sample results. Time is allotted in the course for each student to calibrate the different sampling equipment, and practice collecting the samples for most of the common contaminants collected in the field. They will complete an Industrial Hygiene Sample Data Sheet on each sample collected. The students will also be able to compute the time weighted averages when given sample results.

March 2-5, 1982	Houston, Texas
July 13-16, 1982	Houston, Texas
October 5-8, 1982	Houston, Texas

INDUSTRIAL RESPIRATORY PROTECTION COURSE
THREE (3) DAYS

The objective of this three-day course is to prepare selected personnel to present adequate training in respiratory protection to the appropriate employes at their locations.

In this course, personnel will be trained to select the proper respirator for protection against a particular hazard and to recognize respirators which are not in compliance with the federal standards. Time is allocated for each individual to examine the different respirators and to identify the discrepancies. They will also be trained in the proper fitting techniques by wearing different respirators and being tested for proper fit in a simulated contaminated environment. The importance and purpose of written standard operating procedures (SOPs) are emphasized, and examples of SOPs are discussed in the course. Personnel completing this course will be able to return to their operations and conduct the training required to ensure that each employe required to use a respirator has an adequate concept of respiratory protection. This course will provide excellent training for employes that have previously attended a respiratory protection course but feel that an update and refresher training would be beneficial.

In conjunction with the training course, a slidetape program entitled, "Basics of Respiratory Protection," has been developed by the Safety and Industrial Hygiene Division. This slidetape program will be used during the course and will be

made available for use as a visual aid for the training programs at each location.

February 2-4, 1982	Houston, Texas
June 1-3, 1982	Denver Colorado
September 7-9, 1982	Los Angeles, California

INDUSTRIAL HYGIENE SURVEILLANCE SEMINAR FOR INSTRUCTORS AND SUPERVISORY PERSONNEL
ONE (1) DAY

The objectives of the course are to acquaint local training instructors and supervisory personnel with Texaco's programs in industrial hygiene monitoring, epidemiology, and toxicology, and to assist and encourage the development of local programs that will effectively utilize data from these activities in employe training sessions. The purpose is to develop employe awareness of the many steps the Company is taking to protect their health.

This seminar will encourage positive, informed discussion of these programs between management personnel and hourly employes during regularly scheduled training sessions, as well as informal meetings. We also expect an additional positive benefit of building confidence in hourly employes to openly discuss with their supervisor their concerns about the possible effects of working conditions so that proper actions can be taken without the intercession of local, state, or Federal agencies.

January 11-15, 1982	Upon Request
February 22-26, 1982	Upon Request
May 3-7, 1982	Upon Request
August 2-6, 1982	Upon Request

NOISE MEASUREMENTS COURSE
TWO (2) DAYS

The objectives of this two-day course are to train selected management personnel to perform noise measurements, determine if exposure standards are being exceeded by using noise dosimeters, and be able to supervise the fitting of personal ear protection.

February 9-10, 1982	Denver, Colorado
April 6-7, 1982	Houston, Texas
November 2-3, 1982	Houston, Texas

TEXACO INC.
INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 4 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms
456 Diesel Chief 2

Manufacturer's Name
Texaco Inc.

Emergency Telephone No.
(914) 831-3400 Ext. 406

Address
P.O. Box 509, Beacon, NY 12508

Chemical Name and/or Family or Description
Diesel Fuel

THIS PRODUCT IS CLASSIFIED AS:
___X___ HAZARDOUS BY DEFINITION NO.(S) ___1___ ON ATTACHED EXPLANATION SHEET 4.
_____ NOT HAZARDOUS:

WARNING STATEMENT: CAUTION! COMBUSTIBLE

PHYSIOLOGICAL EFFECTS:

Effects of Exposure

Acute:

Eyes: Causes minimal eye irritation. Transient minor irritation may be noted following initial contact.

Skin: Slightly irritating with possible redness, edema, or drying of the skin. May cause dermatitis on prolonged or repeated contact.

Respiratory System: May cause symptoms of drowsiness or narcosis from inhalation of high vapor concentrations.

Chronic: See additional comments on p. 3 Other: -

Sensitization Properties

Skin: Yes ___ No ___ Unknown X

Respiratory: Yes ___ No ___ Unknown X

Median Lethal Dose (LD_{50}, LC_{50}) (Species)

Oral: N.D.; believed to be greater than 5 g/kg (rat); practically non-toxic

Inhalation: N.D.

Dermal: N.D.; believed to be greater than 3 g/kg (rabbit); practically non-toxic

Other: -

Irritation Index, Estimation of Irritation (Species)

Skin: N.D.; estimated 0.5-3.0/8.0 (rabbit); slightly irritating

Eyes: N.D.; estimated 0-15/110 (rabbit); no appreciable effect

Symptoms of Exposure: See above

EMERGENCY AND FIRST AID PROCEDURES

First Aid

Eyes: As with most foreign materials, should eye contact occur, flush eyes with plenty of water.

Skin: Wash exposed areas with soap and water.

Ingestion: Do not induce vomiting. May cause chemical pneumonitis.

Inhalation: Should symptoms noted under physiological effects occur, remove to fresh air. If unconscious, apply artifical respiration.

Other Instructions: None

*N.D.—Not Determined; *N.A.—Not Applicable

<—Less Than; >—Greater Than

165x

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9A1

OCCUPATIONAL CONTROL PROCEDURES

Code No. 456

Protective Equipment (Type)

Eyes: Chemical goggles or face shield optional.

Skin: Gloves impervious to chemicals and petroleum distillates recommended.

Inhalation: None required if exposure is in well-ventilated spaces. Supplied air respiratory protection for cleaning large spills or upon entry into large tanks, vessels or other confined spaces.

Ventilation Required: Normal X Other

Precautionary Label

CAUTION! COMBUSTIBLE
Keep away from heat and flame.
Use with adequate ventilation.
Avoid prolonged breathing of mist or vapor.
Avoid prolonged or repeated contact with skin.

Permissible Concentrations:

Air: None established Other -

Requirements for Transportation, Handling and Storage: Store away from heat and open flame. Placard required only when material is contained in packaging or container that exceeds 110 gallons, or in tank car or tank truck. Transport, handle, and store in accordance with OSHA Regulation 1910.106.

DOT Proper Shipping Name: Fuel Oil, No. 2

DOT Hazard Class (if applicable): Combustible liquid.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure N.D. (mmHg)

Specific Gravity 0.876 (H_2O = 1) Vapor Density N.D. (Air = 1)

Appearance and Odor Light in color

pH of undiluted product N.D. Solubility Insoluble

Percent Volatile by Volume N.D. Evaporation N.D. ( ) = 1

Viscosity N.D. Other -

Hazardous Polymerizations ____ Occur X Do not occur

The Material Reacts Violently With:

Air	Water	Heat	Strong Oxidizers	Others
			Possible	

FIRE PROTECTION INFORMATION

Ignition Temp. °F. N.D. Flash Point °F. (Method) 140 PM

Flammable limits % Lower N.D. Upper N.D.

Products Evolved When Subjected to Heat or Combustion: Carbon monoxide and carbon dioxide may be formed on burning in limited air supply.

Recommended Fire Extinguishing Agents and Special Procedures: According to the National Fire Protection Association Guide 49, combustible liquid fires may be extinguished by water spray, dry chemical, foam, or carbon dioxide. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Unusual or Explosive Hazards: None.

COMPOSITION

Code No. 456

Components Presenting a Significant Hazard	%	Other Components	%
A complex mixture of hydrocarbons produced by the distillation of crude oil. Consists predominantly of hydrocarbons ranging from C_{11}-C_{25} and boiling in the range of 205°C-400°C (401°F-752°F). Depending on availability, product may contain some hydrocarbons produced by distillation of products from a catalytic cracking process. The latter materials contain bicyclic and tricyclic aromatic hydrocarbon and may increase the boiling range to 205°C-450°C (401°F-842°F). The product may be hydrotreated or hydrosulfurized.	100		

ENVIRONMENTAL PROTECTION

Waste Disposal Method Re-evaluation of product may be required by user at the time of disposal, since the product uses, transformations, mixtures and processes may change classification to non-hazardous or hazardous for reasons other than, or in addition to, ignitability. (See Remarks for waste classification.)

Procedures in Case of Breakage or Leakage Contain spill if possible. Ventilate area. Avoid breathing vapor. Use self-contained breathing apparatus or supplied air mask for large spills in confined area. Wipe up or absorb on suitable material and shovel up.

Remarks: Waste Classification: Product (as presently constituted) has the RCRA characteristics of ignitability and if discarded would have the hazardous waste number D001.

ADDITIONAL COMMENTS

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT

State of Michigan Critical Materials Act (Revised 1981).
None present.

"Positive results in carcinogenic screening assays and mouse skin carcinogenesis bioassays have been found with products of similar composition, i.e., those containing high boiling aromatic components from catalytic cracking. Strict compliance to the occupational control procedures outlined in this Data Sheet is believed to be adequate protection from such hazards."

To determine applicability or effect of any law or regulation with respect to this product, user should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By: R. T. Richards Title: Manager, Industrial Hygiene and Toxicology

Date: 5/27/82 ☐ New ☒ Revised, Supersedes 5/1/80

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EXPLANATION OF THE INDUSTRIAL HYGIENE TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

Product Information

Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explanatory.

Chemical Name and/or Family or Description

Refers to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following characteristics: (1) has a flash-point below 200°F, closed cup or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm for gases and vapor, below 5 mg/m^3 for dusts, fumes and mist, and below 25 MPPCF for mineral dust; (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumonoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapors, mist or smoke which have one or more of the above characteristics.

Physiological Effects

Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

Median Lethal Dose or Concentration (LD50, LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposue time is indicated.

Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation when tested by the method described. If numbers are not available, a yes or no answer indicates whether or not the material is an irritant.

Emergency and First Aid Procedures

Gives first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

Occupational Control Procedures

Protective Equipment

Type of protective equipment that is necessary for the safe handling and use of this product.

Ventilation

Ventilation: type, i.e. local exhaust, mechanical, etc.

Precautionary Label

Label that is required or recommended.

Permissible Concentrations

Indicates Threshold Limit Value (TLV) and/or Time Weighted Average (TWA) as established by the American Conference of Governmental Industrial Hygienists and/or standards promugated by the Occupational Safety and Health Administration.

Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

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Chemical and Physical Properties

Boiling Point (or Range)

In degrees F. (or C.), Boiling Point at 760 mmHg.

Vapor Pressure

Refers to pressure of saturated vapor above the liquid expressed in mm of Hg. at 20°C. or 68°F.

Specific Gravity

The ratio of the density of the product to the density of water.

Vapor Density

The ratio of the density of the vapor at saturation concentrations (20°C. or 68°F. to the density of air at 760 mmHg.)

Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

pH

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 —strongly acidic
pH5-7 —weakly acidic
pH7-9 —weakly basic
pH9-14—strongly basic

Solubility

Refers to the solubility of a material by weight in water at room temperature. The terms negligible, less than 0.1 percent; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable 10% or greater. Gives solubility in organic solvents where appropriate.

Percent volatile by volume amount volatized at 20°C. or 68°F. when allowed to evaporate.

Evaporation

Gives the rate of evaporation compared to a standard.

Viscosity

Measure of flow characteristics in Kinematic viscosity of Saybolt Universal Seconds.

Hazardous Polymerization

Hazardous polymerization is that reaction which takes place at a rate which releases large amounts of energy. Indicates whether it may or may not occur and under what storage conditions.

Does the Material React Violently

Indicates whether the material will react violently, releasing large amounts of energy when exposed under conditions listed.

Fire Protection Information

Ignition Temperature

Refers to the temperature in degrees F., at which a liquid will give off enough flammable vapor to ignite and burn continuously for 5 seconds.

Flash Point (State Method Used)

Refers to the temperature in degrees F., at which a liquid will give off enough flammable vapor to ignite.

Flammable Limits

Refers to the range of gas or vapor concentration (percent by volume in air) which will burn or explode if an ignition source is present. Lower means the lower flammable limit and upper means the upper flammable limit given in percent.

Products Evolved When Subjected to Heat or Combustion

The products evolved when this material is subjected to heat or combustion. Includes temperature at which oxidation or other forms of degradation occurs.

Recommended Fire Extinguishing Agents and Special Procedures

Specifies the fire fighting agents that should be used to extinguish fires. If unusual fire hazards are involved or special procedures indicated, this is specified.

Unusual Fire or Explosive Hazards

Specific hazards to personnel in case of fire, explosive danger.

Composition

Components of the product as manufactured.

Environmental Protection

Specifies how this product can be successfully disposed of.

Indicates precautions necessary in the event that leakage or breakage occurs. Included are (a) clean-up procedures, (b) personal protective equipment if necessary, and (c) hazards that may be created, i.e. fire, explosion, etc.

Texaco Inc.
2000 Westchester Avenue
White Plains, New York 10650
Phone (914) 253-4000 (White Plains)
(914) 831-3400 (Beacon)

TEXACO INC.
INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 4 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms
1939 Premium RB Grease

Manufacturer's Name
Texaco Inc.

Emergency Telephone No.
(914) 831-3400 Ext. 406

Address
P.O. Box 509, Beacon, NY 12508

Chemical Name and/or Family or Description
Industrial Grease

THIS PRODUCT IS CLASSIFIED AS: ___X___ NOT HAZARDOUS
_____ HAZARDOUS BY DEFINITION NO.(S) _____ ON ATTACHED EXPLANATION SHEET 4.

WARNING STATEMENT: CAUTION! MAY CAUSE EYE IRRITATION

PHYSIOLOGICAL EFFECTS:

Effects of Exposure

Acute:

Eyes: Causes minimal eye irritation. Transient minor irritation may be noted following initial contact.

Skin: Slightly irritating with possible redness, edema or drying of the skin. May cause dermatitis on prolonged or repeated contact.

Respiratory System: N.D. Believed to be minimally irritating.

Chronic: N.D.

Other: -

Sensitization Properties

Skin: Yes ___ No ___ Unknown ___X___

Respiratory: Yes ___ No ___ Unknown ___X___

Median Lethal Dose (LD_{50}, LC_{50}) (Species)

Oral: = 7.5 g/kg (rat)

Inhalation: N.D.

Dermal: Greater than 10 g/kg (rabbit)

Other: -

Irritation Index, Estimation of Irritation (Species)

Skin: 1.96/8.0 (rabbit)

Eyes: 12/110 (rabbit)

Symptoms of Exposure: see above

EMERGENCY AND FIRST AID PROCEDURES

First Aid

Eyes: As with most foreign materials, should eye contact occur, flush eyes with plenty of water.

Skin: Wash exposed areas with soap and water.

Ingestion: None considered necessary.

Inhalation: None considered necessary.

Other Instructions: None

*N.D.—Not Determined; *N.A.—Not Applicable
<—Less Than; >—Greater Than

OCCUPATIONAL CONTROL PROCEDURES

Code No. 1939

Protective Equipment (Type)

Eyes: Protective goggles or face shield optional.

Skin: Exposed employes should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water, and laundering or dry cleaning soiled work clothing at least weekly.

Inhalation: None required.

Ventilation Required: Normal X Other

Precautionary Label

CAUTION! MAY CAUSE EYE IRRITATION
Avoid contact with eyes.
Wash thoroughly after handling.

Permissible Concentrations:

Air: None established for greases. Other -

Requirements for Transportation, Handling and Storage

Periods of exposure to high temperatures should be minimized.

DOT Proper Shipping Name: N.A.
DOT Hazard Class (if applicable) N.A.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure Nil (mmHg)

Specific Gravity N.D. (H_2O = 1) Vapor Density N.D. (Air = 1)

Appearance and Odor Smooth and buttery

pH of undiluted product N.A. Solubility Insoluble

Percent Volatile by Volume Nil Evaporation N.D. ( ) = 1

Viscosity cSt @ 40°C = 134 Other -

Hazardous Polymerizations ____ Occur X Do not occur

The Material Reacts Violently With: None of those listed below.

Air Water Heat Strong Oxidizers Others

FIRE PROTECTION INFORMATION

Ignition Temp. °F. N.D. Flash Point °F. (Method) 460°F (COC)

Flammable limits % Lower N.D. Upper N.D.

Products Evolved When Subjected to Heat or Combustion: Carbon monoxide, carbon dioxide, aldehydes and ketones, combustion products of nitrogen and sulfur.

Recommended Fire Extinguishing Agents and Special Procedures: According to the National Fire Protection Association Guide, use water spray, dry chemical, "alcohol" foam, or carbon dioxide. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Unusual or Explosive Hazards: None indicated.

COMPOSITION

Code No. 1939

Components Presenting a Significant Hazard	%	Other Components	%
None.		Mineral oil	greater than 90
		Aryl amine	1-5
		Sodium nitrite	1-5

ENVIRONMENTAL PROTECTION

Waste Disposal Method Under RCRA, it is the responsibility of the user of products to determine, at time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes etc. may render the result hazardous. (See Remarks for waste classification.)

Procedures in Case of Breakage or Leakage Contain spill. Absorb with inert porous material. Dispose in accordance with local laws and regulations governing disposal of oily wastes. Contact a waste oil contractor or disposal specialist if necessary.

Remarks: Waste Classification: Product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased forms.

ADDITIONAL COMMENTS

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT

State of Michigan Critical Materials Act (Revised 1981).

0.4% Lithium;

Maximum usable temperature 325°F

To determine applicability or effect of any law or regulation with respect to this product, user should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By: R. T. Richards Title: Manager, Industrial Hygiene and Toxicology

Date: 4/2/82 ☐ New ☒ Revised, Supersedes 9/1/80

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EXPLANATION OF THE INDUSTRIAL HYGIENE TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

Product Information

Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explanatory.

Chemical Name and/or Family or Description

Refers to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following characteristics: (1) has a flash-point below 200°F, closed cup or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm for gases and vapor, below 5 mg/m^3 for dusts, fumes and mist, and below 25 MPPCF for mineral dust; (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumonoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapors, mist or smoke which have one or more of the above characteristics.

Physiological Effects

Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

Median Lethal Dose or Concentration (LD50, LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposue time is indicated.

Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation when tested by the method described. If numbers are not available, a yes or no answer indicates whether or not the material is an irritant.

Emergency and First Aid Procedures

Gives first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

Occupational Control Procedures

Protective Equipment

Type of protective equipment that is necessary for the safe handling and use of this product.

Ventilation

Ventilation: type, i.e. local exhaust, mechanical, etc.

Precautionary Label

Label that is required or recommended.

Permissible Concentrations

Indicates Threshold Limit Value (TLV) and/or Time Weighted Average (TWA) as established by the American Conference of Governmental Industrial Hygienists and/or standards promugated by the Occupational Safety and Health Administration.

Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

Chemical and Physical Properties

Boiling Point (or Range)

In degrees F. (or C.), Boiling Point at 760 mmHg.

Vapor Pressure

Refers to pressure of saturated vapor above the liquid expressed in mm of Hg. at 20°C. or 68°F.

Specific Gravity

The ratio of the density of the product to the density of water.

Vapor Density

The ratio of the density of the vapor at saturation concentrations (20°C. or 68°F. to the density of air at 760 mmHg.)

Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

pH

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 —strongly acidic
pH5-7 —weakly acidic
pH7-9 —weakly basic
pH9-14—strongly basic

Solubility

Refers to the solubility of a material by weight in water at room temperature. The terms negligible, less than 0.1 percent; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable 10% or greater. Gives solubility in organic solvents where appropriate.

Percent volatile by volume amount volatized at 20°C. or 63°F. when allowed to evaporate.

Evaporation

Gives the rate of evaporation compared to a standard.

Viscosity

Measure of flow characteristics in Kinematic viscosity of Saybolt Universal Seconds.

Hazardous Polymerization

Hazardous polymerization is that reaction which takes place at a rate which releases large amounts of energy. Indicates whether it may or may not occur and under what storage conditions.

Does the Material React Violently

Indicates whether the material will react violently, releasing large amounts of energy when exposed under conditions listed.

Fire Protection Information

Ignition Temperature

Refers to the temperature in degrees F., at which a liquid will give off enough flammable vapor to ignite and burn continuously for 5 seconds.

Flash Point (State Method Used)

Refers to the temperature in degrees F., at which a liquid will give off enough flammable vapor to ignite.

Flammable Limits

Refers to the range of gas or vapor concentration (percent by volume in air) which will burn or explode if an ignition source is present. Lower means the lower flammable limit and upper means the upper flammable limit given in percent.

Products Evolved When Subjected to Heat or Combustion

The products evolved when this material is subjected to heat or combustion. Includes temperature at which oxidation or other forms of degradation occurs.

Recommended Fire Extinguishing Agents and Special Procedures

Specifies the fire fighting agents that should be used to extinguish fires. If unusual fire hazards are involved or special procedures indicated, this is specified.

Unusual Fire or Explosive Hazards

Specific hazards to personnel in case of fire, explosive danger.

Composition

Components of the product as manufactured.

Environmental Protection

Specifies how this product can be successfully disposed of.

Indicates precautions necessary in the event that leakage or breakage occurs. Included are (a) clean-up procedures, (b) personal protective equipment if necessary, and (c) hazards that may be created, i.e. fire, explosion, etc.

Texaco Inc.
2000 Westchester Avenue
White Plains, New York 10650
Phone (914) 253-4000 (White Plains)
(914) 831-3400 (Beacon)

TEXACO INC.
INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 4 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms
7513 309 Benzene

Manufacturer's Name
Texaco Inc.

Emergency Telephone No.
(713) 722-8381

Address
4800 Fournace Place, P.O. Box 430, Bellaire, Texas 77401

Chemical Name and/or Family or Description
Benzene

THIS PRODUCT IS CLASSIFIED AS:
____ NOT HAZARDOUS:
X HAZARDOUS BY DEFINITION NO.(S) 1,2,7 ON ATTACHED EXPLANATION SHEET 4.

WARNING STATEMENT: DANGER! BENZENE CANCER HAZARD
EXTREMELY FLAMMABLE

PHYSIOLOGICAL EFFECTS:

Effects of Exposure

Acute:

Eyes: May cause slight-moderate eye irritation with moderate burning sensation. These effects are usually transient.

Skin: Slightly irritating with possible redness, edema, or drying of the skin. May cause dermatitis on prolonged or repeated contact. Significant amounts absorbed through the skin.

Respiratory System: Exposure to high concentrations may cause headache, weariness, lassitude, loss of appetite and possibly blood abnormalities.

Chronic: Prolonged, repeated exposures to atmospheric benzene concentrations in excess of one hundred parts per million may cause decreases in cell counts of formed blood elements and possibly irreversible injury of the blood forming tissues. Benzene is suspected of causing leukemia, a form of cancer.

Other: Toxic exposures are possible by repeated skin absorption.

Sensitization Properties
Skin: Yes ____ No X Unknown ____ Respiratory: Yes ____ No ____ Unknown X

Median Lethal Dose (LD_{50}, LC_{50}) (Species)	Irritation Index, Estimation of Irritation (Species)
Oral 3.3g/Kg (rat)	Skin N.D.
Inhalation 10,000 ppm, 7 hours(Rat)	Eyes N.D.
Dermal N.D.	Symptoms of Exposure See above
Other -	

EMERGENCY AND FIRST AID PROCEDURES

First Aid

Eyes: Flush with water for 15 minutes.

Skin: Wash exposed areas with soap and water.

Ingestion: Do not induce vomiting. May cause chemical pneumonitis.

Inhalation: Should symptoms noted under physiological effects occur, remove to fresh air. If unconscious, apply artificial respiration.

Other Instructions: None

*N.D.—Not Determined; *N.A.—Not Applicable
<—Less Than; >—Greater Than

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OCCUPATIONAL CONTROL PROCEDURES

Code No. 7513

Protective Equipment (Type)

Eyes: Chemical type goggles or face shield recommended.

Skin: Gloves impervious to chemicals and petroleum distillates required. NIOSH has indicated that only gloves made of Viton® rubber or polyvinyl-alcohol provide reasonable protection from benzene.

Inhalation: Supplied air respiratory protection for cleaning large spills or upon entry into large tanks, vessels, or other confined spaces.

Ventilation Required: Normal — Other: Local exhaust ventilation recommended.

Precautionary Label: BENZENE DANGER! EXTREMELY FLAMMABLE, CANCER HAZARD
VAPOR HARMFUL MAY CAUSE EYE IRRITATION
Keep away from heat, sparks and flame
Avoid prolonged or repeated breathing of vapor
Keep container closed. Use only with adequate ventilation.
Avoid prolonged or repeated contact with skin. Avoid eye contact. Wash thoroughly after handling or any skin contact.

Permissible Concentrations:

Air: 10 ppm for benzene averaged over an 8-hour daily exposure (AGIH, 1979). See additional comments for OSHA permissible concentration and ACGIH skin notation.

Other:

Requirements for Transportation, Handling and Storage

Transport, handle, and store in accordance with OSHA Regulation 1910.106

DOT Proper Shipping Name: Benzene

DOT Hazard Class (if applicable): Flammable liquid

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) 176 — Vapor Pressure 74.6@20°C (mmHg)

Specific Gravity 0.8835@60/60°F (H_2O = 1) — Vapor Density 2.77 (Air = 1)

Appearance and Odor: Clear colorless liquid with characteristic pleasant odor

pH of undiluted product N.A. — Solubility Nil

Percent Volatile by Volume 100 — Evaporation 1.0 carbon tetrachloride) = 1

Viscosity N.D. — Other -

Hazardous Polymerizations _____ Occur X Do not occur

The Material Reacts Violently With:

Air	Water	Heat	Strong Oxidizers	Others
			Possibly	

FIRE PROTECTION INFORMATION

Ignition Temp. °F. 928 — Flash Point °F. (Method) 12°F (TCC)

Flammable limits % Lower 1.3 — Upper 7.1

Products Evolved When Subjected to Heat or Combustion: Carbon monoxide, carbon dioxide, aldehydes and ketones.

Recommended Fire Extinguishing Agents and Special Procedures: According to the National Fire Protection Association Guide 325M, use dry chemical, foam, or carbon dioxide. Water may be ineffective on the flames, but water should be used to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for men attempting to stop the leak.

Unusual or Explosive Hazards: Heating greatly increases explosive hazard. High vapor concentrations may be lethal.

176x

COMPOSITION

Code No. 7513

Components Presenting a Significant Hazard	%	Other Components	%
Benzene CAS # [000-071-432]	100		

ENVIRONMENTAL PROTECTION

Waste Disposal Method

Dispose in approved chemical disposal area or in a manner which complies with all local, state, and federal regulations.

Procedures in Case of Breakage or Leakage

Eliminate all ignition sources. Contain spill if possible. Ventilate area. Avoid breathing vapor. Use self-contained breathing apparatus or supplied-air mask for large spills in confined area. Avoid contact with eyes. Remove with inert absorbant and non-sparking tools.

Remarks:

None.

ADDITIONAL COMMENTS

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT

State of Michigan Critical Materials Act (Revised 1980).

Conversion factor 7.357 lbs/gal 100% wt Benzene.

OSHA permissible concentrations: 8 hour time-weighted average	Acceptable ceiling concentration	Acceptable maximum peak above ceiling concentration for an 8-hour shift
10 ppm	25 ppm	50 ppm for 10 minutes

ACGIH Skin notation--permissible concentrations should be adjusted downward if there is any significant skin or eye contact. Skin contact should therefore be minimized.

To determine applicability or effect of any law or regulation with respect to this product, user should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By: F. E. Bentley Title: Coordinator, Product Safety

Date: 5/1/81 ☐ New ☒ Revised, Supersedes 11/25/80

NOTE: THIS DATA IS FURNISHED GRATUITOUSLY INDEPENDENT OF ANY SALE OF THE PRODUCT, ONLY FOR YOUR INVESTIGATION AND INDEPENDENT VERIFICATION. WHILE THE INFORMATION IS BELIEVED TO BE CORRECT, TEXACO INC. MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. TEXACO INC. SHALL IN NO EVENT BE RESPONSIBLE FOR ANY DAMAGES OF WHATSOEVER NATURE DIRECTLY OR INDIRECTLY RESULTING FROM THE PUBLICATION OR USE OF OR RELIANCE UPON DATA CONTAINED HEREIN. **NO WARRANTY, EITHER EXPRESS OR IMPLIED OF MERCHANTABILITY OR FITNESS OR OF ANY NATURE WITH RESPECT TO THE PRODUCT OR TO THE DATA HEREIN IS MADE HEREUNDER. DATA SHEETS ARE AVAILABLE FOR ALL TEXACO PRODUCTS. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL TEXACO PRODUCTS YOU BUY, PROCESS, USE, OR DISTRIBUTE, AND ENCOURAGED TO ADVISE ANYONE WORKING WITH OR EXPOSED TO SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.**

EXPLANATION OF THE INDUSTRIAL HYGIENE TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

Product Information

Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explanatory.

Chemical Name and/or Family or Description

Refers to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following characteristics: (1) has a flash-point below 200°F, closed cup or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm for gases and vapor, below 5 mg/m^3 for dusts, fumes and mist, and below 25 MPPCF for mineral dust; (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumonoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapors, mist or smoke which have one or more of the above characteristics.

Physiological Effects

Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

Median Lethal Dose or Concentration (LD50, LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposue time is indicated.

Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation when tested by the method described. If numbers are not available, a yes or no answer indicates whether or not the material is an irritant.

Emergency and First Aid Procedures

Gives first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

Occupational Control Procedures

Protective Equipment

Type of protective equipment that is necessary for the safe handling and use of this product.

Ventilation

Ventilation: type, i.e. local exhaust, mechanical, etc.

Precautionary Label

Label that is required or recommended.

Permissible Concentrations

Indicates Threshold Limit Value (TLV) and/or Time Weighted Average (TWA) as established by the American Conference of Governmental Industrial Hygienists and/or standards promugated by the Occupational Safety and Health Administration.

Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

Chemical and Physical Properties

Boiling Point (or Range)

In degrees F. (or C.), Boiling Point at 760 mmHg.

Vapor Pressure

Refers to pressure of saturated vapor above the liquid expressed in mm of Hg. at 20°C. or 68°F.

Specific Gravity

The ratio of the density of the product to the density of water.

Vapor Density

The ratio of the density of the vapor at saturation concentrations (20°C. or 68°F. to the density of air at 760 mmHg.)

Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

pH

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 —strongly acidic
pH5-7 —weakly acidic
pH7-9 —weakly basic
pH9-14—strongly basic

Solubility

Refers to the solubility of a material by weight in water at room temperature. The terms negligible, less than 0.1 percent; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable 10% or greater. Gives solubility in organic solvents where appropriate.

Percent volatile by volume amount volatized at 20°C. or 68°F. when allowed to evaporate.

Evaporation

Gives the rate of evaporation compared to a standard.

Viscosity

Measure of flow characteristics in Kinematic viscosity of Saybolt Universal Seconds.

Hazardous Polymerization

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