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Attached is a copy of Dr. Mellon's annual report of what he and his Corporate health/safety staff did for the yrs in 1983. It reminds one of the saying "if you don't blow your own horn, nobody else will."

Occupational Medical Department

1983 Annual Report

CertainTeed

3/6/84
DRH

CTL002925

1983 HEALTH/SAFETY
MEDICAL
ANNUAL REPORT

INTRODUCTION

Despite the emphasis of the Reagan Administration to deregulate, a significant amount of effort was expended in 1983 in responding to health and environmental regulatory issues and this continues at years end.

Regulatory issue involvement included responses to the proposed Environmental Protection Agency (EPA) PCB rules; implementing the Occupational Safety and Health Administration (OSHA) Hearing Conservation Standard; implementing the EPA Significant Adverse Reactions Regulation; implementing the California Hazardous Substances Training and Information Act; implementing changes in the Department of Transportation (DOT) Federal Motor Carrier Safety Regulations; responding to the EPA reporting action on asbestos under the Toxic Substances Control Act (TSCA) Section 8, and at years end, undertaking the task of implementing the OSHA Hazards Communication Rule.

Trade Association activities were quite active. These included the completion of several studies under the sponsorship of the Thermal Insulation Manufacturers Association (TIMA) on fibrous glass toxicity, the initiation of a new fibrous glass toxicity study on current workers, on a new epidemiological study with ARMA on asphalt workers; a joint effort with the Asphalt Roofing Manufacturers Association (ARMA) responding to the EPA PCB rule making, and at years end, a joint effort with the Asbestos Information Association/North America (AIA/NA) on responding to the OSHA Emergency Temporary Standard for Asbestos. → Jay BAKER did!

The staff made 43 plant visits during the year with a total of 24 locations visited. Included in these visits, were 31 industrial hygiene surveys as part of the company industrial hygiene surveillance program.

Several new Unit Programs were issued in the CertainTeed Health Maintenance Manual providing guidelines for controlling Asbestos, Vinyl Chloride, Hearing Conservation, Audiometric Testing, and calculating confidence levels for industrial hygiene sampling. A revision of the Corporate Procedure on Fleet Safety was also issued.

PATCO asked for and provided 90% of info!

Over 2000 medical files have been stored in the Computerized Health Information System. Programs for retrieving and analyzing this information as well as programs for storing and analyzing industrial hygiene data will receive major emphasis in 1984. The recent acquisition of the Radio Shack TRS 80 Computer will greatly assist in expediting these programs.

The company-wide accident frequency and severity rates continued to improve for the third consecutive year.

REGULATORY ACTIVITIES

Hearing Conservation

The stayed portions of the OSHA Hearing Conservation Amendment to the Occupational Noise Exposure Standard (29 CFR 1910.95) became effective in April 1983. These changes clarified portions on monitoring, audiometric testing, hearing protection, training, and recordkeeping. We revised our Health Maintenance Manual Unit Program to implement these rule changes.

A review of the CertainTeed plants visited this past year found the plants are implementing hearing conservation programs to meet the OSHA Standard.

OSHA also issued a directive in November to their field offices interpreting the requirement in the OSHA noise standard requiring engineering or administrative controls for exposures over 90 dBA. The directive instructs them not to cite for exposure between 90 and 100 dBA if the employee has an effective Hearing Conservation Program, e.g. employees are wearing hearing protectors, audiograms are not showing loss, etc. This information was provided to each operating Group.

I gave to Corp.!

Formaldehyde

As we reported last year, the United Auto Workers filed suit against OSHA seeking an emergency regulation of formaldehyde as a workplace cancer hazard. Since then, another suit has been filed by the National Resources Defense Council and the American Public Health Association stating that formaldehyde should be regulated under the substantial risk provisions Section 4(f) of TSCA.

In response to the suits, EPA responded that the available data was insufficient to establish any substantial risk. Due to the controversy surrounding EPA's assessment, including allegations of EPA management collusion with industry on the subject, EPA recently announced they are reopening the record and are seeking additional inputs to reevaluate the risk.

Asbestos

OSHA issued an Emergency Temporary Standard (ETS) on asbestos exposure (29 CFR 1910.1001) in November. The permissible exposure limit for an 8 hour time weighted average was reduced from 2 f/cc to 0.5 f/cc.

Immediately after the temporary standard was issued, the AIA/NA filed a Motion for Stay and by the end of November, the U.S. Fifth Circuit Court of Appeals granted the motion.

A permanent standard on asbestos is expected to be promulgated later in 1984, but in the meantime, much regulatory activity is expected before such a standard is issued.

The EPA's Office of Toxic Substances has proposed a regulatory initiative to ban five categories of asbestos use and a production cap placed on all other asbestos uses. Targeted under the proposed ban would include asbestos used in cement pipe. The ban and production cap is being proposed under Section 6 of TSCA, under which EPA can control hazardous substances.

Asphalt Fumes

After several years of effort by ARMA and the American Petroleum Institute (API), OSHA revised its regulation on Coal Tar Pitch Volatiles to eliminate asphalt fumes from the regulation. We have supported this action over the years including written submissions to OSHA for the revision.

Despite this action OSHA and NIOSH are continuing study of the toxicity of asphalt fumes. A National Institute for Occupational Safety and Health (NIOSH) sponsored study by A. D. Little in which mice were painted with "asphalt fumes" and "coal tar fumes" produced tumors although the incidence of tumors in those exposed to "asphalt fumes" was much lower. An ARMA Health Issues Committee review of the study roundly criticized the protocol used. (See also page 6, ARMA Activities).

NIOSH also announced a new animal study in 1983 to test the hypothesis that asphalt fumes exhibit carcinogenic properties as a result of low level polynuclear aromatic hydrocarbons (PNAs) initiating activities together with co-carcinogenic activity due to aliphatic straight chain hydrocarbons which account for 99% of the condensed material in asphalt. No information is available on these studies at years end.

EPA Adverse Reactions Rule

An EPA rule 40 CFR 717 was issued to implement Section 8(c) of TSCA. Section 8(c) of TSCA requires that any person who manufactures, processes, or distributes in commerce any chemical substance or mixture must keep records of Significant Adverse Reactions to health or the environment. The purpose of the rule is to create a historical record of Significant Adverse Reactions alleged to have been caused by a substance or mixture. It will act as a means to identify previously unknown chemical hazards and to reveal patterns of adverse reactions.

Memos were being prepared at years end to inform CertainTeed plant managers and marketing and sales personnel of the requirements in this rule. These memos also contain a simple procedure for submitting all allegations to the Corporate Medical Director who will evaluate them and maintain the central file required by the regulation.

OSHA Hazard Communication Regulation

OSHA published its final rule on Hazard Communication in November, 1983. This Rule, 29 CFR 1910.1200 establishes requirements for developing Material Safety Data Sheets (MSDS) on manufactured hazardous chemicals, employee right-to-know, labeling, training and developing written hazard communications procedures at each location.

Because it is a standard, it preempts competing state standards which do not meet certain procedural and substantive criteria. The standard only applies to the Standard Industrial Classification (SIC) Categories 20-39 industries. The states can still apply their rules to non-SIC 20-39 industries in other SIC categories. OSHA also does not have the authority to preempt environmental pollution and community requirements in these state right-to-know laws. Several unions and states have challenged the rule in court for the preemption clause and trade secret confidentiality provisions.

An implementation plan has been prepared by Corporate Health and Safety and an Ad Hoc Committee composed of representatives from each group has been established to develop and implement this program in CertainTeed.

State and City Right-To-Know Laws

Fourteen states and two cities as of September 1983 have promulgated Employee Right-To-Know laws and the regulations vary widely from state to state. With the new OSHA standard, the impact of these laws is unknown at years end. Since the federal standard is not fully implemented until May 1986, indications are that jurisdiction with current laws will continue to enforce them until that date.

Polychlorinated Biphenyl Regulation (PCBs)

The discovery of PCBs in the waste streams from our asphalt roofing manufacturing operations, resulting from the use of waste paper containing PCBs, prompted our intense interest in PCB regulatory actions.

Despite a lack of recognition of this problem by our competitors, at our insistance, ARMA agreed to respond to regulatory and judicial initiatives which could have seriously burdened the industry.

In response to EPA regulatory initiatives stemming from the District of Columbia Court of Appeals ruling setting aside the provision of limiting application of the rules to PCBs in concentrations of 50 ppm or greater, an ARMA response was submitted to EPA on 3/31/83 requesting a use authorization for any PCBs which may contaminate any waste paper used in asphalt roofing manufacturing plants. The technical report backing up this request was prepared by O. Kittilstad.

A proposed EPA rule on this subject was recently published on 12/8/83. If the rule is implemented as proposed, the asphalt roofing manufacturing industry will not be impacted. The ARMA input was extensively cited in the preamble to the proposed rule and had an obvious impact on the rulemakers.

MEDICAL ACTIVITIES

Physical Examination Programs

Unit programs to define the Company Health Maintenance Examination programs are nearing completion after extensive review by the operating Groups. We plan to publish these in early 1984. Essentially the program calls for triennial examinations of plant workers except for those workers where OSHA regulations require more frequent exams, e.g. asbestos and vinyl chloride exposed workers, annual hearing tests, etc. The IG and FRD employees will be examined by our plant nurses.

Health Information System (HIS)

We have inputted data entry screens for 2000 Health Questionnaires and Physical Exam Reports utilizing UFO (User Files On-Line) on the mainframe computer. In completing the HIS, we will continue to use UFO for the medical records input. We will also install a micro computer which is to be hooked into the mainframe for the input of Industrial Hygiene data and Chemical Substances/Physical Agents file. The mainframe is to be used for storage and retrieval of this information. SAS programs will be developed to retrieve the information in on-line reports and batch reports.

In conjunction with a chemical inventory in response to the OSHA Hazard Communications Rule, we are considering the development of a file to maintain an inventory of all chemicals used, produced and distributed together with MSDS's on those substances.

CertainTeed Nursing Seminar

The CertainTeed Nursing Seminar was held on October 3, 4, and 5 in Valley Forge. This years meeting focused on 'Hands On' Physical Examinations. Two nursing professors from Widener University instructed the nurses on how to conduct a physical assessment of CertainTeed employees. Our plans are to use the nursing staff to conduct our Health Maintenance Examinations in IG and FRD and this meeting focused on developing the skills of our nurses to this end.

TRADE ASSOCIATION ACTIVITIES

Asphalt Roofing Manufacturers Association (ARMA)

Dr. Mellon attended four ARMA meetings in 1983 and was appointed as chairman of ARMA's Industry Health Steering Committee. This Group is sponsoring several contracts to study the toxicity of asphalt. These are (1) Penn State Study on the "Biological Effects of Asphalt", (2) a University of California Study of "The Chemistry of Asphalts" and (3) a Georgetown University feasibility study for carrying out epidemiologic studies of the mortality experience of current and former asphalt roofing manufacturing workers. We also provided major assistance to ARMA in responding to the EPA rules for controlling PCB's in concentrations below 50 ppm (see Regulatory Activities, page 4.)

Penn State Study-

This study was a critical review of the literature on the biological effects of asphalt. The study was conducted by Velma Hunt and the final report will be completed in early 1984.

University of California Study-

This study, also nearing completion, is an in-depth review of the complicated chemistry of asphalt. The study is being conducted by Drs. Castagnoli and Burlingame. The object of the study is to provide in-sight to the chemistry of asphalt emissions for the purpose of interpreting and designing asphalt toxicity studies.

Georgetown University Study-

This is a study to determine the feasibility (1) of carrying out epidemologic studies of the mortality experience of current and former asphalt roofing manufacturing workers and (2) to establish an on-going mortality surveillance system for the industry. The aim of the study is to determine whether workers in the asphalt roofing manufacturing industry have important excesses for specific causes of death, especially cancer causes. And if so, whether such excesses may be occupationally related. The feasibility study being conducted by Dr. Leonard Chiazze, has as its major objective a determination of the availability and utility of plant (company) records which might be used in epidemiologic studies.

A protocol for the study has been completed and plant visits to compile the information is scheduled to start in February 1984. The study is scheduled for completion in late 1984 or early 1985.

EPA PCB Rule

The Health and Safety Department was instrumental in preparing ARMA's response to the TSCA PCB rule on the inadvertant generation of PCB's in manufacturing processes. This effort is discussed in more detail in the Regulatory Activities section of this report.

Thermal Insulation Manufacturers Association (TIMA)

Dr. Mellon attended seven TIMA meetings during the year. All of the animal toxicity and epidemiological studies continue to find negative association of disease with exposure to fibrous glass. One new study was initiated during the year with Dr. Hans Weill, Tulane University.

Los Alamos Inhalation Study of Insulsafe-

This animal inhalation study is nearing completion with surviving animals being kept for the rest of their lives where they will be examined. The Insulsafe inhalation study using rats and hamsters has been completed with no evidence of cancer, fibrosis or chronic disease seen in any of the animals.

Brookhaven National Laboratory Study-

The final report on this study was published in 1983. The study found important mechanisms explaining the clearance of fibers from the lungs including capture of the fibers by large macrophages, clearance through bodily waste systems and dissolving of fibers by body fluids. No evidence of cancer or mesothelioma was observed in any of the exposed animals.

Tulane University Mortality Study-

This new study is partially a repeat of the mortality study conducted by Dr. Weill in 1979-80 in which he found some excess of small opacities in chest x-rays in certain categories of fibrous glass manufacturing employees. No symptoms or functional evidence of exposure effects were observed. His earlier study received some criticism for lack of adequate controls. This new study will attempt to assess the significance of the excess of the small opacities. A control population will be used, repeat exams will be obtained on participants in the earlier study and the Study Group will be expanded to include short-term employees to extend the range of dose for investigation.

Asbestos Information Association/North America (AIA/NA)

Dr. Mellon attended one meeting and Janis Woodson attended the annual meeting of the AIA/NA. AIA/NA's thrust in 1983 included efforts to have OSHA adopt a construction industry standard for asbestos, the fight against the Emergency Temporary Standard for Asbestos, and the proposed EPA rule to ban certain applications of asbestos including its use in cement products.

O. Kittilstad is working closely with AIA/NA in preparing a technological feasibility case as part of the industry's position on proposed asbestos standards. He will be meeting with AIA/NA Legal Counsel and Dr. Gordon Bragg from the University of Waterloo, Toronto on January 10, 1984 in Riverside, California Dr. Bragg performed a similar function in connection with the Ontario Royal Commission hearings.

HEALTH PROMOTION

High Blood Pressure Program

This screening program was well received by our employees. Of the 353 Blue Bell and Valley Forge employees that participated in the program, 88% had normal pressure, 7% had slightly high blood pressure and 6% had high blood pressure.

Breast Cancer Program

Drs. C. Korbonits, M.D. and L. Mellon, M.D. were present to answer questions after a breast cancer film was shown to 98 employees.

Daffodil Day

This fund raiser was a great success in that $819.00 in employee purchased daffodils was collected to help support the American Cancer Society's battle against cancer.

Red Cross Blood Drives

One blood drive in Valley Forge and two blood drives in Blue Bell were held this year. Donation quotas for both locations were surpassed this year.

No Smoking Program

The Great American Smokeout was held again this year. The Smokeout is a nationwide campaign sponsored by the American Cancer Society to help smokers quit. Valley Forge and Blue Bell employees participated in this smokeless day by signing a pledge to quit or help a friend quit. Six turkeys were raffled to lucky ex-smokers. Also, this year in conjunction with smoking, a presentation on throat cancer was given by recovered throat cancer patients who underwent laryngectomies.

Management Arthritis Education Program

Dr. Donald Friedman, a specialist in Arthritis Disease spoke on the symptoms and incidence of the more prevalent forms of this disease. The presentation was geared to the managements position on absenteeism, productivity, and cost and to help develop and enhance the health and productivity of employees.

FIRST AID and CARDIOPULMONARY RESUSITATION

The purpose of this program is to provide a first response capability for saving or protecting lives of CertainTeed employees in the event of an emergency. This emergency care is crucial in sustaining life, pending the arrival of emergency rescue services. Twenty-six employees from both Valley Forge and Blue Bell participated in this training program put on by Zee Medical Services.

The trained employee's names and locations will be posted on bulletin boards in the near future throughout Valley Forge and Blue Bell in case an emergency such as heart attack, respiratory failure or major accidents occur.

SAFETY ACTIVITIES

Safety Performance

The company-wide accident frequency and severity rates continued to improve for the third consecutive year. While the rate of occurrence of lost day accidents was up slightly, the combined frequency rate of lost day and restricted work accidents was down about 25%. The lost day severity rate was also down sharply.

CY	Workhours (Millions)	Total Recordable Incident Rate	Restricted Duty Incidence Rate	Lost Day Incidence Rate	Restricted Duty Rate	Lost Day Rate
1981	17.2	13.7	3.5	4.0	40.0	61.0
1982	14.9	11.4	3.4	2.2	36.0	45.0
1983	16.3	10.2	1.9	2.4	22.0	43.0

Twenty one of the 65 reporting locations experienced no lost time accidents for the year. There were significant performances at Kansas City 7 and Chowchilla including periods in excess of 1 million workhours without a lost time accident. Lake Charles also completed 9 1/2 years of operation without a lost time accident. Two SMG plants, Avery and Oxford, also had no lost time accidents for the year.

A quarterly and annual performance report combining accident data and workers' compensation data was jointly initiated with the Corporate Treasury Department. Two reports were issued in 1983. The fourth quarter report will be published in February 1984.

Fleet Safety

A change to the Corporate Procedure AD013, "Commercial Fleet Safety Program" was published in response to changes in the DOT Motor Carrier Safety Regulations 49 CFR 395.

ADDITIONAL STAFF ACTIVITIES

Customer Product Complaint

P. Norris accompanied Levecque Technical Center Insulation Group Quality Control representative to investigate allergic symptoms of customer to Blowing Wool from the attic Insulation in Broomfield, Colorado. Bulk samples of insulation wer obtained, wipe samples were collected throughout the home, and ambient air samples for fiberglass, sulphur dioxide, formaldehyde, phenol, and ammonia were performed to evaluate the complaint. The results showed no detectable levels of sulphur dioxide, formaldehyde, phenol, and ammonia. Very low to no detectable levels of fiberglass were also found in the customers home.

Employee Training

Dr. Mellon spoke to all the employees at seven plants during the year on job health problems and Health Maintenance. These plants were Athens, Social Circle, Dallas, Mountaintop, Chowchilla, Richmond and Avery. These talks, will continue when requested by local management, as they have been well received by the employees.

Group Management Meetings

A number of presentations were made to various Group and Corporate Management Meetings by members of the Medical and Health/Safety Department staff.

Dr. Mellon and O. Kittilstad, did not do anything together with the Group Health and Safety Managers presented a two hour training program on health and safety to the CertainTeed Plant Managers Seminar.

Several other briefings on Health Maintenance were given by Dr. Mellon to various functional departments in Valley Forge and Blue Bell including ISD, the P&PG plant personnel managers, and the SMG plant Employee Relations Managers Seminar.

Several briefings were also given to Mr. Besson's Senior Management Group on new regulatory issues such as the OSHA Hazard Communication Regulation, State Right-To-Know legislation and the status of various toxicity studies in progress with TIMA, ARMA, etc.

Dr. Mellon also spoke on the Health Aspects of Fibrous Glass at the Annual Rossnagel Association Seminar and the Temple University Graduate School.

PROFESSIONAL EDUCATION

O. Kittilstad attended a seminar on Toxicology of Vinyl Chloride Monomer, Polyvinyl Chloride Dust, and other structural analogues in Bethesda, Maryland.

O. Kittilstad attended the Chemical Manufacturers Association Seminar on Polychlorinated Biphenyls.

L. Mellon attended the NAM Washington Issue Briefing on the George Miller Bill - asbestosis bill.

L. Mellon attended the American Occupational Health Conference in Washington, D.C. During this conference, he also attended a course on Occupational cancer.

O. Kittilstad attended a seminar at the Jefferson Medical College on Reproduction and Work.

O. Kittilstad and P. Norris attended the American Industrial Hygiene Conference in Philadelphia.

J. Woodson attended the Asbestos Information Association Meeting in Washington, D.C.

P. Norris attended a Consensus Workshop on Formaldehyde in Little Rock, Arkansas.

L. Mellon, P. Norris and J. Woodson attended a seminar at the Jefferson Medical College on Occupational Immuniological Lung Disease.

O. Kittilstad and P. Norris attended a seminar on Asbestos: Pleural Placques and Parenchymal Disease at Jefferson Medical College.

P. Norris and J. Woodson attended a Business Writing Course by Lewis Spence, Inc. at Valley Forge.

L. Mellon and O. Kittilstad attended the American Industrial Health Council Special Mid Year Briefing in Washington, D.C.

L. Mellon attended the National Safety Council Nationwide TV Seminar on Back Injury Rehabilitation and Related Back Injury Cases.

INDUSTRIAL HYGIENE ACTIVITIES

Monitoring Surveys

Thirty-one industrial hygiene monitoring surveys were conducted by Corporate Health and Safety during 1983:

LOCATION		MONITORING FOR	MONTH
Mountaintop	IG	Chlorine, Inorganic Acids Hydrogen Cyanide, Sodium Hydroxide, Acrolein, Formaldehyde Phenol	January
Berlin	IG	Electrostatic Precipitator Dust	January
Wichita Falls	FRD	Ammonia, Styrene, Noise, Hydrofluoric Acid, Total & Respirable Dust, Silica, Fiberglass, Electrostatic Precipitator Dust	February
Dallas	SMG	Total & Respirable Dust, Silica, Fiberglass, Asbestos, Formaldehyde, Asphalt Fume, PCBs, Noise	March
Dallas	BMDG	Noise	March
Mountaintop	IG	Sodium Hydroxide, Inorganic Acids, Aromatic Amines, Aliphatic Amines, Phenol, Formaldehyde	March
Lake Charles ✓	PPG	Vinyl Chloride Monomer, PVC Dust, Noise	April
Berlin	IG	Noise, Electrostatic Precipitator Dust, Skin Irritation	April
Mountaintop	IG	Sulphur Dioxide	April
Savannah	SMG	Noise, Formaldehyde, Total & Respirable Dust, Fiberglass, Asphalt Fume	April
Levecque Technical Center		Asbestos	April, May
Shakopee	SMG	Asphalt Fumes, Benzene Solubles, Total & Respirable Dust, Noise, Fiberglass	May

LOCATION		MONITORING FOR	MONTH
Atlanta Flex	IG	Noise, Methylene Chloride, Isopropyl Alcohol, Fiberglass	May
Athens Wool	IG	Fluorides, Hydrogen Fluoride, Hydrogen Cyanide, Sulphur Dioxide, Hydrogen Sulphide	May
Athens Bonded Matt	SMG	Formaldehyde, Total Dust, Fiberglass	May
Berlin	IG	Formaldehyde	May, June
Kansas City 7	IG	Formaldehyde	June
Richmond	SMG	PCB's, Asphalt Fumes, Benzene Solubles, Total & Respirable Dust, Fiberglass, Noise	June
Tacoma	SMG	PCB's, Asphalt Fumes, Benzene Solubles, Total & Respirable Dust, Fiberglass, Noise	June
Atlanta Flex	IG	Toluene, Methylene Chloride, Isopropyl Alcohol	June
Athens Wool	IG	Fluorides	June
Athens Wool & Bonded Matt	IG SMG	Formaldehyde	June
Avery	SMG	Total & Respirable Dust, Fiberglass Formaldehyde, PCBs, Asphalt Fumes, Noise	July
Athens Wool	IG	Respirable Dust, Fiberglass, Formaldehyde, Phenol, Ammonia, Noise	September
Athens Bonded Matt	SMG	Electrostatic Precipitator Dust, Fiberglass, Formaldehyde, Noise	September
Atlanta Flex	IG	Methylene Chloride, Isoprophyl Alcohol	September
Corbin	IG	Total & Respirable Dust, Carbon Black, Fiberglass, Ammonia, Phenol	September
Hillsboro	PPG ✓	Asbestos, Silica, Noise	October
Mountaintop	IG	Fiberglass, Noise	October
Riverside	PPG ✓	Asbestos, Silica, Noise	October

Chemical Waste Audit - Levecque Technical Center

An audit of chemical inventory, usage, and disposal was performed at LTC this past year and will carry on into 1984. The purpose of the audit is to insure that chemical usage and disposal at LTC is being accomplished safely and that all federal and state health, and environmental and hazardous waste transportation regulations are being complied with.

The individual chemicals and their Chemical Abstracts Service (CAS) Registry Numbers were incorporated into a simple Computer Program (Radio Shack TRS 80) for storage, sorting and subsequent retrieval for future use.

A hazardous waste disposal procedure has been developed. The discarded chemical waste will be tagged and coded by group and contents of container. Each group, in turn, will be billed for their part of the disposal. Advanced Environmental Technology Corporation (AETC) has been contracted to dispose of the chemical waste identified by the audit and for subsequent generated wastes on a periodic basis.

Industrial Hygiene sampling in the laboratory spaces will be conducted in January 1984 to monitor the efficiencies of the laboratory hoods and employee work habits. The current LTC safety manual will be revised to include the findings and procedures resulting from this study.

SUPPLEMENTAL INDUSTRIAL HYGIENE SUPPORT

Special instructions and equipment "loans" to the plant safety personnel supplemented our industrial hygiene monitoring support. Less equipment loans were done this year due to the increased number of surveys performed, and also the completion of the initial noise measurements for the Hearing Conservation Program in 1982. We will continue this procedure as a cost effective means of supporting the plants on specific problems which arise.

Supplemental studies were conducted at the following locations:

Location	Type of Study
Athens	Methylene Chloride, 1,1,1-Trichloroethane
Savannah	Respirable Dust
Hillsboro	Asbestos
Chowchilla	Total & Respirable Dust, Silica
Cameron Park	Total Dust
Athens	Fiberglass
Savannah	Respirable Dust, Silica
Savannah	Noise
Wichita Falls	Noise
Atlanta Flex	Methylene Chloride, Isopropyl Alcohol
Oxford	Formaldehyde
Tacoma	Total Dust

Asbestos Fiber Counting Quality Control Program

The first test of CertainTeed's semiannual round robin Quality Control Fiber Counting Program began in August of this year. Reference asbestos filter samples obtained from the Proficiency Analytical Testing (PAT) Program of NIOSH were used in this quality control program. The program as outlined in the Asbestos Unit Program, is designed to improve performance of asbestos fiber counting within the company. Participants in this program are from Hillsboro, Riverside, Blue Bell - P&PG, and Corporate. The conclusions are that much variation in counting results, up to 3 standard deviations, which we feel is largely attributable to the differences in microscopes. Also, the counting method presently used is highly subjective and individual perceptions can affect the results. The results of this first test met NIOSH standards for fiber counting.

Industrial Hygiene Laboratory

We continue to utilize our laboratory at the Blue Bell facility in support of our industrial hygiene surveys. Preparations of dust and asphalt fume samples are still performed in-house along with asbestos and fibrous glass counting and gravimetric analysis of nuisance dusts and silica.