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CHEMSTAR CARE

CHEMSTAR Panels and Councils Aid Implementation of Responsible Care®

The chemical industry as a whole recognizes that the public perception about the management of chemicals needs improvement. After analyzing public opinion and industry operations, industry realized that the problem was not perception - it was performance. The chemical industry initiative called Responsible Care® was designed to improve the management of chemicals and thereby eliminate the negative stigma that has enveloped the industry for years.

CHEMSTAR is facilitating implementation by assimilating Responsible Care® activities into its programs. CHEMSTAR groups currently are addressing several Responsible Care Codes of Management Practices including Community Awareness and Emergency Response, Pollution Prevention, Distribution, Process Safety, Employee Health and Safety, and Product Stewardship. Codes of Management Practices are the heart of the Responsible Care initiative because they are statements of expected performance that CMA member companies must make good-faith efforts to attain. Through these Codes, Responsible Care is defined and implemented. And through

CHEMSTAR, companies join forces and resources to make the ideals and vision of the Responsible Care Codes reality.

Community Awareness and Emergency Response:

Several Panels are addressing the Community Awareness and Emergency Response Code which places its emphasis on community outreach and dialogue. Often, activities under this Code overlap with the Product Stewardship Code which covers product specific information to educate customers on proper use and disposal practices of chemicals.

In 1991, the Vinyl Chloride Panel developed a mutual aid network for vinyl chloride rail transportation in the U.S. Vinyl chloride monomer is a large volume chemical of which approximately half is transported by rail. Three years ago, there was no organized way to handle emergency responses to vinyl chloride incidents. Today, the network consists of eight companies committed to responding to potentially hazardous vinyl chloride incidents with the expertise necessary to help ensure a safe and informed response. The Panel also developed the Vinyl Chloride Emergency Response Training Program involving

plant and local emergency response personnel from Local Emergency Response Planning Committees and fire departments. The training program consists of a series of workshops held in various locations and includes hands-on emergency response training for vinyl chloride rail incidents. The Panel is now producing a video on safe-handling procedures for vinyl chloride to be used in training for industry personnel.

The Phenol Panel was organized to enhance safety in production, handling, and transportation of phenol. The Panel presents two proactive safety awards annually to phenol manufacturers to recognize dedication, commitment, and performance within the industry. The two awards are: the Industry Leader in Safety Performance Award and the Most Improved Safety Performance Award. The Panel designed a worker safety evaluation process to judge performance. Criteria include: OSHA-reportable lost time injuries; employee days away from work as a result of workplace accidents; EPA-reportable spills; first aid cases; and, emergency response to workplace incidents. The Panel is considering ways to expand the criteria in the future to encompass more indicators of safety and environmental performance. The Panel also is developing stewardship programs to educate customers and other downstream users on safe handling procedures. The Panel has produced a 50-minute video on safe handling procedures to be used in conjunction with a workbook to train plant personnel.

Pollution Prevention:

This Code aims at reducing the amounts of hazardous materials released into the environment. In the interests of community and industry

awareness, the Atmospheric Research Council developed a document, "Chemicals in the Atmosphere", which provides an introduction to the principles that govern the fate and impact of chemicals emitted into the atmosphere. "Chemicals in the Atmosphere" consists of a primer, as an overview to global issues, and a workbook with step-by-step instructions for determining the

estimated lifetime of a chemical in the atmosphere. Future efforts of the Council include refining estimates of direct Global Warming Potential of chemicals as well as sponsoring research to evaluate the potential indirect effects of chemical emissions on climate change.

The Council currently is drafting a consensus report to characterize indirect effects on the global climate change of atmospheric emissions resulting from products and processes of the chemical industry.

Distribution:

The Distribution Code requires that CMA members evaluate carriers that transport chemicals for safety fitness and regulatory compliance. The Code also requires feedback to carriers on their safety and regulatory performance and gives suggestions for improvement. The Carrier Assessment Council formed in 1990 in direct response to the requirements of the Distribution Code. Although the industry record for transporting hazardous materials shows a 99.9% success rate, the industry aims to reduce risk even more. The CAC, which includes about 40 CMA member companies, formed various workgroups to develop evaluation tools that could be used to evaluate the various types of carriers: highway, rail, barge, and vessel container. The highway protocol is complete. The rail, barge, and vessel

container protocols are expected to be completed by August. The highway protocol has been transferred to the CMA Distribution Committee for implementation. The Committee plans to work with the carrier industry to establish a "self-assessment program" whereby the highway carriers will use the highway protocol as a basis for communication with chemical industry shippers.

The Chemical Distributors Council also focused on response to the Responsible Care Distribution Code. The Council developed an implementation aid for the Code entitled, "Chemical Distributors Self-Assessment Protocol." The protocol provides guidelines for evaluation of a distributor's operations. Through in depth questions about safety, emergency preparedness, transportation, transportation equipment, product information, and hazardous waste, the protocol helps companies identify strengths and areas where improvement is needed. Addenda cover

quality control, customer service, and corrective action processes and procedures. Manufacturers can use the protocol to assess their own internal distribution activities. The Council will release a document

addressing the Product Stewardship Code this year.

Process Safety:

The focus of the Process Safety Code is on prevention of fires, explosions, and accidental chemical releases. The activities of the Vinyl Chloride and Phenol Panels certainly fall under this Code as well as the CAER Code. In addition, the Ethylene Glycol Ethers Panel has prepared a process safety document for Panel member companies to distribute to customers. The document is a brochure on process safety designed to inform industrial users of potential safety hazards associated with the processing or recovery of ethylene glycol ethers.

The Total Quality Council believes that Total Quality Management tools can make Responsible Care implementation aids more efficient.

Through CHEMSTAR, companies join forces and resources to make the ideals and vision of the Responsible Care Codes reality.

The Maleic Anhydride Panel formed with the purpose of addressing Responsible Care® product stewardship issues. In line with the Process Safety Code, the Panel is producing two videos and a brochure on safe handling and safe unloading of maleic anhydride from both tank trucks and railcars.

The Total Quality Council believes that Total Quality Management tools can make Responsible

Care implementation aids more efficient. The Council formed a joint task group with the former CMA Engineering and Operations Committee (now part of the Environment, Health, Safety, and Operations Committee) to demonstrate specific applications of TQM using the Process Safety Code. The project includes three parts. The first piece, "Integrating Process Safety and Total Quality: A Matrix," graphically depicts the common elements of process safety initiatives (the Process Safety Code and OSHA's Process Safety Standard, 1910.119) and several quality initiatives (ISO 9000, the Malcolm Baldrige National Quality Award, and the Total Quality Council's "Criteria for Continuous Improvement"). The second and third pieces of the document include a

Although the industry record for transporting hazardous materials shows a 99.9% success rate, the industry aims to reduce risk even more.

"Roadmap" for implementing process safety in a quality environment, and a "Toolbox" of quality techniques that can be used to implement each of the 22 elements of the Code. Included with the Matrix is a chart showing the connections between elements of the Process

Safety Code and the other five Responsible Care® Codes. The Council believes that the process used to develop the Matrix, Roadmap, and Toolbox for the Pro-

cess Safety Code can serve as a model for similar efforts to develop implementation aids for the remaining Codes. The Matrix is available now from the Total Quality Council (contact Trish Messenger at 202/887-1169). The "Roadmap" and "Toolbox" will be issued this fall.

Product Stewardship:

The Product Stewardship Code covers all stages of a product's life. The Code focuses on educating customers on proper use and disposal practices by providing product-specific information. This Code also addresses product research and development issues. In some areas, the Code overlaps with the Employee Health and Safety, Process Safety and Distribution Codes.

In a sense, almost all of the CHEMSTAR panels and councils address the Product Stewardship Code. For example, CHEMSTAR groups often sponsor research for specific chemicals. This data can be used in risk management programs that fall under the Product Stewardship umbrella. For example, in 1990 the Cumene Panel conducted a voluntary subchronic study to address effects that were seen in an earlier subchronic study conducted under EPA-required testing of the chemical. In response to the Panel's voluntary research, EPA found that cumene does not cause cataracts and is not neurotoxic — both valuable findings when designing risk management efforts. In another example, voluntary testing programs are being conducted by the Oxo-Process Panel on butyl and ethyl acetate to supplement the available toxicity data. Many other Panels are involved in voluntary research of this nature. This research provides regulators, and in the long-run consumers, with information necessary to understand these chemicals. It also provides manufacturers and their customers with data to aid in reducing risks of handling the chemicals.

CHEMSTAR Panels and Councils are eager to explore new ways to achieve Responsible Care® goals. *If you would like to learn more about tailoring programs to meet these goals, contact Kim Reed at 202/887-1191.*

MORE ON OECD VOLUNTARY TESTING

Completed OECD Phase 4 Screening Information Data Set dossiers were due to Charles Auer at EPA by June 1, 1994. The OECD dossier review will henceforth take place by mail rather than the formal setting of a SIDS Initial Assessment Meeting.

Industry volunteers are being sought to provide EPA with SIDS dossiers and screening test data on the following High Production/High Release chemicals on the Toxics Release Inventory, with U.S. production of >106 pounds and TRI releases >106 pounds annually:

CAS NO./CHEMICAL

000074839 /Bromomethane
000075650/t-Butyl Alcohol
000091203/Naphthalene
000092524/Biphenyl
000095476/p-Xylene
000108383/m-Xylene
000109864/2-Methoxyethanol
000110805/2-Ethoxyethanol
000115071/Propylene
000463581/Carbonyl sulfide
001330207/Xylenes (Mixed Isomers)
010049044/Chlorine Dioxide

To volunteer for providing a SIDS Dossier or for more information, contact Cecilia Spearing at 202/887-1305.

ETHYLENE AND PROPYLENE CLEARED BY IARC

In a decision with significant ramifications, the International Agency for Research on Cancer ruled that ethylene and propylene are not animal carcinogens. IARC held a meeting in February to review data on 14 chemicals and determine whether to designate them possible, probable, or known human carcinogens. A concern about ethylene and propylene was based on their metabolism to eth-

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ylene oxide and propylene oxide, respectively. The oxides are classified as animal carcinogens. In late 1993, the German MAK Commission had listed ethylene as a carcinogen based upon its metabolism to ethylene oxide.

The Olefins Panel in collaborated with the Society of Plastics Industry to address the IARC review. The Panel sponsored scientific studies on ethylene which showed that, although a small amount of ethylene oxide was produced during metabolism, it did not cause the DNA damage seen with ethylene oxide exposure. Thus, ethylene is unlikely to cause cancer. Based upon this and other research, which was presented to IARC scientists, ethylene and propylene were not designated as carcinogens.

In addition to triggering labeling and reporting requirements, the designation would have triggered concerns about food contact uses of polymers derived from the two chemicals and extensive data collection and analysis would have been necessary. *For more information, contact Dr. Elizabeth Moran at 202/887-1182.*

CHEMSTAR Shines on Its Own

We are pleased to announce the establishment of CHEMSTAR as a CMA department and congratulate Dr. Langley A. Spurlock for being named as its Vice President. Twenty-two years ago, the Board of Directors of the Manufacturing Chemists Association approved the first self-funded chemical specific organization under the Association's umbrella. The "Ad Hoc Task Group on Phosgene Safety," as it was called, was the beginning of today's CHEMSTAR Phosgene Panel at CMA.

This single event launched a remarkable evolution of special interests within the Association's membership. From one research-focused special project, the trail led through special programs focused on regulatory activities (advocacy), to broad-spectrum organizations addressing a wide variety of topics important to the chemical industry.

In 1979, these special issue groups totaled seventeen and were consolidated as the Biomedical and Environmental Special Projects Division. Then, in 1986 the division was renamed CHEMSTAR. For the past three years it has been a part of CMA's Technical Services Department. On April 19, the CMA Board approved the formation of the CHEMSTAR Department to be headed by a newly appointed Vice President, Dr. Spurlock.

Since its inception, CHEMSTAR has grown to manage the activities of 66 groups (60 panels, and 6 councils) which address advocacy, research, education, communication, evaluation, and litigation efforts. As a full-fledged department of CMA, CHEMSTAR looks forward to continuing its tradition of excellence in providing high value-added services to the chemical industry. *For more information, contact Laura Sutton at 202/887-1220.*

Compromise On Neurotox Test Rule

In 1991, EPA published the Multisubstance Proposed Rule for the Testing of Neurotoxicity under TSCA Section 4. The test rule required that a battery of six neurotoxicity studies be conducted on ten solvents: butanol, methyl isobutyl ketone, acetone, ethyl acetate, diethyl ether, 2-ethoxyethanol, isobutyl alcohol, butyl acetate, n-amyl acetate, and tetrahydrofuran. The specific studies required by the test rule were: acute and subchronic motor activity and functional observation battery; subchronic neuropathology; and, subchronic schedule-controlled operant behavior (SCOB) testing.

This proposed test rule was a departure from previous testing programs under TSCA, in that it was the first time EPA had required testing for a single endpoint for a group of essentially unrelated chemicals. EPA typically had required testing for multiple endpoints for a single compound or a group of related compounds.

In 1992, EPA declared an "open season" with the opportunity to initiate

negotiations for TSCA Section 4 testing consent orders. Producers of the ten chemicals cited in the test rule formed the CHEMSTAR Neurotoxicity Work Group to develop an alternative proposal. The final rule, issued in July 1993, was virtually identical to the proposed rule and did not consider any of the Work Group's proposals.

After carefully considering all options, manufacturers filed a petition for judicial review in the United States Court of Appeals for the Fifth Circuit in October 1993. The petition challenged all testing requirements for six chemicals (ethyl acetate, butyl alcohol, acetone, MIBK, diethyl ether and 2-EE), and the SCOB testing requirement for the remaining four chemicals. The legal challenge reflected disagreement principally on two issues: (1) whether studies submitted by petitioners during the rulemaking proceedings were sufficient to enable EPA to evaluate potential neurotoxicity hazards for the six chemicals; and (2) whether it was appropriate to include the SCOB test in an initial battery of neurotoxicity screening studies.

In December 1993, CMA and EPA began settlement negotiations which resulted in a tentative settlement agreement being signed on April 28, 1994. Culminating a two-year effort, the settlement agreement provides for a substantial reduction in testing requirements, but still requires some testing for most of the ten chemicals covered by the final rule. The settlement is expected to become final sometime later this year when the modified testing requirements have been incorporated into testing consent agreements.

Although the settlement agreement provides for a stay of testing requirements, petitioners have already initiated testing on butyl acetate, isobutanol, and ethyl acetate. Under the terms of the settlement, all testing will be completed within the same 36-month timeframe established in the final test rule. Additionally, the settlement agreement stipulates that EPA and petitioners will jointly sponsor a public work-

shop after the SCOB testing is completed to discuss a variety of neurotoxicity testing and risk assessment topics.

On June 27, EPA published three notices in the *Federal Register* announcing the following: Stay of the Multisubstance Rule for the Testing of Neurotoxicity, Proposed Revocation of the Final Multisubstance Rule for the Testing of Neurotoxicity, and a Proposal for the Opportunity to Participate in Negotiations for Neurotoxicity Testing. This latter notice confirmed a meeting for July 28, in which interested parties to the testing could identify disagreements and comment on the testing plans in the draft enforceable consent agreements. Because no comments were offered at the July 28 Meeting, EPA used the public forum to outline a schedule for finalizing the consent agreements and revoking the test rule.

Despite the legal challenge to an EPA final rule, the test sponsors have been able to maintain a very constructive dialogue with the Agency on technical improvements to the test protocols, and on changes to the schedules that will permit more efficient testing of individual compounds. Early in the litigation, petitioners agreed to accelerate testing for two compounds for which only SCOB testing requirements were being challenged. EPA, in turn, agreed to allow petitioners to defer testing on other chemicals for which all testing requirements were being challenged. Petitioners believe this cooperative approach on both sides played an important role in the ultimate negotiation of a settlement of the case. *For more information, contact Barbara Francis at 202/887-1314.*

Typical Settlement Agreement Requirements

Chemicals	Required Studies
Isobutyl Alcohol	all studies
Butyl Acetate	all studies
Ethyl Acetate	all studies
Acetone	SCOB Only
Methyl Isobutyl Ketone	SCOB Only
Butanol	Hydrolysis Study of n-butyl acetate to characterize the rate of hydrolysis to butanol
n-Amyl Acetate	all studies except SCOB
Tetrahydrofuran	all studies except SCOB
2-Ethoxyethanol	no testing; SNUR required before use in consumer products
Diethyl Ether	no testing



This is the latest article in a series which highlights the activities of the various CHEMSTAR Panels and Councils.

In February, the Olefins Panel and the Butadiene Panel merged to form the new Olefins Panel. Previously, the Butadiene Panel focused on a variety of health-based regulations while the Olefins Panel concentrated on environmental regulations from an engineering point of view.

The Butadiene Panel formed in 1984 to address EPA's review of a National Toxicology Program mouse bioassay under TSCA Section 4(f). The Panel commented on the resulting EPA risk assessment and referral to OSHA under TSCA Section 9 for development of a workplace standard. The Panel has focused on conducting research and commenting on a variety of state and federal regulations, frequently in cooperation

with the American Petroleum Institute and the International Institute of Synthetic Rubber Producers.

The Olefins Panel was originally formed in 1991 to coordinate advocacy on environmental issues affecting ethylene manufacturers. The Panel's initial focus was on the Clean Air Act. In a major accomplishment, the Panel convinced EPA that ethylene manufacturing processes were so different from other Synthetic Organic Chemical Manufacturing Industry processes that they should be specifically excluded from the Hazardous Organic National Emissions Standard for Hazardous Air Pollutants. Accordingly, EPA issued the final rule for the HON in March with a specific exclusion for ethylene manu-

facturing. Ethylene manufacturing will be added to the source category list and EPA will propose the development of a specific Maximum Achievable Control Technology standard. The Panel will work with EPA to develop appropriate MACT standards for ethylene manufacturing.

In addition to continuing the work of the original Butadiene and Olefins Panels, the new Panel will address research and advocacy on chemicals of interest to all ethylene manufacturers. At present, the Panel covers the major products ethylene and propylene, and the by-products butadiene and 4-vinylcyclohexene. Benzene and other by-products may be addressed if the need arises.

Dr. Norman Morrow of Exxon Chemical Americas chairs the new Olefins Panel. He was chair of both the Olefins and Butadiene Panels. Panel member companies include:

American Petroleum Institute
Amoco Chemical Company
Asahi Chemical Industry
BP Chemicals, Inc.
Chevron Chemical Company
The Dow Chemical Company
Eastman Chemical Company
Exxon Chemical Company
Fina Oil and Chemical Co.
Huntsman Corporation
Lyondell Petrochemical Co.
Mobil Chemical Company
Novacor Chemicals Ltd.
Occidental Chemical Corp.
Phillips Petroleum Co.
Quantum Chemical Company
Shell Oil Company
Texaco, Inc.
Texas Petrochemicals Corp.
Union Carbide Corporation
Union Texas Products Corp.

Good Science - the Cornerstone of Butadiene Advocacy

Butadiene is a potent carcinogen in the mouse but only a weak carcinogen in the rat. Epidemiology studies have failed to establish a link between butadiene exposure and increases in cancer in the workplace. The question of cancer risk to humans, if any, has led to the development of a four-year research program. The Panel's research examines the effects and metabolism of butadiene in different species in order to understand the mechanism by which butadiene causes cancer in mice. The relevance of mouse effects to humans is being examined by an analysis of species differences (mouse, rat, human) in metabolism. Once these differences are understood, the risk to humans can be assessed more accurately.

The IISRP is sponsoring a comprehensive epidemiology update study on butadiene. The epidemiology and Panel research results will compliment each other in defining butadiene effects and risks.

Advocacy - the Butadiene Story

During its 10 years of existence, the Butadiene Panel has supported an advocacy program directed toward EPA, OSHA, IARC and the California OSHA. The Panel's advocacy focuses on proper evaluation of the scientific data on BD and appropriate human risk assessment.

Significant Accomplishments

In conjunction with the Phosgene and Ethylene Oxide Panels, the Butadiene Panel conducted the most comprehensive measurement of fugitive emission factors ever done in SOCMI. The Panels' data showed that emissions from most components are much lower than EPA estimates. The Panels' work led EPA to change the standard emission factors used for SOCMI.

In comments on EPA's draft report, "Mobile-Sources Air Toxics Study", required under the Clean Air Act Amendments, the Butadiene Panel emphasized EPA's inconsistent approach to risk assessment and its failure to consider species differences in BD effects. As a result, EPA's final report contained a balanced review of the data. Future regulation of motor vehicle emissions will have sound science and a balanced analysis of risks as a basis.

The Panel formed a joint program with IISRP and the American Petroleum Institute to address the proposed OSHA workplace standard of 2 ppm for butadiene. IISRP took the lead in epidemiology issues while the Panel organized the toxicology research and risk assessment. The two organizations worked together on feasibility, application and medical surveillance. The final OSHA standard is expected in early 1995.

The Panel negotiated a consent order in lieu of a test rule under TSCA Section 4 on 4-vinylcyclohexene (4-VCH), commonly known as butadiene dimer. The consent order testing compares 4-VCH to butadiene, rather than requiring an exhaustive independent testing program. As a result of this approach, the industry saved several million dollars in testing costs.

California has reviewed BD under three regulations. First, Cal-OSHA proposed the establishment of a workplace standard. The Panel commented on Cal-OSHA's proposal and participated in an Advisory Group Meeting. As a result, California set its occupational exposure standard at 2 ppm, consistent with the proposed federal OSHA Standard. Next, California listed BD as high priority for review as a reproductive toxicant under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). The Panel filed comments on the flaws in the species differences data and the toxicity database. As a result, BD is no longer a candidate for priority review. The California Air Resources Board also proposed to list BD as a Hazardous Air Contaminant and developed a cancer potency factor. The Panel filed comments on the use of species differences data in the risk assessment. Although unsuccessful in affecting the risk assessment, the Panel may request a re-evaluation by the Board once the BD research program is completed.

In 1988, the Panel co-sponsored an International Symposium on Health Effects of Butadiene, in conjunction with IISRP and NTP. A second symposium is scheduled for June 27-29, 1995. This symposium will provide a forum for presenting the results of the CMA and IISRP research programs.

Olefins Panel Accomplishments

In February, the International Agency for Research on Cancer began a review of 14 chemicals, including ethylene and propylene, for possible designation as carcinogens. Although lifetime animal studies on both chemicals did not indicate any elevation in cancer incidence, IARC's concern was based on the metabolism of these chemicals to ethylene oxide and propylene oxide which are known animal carcinogens.

Responding to the IARC review, the Olefins Panel formed a joint program with the producers of polyethylene and polypropylene in the Society of the Plastics Industry. The program consisted of research on ethylene conducted

at the University of North Carolina, development of scientific review papers by the Panel, and coordination of a communications program by SPI. The research was designed to look for ethylene oxide-specific effects in ethylene-exposed rats and mice. The results verified the metabolism of ethylene to ethylene oxide but found no increase in ethylene oxide-specific DNA adducts or other health effects. Based on the research results and observed effects, IARC continued to assign ethylene and propylene to its unclassified category.

The Olefins Panel recently completed a benchmarking survey on hazardous air pollutant and Volatile Organic Compound emissions from member company facilities. A follow-up survey is planned for later this year or in 1995.

The Olefins Panel held a workshop on methods for controlling fugitive emissions. A survey of control practices was conducted in conjunction with the workshop. Sharing of information will help member companies design strate-

gies to control emissions from ethylene manufacturing.

The Panel commented on the draft EPA Alternative Control Technology document, "Control of NOx Emissions from Process Heaters." The document will be used by states in ozone-nonattainment areas to develop NOx emission controls under the Clean Air Act Amendments. The Panel succeeded in demonstrating to EPA that process heaters used in ethylene manufacturing should be treated differently from process heaters in general. The Panel's advocacy efforts will result in the application of appropriate control strategies by the states.

What's Next?

The new Olefins Panel will continue and complete the BD research program, work with API and IISRP to address the OSHA workplace standard, and work with API on Clean Air Act advocacy under the Mobile Sources Provisions. In addition, the Panel will continue to advocate the use of good science and reasonable risk assessment in

state and federal regulations. As part of this effort, the Panel is beginning to develop its own risk assessment which will incorporate the results of the mechanistic and species differences research and IISRP epidemiology findings.

The Panel will support environmental advocacy under the Clean Air Act, including the development of a MACT standard for ethylene manufacture. Research on the health effects of ethylene and propylene will be considered and advocacy will continue as needed.

The Panel is working with the CEFIC Lower Olefins Sector Group to develop coordinated research and advocacy programs on ethylene, propylene, and butadiene. Currently, butadiene reproductive effects research is being conducted jointly with CEFIC. The CEFIC group will focus on male reproductive effects, and the Panel will focus on ovarian effects. Together, the two groups are developing a research and advocacy strategy on ethylene and propylene.

For more information on the new Olefins Panel, contact Dr. Elizabeth Moran at 202/887-1182.

California Lets Go On Glycol Ethers

(Sacramento, CA, January 10)

For the second and final time, California legislators defeated a bill attempting to restrict the use of certain ethylene and propylene glycol ethers. The proposed legislation, introduced previously by Senator Tom Hayden, included elements from criminalizing the use of certain glycol ethers to directing Cal-OSHA to perform numerous and redundant reviews on other glycol ethers. The Ethylene Glycol Ethers Panel appeared before the California Senate Appropriations Committee last April opposing the bill. At this second hearing of the bill, Cal-OSHA took the lead in opposing the initiative. The bill was defeated by a vote of 6 to 5. For more information, contact Kathryn A. Rosica at 202/887-1293.

Fuels Detergent Task Group Points To Simplicity

(Washington, DC, January 11)

The Fuels Detergent Performance Task Group, of the Petroleum Additives Panel, testified at a public hearing on EPA's proposed regulation for deposit control gasoline additives. The Task Group also submitted written comments on February 14 supporting the broad outlines of the performance-based self-certification system that EPA proposed. However, the Task Group expressed concerns on several points which can be clarified, simplified, and made more practical and cost-effective without sacrificing air quality benefits. The Task Group coordinated efforts with the American Petroleum Institute in developing comments and test data for the proposed rulemaking. For more information, contact Kathleen Roberts at 202/887-1146.

Handling Phenol Safely

(Washington, DC, February 1)

Manufacturers of phenol have developed a self-contained training program on how to handle and transport phenol safely. The training program, which includes instructor and student workbooks, along with two separate videotapes, is part of the Phenol Panel's program to improve health, safety and environmental performance in the industry. The training program targets customers, transporters, plant personnel and other downstream users and emphasizes first aid measures, personal protective equipment, emergency response, plant handling, and unloading procedures and precautions.

Phenol is a hazardous material and care must be exercised when handling

the material. "The training program has been very well received by phenol users as a versatile and important tool in training their workers," stated Joe Shrom of AlliedSignal, Chair of the Task Group which produced the training program. *For more information on obtaining the training program, contact Kathryn Rosica at 202/887-1293.*

Cresols Panel Craves Change

(Washington, DC, February 2)

Representatives of the Cresols Panel met with members of EPA's Carcinogen Risk Assessment Verification Endeavor Work Group and the Office of Health and Environmental Assessment. The purpose of the meeting was to discuss the IRIS database classification of cresols as "possible human carcinogens." The Panel believes that the studies cited in the IRIS database do not support this classification and further believes that results from the Panel's earlier TSCA Section 4 testing program, which were not included in the IRIS review, indicate that the cresol isomers should not be classified as carcinogens. The presentation was well received and the Panel believes the CRAVE Work Group will reconsider the cresols classification in the next fiscal year. *For more information, contact Barbara Francis at 202/887-1314.*

Carbon Disulfide Objects to Uts

(Washington, DC, March 3)

Members of the Carbon Disulfide Panel met with EPA representatives to discuss the universal treatment standards for carbon disulfide, proposed under RCRA. The Panel objected to the standards proposed for carbon disulfide because they are based on limited data from waste treatment facilities that do not reflect Panel member facilities' wastewater. Waste CS₂ occurs in the process water of Panel members' facilities in low concentrations. The proposed standards are inappropriate when applied to Panel member companies' wastewater which is characterized by high volume, low CS₂ levels. The Panel

had provided some data from the manufacturing facilities prior to the meeting and agreed to provide additional data in support of its position. EPA was receptive to considering the new data in future rulemakings. *For more information, contact Dr. Elizabeth Moran at 202/887-1182.*

HFPI Is Formed

(Washington, DC, March 8)

The Hydrogen Fluoride Industry Practices Institute, a subsidiary of the Chemical Manufacturers Association, was officially established. The Institute, whose members include hydrogen fluoride manufacturers and users or processors, will develop and publish recommended practices for the HF industry in transportation, storage, construction materials, personal protective equipment, and other areas of concern. At this time, the Institute is developing a canvas list of reviewers who will provide technical input for the first set of guidance documents. *For more information, contact Kathleen Roberts, HFPI Administrator, at 202/887-1146.*

Butyl Acetate Task Group Gets Extension

(Washington, DC, March 18)

As a result of the Oxo Process Panel Butyl Acetate Task Group's efforts, the American Conference of Governmental Industrial Hygienists granted a one-year extension of its re-consideration of the Threshold Limit Value for n-butyl acetate until March 1995. In 1992, ACGIH published a notice of intended change of the n-butyl acetate TLV from 150 ppm to 20 ppm. In 1993, the Oxo Process Panel Butyl Acetate Task Group met with TLV Subcommittee members to discuss inconclusive results of toxicology research designed to replicate European toxicity studies. In an attempt to characterize aerosol exposure to n-butyl acetate in the workplace, the Task Group intends to conduct workplace monitoring studies to characterize aerosol exposure to n-butyl acetate. *For more information, contact Barbara Francis at 202/887-1314.*

The ABCs Of Biocides

(Sacramento, CA, April 11)

The Biocides Panel presented a workshop on biocides and their uses to the California Department of Pesticide Registration. The workshop was designed to provide regulators with specific information on industrial processes, biocide application points, industrial hygiene practices of workers, and occupational and environmental exposure potentials. Through educational sessions like this workshop, the Panel hopes to encourage streamlining of regulatory processes by highlighting the low human and environmental exposure potentials of biocides. Comments following the workshop indicated that the audience found the information useful in expanding their knowledge of the biocides industry. *For more information, contact Dr. Has Shah at 202/887-1192.*

Biocide TRI Tribulations

(Washington, DC, April 11)

The Biocides Panel submitted comments on EPA's proposed rule to add 313 chemicals and chemical categories to the Toxic Release Inventory under EPCRA. The Panel's comments focused on the proposed addition of 25 industrial biocide active ingredients to the TRI. The addition of these biocides to the TRI would contradict the findings of EPA's Office of Pesticide Programs in extensive reviews conducted under FIFRA. The Panel pointed out that in conducting its regulatory impact analysis, the Agency failed to consider the potential impact of the TRI listing on biocide registrants and users. *For more information, contact Dr. Has Shah at 202/887-1192.*

Petroleum Additives Panel Goes Abroad

(Paris, France, April 13)

Members of the Petroleum Additives Panel Product Approval Protocol Task Group briefed representatives of the European additives, automotive and petroleum industries on two years of experience with the Code of Practice for engine oil testing. The Code became

operational in 1992. The CEFIC Additives Technical Committee is leading the development of a European quality monitoring system that is expected to embrace many of the elements of the Panel's Code.

The presentation reviewed the North American system for testing and certification of engine oils, the stakeholders involved, and the role of the CMA Code in the process. A status report on the Code operation included results achieved, the compliance process and current CMA initiatives. *For more information or copies of the presentation, contact Dr. Carol Stack at 202/887-1196.*

AIC And EPA Discuss

(Washington, DC, April 14)

The Antimicrobial Industry Coalition, composed of the Biocides Panel, Chemical Specialty Manufacturers Association, International Sanitary Supply Association, and the Soap and Detergent Association, met with Dr. Lynn Goldman's staff at EPA to discuss the antimicrobial industry's suggestions to streamline the pesticide registration process. Adoption of these suggestions would significantly reduce the burden on the Agency's staff without compromising the integrity of scientific review. The AIC will continue to work with EPA on streamlining activities. *For more information, contact Dr. Has Shah at 202/887-1192.*

Total Quality Council Assists Birth Of NVCASE

(Washington, DC, April 22)

The National Institute of Standards and Technology announced the establishment of the National Voluntary Conformity Assessment System Evaluation Program. The Program will provide a basis for the U.S. Government to assure foreign governments, particularly European Union members, that qualified U.S. conformity assessment bodies are competent to satisfy foreign regulatory requirements. NVCASE covers organizations engaged in product sample test-

ing, product certification and quality system registration. Publication of the final rule concludes more than four years of work by industry, including the Total Quality Council, systems registrars and the U.S. government. Council action centered on preventing government duplication of efforts already underway in the private sector. Establishment of NVCASE reflects the importance of conformity assessment activities to international trade, particularly in the negotiation of Mutual Recognition Agreements aimed at improving access for U.S. goods and services to foreign markets. *For more information, contact Trish Messenger at 202/887-1169.*

EGE Panel International Rendezvous

(Nancy, France, April 22)

Members of the Ethylene Glycol Ethers Panel Toxicology Research Task Group presented results of research on a number of different ethylene glycol ethers at the International Symposium on Health Hazards of Glycol Ethers, in Nancy. The symposium, jointly sponsored by the U.S., French and Swedish governments, and involving over 250 participants from 17 different countries, showcased research findings since the last symposium on glycol ethers held over 10 years ago.

Panel-sponsored research highlighted the safety of ethylene glycol monobutyl ether, (also known as 2-butoxyethanol, and the commercial trade names of Butyl Cellosolve[®], Butyl Oxitol[®], Dowanol[®]EB, Ektasolve[®]EB Solvent, and Glycol Ether EB[®]). Research on the safety of diethylene glycol butyl ether and triethylene glycol ethers also was presented by Panel members. These other glycol ethers are produced in relatively smaller quantities and have more specialized uses than ethylene glycol monobutyl ether.

Presentations or posters were given by Drs. Ralph Gingell of Shell Oil, Richard Corley of Dow Chemical, Tipton Tyler of Union Carbide, and Rodney

Boatman of Eastman Kodak. *For more information, contact Kathryn Rosica at 202/887-1293.*

PGE Panel Gets Stay

(Washington, DC, May 25)

EPA published a stay of the TSCA Section 8(a) and 8(d) reporting rule on the propylene glycol ethers included by the Interagency Testing Committee in its Thirty-First Report. The Propylene Glycol Ethers Panel submitted several letters to the ITC when the report was first published pointing out errors or confusion with the nomenclature, CAS numbers and toxicology information on many of the chemicals in the category. The Panel and ITC have agreed to work together to clarify and correct both the ITC Report and TSCA reporting rules. *For more information, contact Kathryn Rosica at 202/887-1293.*

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Phosgene Departure

Dr. A.W. Hursey, an active member of the Phosgene Panel, will be retiring from GE Plastics. Many thanks to Dr. Hursey for all his effort over the years.

BFRIP Retirement

The Brominated Flame Retardant Industry Panel bid a fond farewell to Bill Hayes, of Ethyl Corporation, as he retired earlier this year. Bill has an integral part of BFRIP since its inception. The Panel originally formed in 1985 under the Fire Retardant Chemicals Association, and became a CHEMSTAR Panel in 1990. Bill's tireless dedication and expertise will be missed by all who had the pleasure of working with him. The Panel wishes Bill the best of luck on all of his endeavors (including his golf game) at his new home in Tuscon, AZ!

Phenol Co-Chair Changes

Dr. Thomas Gardiner of Shell Chemical was elected Regulatory Co-Chair of the Phenol Panel. Gardiner replaces James Santory of Aristech Chemical, who provided the Panel with excellent leadership over the past several years. Santory will continue to serve on the Panel. Gardiner was previously Chair of the Panel's Toxicology Research Task Group. Best of luck to both Jim and Tom.

EOIC Switches Chairs

Dr. Donald Stevenson is retiring from Shell Oil Company and also will retire as Chair of the Toxicology Task Group of the Ethylene Oxide Industry Council. Dr. Sandra Reiss-Murphy of BASF will replace him as Chair. Stevenson will continue to work with the EOIC as a consultant.

David Townsend of Hoechst Celanese stepped down as Chair of the EOIC Safety Task Group. Lou Turner of Shell Oil Company will be the new Chair of the Task Group. Many thanks to Don and David for their hard work and to Sandra and Lou for taking over!

TQC Leadership Succession

Ron Carlson of Amoco Chemical was elected to take the reins of the Total Quality Council. He succeeds David Lindsay of Lyondell, who spearheaded efforts to make Council operations even more efficient and effective. Welcome to Ron and many thanks to Dave!

Richard "Wise's" Up!

Richard Wise of Union Carbide Corporation created a void in several CHEMSTAR Panels when he retired in March from Union Carbide Corporation. Mr. Wise served as Chair of the Oxo Process Panel and Ethylene Glycol Ethers Panels and represented Union Carbide on the Ketones, Isopropanol, and Acetone Panels. Additionally, Wise was instrumental in organizing the Neurotoxicity Work Group, formed in 1992

in response to EPA's "Open Season" comment period for the Multisubstance Proposed Test Rule for the Testing of Neurotoxicity. Chairing this Group as well, Wise contributed to the final settlement agreement signed with EPA on April 28 (See "Features" section). Always finding spare time to organize and chair new groups, Wise was pivotal in forming the Air Issues Task Group in December 1993 which addresses Clean Air issues relevant to the Ketones and Oxo Process Panels. Dick will be missed by CHEMSTAR, but we all wish him the best of luck in his retirement!

Oxo Process and EGE Look to Eastman

In April, the Oxo Process and Ethylene Glycol Ethers Panels changed chairs as a result of the retirement of Richard Wise of Union Carbide Corporation. Eastman Chemical helped make the transition smooth as Dr. Roderick Gerwe and Glenn Jones were elected to chair the Oxo Process and Ethylene Glycol Ethers Panels, respectively. Gerwe is already well-known to CHEMSTAR. In addition to his position at Eastman Chemical as a Senior Associate, Gerwe finds time for the Acetone Panel, Ketones Panel, and other CMA groups. Thanks again to Dick, and welcome aboard to Rod and Glenn. We look forward to a great year!

Vive la difference . . . made by **Larry Andrews** of Arco Chemical who served as a contact for industry observers during the International Agency for Research on Cancer review meeting which took place in Europe from February 15-22.

Larry worked in coordination with Dr. James Swenberg (USA industry observer) to represent all 14 chemicals which were reviewed. Larry served as the primary technical contact for Dr. Swenberg before and during the IARC meeting, as well as maintaining daily contact with industry observers to keep

them updated and informed of the progress of the meeting. He was also on hand to distribute additional information on the chemicals to the reviewers. We thank Larry for acting as such an effective liaison for the industry in this arena.

Th Nitrosamines Panel

The Nitrosamines Panel officially terminated in January. The Panel formed in 1990 to identify and address impending federal and international regulatory actions that could impact nitrosamines. Products of interest to member companies included: rubber additives, secondary amines, cosmetic components, soaps, detergents, and sur-

factants. In 1993, the Panel completed a chapter on N-nitrosamines in *Patty's Industrial Hygiene & Toxicology*. The Panel members also participated in 1993 in the EPA "stakeholders" meeting as part of the EPA Risk Management Review Process. During its lifetime, the Panel worked with OSHA, NIOSH, EPA, the National Safety Council and other

government agencies to discuss potential exposures in the workplace and to promote reasonable regulations. Dr. Charles Green of Witco Corporation was the Panel's last Chair. For more information, contact Dee Kuhn at 202/887-1300.

Comments

Comments to EPA on Chlorine Dioxide Panel Request for a Waiver of Two-Toxicity Tests for Sodium Chlorite (filed by the Chlorine Dioxide Panel, January 11, 1994).

Comments to ACGIH on the Hydrazine Research Update (filed by the Hydrazine Panel, January 14, 1994).

Comments to EPA on the TSCA Section 8(a) and 8(d) Rule and the 31st Interagency Testing Committee Report (filed by the Propylene Glycol Ethers Panel, January 26, 1994).

Comments to EPA on the Proposed Regulation of Fuels and Fuel Additives; Standards for Deposit Control Gasoline Additives (filed by the Fuels Detergent Performance Task Group, February 11, 1994).

Comments to EPA on EPA's Proposed Test Rule for Ethyl Acetate and Other Compounds (filed by the Oxo Process Panel, February 22, 1994).

Comments to the Virginia Department of Environmental Quality on Regulations for the Control and Abatement of Air Pollution (filed by the Acetone Panel, February 24, 1994).

Comments to EPA on the Draft Disinfection By-Products Preamble and Rule (filed by the Chlorine Dioxide Panel, February 28, 1994).

Comments to EPA on the Effluent Limitations Guidelines, Pretreatment

Standards and New Source Performance Standards: Pulp, Paper and Paperboard Category; National Emissions Standards for Hazardous Air Pollutants for Source Category: Pulp and Paper Production; Proposed Rule (filed by the Alkylphenols and Ethoxylates Panel, March 14, 1994).

Comments to EPA on the Extension of Time and Finding Concerning Fuel Additive Waiver Application (filed by the Petroleum Additives Panel, Health, Envir., and Reg. Task Group, March 15, 1994).

Comments to IARC on the Category 1 Listing of Ethylene Oxide (filed by the Ethylene Oxide Industry Council, March 25, 1994).

Comments to EPA on the EPA RM-1 Review of Mercaptobenzothiazole (filed by the Rubber Additives Panel, March 25, 1994).

Comments to EPA on the Fuels and Fuel Additives Registration Regulations (filed by the Petroleum Additives Panel, Health, Envir., and Reg. Task Group, March 28, 1994).

Comments to EPA on the Proposed Listing of 2-Mercaptobenzothiazole (MBT) on the EPCRA Section 313 Toxics Release Inventory (filed by the Rubber Additives Panel, April 7, 1994).

Comments to EPA on the Proposal to Add Certain Chemicals and Chemical Categories to the List of Chemicals Required to be Reported Under Section 313 of the Emergency Planning

and Right-to-Know Act (filed by the Diisocyanates panel, April 12, 1994).

Comments to EPA on the Proposed Listing of Sodium Chlorite under Section 313 (d)(2)(B) of the Emergency Planning and Community Right-to-Know Act (filed by the Chlorine Dioxide Panel, April 12, 1994).

Comments to EPA on Supplemental Data Submission Relating to Land Disposal Restrictions for Newly Identified and Listed Hazardous Wastes and Hazardous Soil (filed by the Carbon Disulfide Panel, April 19, 1994).

Comments to EPA on the Occupational Monitoring for MBT (filed by the Rubber Additives Panel, April 29, 1994).

Comments to the Wisconsin Natural Resources Board on the Proposed Addition of Propylene Glycol Monomethyl Ether to the List of Regulated Hazardous Air Pollutants (filed by the Propylene Glycol Ethers Panel, April 29, 1994).

Comments to the United Nations Committee of Experts on the Transport of Dangerous Goods on the Proposal to Remove Ethylene Glycol Monobutyl Ether (U.N. 2369) from U.N. Recommendations (filed by the Ethylene Glycol Ethers Panel, May 18, 1994).

Final Reports

"Ethylene Glycol Monobutyl Ether: Development of a Physiologically-Based Pharmacokinetic Model For Human Health Risk Assessment," (*Ethylene Glycol Ethers Panel, September 15, 1993*).

"Isopropanol Vapor Inhalation Oncogenicity Study in CD-1 Mice," (*Isopropanol Panel, January, 21, 1994*).

"Ethylene: Four Week Vapor Inhalation Bone Marrow Micronucleus Test in Rats and Mice," (*Butadiene Panel, April 8, 1994*).

"Ethylene: Four Week Vapor Inhalation Exposure of Rats and Mice for Genetic Toxicology Endpoints," (*Butadiene Panel, April 8, 1994*).

"Rat and Mouse Bone Marrow Micronucleus Assay of 4-Vinylcyclohexene," (*Butadiene Panel, April 8, 1994*).

"Subchronic Toxicity Study by the Inhalation Route in Rats and Mice with 4-Vinylcyclohexene, Volumes 1 and 2," (*Butadiene Panel, April 8, 1994*).

"Two-Week Range-Finding Study with 4-Vinylcyclohexene in Rats and Mice," (*Butadiene Panel, April 8, 1994*).

"Identification of Ethylene Glycol Metabolites in the Plasma of Female Sprague-Dawley Rats and CD-1 Mice," (*Ethylene Glycol Panel, April 22, 1994*).

"Ninety-Day Vapor Inhalation Neurotoxicity Study in Female Fischer Rats," (*Isopropanol Panel, May 17, 1994*).

"Immunohistochemical Evaluation of Alpha 2u-globulin in Kidneys of F-344 Rats from the Isopropanol Nine Day Vapor Inhalation Study," (*May 17, 1994*).

Federal Register Notices

"40 C.F.R. Parts 63 and 430 - Public Meeting on the Rulemaking for the Pulp, Paper and Paperboard Industry" (*59FR42854, January 11, 1994*).

"Fuels and Fuel Additives Registration Regulations" (*59FR8886, February 24, 1994*).

"Hazardous Waste Management System; Carbamate Production Identification and Listing of Hazardous Waste; and CERCLA Hazardous Substance Designation and Reportable Quantities" (*59FR9808, March 1, 1994*).

"EPA Final Rule to Establish the Agency's Significant New Alternative Policy (SNAP) Program Under Section 612 of the Clean Air Act" (*59FR13044, March 18, 1994*).

"Preliminary Assessment Information and Health and Safety Data Reporting; Addition of Chemicals; Stay of Certain Reporting Requirements" (*59FR14115, March 25, 1994*).

"Final Rule, Establishment of the National Voluntary Conformity Assessment System Evaluation Program" (*59FR19129, April 22, 1994*).

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If you have any questions, please call Kim Reed at 202/887-1191. Thank you for your help.

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