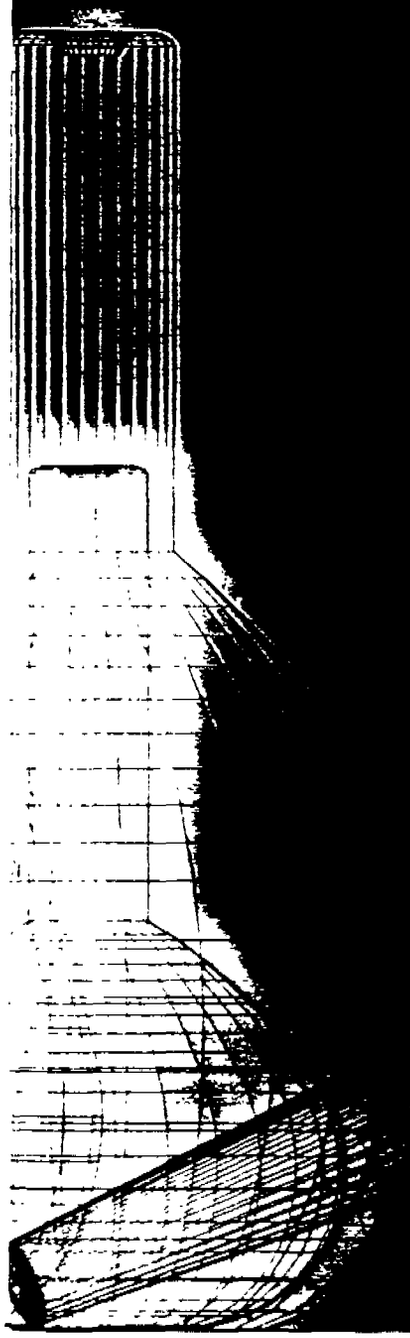
CHEMSTAR

CHEMICAL SELF-FUNDED TECHNICAL ADVOCACY AND RESEARCH



PANEL AND COUNCIL DETAILS

A REPORT ON THE YEAR 1993-1994

The CHEMSTAR Vision

"To be the most effective provider of technical and management services for specific issue groups within the chemical industry. To have our groups be the best in the world at addressing advocacy, research, education, communication, and evaluation issues in their focus areas."

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Panel and Council Details

Acetone Panel

HISTORY: The Acetone Task Group formed under the Ketones Panel in 1990 to address regulatory concerns of manufacturers, processors, and users. Task Group members decided to form a separate Panel because of the complexity and diversity of acetone issues.

ACCOMPLISHMENTS: By submitting information on toxicity and environmental concentrations, the Acetone Panel successfully advocated the removal of acetone from the Arizona Department of Environmental Quality's proposed list of hazardous air pollutants. After the Panel presentation at an ACGIH Committee Meeting in March 1993, and at the specific request of ACGIH members, the Panel developed a review of available human data on acetone. The Panel report, "The Local and Systemic Health Effects of Acetone," was provided to ACGIH Committee members for consideration in the acetone threshold limit value review. The Acetone Panel also submitted a petition requesting EPA to reclassify acetone as a volatile organic compound of negligible reactivity. In conjunction with that petition, the Panel provided EPA with acetone reactivity data developed by Dr. William Carter of the University of California at Riverside. Throughout the year, the group continued its communication with the EPA IRIS Work Group on establishing a reference dose for acetone, and with the National Sanitation Foundation on its accreditation of acetone as a potable water solvent.

PLANS: The Panel will proceed with the scheduled-controlled operant behavior (SCOB) neurotoxicity testing program, which was agreed upon during the settlement negotiations in January, and will be outlined in a final consent order in the fall. In addition, the Acetone Panel will continue its communications with ACGIH regarding the acetone TLV review process. The Acetone Toxicology Research Task Group will develop a dossier for Phase 4 of the OECD SIDS program and address misinformation included in some publicly available databases.

Alkanolamines Panel

HISTORY: The Panel formed to address toxicology issues associated with alkanolamines. Current Panel efforts are focused on voluntary research, publishing data, and regulatory advocacy.

ACCOMPLISHMENTS: The Panel completed a number of studies on monoethanolamine and diethanolamine under its voluntary research program. Completed research includes an *in vitro* dermal absorption study and studies on developmental toxicity in both rats and rabbits. Voluntary research in progress includes a pharmacokinetic study of DEA.

The Panel initiated a literature review covering the use, chemical and physical properties, toxicology, and pharmacokinetics of alkanolamines. Once completed, the literature review will be published. Efforts also were initiated by the Panel to publish results of its voluntary research program.

In 1993, EPA issued a proposed rule that would establish an RQ of 100 pounds for DEA. The Panel submitted comments to EPA indicating that the Agency incorrectly calculated the RQ, and that available scientific data support an RQ of 5,000 pounds. The Panel expects a response from EPA on the RQ issue in late 1994.

PLANS: The Panel plans to: continue voluntary research activities; submit completed research studies to the National Toxicology Program; publish research results in various peer-reviewed journals; publish a literature review of alkanolamines; develop a scientific position statement on the health effects of alkanolamines; continue advocating an increase in the RQ of DEA; and, monitor and respond to new regulatory developments.

Alkylphenols and Ethoxylates Panel

HISTORY: The Panel formed to determine the health and environmental effects of alkylphenols and ethoxylates in manufacture and use. Initial efforts focused on responding to EPA concerns about the chemical fate and environmental effects of nonylphenol. The Panel maintains liaison with the Soap and Detergent Association on scientific and regulatory issues.

ACCOMPLISHMENTS: The Panel completed all testing under TSCA Section 4 for nonylphenol. In April, the Panel participated in an OECD-sponsored Risk Reduction Workshop hosted by the Swedish EPA. The Panel held a facilitated planning session in which communication and research needs were identified as further priori-

ties. The Panel continued to work with the state of North Carolina and the Wisconsin Department of National Resources on alkylphenols and ethoxylates on water treatability issues.

PLANS: The Panel will continue to educate the U.S. regulatory community on the results of Panel research. A risk assessment of APEs will be performed by the Panel by late 1994. The Panel also will continue to work with the Swedish EPA and agencies of other European countries. Biodegradation and treatability studies will be investigated by the Panel to assist North Carolina and other states in assessing potential risks of these chemicals to the environment. The Panel will continue to identify research and communication needs. In addition, the Panel has developed an information package on APE.

American Plastics Council

HISTORY: The Council formed in 1991 to develop technically and economically sound programs for the responsible use, recovery and conservation of plastics and their component raw materials that address public interests and concerns, and to communicate the benefits of plastics and their use to key publics.

GOALS: To assure that plastics are the preferred materials by actively demonstrating they are the responsible choice in a more environmentally conscious world. The strategic elements to fulfill this mission include:

- informing opinion leaders and the public about plastics' advantages in resource conservation and the progress the industry continues to make;
- developing programs and alliances to implement this strategy; and,
- supporting integrated approaches to waste management:
  - supporting increased plastics recycling that is economically and environmentally responsible and sustainable;
  - developing meaningful measures of environmental performance, including better methodologies for determining recycling rates; and,
  - working to ensure the energy value of plastics is captured where practical.

STRUCTURE: The APC operates as a joint initiative with The Society of the Plastics Industry, Inc., and its purpose is to encourage efficient resource management throughout the life-cycle of plastics products. To meet these goals, 24 of the nation's leading plastics resin monomer producers and representatives of the broader plastics processor community have come together with direct involvement by chief executive officers, president and senior executives. Council members have made a substantial commitment and pledged significant resources to achieve this goal.

These top executive have joined forces in this effort because industry believes it has the responsibility not only to respond to public needs with its products but also to respond to public values through its actions.

The APC has an integrated organization, directed by the APC Board of Directors and implemented by ten functional committees in Federal Government Affairs, State Government Affairs, Advertising, Communications, Packaging, Durables, Product Benefits, Process Technology, Business Impact/Information Management and Plastics Mobilization, as well as two ad hoc task forces, West Coast and Energy Recovery.

The technical committees' (Packaging, Durables, Product Benefits, Process Technology, Business Impact/Information Management) functions are to research and develop economically sound integrated resource management technologies and implement these solutions in a timely manner. Some of those efforts include: continuing to develop technology to determine the optimum level for mechanical recycling of plastics; furthering the development of advanced recycling technology systems; conducting life-cycle analyses of plastic products; and compiling and/or developing energy recovery data.

The Advertising and Communications Committees dialogue with and communicate to the public, policy makers, educators and other target audiences to convey the resource management benefits that demonstrate plastics' positive role in society and the environment. This communication will help build public support for industry-sponsored solutions and position plastics as an efficient use of natural resources.

The Government Affairs Committees work with legislators and regulators to ensure an appropriate government role in providing responsible integrated resource management programs. The Federal and State Government Affairs Committees focus on local, state and federal government officials to broaden the current public policy debate to include effective solutions such as recycling, advanced recycling and energy recovery.

The Plastics Mobilization Committee develops a core group of motivated downstream industry representatives committed to speak as a credible voice on critical resource management public policy issues. The Committee targets key local industry personnel with a concerned community viewpoint and focuses their efforts at the local, state and federal levels.

Aryl Phosphates Panel

HISTORY: Before coming to CMA, the manufacturers were part of an *ad hoc* committee which formed to respond to inclusion of the chemical category in the Second Report of the Interagency Testing Committee in 1978. When EPA announced its intention to initiate rulemaking under TSCA Section 4, the members disbanded the Committee and reformed as a CHEMSTAR Panel.

ACCOMPLISHMENTS: In March 1993, EPA provided the Panel with a draft enforceable consent agreement for the aryl phosphate TSCA Section 4 test program. In many significant areas, the Agency's draft agreement coincided with the Panel's September 1992 proposed testing program, which was submitted under EPA's open season initiative.

PLANS: The Panel will initiate the consent order negotiations with EPA soon. Additional Panel activities include sponsoring the negotiated testing program and responding to other regulatory concerns.

Atmospheric Research Panel

HISTORY: The Council formed to address issues concerning the impact of chemical industry emissions on regional and global atmospheric change. Activities include: identifying and resolving scientific uncertainties about effects of increased concentrations of chemicals in the atmosphere; obtaining research data that will assist in developing chemical industry positions on such issues as Clean Air Act implementation and global climate change, and, providing a scientific foundation for the industry's position in the debates on a global effort to control greenhouse gases.

ACCOMPLISHMENTS: The Council continued its research program to increase understanding of the impact of chemical emissions and volatile products on global climate change. The Council decided to become a major co-funder of a project to develop an assessment model for the chemical industry. As part of this project, a workshop was held in Cambridge, Massachusetts on three-dimensional chemical transport assessment modeling in September. The Council also contributed funding for: an international workshop by NIST on chemical kinetics; a project by the International Global Atmospheric Chemistry for the development of global emissions inventories; and, a project to update estimations of hydroxyl radical reaction rate constants.

PLANS: The Council will double its efforts to "work with the scientific community to develop a consensus report by the end of 1996 to characterize the indirect effects on global change of short-lived atmospheric emissions from the products and processes of the chemical industry." This effort will include refining estimates of direct Global Warming Potential as well as appropriate measures of indirect effects. The Science Task Group will continue to sponsor and monitor the 3-D modeling effort and the IGAC inventory of emissions that will help to evaluate the potential indirect effects of chemical indutstry emissions on climate change.

Council members will continue to seek expanded membership and secure additional research funding, in preparation for addressing an issue that will remain on scientific and regulatory agendas into the next century. The Council remains committed to the belief that it can have a significant impact at the most fundamental level of policy development through involvement with the scientific community and through the generation and communication of scientific research.

Biocides Panel

HISTORY: The Panel was formed in 1986 to respond to the California Department of Food and Agriculture data call-in notices on biocidal chemicals registered in the state. The DCIs required that registrants submit data on chronic toxicity, oncogenicity, reproductive effects, teratogenicity, mutagenicity, and neurotoxicity. The Panel since has focused on a variety of issues impacting the biocides industry as a whole, and various task groups have addressed issues surrounding specific biocides.

ACCOMPLISHMENTS: The Panel has developed a comprehensive educational program, along with supporting written materials, for presentation to pesticide regulatory personnel. The program was presented to the staff of EPA's Office of Pesticide Programs on two separate days in December. In April, the Panel presented the program to the staff of CalEPA's Department of Pesticide Regulation, and in June to Canadian officials from Agriculture Canada, Health Canada, and Environment Canada.

The presentations to the various regulatory personnel included discussions of biocide application methods, uses, exposure patterns, effluent treatments and other issues of importance in the regulation of biocides. The Panel is optimistic that the information provided to EPA, CalEPA, and Canadian officials will enable each of these jurisdictions to employ more appropriate data requirements and to arrive at more timely registration decisions for industrial biocides.

In the legislative area, the Panel has joined with other industry trade associations to develop a legislative proposal that distinguishes antimicrobials from other pesticides and streamlines pesticide registration procedures. The proposed legislation is under consideration for introduction as an amendment to FIFRA reauthorization legislation in the current session of Congress. The Panel is also working with other trade associations to respond to EPA's request for statutory authority for additional fees to fund the pesticide reregistration process. Industry groups believe that EPA's request is inflated and plan to provide Congress with more realistic funding information.

In the regulatory area, Panel representatives have continued to meet with EPA officials to discuss ways to streamline the pesticide regulatory process for registration and reregistration. EPA, in its efforts to meet both registration and reregistration deadlines, has been increasingly receptive to Panel suggestions. The Panel, in conjunction with other industry trade associations, and in response to an EPA request, has been working to develop revised procedures for implementing the data compensation provisions of FIFRA. Revisions are needed because registrants that have spent large sums of money on data to obtain and support registrations often are unaware of follow-on registrants, and thereby have not obtained compensation that may be due them for the follow-on registrant's reliance on their data. The Panel also has commented on a number of regulatory proposals that impact pesticides, including the proposal to add 25 or more industrial biocides to the Toxics Release Inventory and proposed regulations regarding pesticide containers and residue removal. The Panel also is involved in activity to persuade OPP to either discontinue or substantially revise its policy regarding water hazard evaluation and risk modeling for industrial biocides undergoing reregistration.

EPA is drafting revisions to the regulations which govern pesticide registration data requirements under 40 C.F.R. Part 158. In an effort to influence this process and ensure that data requirements for industrial biocides are appropriate, the Panel has provided suggested industrial biocide data requirements to EPA. Panel representatives will discuss the suggested requirements with EPA staff throughout the drafting period.

The Panel is continuing its monitoring of state regulatory and legislative activities that impact the biocides industry. States continue to seek additional revenues through increased registration fees and other forms of revenue collection, including assessments for groundwater cleanup based on pesticide sales. Many of these activities have imposed unreasonable burdens on biocides manufacturers. In addition, a number of states have proposed legislation that would require decreased use of pesticides by state agencies or mandate that many pesticides, including industrial biocides, be applied only by certified applicators. The Panel has commented to a number of states where either the proposed legislation or regulations would impose inadvertent or unwarranted burdens on the biocides industry or biocide users. The Panel currently is monitoring activities in 17 states and has targeted a number of states including Wisconsin, New York, and Pennsylvania for advocacy activities.

The Antimicrobial Exposure Assessment Task Force continues to be active in ensuring that follow-on registrants of industrial biocides for which reregistration was in part supported by the Antimicrobial Exposure Assessment Study provide adequate compensation to the Task Force for such reliance. The Task Force is negotiating with one follow-on registrant and has requested information from EPA that will enable it to determine whether there are other registrants relying on Task Force data from which compensation offers have not been received.

The Arsenic Acid Task Force continues to develop data to support the reregistration of arsenical wood preservatives. The Task Force completed an aqueous availability study, determining the leach rates of metals from arsenical-treated woods in a variety of leaching media, and submitted it to EPA. The Task Force was the first registrant group to perform this type of testing and has made the testing protocol available to other registrants that must generate this type of leaching data.

The Formaldehyde Task Force completed the determination of formaldehyde levels in the headspaces of paint cans containing various formaldehyde donor biocides. An evaluation of formaldehyde off-gassing from a room painting study is in progress. Results from these studies will help paint manufacturers to decide whether label warnings are required on paint containers.

PLANS: The Panel will continue its legislative activities throughout this session of Congress. In addition to its involvement in FIFRA reauthorization activities, the Panel also will monitoring Clean Water Act reauthorization, toxic use reduction, and pesticide export restrictions. The Panel also will continue to monitor state legislative and regulatory actions and to undertake advocacy to protect industrial biocide interests where necessary.

A high level of activity in the regulatory arena is expected throughout the next year. The Panel will continue its participation in developing and implementing improved data compensation procedures. Further, the Panel will continue its efforts to streamline registration procedures and to ensure that EPA adopts appropriate registration data requirements for industrial biocides.

Brominated Flame Retardants Panel

HISTORY: The Panel originally formed in 1985 under the auspices of the Fire Retardant Chemicals Association, and became a CHEMSTAR panel in 1990. The Panel formed to address: the inclusion of brominated flame retardants in EPA's proposed analytical test rule on dioxins and furans; the publication of pyrolysis studies demonstrating that brominated dibenzodioxins and dibenzofurans may form from brominated diphenyl oxides; and, the Interagency Testing Committee's recommendations for health and environmental effects of certain brominated flame retardants.

ACCOMPLISHMENTS: In 1991, EPA published a proposed test rule requiring health, environmental, and chemical fate testing on five brominated flame retardants with an estimated testing cost of $11-19 million. The Panel submitted extensive comments on the proposed rule. In 1992, EPA announced an opportunity for negotiation on all pending TSCA Section 4 test rules, and solicited test proposals on these rules from industry. In response to the EPA request, the Panel submitted a science-based tiered testing approach with an estimated testing cost of $6 million. EPA concluded its evaluation of the proposal in 1993 and announced that it will enter into a negotiated testing plan on the five brominated flame retardants. Negotiations have not yet been initiated by the EPA. An additional twenty-two brominated flame retardants had been under consideration for testing by EPA. In November, the TSCA Interagency Testing Committee issued its 33rd Report removing these twenty-two compounds from consideration due to their relatively low production and use levels.

The Panel has continued to work with the Organization for Economic Cooperation and Development and the World Health Organization in compiling accurate information on brominated flame retardants. Panel representatives participated in a July WHO meeting where the Environmental Health Criteria document for polybrominated diphenyl oxide was finalized. The Panel continues to participate in a review of Environmental Health Criteria Documents on Polybrominated Diphenyl Oxides, Tetrabromobisphenol A and Derivatives, and Other Brominated Flame Retardants. The Panel continued to play an important role in evaluating reports on brominated flame retardants developed under the OECD Risk Reduction Program, and in December submitted comments on the Draft Status Report. Panel representatives met with

the EPA to discuss the OECD Risk Reduction Program, and responded to an OECD survey requesting information on specific aspects of the pilot program.

The Panel sponsored a project to evaluate reports detecting the existence of polybrominated diphenyl ethers in environmental samples. The Technical Committee is preparing a recommendation to the Panel for additional testing to evaluate the bioavailability and bioconcentration potential of brominated diphenyl ethers. The Panel has continued to address issues such as bromine recycling and the use of brominated flame retardants in electronics equipment, and is considering proposals to perform a benefits analysis on brominated flame retardants. The Panel published a newsletter in April to provide a current information to customers, users, and others with an interest in brominated flame retardants. The newsletter has been a huge success with copies distributed in the U.S., Europe, Israel and Japan. Member companies completed sponsored testing to determine levels of polybrominated dibenzodioxins and dibenzofurans in commercial samples of eight brominated flame retardants under the TSCA Section 4 Dioxins and Furans Analytical Test Rule.

The Panel discussed current issues and activities related to brominated flame retardants at several workshops and conferences: OrgaBrom '93 in Jerusalem, Israel, July 1993; a Panel sponsored workshop in Crystal City, Virgina, September 1993; a workshop sponsored by the Panel in conjunction with the Fire Retardant Chemical Association in Tucson, Arizona, October 1993 a workshop sponsored by the Panel in conjunction with the Fire Retardant Chemical Association of Japan in Osaka and Tokyo, Japan, May 1994; and the Business Communication Conference in Stamford, CT in May 1994.

PLANS: The Panel will monitor EPA activities in response to the TSCA Section 4 testing proposal, and will continue to work with OECD and WHO in their efforts to compile information on brominated flame retardants. The Panel will address environmental fate issues, and sponsor a project to assess the benefits of brominated flame retardants.

The Panel will hold a workshop in October 1994 in London, UK, in conjunction with the European Brominated Flame Retardant Industry Panel, and will make presentations at the Fire Retardant Chemical Association's meeting this fall. The Panel will continue to monitor U.S. and international regulatory and environmental issues related to brominated flame retardants and will undertake additional projects as appropriate.

Butadiene Panel

HISTORY: The Panel formed following EPA's consideration of butadiene under TSCA Section 4(f). The Panel collects and evaluates information needed to assess safety, environmental, and health issues arising from production, storage, transportation, use, and disposal of butadiene

ACCOMPLISHMENTS: The Panel completed a comprehensive review of the $1.5 million butadiene research program. As a result of the review, the research program was refocused to include examination of a reproductive end point. The new program has a decreased focus on the mutation and biomarker endpoints in recognition of research being conducted by other parties. In addition, the Panel completed the major studies on 4-vinylcyclohexene required under a TSCA Section 4 Consent Order.

The Butadiene Panel merged with the Olefins Panel to form the new Olefins Panel. The new Panel will cover advocacy and research needs for all chemicals of interest to ethylene manufacturing. At present these chemicals include ethylene, propylene, butadiene and 4-vinylcyclohexene.

PLANS: The new Olefins Panel will reorganize to address issues of concern to ethylene manufacturers. For butadiene, the Panel will await the final rule for the OSHA workplace standard on butadiene which is expected in late 1994. The Panel will continue its research activities and begin to apply the research results to risk assessment. In addition, the Panel will complete the final test required by a consent order on 4-vinylcyclohexene.

In the advocacy arena, the Panel will begin discussions with regulatory agencies on the appropriate cancer risk assessment approaches for butadiene, and will continue to monitor and comment on the Clean Air Act Rulemakings involving butadiene, including modifications (section 112G) and Mobile Sources rulemakings.

Butylated Hydroxytoluene Panel

HISTORY: The Panel was organized to conduct the research and advocacy necessary to support the continued use of BHT in food additive applications. In 1978, the Panel filed comments in response to an FDA proposal for interim regulations requiring testing to resolve safety questions. To date, FDA has not issued an interim regulation. The Panel submitted a Citizen Petition in 1986 requesting that FDA issue a regulation recognizing a prior sanction for use of BHT. In 1991, the Panel submitted additional information that contained a review of studies previously submitted and information regarding the EBMA's Chronic Toxicity Study of BHT, *The Role of Hepatocellular Injury in the Chronic Toxicity of BHT*, and again requested that FDA issue a regulation acknowledging the prior sanction status of BHT. To date, the FDA has made no decisions regarding the Petition.

ACCOMPLISHMENTS: The Panel continued cooperative efforts with the FDA, the International Life Sciences Institute, and the European BHT Manufacturers Association through information exchange.

PLANS: The Panel will continue to cooperate with the FDA in its evaluation of BHT and will maintain liaison with EBMA and ILSI through information exchange.

Carbon Disulfide Panel

HISTORY: Companies manufacturing carbon disulfide and using it to produce rayon and cellulose fibers by the viscose process joined together in 1976 as the Inter-Industry Committee on Carbon Disulfide. In 1991, this group became a CHEMSTAR Panel. The Panel's mission is to interact with regulatory agencies and other appropriate organizations on safety, health and environmental issues involving carbon disulfide.

ACCOMPLISHMENTS: The Panel has been advocating an appropriate reference concentration for CS_2 with EPA. To support this activity, the Panel completed a comprehensive literature review and analyzed the best data to support a "no effect" level in humans. The Panel met with EPA to discuss its findings and has supplied data and comments. In addition, the Panel met with the National Toxicology Program to discuss research plans for CS_2. The Panel obtained an outline of the plan and protocols from NTP and submitted them to EPA advocating that CS_2 should be deleted from the upcoming reproductive and developmental endpoint test rule based on NTP's activities.

The Panel has been following OSHA reform legislation with a focus on the provision which would reinstate the 1989 Air Contaminants Standard which was vacated by the court. The Panel has worked with a consortium of trade associates and convinced OSHA to support a modification to this provision which preserves settlement arguments arising from the law suit. Both the House and Senate bills currently contain the modified wording.

The Panel submitted comments opposing the listing of H_2S under EPCRA 313 and is currently working with the American Petroleum Institute and American Forest Products Association to convince EPA to withdraw H_2S from the final rule. The Panel commented on the EPA document "Principals of Neurotoxicity Risk Assessment." The Panel also commented on the proposed Universal Treatment Standard for CS_2 under RCRA land disposal restriction rules. The Panel met with EPA and provided data that show that the UTS for CS_2 is not feasible for the viscose process. Most recently, the Panel provided data to ACGIH as it begins development of a Threshold Limit Value for CS_2.

PLANS: The Panel will continue discussion with EPA and NTP on the testing of carbon disulfide and on the development of an appropriate reference concentration. The Panel will follow OSHA reform legislation closely, and ensure that the provisions of the settlement agreement are incorporated into any new legislation. Also, the Panel will continue to monitor EPA's activities in developing TSCA test rules on carbon disulfide. The Panel will continue its reanalysis of the NIOSH data to support both a TLV and reference concentration and present its findings to EPA and ACGIH.

Carrier Assessment Council

HISTORY: The Council formed to address carrier assessment issues of concern to the CMA membership. A major goal of the Council is to help interested CMA members meet the carrier safety provisions (3.1 and 3.2) of the Distribution Code of Management Practices. These provisions require that CMA members: establish a process for qualifying carriers of all modes and types; evalu-

ate carriers for safety fitness and regulatory compliance; and, provide feedback and suggestions for improvement to carriers on their safety performance. Activities to accomplish this goal include developing assessment protocols, promoting their use and working with the Distribution Committee to optimize assessment protocol value to chemical shippers and carriers.

ACCOMPLISHMENTS: The Council completed development of the Highway Carrier Assessment Protocol and completed pilot field testing of the final protocol. Assessment protocol developments were initiated for rail, barge and container vessel modes. Active participation of the carriers is a hallmark of all protocol development. Work on these three protocols was 90% completed as of May 31. The Highway Protocol was referred to the CMA Distribution Committee Implementation Work Group, and Council members are working to ensure a smooth transition from the development to the implementation phase. Final drafts of the remaining protocols are being utilized by the Distribution Committee to facilitate use planning.

PLANS: The Council will complete rail, barge and container vessel assessment protocols in July 1994.

Chemical Distributors Council

HISTORY: The Council formed to address issues of concern to chemical distributor members of CMA. Council activities include: collecting, evaluating and disseminating information on issues that affect chemical distribution; and advocating the interests of the chemical distributor sector. The Council maintains a strong interaction with the National Association of Chemical Distributors through that Association's formal membership in the Council.

ACCOMPLISHMENTS: The Council developed the Responsible Care® Product Stewardship Code Assessment Protocol for Distributors. Although primarily developed for use by distributors, the protocol can be been useful in assessing manufacturers' in-house distribution operations

PLANS: After wider dissemination of the Chemical Distributors Self-assessment Protocol developed in 1992 and the new implementation aid for the Product Stewardship Code, the Council will terminate operations.

Chlorinated Pool Chemicals Panel

HISTORY: The Panel formed to promote safety practices worldwide in the processing, packaging, warehousing, transportation, and use of chlorinated pool chemicals. Panel members include producers of calcium hypochlorite and chlorinated isocyanurates worldwide.

ACCOMPLISHMENTS: The Panel submitted its research report on chloroform releases from swimming pools to the California Air Resources Board. The Transportation Task Group's bulletin on the transportation of calcium hypochlorite and chlorinated isocyanurates was finalized and prepared for publication. The Panel continued to research the "self-reactive" classification recommended by the U.N. Expert Committee on the Transport of Dangerous Goods and discussed the issue with the U.S. Department of Transportation.

PLANS: The Panel will continue to work with DOT on the classification of specific pool chemicals. The transportation bulletin soon will be available for distribution to shippers of pool chemicals and personnel responsible for in-transit storage. In addition, the Panel will continue distribution of its training videotapes for fire and emergency response personnel and guidelines for safe handling and storage of pool chemicals. The group will proceed with monitoring various fire and building code regulations and other requirements affecting chlorinated pool chemicals.

Chlorine Chemistry Council

HISTORY: The Council was formed to promote public understanding of chlorine and chlorine-related products. Council activities contribute to the public policy debate on these chemicals; heighten public awareness of the benefits of these products; and facilitate risk-benefit analyses through collection and development of solid scientific data on health, safety and environmental issues.

The Council conducts advocacy, outreach, product stewardship and scientific data development in close coordination with two related trade associations, the Chlorine Institute and the Vinyl Institute. The Council membership includes producers and users of chlorine and chlorine-related products, as well as organizations and companies in interested industries. The Council also encour-

ages other organizations and associations, nationally and internationally to address chlorine and chlorine-related public issues.

ACCOMPLISHMENTS: This year three key issues on the federal level required comprehensive advocacy and outreach efforts. The Council was effective in preventing anti-chlorine provisions in the Clinton administration's executive order on recycled paper and forestalling proposed Clean Water Act provisions which were aimed at banning chlorine chemistry. EPA's Dioxin Reassessment is being addressed by coalitions of other interested parties, a scientific review and a very proactive outreach/education program to the media and key policy influencers. Seven state initiatives which would have inappropriately affected chlorine chemistry were deflected during the year. The CCC-sponsored work by a panel of scientists on an "Interpretative Review of the Potential Effects of Chlorinated Materials on Human Health and the Environment" was in the August volume of the *Journal of Regulatory Toxicology and Pharmacology*.

PLANS: The Council's public policy goals and current key objectives were defined in July 1994 and comprehensive action plans are being developed and implemented. A major outreach/communications effort will be maintained on these issues. State government relations and grassroots programs are being significantly upgraded to state of the art programs. The Council's portfolio of science programs will expand with those of its global partner associations coordinated by the International Group of Chlorine Chemistry Associations. The Council is also working to enhance stewardship of chlorine chemistry by all industry sectors consistent with Responsible Care .

Chlorine Dioxide Panel

HISTORY: The Panel formed in anticipation of an EPA proposal to regulate chlorine dioxide under the Safe Drinking Water Act by 1993. In addition, the state of California contracted for a risk assessment on chlorine dioxide and sodium chlorite. The Panel aims to gather, review, generate, and disseminate information on chlorine dioxide and its precursors, sodium chlorite and sodium chlorate. The Panel monitors and interacts with regulatory agencies and fosters scientific communications. Primary focuses of the Panel are generation, applications, health effects, safety, and test methods of chlorine dioxide.

ACCOMPLISHMENTS: The Panel completed all Phase I requirements for EPA's FIFRA data call-in. The Panel also completed all testing required for FIFRA Phase IV Reregistration. The Panel continued to work closely with the EPA Office of Drinking Water on the upcoming Disinfection Disinfection By-Product Rule standards for chlorine dioxide and sodium chlorite. The Panel is conducting a two generation reproductive study on sodium chlorite in rats via drinking water. The rangefinder portion of the study is underway, the definitive study will be completed next year. At the Spring planning meeting the Panel developed and accepted a new organization structure. The structure consists of four new task groups with specific goals and objectives. The group has worked closely with WHO and is tracking the chlorite issues from an international perspective. The Panel's final studies have been sent to the state of California for its sodium chlorite "data-call-in". The Panel sent comments to the EPA in regard to its draft proposal that would add chlorine dioxide to the SARA Section 313 reporting list. The Panel has executed the Data Ownership Contract forToxicology Studies generated by the Panel, and all studies have been distributed to each participating member. The data is confidential under FIFRA, and all parties must abide by the provisions of the signed agreement. The data is compensable under FIFRA.

PLANS: Panel representatives will continue to interact with EPA on the FIFRA data call-in and reregistration. The Panel will undertake additional testing which EPA may require under FIFRA Reregistration Phase V. The Panel will review and comment on EPA's Chlorine Dioxide Health Advisory Report which is the basis for the upcoming Drinking Water Standard. Interaction with EPA on its negotiated test rule approach for the Disinfection By-Product Rule which includes chlorine dioxide and sodium chlorite, will be a major Panel focus through 1994 and 1995. The Panel's two-generation reproductive study should be complete by October 1995. The Panel has focused very actively in tracking chlorine dioxide in the international arena; this will be a big part of 1995 Panel activities. The Panel will also seek to obtain sodium chlorite data to assist EPA in preparing water quality criteria for chlorine dioxide.

Chlorobenzenes Panel

HISTORY: The Panel formed to sponsor voluntary research on chlorobenzenes. The focus on research remains, but now the emphasis is on completing mandated research on health and environmental effects. The Panel continues to provide technical support for the advocacy activities of the Chlorobenzenes Producers Association, an affiliate of the Synthetic Organic Chemical Manufacturers Association.

ACCOMPLISHMENTS: The Panel continued to sponsor research to meet 1,2,4-trichlorobenzene (TCB) oncogenicity testing requirements under TSCA Section 4. The Panel also sponsored research to address a FIFRA data call-in on p-dichlorobenzene (PDCB).

PLANS: The Panel's TSCA testing program will be completed in June 1994, when the final reports on the TCB dietary oncogenicity studies in rats and mice are submitted to EPA. Acute and subchronic neurotoxicity studies on PDCB required under the FIFRA data call-in have been completed. Final reports will be submitted to EPA in September 1994. There are presently no plans for future research.

Cobalt Panel

HISTORY: The Panel formed to interact with regulatory agencies and other appropriate organizations on cobalt safety, health, and environmental issues. The Panel first focused on the 1990 IARC review of cobalt and cobalt compounds. Panel interaction with the Cobalt Development Institute provided valuable information for use in the IARC review.

ACCOMPLISHMENTS: The Panel presented oral testimony to the ACGIH Biological Exposure Index Committee, and submitted comments to the EPA on the proposed assignment of reportable quantities to broad generic categories of chemicals. The Panel addressed environmental issues related to cobalt compounds, and has continued to cooperate with the Cobalt Development Institute through meetings and information exchange.

PLANS: The Panel will continue to monitor North American and European regulatory and environmental issues affecting cobalt. Panel members will continue to interact with the ACGIH BEI Committee, and will maintain working relations with CDI.

Cresols Panel

HISTORY: The Panel formed in 1984 in response to a TSCA Section 4 test rule. Testing required under the test rule was completed in 1990, and after evaluation of the test data in its Risk Management process, EPA decided to take no further action on cresols, but referred the three cresol isomers to OSHA and NIOSH for their consideration. The Panel has worked with the EPA Chemical Testing Branch, Office of Solid Waste, and the National Toxicology Program to ensure that logical and scientifically sound testing programs are conducted on cresols.

ACCOMPLISHMENTS: In July, the Panel submitted comments to the Carcinogen Risk Assessment Verification Endeavor Workgroup urging it to re-review the IRIS Database's classification of cresols as "possible human carcinogens." As a follow-up to the July comments, the Panel made a presentation to members of the CRAVE Workgroup and the EPA Office of Health and Environmental Assessment in February. The Panel's presentation summarized the reasons why existing studies do not support a carcinogen classification for the cresols isomers. EPA has indicated that cresols will likely be reconsidered by the IRIS Workgroup in late 1994.

PLANS: The Panel will continue to monitor cresols regulatory issues and interact with the agencies, as appropriate.

Crystalline Silica Panel

HISTORY: The Panel formed to address the 1987 International Agency for Research on Cancer listing of crystalline silica as a "probable" carcinogen. Classification as a probable carcinogen automatically requires U. S. firms to comply with OSHA Hazard Communication Standard cancer labelling requirements. The Panel began with nine members, dedicated to bringing together the silica industry to speak with a strong united voice on scientific, regulatory and analytical concerns stemming from the IARC classification.

ACCOMPLISHMENTS: The Panel continued to have a membership of over 40 organizations. The Panel, along with the American Mining Congress, the International Diatomite Producers Association and the California Mining Association, completed a focused review of crystalline silica literature and risk assessments performed to date. The Panel also co-funded a separate epidemiology review and a toxicology review. The three science reviews formed the basis of input to the States of California and North Carolina. These States are attempting to develop recommendations for "acceptable" levels of environmental exposure to silica. The Panel also sponsored a paper on the public policy issues of further regulating crystalline silica, that has been submitted for publication.

In April the Panel co-sponsored with Johns Hopkins University an international conference on crystalline silica health effects in Baltimore, Maryland. The Panel also submitted comments to NIOSH on its recommended crystalline silica exposure limit in its draft Respirable Coal Dust Criteria Document.

The proceedings of the Panel's 1992 international symposium on methods for detecting and analyzing crystalline silica content were published in a peer-reviewed journal in February. The four Panel sponsored, state-of-the-art reviews of analytical methods used to detect and quantify crystalline silica in bulk samples are still awaiting publication. The Science and Technical Advisory Group turned its attention to determining the cystalline silica content of ambient air.

PLANS: The Panel will continue to urge that public policy decisions concerning crystalline silica be based on a balanced review of the scientific literature concerning both cancer and non-cancer issues. The Panel will follow closely efforts in California, and within EPA, to: increase regulatory requirements; and, perform quantitative risk assessments of crystalline silica. The Panel also is committed to maintaining industry input as policy makers wrestle with generic issues relating to risks and exposure to substances, including crystalline silica. The Panel will track development of a new NIOSH criteria document for crystalline silica, any new OSHA or MSHA Permissible Exposure Limits or ACGIH Threshold Limit Values and discussion of silica in revisions to EPA's PM10 regulations. Comments will be submitted as necessary. The Panel will consider a cooperative pilot project to determine the range of airborne respirable crystalline silica in the general environment.

As other opportunities arise, the Panel will express concern to Congress, agencies and the administration on the use of automatic triggers for labeling decisions. The Panel will maintain efforts to expand the membership and increase financial resources to respond to expanding issues.

Cumene Panel

HISTORY: The Panel formed as a result of the Interagency Testing Committee's designation of cumene for priority testing under TSCA Section 4. The Panel's objective is to collect information that will allow assessment of health and environmental effects arising from production, storage, use, and disposal of cumene.

ACCOMPLISHMENTS: The Panel completed the testing mandated under TSCA Section 4 and conducted a voluntary subchronic inhalation study on rats to assess effects seen in the first subchronic study. After reviewing the data, EPA concluded that the TSCA Section 4 test data support a low hazard concern for cumene and that, based on current hazard and exposure information, cumene is of low risk to humans.

In 1990, through the legal challenge of a test rule, the Panel sought definition of "substantial" exposure limits by which the Agency can require testing under TSCA Section 4(a)(1)(B). In 1990, the Court ruled that EPA did not justify the test rule for cumene because meaningful criteria for defining "substantial or significant" environmental release and human exposure had not been established. The Court remanded the test rule to EPA and directed the Agency to provide a rationale for its exposure findings. The Agency published the "B" Policy in May 1993.

PLANS: The Panel has volunteered cumene for Phase 4 of the OECD SIDS program and plans to submit a dossier in the near future. The Panel will continue to interact with EPA and other agencies on hazard and risk assessment issues. Manuscripts of the testing data are being prepared and submitted for publication in peer-reviewed journals. The Panel continues efforts to have the cumene test rule data evaluated by IRIS.

Cyclohexane Panel

HISTORY: The Panel formed in response to the Interagency Testing Committee's "intent-to-designate" cyclohexane for priority testing under TSCA Section 4. During the past year, Panel efforts have focused on negotiation and litigation activities.

ACCOMPLISHMENTS: A proposed TSCA Section 4 test rule on cyclohexane was published by EPA in 1987. Between 1987 and 1992, EPA postponed issuance of the final test rule. During this period, the Panel submitted background information on the use, production, release, and safety of cyclohexane. In 1992, EPA launched an "open-season" initiative in which the Agency solicited from industry testing proposals for chemicals with pending TSCA test rules. The Panel responded by submitting a testing proposal on cyclohexane and by stating its intent to negotiate with EPA.

In February 1993, the Panel initiated negotiations with EPA for a TSCA Section 4 enforceable consent agreement. As part of the negotiation process, the Panel submitted a written testing proposal and gave an oral presentation to EPA describing the studies it was prepared to conduct. The Panel's testing proposal included numerous protocol enhancements beyond the standard EPA testing guidelines. The Panel offered to conduct all of the studies in EPA's 1987 proposed test rule, with the exception of two oncogenicity studies. The Panel presented toxicology, exposure, and release data indicating that there was no scientific basis for conducting oncogenicity studies on cyclohexane. Based on the Panel's written and oral comments, EPA accepted the Panel's testing proposal and further agreed to delete the oncogenicity study requirement from the testing program. Unnecessary oncogenicity testing would have cost cyclohexane producers an estimated 2 million dollars. After review of future emissions data and data from the completed testing program, EPA may revisit the need for oncogenicity testing in a future rulemaking. By the end of the fiscal year, the Panel and EPA had resolved all major negotiation issues and were near settlement on a final consent agreement.

During the past year, the Panel also was involved in litigation activity. In May 1993, EPA issued its new TSCA 4(a)(1)(B) policy outlining quantitative criteria for an exposure finding to justify chemical testing. The Panel responded by filing a petition for review of the "B policy" with the U.S. Court of Appeals, Tenth Circuit. In filing the petition for review, the Panel's intent was to preserve its legal right to challenge the B policy if and when a final test rule on cyclohexane was promulgated. The Panel's intent also was to stay the judicial challenge until negotiations with EPA on a consent agreement were complete. As anticipated, the Court dismissed the Panel's petition on grounds it was not ripe for review; however, the Court noted that the Panel may renew its challenge when the B policy is specifically applied in a test rule. This was the Panel's desired outcome because it preserves the right of the Panel and other industry groups to legally challenge the B policy in the event a TSCA Section 4 test rule is issued.

PLANS: The Panel expects to successfully complete TSCA consent agreement negotiations with EPA. The Panel will make final decisions regarding placement of studies with laboratories and will make other preparations as necessary for initiating its testing program.

Dibenzofurans/Dibenzodioxins Panel

HISTORY: The Panel formed when the Environmental Defense Fund and National Wildlife Federation filed a TSCA Section 21 Petition. In addressing the EPA response, the Panel commented to the Agency on proposed rules under TSCA Sections 4 and 8. Final rulemakings on the two sections require analyses of chemicals for the presence of dibenzofurans and dibenzodioxins as impurities and the reporting of production, processing, use, exposure, and disposal data.

ACCOMPLISHMENTS: The Panel funded an independant analysis of the original data used to prepare the NIOSH epidemiology study of workers exposed to 2,3,7,8-TCDD (dioxin). The last phase of the project is being co-funded with the CMA Chlorine Chemistry Council (CCC).

The Panel worked cooperatively with the CCC to set up a Dioxin Work Group, within the Council, to address dioxin related activities, particularly those surrounding the EPA reassessment of the toxicity of dioxins.

PLANS: The Panel will oversee the reanalysis of the NIOSH study data through completion. The Panel will then reassess whether to terminate its activities.

Diisocyanates Panel

HISTORY: The Panel formed to develop and disseminate information on the safe handling of diisocyanates, including: TDI, MDI, hexamethylene diisocyanate, and, methylenebis-dicyclohexyl diisocyanate. Monitoring impending regulations affecting the production or use of diisocyanates and developing responses as needed also are key Panel activities.

ACCOMPLISHMENTS: The Panel worked with EPA to ensure that all necessary data are available to make informed decisions during implementation of Clean Air Act Title III. The Maximum Achievable Control Technology Task Group explored the effect of the proposed Hazardous Organic National Emissions Standards for Hazardous Air Pollutants (HON) on member companies' operating procedures, and the Panel commented on the proposed HON Rule. Following the issuance of the Early Reduction Rule, the Panel filed a judicial challenge to remove methylenediphenyl diisocyanate (MDI) from the high pollutant risk list. The Panel submitted a petition to EPA to raise the Reportable Quantity for MDI and awaits a formal response from the Agency. As a follow-up to the Agency's Risk Management-1 assessment of the isocyanates and in preparation for the RM-2 process, the Panel developed a position paper on the pulmonary effects of MDI. The Emergency Response Preparedness Guidelines for MDI and TDI were completed under the Panel's sponsorship. The TSCA Nomenclature Task Group interacted with EPA to address optimum definition of the dominant nomenclature for MDI and TDI products on inventory lists world-wide. These discussions resulted in the publication of an instruction manual, "Nomenclature for Diisocyanates TDI, MDI and Derivatives," sponsored by the Panel and the Polyurethane Division of The Society of the Plastics Industry, Inc. The manual contains the Task Group's recommendations for TDI and MDI and their derivatives for inclusion in the 1994 correction of the TSCA Inventory. Panel comments were submitted to the state of Michigan on its proposed Occupational Health Standard for Isocyanates.

PLANS: The Panel will submit comments to EPA on Section 112(g) of the Clean Air Act. Members will continue to work with the states on various initiatives, such as California's Proposition 65 implementation, the Michigan Occupational Health Standard for Isocyanates, and various state air toxic regulations, as they develop. The Panel awaits the Court's decision on the judicial challenge to the Early Reduction Rule. If the ruling is in the Panel's favor, efforts to delist MDI from EPA's high pollutant risk list under the Rule will continue. Also impending is EPA's completion of the adjustment of the RQ for MDI to 5,000 pounds. The Panel will continue to interact with EPA and its Canadian and European counterparts on implementation of the Nomenclature Task Group's recommendations for MDI and TDI products for uniform correction of inventory lists worldwide. Conversations between the Panel and the Interagency Testing Committee on appropriate research information for the isocyanates will continue. The Panel will become an active participant in EPA's Risk Management-2 process for isocyanates. As a volunteer in Phase 4 of the OECD High Production Volume Existing Chemicals Voluntary Testing Program, the Panel will submit a Screening Information Data Set dossier on MDI to the US Representative in June 1994. Other Panel initiatives will be to communicate the industry's interests in issues such as Hazardous Waste Identification, TSCA Section 5 restrictions, and Toxic Use Reduction to the EPA. The Panel also will continue to interact and coordinate activities with the Society of the Plastics Industry, the Polyurethane Foam Association, the International Isocyanate Institute, and the European Isocyanates Producers Association.

Dinitrotoluenes Panel

HISTORY: The Panel initially formed to conduct research on dinitrotoluenes. Under a voluntary research agreement with EPA and German regulatory agencies, the Panel conducted a pharmacokinetics study. The pharmacokinetics study was completed in 1991 and results have been submitted to the various regulatory agencies. Panel member companies are awaiting the outcome of EPA's evaluation of the data. Current Panel activities focus on regulatory advocacy.

ACCOMPLISHMENTS: During the past year, the TSCA Interagency Testing Committee designated 2,4-DNT for dermal absorption testing. The Panel submitted technical comments advocating that dermal absorption testing of 2,4-DNT is unnecessary. The Panel is waiting for ITC's response.

PLANS: The Panel intends to interact with German and U.S. agencies as results of its voluntary testing are assessed. The Panel also plans to monitor ITC dermal absorption testing requirements. Future plans include publishing research results.

Ethylenebis(stearamide) Panel

HISTORY: One of the sixty-two chemicals assigned to Phase 3 of the OECD High Production Volume Existing Chemicals Voluntary Testing Program is N,N'-1,2-ethanediylbis-octadecanamide, also known as N,N'-ethylene-bis(stearamide) (EBS). Manufacturers of EBS formed the Panel to voluntarily collect, generate, and evaluate information required to complete a Screening Information Data Set (SIDS) dossier for evaluating environmental and health toxicity potentials of this chemical.

ACCOMPLISHMENTS: The Panel developed a SIDS dossier for EBS and worked with EPA to ensure that all available data and data gaps are identified for consideration in the OECD process.

PLANS: Following notification of the recommendations agreed upon during the Phase 3 OECD SIDS Review Meeting in Paris, the Panel will consider the recommendations concerning EBS and then take appropriate action.

Ethylene Dichloride Panel (Completed)

HISTORY: The Panel formed to address federal and state agencies in all safety and health issues arising from the production, distribution, and use of ethylene dichloride.

ACCOMPLISHMENTS: During its time as a CHEMSTAR group, the Panel evaluated scientific literature, identified data gaps, and, in an effort to improve the research data base, completed a voluntary testing program which included chronic inhalation, metabolism, and teratogenicity studies. The Panel also responded to regulatory issues affecting EDC from various federal and state agencies, such as ATSDR, EPA, OSHA, and California EPA.

PLANS: The Panel completed its tasks and agreed to terminate operations. No other group has been identified which will address EDC issues.

Ethylene Glycol Panel

HISTORY: The Panel formed in 1986 to augment the ethylene glycol toxicological data base. The Panel then completed a voluntary testing program, focusing on developmental toxicity and pharmacokinetics research in mice and rats.

ACCOMPLISHMENTS: As a result of the Ethylene Glycol Panel's advocacy efforts, EPA issued a proposed rulemaking in November to adjust the reportable quantity (RQ) for ethylene glycol from the statutory CERCLA default of one pound to 5,000 pounds, based on a review of EG toxicity and environmental data. In addition, the Panel was successful in correcting the classification of ethylene glycol in the proposed Section 112(g) rulemaking before that NPRM was published. The Panel also submitted extensive comments to the Agency for Toxic Substances and Disease Registry (ATSDR) on its technical report on ethylene and propylene glycol. The Toxicology Research Task Group completed two research projects, an *in vitro* skin penetration study and a plasma metabolite identification study, and is in the midst of having several research projects published, including a perspective of ethylene glycol developmental toxicity.

PLANS: The Ethylene Glycol Toxicology Research Task Group will continue its investigation into the mechanism of EG developmental toxicity by conducting a whole embryo culture assay on EG and a study to determine the relationship between developmental toxicity effects and the onset of metabolic acidosis. The Panel will monitor the status of the RQ rulemaking within EPA and the final technical report from ATSDR. In addition, the Panel will provide input into ACGIH during its review process of ethylene glycol's TLV values. The Panel will develop an appropriate strategy for disseminating available EG data to interested parties.

Ethylene Glycol Ethers Panel

HISTORY: The Panel formed to develop an adequate toxicity data base on ethylene-based glycol ethers, provide information to users and government agencies on the safety of the chemicals, and promote scientifically sound regulatory action.

ACCOMPLISHMENTS: Results of several year's worth of voluntary and required toxicology testing were highlighted this past year, with papers presented at an international symposium and a number of publications published or pending. A primary focus of the last year, the International Symposium on Health Hazards of Glycol Ethers, was cosponsored by the U.S., Netherlands, and France and held in Nancy, France in April. Four members of the Toxicology Research Task Group gave oral and written presentations on ethylene glycol butyl ether, diethylene glycol butyl ether and triethylene glycol ethers. The Panel also prepared informational packages describing its research and advocacy programs for members of the international audience. A number of papers given at the symposium will also be published in the peer-reviewed literature.

Completed research over the past year included further refinements to a physiologically-based pharmacokinetic model of EGBE and a unique human exposure protocol to assess the nature of dermal uptake from vapors. The latter study responds to earlier reports that the skin could potentially be a much greater route of exposure than general biological considerations would predict.

The Panel sponsored active involvement in an ECETOC Technical Committee developing an Indicative Limit Value for a European Union occupational standard on EGBE. A representative of the Panel's TRTG participated in meetings throughout the year and all of the Panel's sponsored research on EGBE was supplied for the effort. An ECETOC Special Report has been published and transmitted to the Scientific Expert Committee of the European Union.

The Panel worked with the U.S. Department of Transportation to submit a paper to the United Nations Committee on the Transport of Dangerous Goods. The paper proposes to change the United Nations and DOT classification of ethylene glycol butyl ether from its current Packing Group III Poisonous Substance class to non-regulated. This precedent-setting paper utilizes acute toxicity data in an alternative species, more relevant to human assessment. The UN Committee will meet in July, 1994 to take action on the proposal.

The Panel conducted a second and final effort to defeat a bill on glycol ethers proposed by Senator Tom Hayden in California. In its evolution, the bill's provisions ranged from criminalizing the use of certain members of the class to directing Cal-OSHA to carry out redundant and needless reviews.

The Panel continued efforts to clarify and correct the inappropriate use of the term "glycol ethers" in articles and statements characterizing toxicology, use and exposure information on the more than 30 different commercial products included in the chemical category. These efforts included letters to the editor and other responses to popular press, trade and scientific journals, and the mass media.

The Panel continue to seek avenues for relief from inappropriate regulatory actions listing glycol ethers as a category of chemicals. Such regulations include those implementating provisions of the Clean Air Act and Reportable Quantities requirements under CERCLA. A petition to EPA on RQs is still pending Agency action.

PLANS: The Panel will continue a focus on international activities and pursue a coordinated industry program with the Ethylene Glycol Ethers Sector Group of CEFIC. Panel members plan to meet with representatives of the Group this year and will also work to include members of an *ad hoc* Japanese consortium in the discussions. Voluntary research on EGBE will continue to be supported in the area of human risk assessment and species-specific mechanisms of hemolysis.

Ethylene Oxide Panel

HISTORY: The Panel formed to evaluate the results of an animal study that may affect OSHA and EPA regulatory proceedings on ethylene oxide. The EOIC addresses many regulatory and scientific activities in an effort to provide agencies with enough information to make reasonable and scientifically sound decisions on regulatory controls.

ACCOMPLISHMENTS: The Ethylene Oxide Industry Council and Chemical Industry Institute of Toxicology continued cofunding a pharmacokinetics physiological modeling study being conducted at CIIT. The study results will be very helpful in conducting ethylene oxide risk assessments, specifically mutagenicity risk assessment. The EOIC continued working with the EPA on

ethylene oxide risk assessment. The EOIC worked with IARC as it revisited ethylene oxide. The epidemiology studies of ethylene oxide do not agree with the results of the animal studies and recent EOIC sponsored meta-analysis further illustrates this point. This point was carried to IARC during its ethylene oxide review. The final Hazardous Organic NESHAPS was issued this past winter and the EOIC assessed how ethylene oxide may be affected. The EOIC is sponsoring an ethylene oxide flame propagation study in two and twelve-inch lines. The EOIC Safety Task Group has had several information exchanges on ethylene oxide stewardship.

PLANS: The CIIT pharmacokinetics physiological modeling study will continue, into its fourth year. The Toxicology Task Group will review several ethylene oxide reproductive studies and evaluate ethylene oxide carcinogenicity risk assessment. In August the Group will host with CIIT a joint planning meeting on mutagenicity risk assessment with EPA representatives, industry toxicologists and academicians. A scientific paper on the CIIT research will be published this year. An international symposium cosponsored with CIIT and EPA on mutagenicity risk assessment is planned for 1995. The ethylene oxide flame propagation study will continue through 1994, with a final report due in January, 1995. "Information Exchange" workshops focusing on safety and handling of ethylene oxide and on toxicology issues are planned for 1995. The Environmental task group will summarize the final HON Standards as it effects ethylene oxide manufacturing and use. They will also evaluate ethylene oxide exposure for ultimate use in risk assessment. The Industrial Hygiene task group will publish an article on ethylene oxide protective clothing research.

Fluoroalkenes Panel

HISTORY: The manufacturers of fluoroalkene monomers originally formed an *ad hoc* coalition to address the Interagency Testing Committee's 1980 designation of fluoroalkenes for priority consideration under TSCA Section 4. The coalition reorganized as a CHEMSTAR panel when EPA issued the final test rule.

ACCOMPLISHMENTS: In 1992, the Panel completed the requirements for the TSCA Section 4 test rule, which included mutagenicity, subchronic toxicity, and oncogenicity on four fluoroalkene monomers — vinyl fluoride, vinylidene fluoride, hexafluoropropene, and tetrafluoroethene.

PLANS: The Panel will respond to any issues regarding the results of its TSCA testing program, and will monitor other regulatory issues on fluoroalkenes.

Hexamethylene Diisocyanate Panel

HISTORY: The Panel formed to address the inclusion of HDI on the Interagency Testing Committee priority list of chemicals for testing under TSCA Section 4.

ACCOMPLISHMENTS: The Panel continued to wait for EPA to issue the final TSCA Section 4 test rule on HDI. In the meantime, the group commented on EPA's proposed rulemaking to adjust the reportable quantity for HDI from a statutory one-pound limit to 100 pounds. In addition, the Panel responded to the inclusion of HDI on EPA's proposed Toxics Release Inventory expansion list.

PLANS: The Panel will proceed with the required testing program when EPA issues the final rule. In addition, the Panel intends to contact DOT regarding HDI classification under Hazardous Material Transportation Rule 181. The Panel will continue to track other regulatory issues affecting HDI.

Hydrazine Panel

HISTORY: The Panel formed to support hydrazine-related product stewardship activities. Panel members have reviewed and evaluated published and unpublished literature on the health effects of hydrazine in order to maintain a current, accurate point of reference for discussion of the safe use of hydrazine products.

ACCOMPLISHMENTS: The Panel submitted comments to ACGIH on the proposal to lower the Threshold Limit Value for hydrazine from 0.1 ppm to 0.01 ppm. In response, ACGIH has postponed the decision for another year so that its TLV Committee may further consider research results. The Panel cooperated with the EPA in its Risk Management Review of hydrazine through meetings and submission of other pertinent information. The Panel also and submitted a petition to the EPA for reconsideration of the weighting factor for hydrazine under the Early Reduction Rule. The Panel submitted analytical

methods for analyzing hydrazine in water and soil to the EPA for consideration in the drafting of a proposed hazardous waste identification rule under RCRA, and supported a petition for a new classification of hydrazine by DOT for "less than 37% hydrazine".

PLANS: The Panel will continue its product stewardship activities, and will work with regulatory agencies and other concerned organizations on matters relating to health and safety aspects of hydrazine.

Hydrogen Fluoride Panel

HISTORY: The Panel formed to provide a forum for U.S. and Mexican producers and shippers to share information on safety in the manufacture, handling and transportation of, and emergency response procedures for, anhydrous hydrogen fluoride and hydrofluoric acid.

ACCOMPLISHMENTS: The Panel expanded to include users and suppliers of raw materials as members and broadened its focus to include advocacy activities. The Management Group and Advocacy/Communications Task Group led the Panel's participation in EPA's Congressionally-mandated program to prepare a study of the industry. The Panel also submitted to EPA an independent study of transportation incidents involving anhydrous HF. The Panel commented extensively on ATSDR's Draft Toxicology Profile on HF. Members of the Medical & Toxicology Task Group also worked with the CMA Health and Safety Committee to develop comments on ATSDR's draft protocols for emergency medical treatment of HF exposure victims.

PLANS: The Panel will track a lawsuit filed against the California South Coast Air Quality Management District that banned specific uses of HF. The technical task groups will work toward completion of their recommended guidelines for industry safety practices. The Panel will continue to hold its Annual Meeting and Safety Seminar.

Hydroquinone Panel

HISTORY: The Panel formed in response to a TSCA Section 4 test rule published by EPA in 1984. The current focus of the Panel is voluntary research. In 1990, the Panel completed a TSCA Section 4 testing program for hydroquinone. All required data and reports have been submitted to EPA, and the Panel has prepared a Research Summary Report outlining the findings and conclusions of the various studies. Completed TSCA Section 4 studies include evaluations of developmental toxicity, reproductive toxicity, subchronic neurotoxicity, and pharmacokinetics.

ACCOMPLISHMENTS: The Panel initiated a voluntary research program to further evaluate the health effects of hydroquinone. Voluntary research currently in progress includes PBPK modeling and studies on epidemiology, protein binding dosimetry, oxidative stress in the kidney, comparative enzymology, and *in vitro* metabolism.

To disseminate results of its research program, the Panel published a number of abstracts and scientific articles, and gave poster presentations at various scientific conferences. The Panel also provided various trade groups, including the Nonprescription Drug Manufacturers Association, the Cosmetic Ingredient Review, and the Cosmetic, Toiletry, and Fragrance Association, with summaries and final reports of its studies.

PLANS: The Panel plans to continue publishing results of its TSCA and voluntary research programs in appropriate scientific journals. The Panel also will monitor hydroquinone issues being considered by the European Union, OECD, Japan, EPA, NTP, IARC, the Food and Drug Administration, and the Nonprescription Drug Manufacturers Association.

Inorganic Acid Mists Panel

HISTORY: Manufacturers and users of sulfuric acid formed the Panel to address the International Agency for Research on Cancer's classification of occupational exposure to strong inorganic acid mists, including sulfuric acid, as carcinogenic to humans. Occupational exposures to strong inorganic acid mists have occurred in a variety of occupational settings such as isopropanol and ethanol manufacturing, metal plating, steel pickling, soap manufacture, metal smelting, and cell houses.

ACCOMPLISHMENTS: The Panel co-sponsored an independent scientific review of epidemiology studies on occupational exposure to inorganic acid mists. The review was co-sponsored with the European Sulfuric Acid

Association (ESA), a CEFIC Sector Group. The review targeted the human cancer studies reviewed by IARC and included more recent studies. Applicable rodent and genotoxicity data were also evaluated. A draft report has been provided to the Panel. A final report and publication of an article in a scientific, peer-reviewed journal are anticipated.

The Panel also is supporting the development of a method for measuring airborne sulfuric acid mist levels in occupational settings. Current methods are inadequate in that there is positive interference from particulate sulfate salts which can lead to calculations of high workplace exposures.

PLANS: Other objectives of the Panel are the development of data for input into the exposure and risk assessment process and possible participation in and conduct of additional feasibility and epidemiology studies. The Panel will monitor NIOSH's interest in the conduct of new occupational human health studies and the updating of previous studies.

Isopropanol Panel

HISTORY: The Panel formed to address health effects concerns about isopropanol raised by the Interagency Testing Committee in its 19th Report to the EPA Administrator. The Panel's objective is to collect information to aid in the assessment of health risks arising from production, storage, transportation, and use of isopropanol.

ACCOMPLISHMENTS: The Panel is testing isopropanol for health effects in compliance with a TSCA Section 4 test rule issued in 1989. Testing requirements include: subchronic toxicity, reproductive toxicity, developmental toxicity and neurotoxicity, mutagenicity, pharmacokinetics, and oncogenicity. The developmental toxicity, mutagenicity, pharmacokinetics, subchronic neurotoxicity, developmental neurotoxicity, reproductive, and 18-month mouse oncogenicity studies were completed and submitted to EPA. The final report of the two-year rat oncogenicity study will be submitted to the Agency in July. Manuscripts of all other completed studies have been submitted to peer-reviewed journals for publication. A single manuscript for the two oncogenicity studies is in preparation. The Panel is conducting several follow-up studies to the Section 4 work to evaluate findings for risk assessment data. For example, an *in vitro* skin penetration study as a human exposure paradigm for risk assessment is underway. Completed studies include a 90-day vapor inhalation neurotoxicity follow-up study in female Fischer 344 Rats and an alpha 2u-globulin study. Final reports have been submitted to EPA. Panel representatives gave poster presentations on these two completed add-on studies at the Annual Meeting of the Society of Toxicology in March. EPA has issued the final Significant New Alternatives Policy Rule. The Panel commented on the proposed rule in June. The final rule clarifies that all "oxygenated organic solvents," including esters, ethers, alcohols and ketones, are acceptable substitutes in the following use sectors: metals cleaning; electronics cleaning; precision cleaning; adhesives, coatings and inks; and, aerosol solvents. Additionally, the Panel has reviewed the Section 4 test results with the Michigan Scientific Advisory Panel in a successful effort to encourage the Advisory Panel to recommend an interim Initial Threshold Screening Level for isopropanol to the Michigan Air Toxics Commission.

PLANS: The Panel will continue to conduct add-on studies to the TSCA test rule as well as interact with EPA on interpretation and evaluation of the Section 4 test results. Sponsorship of one additional study, an *in vivo* dermal absorption study in rats, is anticipated. The Panel plans a comprehensive risk assessment of isopropanol and will work with IRIS on its database. Results of all completed studies will be published in peer-reviewed journals. The Panel also plans to complete a SIDS dossier for submission to OECD in January 1995. The Panel will continue its efforts to impact the following issues: Design for the Environment; Michigan Air Toxics Regulations; and, the Canadian National Pollutant Release Inventory. Work with EPA to correct the TRI database for isopropanol will continue.

Ketones Panel

HISTORY: The Panel formed to address EPA activities on MEK, MIBK, MO, and isophorone and has recently decided to include issues relating to secondary butanol. The Panel has negotiated testing programs with EPA to supplement the data base on MO, MEK, MIBK and isophorone.

ACCOMPLISHMENTS: The Panel litigated against the inclusion of MIBK in the Neurotoxicity Endpoint Test Rule and worked with other litigants to negotiate a settlement agreement with the Agency which was signed in April. After a consent agreement is signed, the Panel intends to conduct the neurotoxicity testing program for MIBK agreed upon in the settlement.

As part of a joint CMA/EPA/SOCMA pilot project, the Panel submitted information to support EPA's efforts to accurately characterize risk for chemicals under evaluation in the Agency's Risk Management Program. In March, the Panel submitted comments in response to EPA's proposal to list wastes generated during the production of carbamates as hazardous wastes. The Agency identified MEK and MIBK as constituents of concern and proposed to add MIBK to Appendix VIII of the RCRA regulation. The Panel submitted comments and developed a protocol for testing in response to the Interagency Testing Committee's designation of secondary butyl alcohol for dermal absorption testing. Also, the Panel, together with the Oxo Process Panel, has formed a Task Group to address Clean Air Act issues, such as voluntary regulatory negotiations, pending Maximum Acheivable Control Technology standards, and EPA's proposed "cluster" rules. The Task Group has begun preparation of a "white paper" on oxygenated solvents.

PLANS: The Panel will continue to address a variety of voluntary and regulatory initiatives regarding ketones. Areas of interest include the EPA OPPT Printing Industry Design for the Environment initiative, the Architectural and Industrial Maintenance Coatings and the Wood Furniture regulatory negotiations. Additionally, the Panel continues to discuss areas of mutual interest with the CEFIC Oxygenated Solvents Producers Association.

Laboratory and Research Chemicals Panel

HISTORY: The Panel formed to address issues unique to the laboratory and research chemicals industry. Panel focuses are: commenting on regulatory and legislative proposals affecting the industry; advocating the interests of the industry before domestic and international organizations and government agencies; developing protocols and contracting for research; and, developing and sponsoring educational programs to implement objectives of the Panel.

ACCOMPLISHMENTS: This former Business Council elected to become a Panel in order to expand its membership beyond CMA member companies. The Panel then participated in the CMA-sponsored American National Standards Institute (ANSI) labelling standards process to ensure that needs of small packagers were appropriately addressed. The ANSI labelling standards revisions are nearing completion and for the first time the standards recognize small package considerations.

PLANS: The Panel will continue evaluating cost-effective ways to help the laboratory and research chemicals industry implement Responsible Care®, with particular focus on the Product Stewardship and Distribution Codes. Projects to develop input into other standards setting organizations and regulatory agencies on packaging and transportation issues are being initiated. Also, the Panel will provide a forum for ensuring that CMA standing committees develop positions and work products that reflect the special considerations of small chemical packagers.

Maleic Anhydride Panel

HISTORY: The Panel formed in 1993 to jointly promote the principles and practices of Responsible Care® with primary emphasis on Product Stewardship. The Panel plans to accomplish this by providing health, safety and environmental information to guide maleic anhydride users and transporters.

ACCOMPLISHMENTS: The Panel's immediate priority is to provide consensus non-proprietary information to guide maleic anhydride users and transporters. To this end, the Panel has contracted to produce two videos. The first will cover health and safety issues and the second will deal with shipping and unloading maleic anhydride. It is expected that the videos will be completed by late Summer, 1994.

PLANS: The Panel is also planning to publish a comprehensive brochure that can accompany the videos.

Metal Catalysts Panel

HISTORY: The Panel formed to collect and evaluate information necessary to assess safety, environmental, and health issues for metal-containing catalysts used in industrial processes. The Panel originally focused on a re-

search program to characterize the toxicity profiles of metal catalysts, with particular emphasis on nickel-containing materials. Over the last several years, Panel focus has changed with an increase in advocacy activities in the areas of industrial and environmental regulatory concerns.

ACCOMPLISHMENTS: The Panel continued to interact with the ACGIH on the proposal to lower the Threshold Limit Values for all nickel compounds to 0.05 mg/m3. Industry commenters were successful in persuading ACGIH to keep nickel in the "intend to change" category for another year. The Panel worked extensively with the EPA in its efforts to revise the definition of solid waste under RCRA subtitle C. Comments and discussion papers were submitted on several occasions, and meetings were held with EPA officials. The Panel continued to cooperate with the Nickel Producers Environmental Research Association, the Chrome Coalition, and the European Catalysts Manufacturers Association (ECMA), through meetings and information exchange.

The Panel is involved jointly with NiPERA, the Nickel Development Institute, the National Association of Metal Finishers, Inco United States, Inc., and the International Metals Reclamation Company, Inc., in litigation challenging EPA's National Primary Drinking Water Regulation for Nickel. As a result of the litigation, EPA has agreed to take a voluntary remand of the standard. Closure is expected in the near future.

PLANS: The Panel will continue liaison with NiPERA, NiDI, ISRI, NAMF, the Chrome Coalition, and ECMA. Issues that will be of prime importance to the Panel are the nickel litigation, the EPA proposal on solid waste, and various actions under the Clean Air Act Amendments. The Panel will continue to monitor and evaluate issues of interest to the industry, and will undertake additional projects as appropriate.

Methyl Bromide Industry Panel

ACCOMPLISHMENTS: The Panel continues to conduct testing to satisfy pesticide reregistration and other data call-in requirements. Testing is ongoing in numerous areas including product chemistry, ecological effects, environmental fate, toxicology, and residue analyses. In the latter area of residue studies, the Panel completed residue analyses on almost 50 different crop commodities and worked with a dozen other organizations to complete work on another 20 crops. A number of food processing studies also have been completed.

PLANS: The Panel will continue to fulfill pesticide data call-in requirements and will complete a dietary assessment and tolerance petition for submission to EPA in 1994.

Nitrosamines Panel (Completed)

HISTORY: In January of this year, the Panel officially terminated its activities. The Panel originally formed to identify and address impending federal and international regulatory actions that potentially impact nitrosamines. Products of interest to member companies include: rubber additives, secondary amines, cosmetics components, soaps, detergents, and surfactants.

ACCOMPLISHMENTS: In 1993 the Panel completed a chapter on N-nitrosamines in "Patty's Industrial Hygiene and Toxicology," and met with OSHA, NIOSH, EPA, and the National Safety Council (NSC) to discuss concerns about potential exposures in the workplace. Over the years the Panel has interacted with numerous regulatory agencies to alleviate concerns about potential workplace exposure to nitrosamines. Advocacy efforts were also directed at proposed regulations to lower levels of nitrosamines in drinking water. Panel members have sponsored projects and participated in seminars to better assess and communicate information on the properties and risks of N-nitrosamine containing compounds.

Olefins Panel

HISTORY: The producers of ethylene and propylene formed the Panel in 1992 to conduct advocacy on environmental regulations from an engineering viewpoint. Regulations on benzene and butadiene, which are inadvertently generated in the production of C_2 - C_4 olefins, were a major focus. The Panel is particularly concerned with the regulation of olefins plants under the Clean Air Act Amendments. Because olefins plants are intermediate between petroleum refin-

ing and traditional chemical synthesis facilities in their operations, they require specifically focused regulations.

ACCOMPLISHMENTS: The Panel focused on environmental advocacy by obtaining a separate source category for olefins plants under the Clean Air Act. Based on this separation, these plants are excluded from the Hazardous Organic NESHAP which was published in March. In addition, the Panel commented on the ACT for control of NOx emissions from process heaters and convinced EPA to create a separate category for pyrollysis furnaces. The separate category recognizes differences in NOx emissions and allows states to regulate emissions from pyrollysis furnaces differently from other types of industrial furances.

In addition, the Panel conducted a very successful research and advocacy program on ethylene and propylene. The program was developed and funded jointly with the Society of the Plastics Industry. The concern about ethylene and propylene was based on their metabolism to ethylene oxide and propylene oxide, respectively. The oxides are animal carcinogens. The Panel sponsored scientific studies on ethylene which showed that, although a small amount of ethylene oxide was produced, ethylene was unlikely to cause cancer due to this small amount of metabolism. Based upon the Panel's research, which was presented to IARC scientists, ethylene and propylene were not designated carcinogens.

The Panel began a coordination effort with the Lower Olefins Sector Group at CEFIC. The two groups are working together following the IARC review to determine data needs for ethylene and propylene. In addition, the two groups are discussing coordinated advocacy efforts.

The Panel merged with the Butadiene Panel to form the new Olefins Panel. The new Panel will cover advocacy and research needs for all chemicals of interest to ethylene manufacturing. At present these chemicals include ethylene, propylene, butadiene, and 4-vinylcyclohexene.

PLANS: The new Olefins Panel will reorganize to address all issues of concern to the industry. An Environmental Task Group was formed to address environmental issues, including Clean Air Act regulations. In addition, a research and advocacy plan will be developed jointly with CEFIC on ethylene and propylene. Finally, the butadiene and 4-vinylcyclohexene activities will be incorporated into the new Panel.

α-Olefins Panel

HISTORY: Manufacturing companies formed the Panel to collect, generate and evaluate information required to complete Screening Information Data Sets for several alpha-olefins. The SIDS information will be used for evaluating environmental and health toxicity potentials of these chemicals. The Panel will conduct other testing as appropriate.

ACCOMPLISHMENTS: The Panel developed dossiers for 1-hexene, 1-octene, 1-decene, 1-dodecene, and 1-tetradecene. The Panel also framed structure activity relationship based-testing recommendations to fill data gaps for the series. These U.S. recommendations were approved by the OECD at a meeting in Paris in March 1993. The referenced chemicals are included in the second phase of the OECD High Production Volume Existing Chemicals Voluntary Testing Program.

PLANS: The Panel is awaiting the results of a reproductive/ developmental toxicity screening test for 1-hexene following OECD Guideline 421 and a combined repeat dose toxicity study with reproductive/developmental screening for 1-tetradecene following OECD Guideline 422. The Panel intends to sponsor an aquatic screening testing package for 1-tetradecene in the near future. Upon completion of testing and collection of exposure information, the Panel plans to participate in a SIDS Assessment Review of C6, C8, C10, C12, and C14a-Olefins.

Oleylamine Panel

HISTORY: The Panel formed in response to the proposed test rule for oleylamine under TSCA Section 4 requiring pharmacokinetics, genetic effects, subchronic toxicity (including neurotoxicity and reproductive effects), and teratogenicity data for this chemical.

ACCOMPLISHMENTS: In June 1994, the Panel received information about the EPA Risk Management I meeting to evaluate the results of studies conducted by the Panel in fulfilling the requirements of the TSCA Section 4 Test Rule for Oleylamine. The Agency's decision was to drop oleylamine from further review, based on a

low level of concern for health and environmental effects. Additionally, requirements for third-tier mutagenicity and oncogenicity testing were not implemented in light of the Agency staff's conclusions on mutagenicity tests.

In September 1994, the Panel agreed to participate in the OECD Existing Chemicals Voluntary Testing Program to investigate the potential human health and environmental effects of oleylamine. The Panel has prepared and submitted a Screening Information Data Set dossier which includes an evaluation of existing data and an identification of any data gaps.

PLANS: The Panel plans to complete a toxicokinetics research project in late 1994. At the completion of this study, members will assess the data and determine the Panel's future course of action.

Oxo Process Panel

HISTORY: The Panel formed from a merger of the Ethylhexanoic Acid Panel, and the 2-Ethylhexanol Panel along with its Butyraldehyde Task Group. In addition to these three chemicals, the Panel addresses issues pertaining to ethyl and butyl acetate, amyl, butyl and isobutyl alcohols, propionaldehyde and isobutyraldehyde. This consolidated approach enables members to address issues on a broad range of chemicals that are starting materials, intermediates, or end products of the same industrial process.

ACCOMPLISHMENTS: The Panel litigated against inclusion of isobutyl and butyl alcohol, butyl and ethyl acetate, and n-amyl acetate in the Neurotoxicity Endpoint Test Rule and worked with other litigants to negotiate a settlement agreement with the Agency which was signed on April 28, 1994. Although the consent agreements have not yet been signed, the Oxo Process Panel has begun neurotoxocity testing on isobutyl alcohol, butyl acetate and ethyl acetate. The remainder of the neurotoxicity testing program will be initiated after signing of the consent agreements.

Due to information presented by Panel toxicologists at the March 1994 TLV Subcommittee Meeting, ACGIH agreed to postpone the decision to reduce the TLV for butyl acetate from 150 ppm to 20 ppm until March 1995. This decision was based largely on the understanding that the Panel would attempt to characterize workplace exposure to butyl acetate. The Panel's Butyl Acetate Task Group intends to conduct air monitoring studies this Fall at six furniture manufacturers' facilities in the hopes of providing information to ACGIH that supports retaining the current TLV.

To further its proactive approach, the Panel has volunteered to prepare dossiers on a number of Oxo Process chemicals for the OECD Existing Chemicals Testing program. The chemicals that have been accepted into the OECD program include butyl and isobutyl alcohols, 2-ethylhexanoic acid and butyraldehyde, as well as 2-ethylhexyl alcohol for which credit is being shared with Sweden.

As part of a joint CMA/EPA/SOCMA pilot project, the Panel submitted information on n-butanol to support EPA's efforts to accurately characterize risk for chemicals under evaluation in the Agency's RM Program. Representatives of the Panel attended the June 1993 meeting of the North Carolina Scientific Advisory Board on Toxic Air Pollutants to urge consideration of further information regarding the toxicity of 1-butanol prior to setting an Acceptable Ambient Level(AAL) for the chemical. After the Panel's presentation, the Air Toxics Board agreed that a more appropriate basis for establishing an AAL should be selected.

In response to an ITC request, the Panel's Butyraldehyde Task Group submitted information on butyraldehyde concerning the potential for worker exposure and environmental releases. On February 24, 1994, the Panel submitted comments to EPA in response to the Agency's proposed test rule for health effects testing on ethyl acetate. The Panel is preparing manuscripts on the 2-EH oncogenicity and subchronic studies for submission to peer-review journals

Finally, the Panel, together with the Ketones Panel, has formed a Task Group to address Clean Air Act Issues that impact solvents. Issues include voluntary regulatory negotiations, such as the Wood Furniture and the Architectural and Industrial Maintenance initiatives, pending MACT standards and EPA's proposed "cluster" rules. The Task Group has begun preparation of a "white paper" on

regulated solvent emissions and intends to interact with other associations to identify issues of common concern.

PLANS: The Panel will continue to address a variety of voluntary and regulatory initiatives regarding oxo process chemicals and is currently preparing for its upcoming combined Panel and TRTG Planning Session. The Panel intends to develop a long-range strategic plan for the oxo process chemicals. Other areas of interest for the Panel include participation in the EPA OPPT Printing Industry Design for the Environment Initiative and further developing a cooperative, mutually beneficial relationship with CEFIC's Oxygenated Solvents Producers Association in order to further develop an international approach to oxo process chemicals' advocacy.

Petroleum Additives Panel

HISTORY: The Panel formed to pursue research and advocacy interests of active developers, manufacturers or users of additives used to enhance the performance of automotive and industrial petroleum fuels or lubricants. The Panel's mission included development of a product approval protocol for engine oil testing and addressing health, regulatory, and environmental issues affecting the additives industry.

ACCOMPLISHMENTS: The Health, Environmental and Regulatory Task Group, in conjunction with the European Additives Technical Committee, is conducting an aquatic toxicity research program on nineteen classes of lubricant additives. The data will be used to support European environmental labeling requirements and U.S. regulations. The Task Group also is participating in Phase 2 of the OECD HPV Existing Chemicals Voluntary Testing Program, specifically addressing data needs on zinc dialkyldithiophosphates. Testing will be completed and updated dossiers submitted to EPA in September 1994. Additionally, the Task Group is reviewing an EPA final rule on fuels and fuel additives registration which requires health effects testing of combustion and evaporative emissions.

Through the efforts of the Product Approval Protocol Task Group (PAPTG), the Panel developed a CMA Product Approval Code of Practice for engine oil testing that became operational in March 1992. Registration Systems, Inc., provides industry oversight, administrative and advisory services related to operation of the Code. RSI has registered over 8000 candidate engine oil tests. Using the submitted test reports, RSI has analyzed the results and provided periodic reports to industry on engine testing precision and accuracy.

In March, five heavy-duty (diesel) engine tests were included in the Code. In addition, the Task Group completed development of a template for introduction of new tests into the Code, and developed a procedure for proactive analysis of the candidate database. The Task Group also completed work on a system to annually benchmark and measure engine test quality improvement, timeliness in identification and quantification of engine test problems, and test equipment calibration costs. These activities were introduced at an industry management meeting in December 1993. The Task Group has also held meetings with U.S. and European stakeholders in the testing, licensing and certification process.

Another major event was the introduction of engine testing laboratories into the Code compliance process. Ten laboratories committed to conduct all CMA-scheduled engine tests according to those practices of the Code for which the test laboratories are responsible. This includes calibration and assignment of engine test stands, test registration, and reporting of test results to the CMA Monitoring Agency. Also in the compliance area, fifteen test sponsors successfully completed their first year of Code practice by completing an audit and submitting the results to CMA. All fifteen companies were found to be in compliance.

The Fuels Detergent Performance (FDP) Task Group responded to the proposed Clean Air Act Section 211(l) rulemaking, which was issued in December 1993. Dr. Alan Millard, FDP Task Group chairman, testified at EPA's public hearing on the rulemaking on January 11, 1994. In addition, the Task Group submitted extensive written comments on the rulemaking on February 11, 1994. Overall, the Task Group agreed with the broad outlines of a performance-based self-certification system, as proposed in the rulemaking, but noted several aspects of the rule which could be revised for a more practical and cost effective regulation, without sacrificing air quality benefits. In particular, the Task Group disagreed with the proposed four-fuel test matrix approach, and with API's concurrence, suggested the option of testing a single fuel that meets

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specific severity parameters. The Task Group and API also supported a single-tier certification system, rather than the two-tier system outlined by the Agency. To respond to EPA's concern with the potentiality of under-additized gasoline, the Task Group co-sponsored a project with API to investigate variations in fuel severity parameters on deposit formations. Finally, in its comments, the Task Group noted that EPA should not purport to make detergent manufacturers "presumptively liable" for downstream violations.

PLANS: The HERTG will decide if the testing requirements for fuel/fuel additives registration can be met by an industry testing consortium. Coordination with the American Petroleum Institute on this issue is anticipated. The current voluntary testing programs are expected to be completed by year end, at which time the Task Group will assess further testing needs.

The PAPTG and its work groups and advisory groups will continue involvement in activities related to the Code of Practice operation. Work in progress includes benchmarking of the Code, proactive analyses of the database on candidate oils (pilot program), and third-party auditing of company and test laboratory compliance during the second year of Code operation. Using the Code template as a model, the group will continue to meet with industry stakeholders both in the U.S. and abroad to advocate improvement in test development and improved test precision and accuracy.

The FDP Task Group will await the final Section 211(l) rulemaking, which is scheduled to be issued by October 15, 1994.

Phenol Panel - Regulatory

HISTORY: The Phenol Regulatory Task Group formed to address regulatory, toxicology, and environmental issues concerning phenol. During the past year, Regulatory Task Group efforts have focused on voluntary research and regulatory advocacy.

ACCOMPLISHMENTS: A voluntary pharmacokinetics study sponsored by the Regulatory Task Group was completed. Results supported the conclusion that oral toxicity data on phenol may be used to extrapolate to the inhalation route of exposure. The final study report was submitted to EPA. The Agency will use the pharmacokinetic study to decide if inhalation testing of phenol is necessary. The Regulatory Task Group is waiting for EPA's decision.

EPA listed phenol as a proposed regulated substance under the accidental release provisions of the Clean Air Act Section 112(r). The Regulatory Task Group subsequently submitted technical comments resulting in removal of phenol from the final 112(r) list. In response to a proposal by the Ontario Ministry of Labour to lower the occupational exposure limit of phenol in Canada to 1 ppm, the Regulatory Task Group submitted safety data to the Canadian government supporting a 5 ppm limit. The Regulatory Task Group is waiting for a response on its comments from Canadian officials. In response to EPA Region V listing phenol as a "bioaccumulative chemical of concern" in its Water Quality Guidance for the Great Lakes, the Regulatory Task Group submitted comments indicating phenol is inappropriately listed because phenol does not persist in the aquatic environment and does not bioaccumulate. The Regulatory Task Group is waiting for a response from EPA Region V on its request to delist phenol.

EPA issued a proposed TSCA Section 4 test rule on phenol. The Regulatory Task Group responded by submitting comments stating that existing data on phenol makes much of the Agency's proposed testing unnecessary. As a cost-effective alternative to the extensive health effects testing program required by EPA in the proposed test rule, the Regulatory Task Group proposed a tiered testing approach that would address all of the Agency's data needs. The Regulatory Task Group is waiting for EPA to set a date to begin TSCA Section 4 consent agreement negotiations.

PLANS: The Regulatory Task Group plans to: prepare for its TSCA Section 4 consent agreement negotiations with EPA; address a proposed EPA HAPs TSCA test rule requiring acute inhalation data; and, respond to the listing of phenol as a targeted substance under the Automotive Pollution Prevention Program. The Regulatory Task Group is considering sponsorship of a study on the treatment of phenol burns. The Regulatory Task Group also intends to publish its pharmacokinetic study in a scientific, peer-reviewed journal.

Phenol Panel - Safety

HISTORY: The Panel formed to promote greater safety in the production, transportation and use of phenol. Member companies exchange non-proprietary safety information on transportation and handling issues. Education issues are the focus of the Video Task Group, which is targeting worker and customer safety.

ACCOMPLISHMENTS: The Panel completed work on a self-contained training program on how to safely handle and transport phenol. The training program includes instructor and student workbooks, along with two separate instructional videotapes. The 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.

The Panel completed the fourth annual member company self-assessment of worker safety and environmental performance in phenol-producing plants. The Panel developed Pro-Active Safety Index was the tool used to complete the self-assessment. At the awards ceremony in October, Georgia Gulf Corporation was recognized as both the industry leader and most improved for their record at their Pasadena, Texas facility. This years index was expanded to include environmental factors along with worker safety in the evaluation.

PLANS: The Panel will sponsor a customer safety seminar in 1994-1995.

Phosgene Panel

HISTORY: The Panel formed to improve the industry's ability to safely manufacture, handle, and use phosgene. Predicting and controlling ambient concentrations of phosgene from accidental releases is an important Panel objective.

ACCOMPLISHMENTS: The Panel completed the Bulletin on Phosgene Pulmonary Exposure Information. The basis of the bulletin was the research findings from the New York Medical College phosgene countermeasure research. The bulletin was provided to all Panel member medical staff. The Panel continued to sponsor studies in phosgene air dispersion modeling and mitigation. Most recently the phosgene mass coefficient was determined by the Panel; this coefficient will be used in the phosgene air dispersion model. The Panel examined several rules dealing with phosgene: The Protection of Stratospheric Ozone Rule and Listing 40CFR82; The Enhanced Monitoring Rule 40 CFR, part 5.1; and an English proposal to lower the TWA for phosgene in Europe to .02 ppm. The Panel continued to have special topic discussions on phosgene stewardship. Also the Panel reviewed several publications on phosgene safety and phosgene hazard/toxicity.

PLANS: The Panel will continue its regular program of nonproprietary information exchanges among member companies on safety techniques. In addition, the Panel will continue monitoring increasing regulatory interest in phosgene. Modelling and mitigation work may continue into 1995. The Panel will continue to identify and explore additional health research projects on phosgene. The Panel at its recent Planning Meeting decided to reorganize. The Panel added a new task group on Safety Practices and Guidelines to its present three existing task groups. The Panel wishes in 1995 to begin investigating how to establish safety practices and guidelines for phosgene manufacturing.

Phthalate Esters Panel

HISTORY: The Panel formed in 1972 to address environmental issues. In 1976, the Interagency Testing Committee listed the alkyl phthalate category for test rule development under TSCA Section 4. The ITC also included health effects testing as a concern following the release by National Toxicology Program of bioassay results on DEHP and di-2-ethylhexyl adipate. In 1980-81, the Panel worked with EPA to develop the first negotiated testing agreement in lieu of a TSCA Section 4 test rule. The testing was completed in 1984, and the results were submitted to the Agency along with a proposal for further environmental testing. In 1988, the Panel and EPA agreed on an environmental testing program under a consent order. The testing was completed in 1991 and formally accepted by EPA in 1992.

ACCOMPLISHMENTS: The Panel has worked with EPA to develop a sediment toxicity work plan that will assess phthalate esters as a class. EPA has worked with the Panel to refine the work plan and will conduct a portion of the testing.

Based on comments submitted by the Panel, di-n-octyl phthalate was removed from Arizona's list of Hazardous Air Pollutants. The Panel also commented on the HON resulting in EPA's decision to drop phthalate esters from the Synthetic Organic Chemical Manufacturers Industry category. It will instead regulate phthalate ester production under the Phthalate Plasticizers category which is not scheduled for Maximum Achievable Control Technology development until the end of the decade.

The Panel had a productive year working on a wide variety of needs and responding to many diverse requests. Data from Panel-sponsored environmental effects testing has been prepared for publication in peer reviewed journals. Panel members critiqued Chemical Product Safety Cards for the World Health Organization. Posters were presented at the SETAC meeting in Houston and at SETAC Europe. Panel comments were submitted on the Great Lakes Initiative, the ATSDR Toxicological Profile on diethyl phthalate, and the Texas Hazardous Waste Identification Rule. The Panel challenged an article implying that DEHP has a hazard equivalent to that of PCBs when it is used as a dielectric fluid in lighting ballasts. As a result of the Panel's comments, the article was substantially rewritten.

PLANS: The Panel plans to work with CEFIC's European Council for Plasticisers and Intermediates to coordinate testing and publication programs to foster harmonization and reduce costs. The Panel will continue to provide input to NTP on a testing program it is designing which will include dibutyl phthalate. The Panel will start the in-lab portion of the sediment toxicity testing program and make preparations for Phase II testing. A petition will be prepared and submitted to EPA requesting that DEHA be delisted from SARA 313.

Polychlorinated Biphenyls Panel

HISTORY: The Panel was formed to represent the interests of the industry during implementation of the TSCA Section 6 regulations for PCBs. Regulations evolved covering spills and disposal of PCBs, mitigation of transformer fires, the inadvertant generation of PCBs, and operation of electrical equipment containing PCBs.

ACCOMPLISHMENTS: The Panel continued its collaboration with the National Electrical Manufacturers Association and the Edison Electric Institute's Utility Solid Waste Activities Group as part of the PCB Industry Consensus Group (ICG). The Industry Coalition pressed EPA to publish a proposed rulemaking to expedite PCB disposal through more flexible and consistent rules. The Coalition continues to advocate presumptive numbers for the cleanup of old spills and withdrawal of the PCB anti-dilution provisions of TSCA. The Coalition also reviewed the information on PCBs contained in the EPA IRIS data base and submitted additional information to IRIS. The Coalition supported presentation of its funded study of declining trends of PCBs in the environment and filed comments on EPA's proposed water quality guidance for the Great Lakes.

The PCB Coalition dedicated a meeting in January for a strategy and planning session that included a historical and future review.

PLANS: The Panel and the other members of the Industry Coalition will implement its strategic plan and continue to focus on the progress of EPA's proposed disposal rulemaking and coordinate approaches to new EPA PCB cleanup rules. The Coalition will persist in its position that PCB disposal should continue to be governed by TSCA. The Coalition will follow-up on the comments submitted and activities surrounding the Great Lakes water quality and is planning comments on the EPA sediment quality criteria. The Panel will follow developments surrounding the use of Toxicity Equivalency Factors (TEQ) by EPA. TEQ, originally suggested as a screening tool, is being applied to PCBs and other chemicals as a regulatory device at both the state and federal levels. The Panel filed comments as early as 1991 cautioning EPA about the limitations of applying TEQ in a regulatory framework.

Propylene Glycol Ethers Panel

HISTORY: Manufacturers of propylene glycol ethers organized as a Panel to explore interest in a shared research program and work with government organizations interested in these materials.

ACCOMPLISHMENTS: Responding to a TSCA Interagency Testing Committee report, manufacturers of propylene-based glycol ethers have established a working relationship with the ITC to clarify testing interests. The Panel sought and received a stay of the corresponding TSCA Section 8(a) and 8(d) reporting rules while the issues are getting clarified. Liaison with the National Toxicology Program has also been established to share information on testing programs. The Panel successfully kept propylene glycol ethers out of both a California legislative initiative and an Arizona air regulation. Both situations involved confusion with the definitions and scientific data for propylene glycol ethers. The Panel shared toxicology information with a California-OSHA Advisory Board as they set priorities for occupational standard setting.

PLANS: The Panel plans to complete a toxicology review and initiate a voluntary research program over the next year. They will continue to monitor and respond to government proposals at both a federal and state level.

Propylene Oxide Panel

MISSION: Manufacturers of propylene oxide organized as a Panel to improve emergency response, handling and transportation of propylene oxide and to address advocacy issues such as reevaluation of workplace exposure limits and carcinogenicity potential. The Panel established the Emergency Response and Marine Transportation Task Groups to assess the emergency response needs and capabilities of the industry with emphasis on marine distribution.

ACCOMPLISHMENTS: The Panel sponsored an observer to IARC workgroup meetings in February where the classification of propylene oxide was under review. As a result of the meetings, the current classification of propylene oxide was not changed. Panel task groups began to address safety and handling procedures related to marine transporation, and to assess U.S. emergency response capabilities.

PLANS: The Panel will continue to address safety and handling issues, and will further consider developing an emergency response network. The Panel plans to establish working relations with the European Propylene Oxide Panel through information exchange. Panel members will, as appropriate, monitor and evaluate research of interest to the industry as well as work with regulatory agencies and other concerned organizations in matters relating to propylene oxide.

Rubber Additives Panel

HISTORY: The Panel formed to support research that would expand the rubber additives safety and health issues data base. To date, the Panel has collected information on approximately 65 chemicals classified as rubber additives, and has sponsored more than $800,000 in research.

ACCOMPLISHMENTS: The Panel continued to cooperate with the EPA in its Risk Management review of 2-mercaptobenzothiazole (MBT) through conversations with the RM1 project manager and members of the risk management team, and through submission of exposure and use information. The Panel submitted comments to the EPA on the proposed addition of MBT to the EPCRA Section 313 Toxics Release Inventory, and monitored MBT issues in Canada and Europe.

PLANS: The Panel will continue to cooperate with the EPA in its review of 2-MBT, and will address environmental issues and undertake additional projects as appropriate.

Sodium Bromide Panel

HISTORY: The Panel formed to address health, environmental, and regulatory issues relating to sodium bromide. Research has been the primary focus of the Panel.

ACCOMPLISHMENTS: The Panel undertook no new activities this year. In 1990, the Panel initiated a voluntary study to evaluate the relative toxicities of bromine chloride and chlorine on various freshwater and saltwater species. The final study report was completed and submitted to EPA in 1991. EPA is using results of the aquatic toxicity research to develop water quality criteria for controlling discharges to water from facilities that use activated sodium bromide or bromine chloride as treatment chemicals.

PLANS: The Panel will monitor pertinent research conducted by organizations outside of CMA. The Panel also will interact closely on sodium bromide issues with interested organizations and agencies, such as the Utility Water Act Group and the EPA Office of Water.

Specialty Acrylates/Methacrylates Panel

HISTORY: The Panel formed to address EPA concerns about new and existing specialty acrylates and methacrylates. The Panel's major emphasis is on working with the Agency to remove restrictions on the development and marketing of new products. Panel membership consists of producers, importers, formulators, and users of these chemicals.

ACCOMPLISHMENTS: The Panel has completed Phase I of its research program. The dermal bioassay is complete, and the Panel is expecting a draft report by mid-1995. EPA has published a proposed generic Significant New Use Rule for acrylates as a class. The Panel commented on the proposed rule and awaits publication of the final rule.

PLANS: Once the results of the dermal bioassay are available, the Panel will evaluate the need for further testing. Discussions will be held with EPA to ensure that the goals of the research program have been met. The Panel also will continue efforts with EPA to remove distribution restrictions on important new chemical products in this category.

Terephthalates Panel

HISTORY: The Panel originally formed as a task group of the Trimellitates Panel to address the petition to delist terephthalic acid from the EPCRA 313 list. A test rule proposal on TPA and Interagency Testing Committee listing of dimethyl terephthate (DMT) caused the producers to form the Terephthalates Panel. The mission of the Panel is to address research and advocacy issues on chemicals of interest to the Panel.

ACCOMPLISHMENTS: Based on Panel comments, EPA deleted DMTs from the ITC list for test rule development under TSCA Section 4, because these chemicals are covered by the OECD Voluntary Testing Program.

PLANS: The Panel will submit data to EPA on DMT as part of a voluntary CMA, SOCMA, EPA program on exposure assessment. In addition, the Panel is awaiting the final test rule for TPA. The Panel will await development of a SIDS dossier on DMT by Italy and monitor the review process.

Titanium Dioxide Panel

HISTORY: The Panel formed in 1977 to address toxicology and occupational issues associated with TiO_2 and its manufacture.

ACCOMPLISHMENTS: During the past several years, the Panel submitted scientific data to NIOSH supporting the safety of titanium dioxide (TiO_2). This submission was in response to NIOSH classifiying TiO_2 as a potential occupational carcinogen. The Panel's position is that TiO_2 is not a carcinogen, which is consistent with determinations made by ACGIH, EPA, FDA, and IARC, as well as by an independent, international group of expert pathologists. This past year, the Panel sponsored voluntary research to evaluate the potential pulmonary effects of TiO_2. The research was undertaken by the Panel to support its continuing advocacy efforts with NIOSH.

During the past year, the Panel completed development of a new air dispersion model for titanium tetrachloride ($TiCl_4$). Compared to older air dispersion models, the Panel's new software model more adequately predicts downwind dispersion and concentrations of $TiCl_4$. Also in contrast to older air dispersion models, the new model can track dispersion of secondary reaction products. As part of the model development effort, a scientific background document and user-trainer manual were prepared. An international workshop of U.S., Canadian, and European producers was held to train users on the new model.

As in past years, the Panel continued to hold information-sharing sessions in which member company representatives discussed case histories of accidental releases and safety problems encountered with $TiCl_4$. By sharing incident experiences, the Panel hopes to enhance worker and community safety.

PLANS: The Panel's plans include: meeting with NIOSH to discuss Panel sponsored research; providing scientific data to NIOSH, OSHA, ACGIH, other interested organi-

zations; participating in symposia on lung clearance mechanisms; voluntarily sponsoring and publishing studies on the potential health effects of TiO_2; advocating an upward adjustment in the RQ for $TiCl_4$; monitoring CEFIC'S TiO_2 Sector Group; and, developing advocacy positions on proposed regulations.

Toluenediamines Panel

HISTORY: A Toluenediamines Panel was formed in 1980 to address an EPA Advance Notice of Proposed Rulemaking on Phenylenediamines, including toluenediamines. EPA recommended carcinogenicity testing for TDA, but later in the rulemaking decided that testing was not required. Ultimately, EPA, under the authority granted by TSCA Section 9, referred the matter to OSHA for possible regulation. OSHA did not initiate rulemaking on TDA and, in the absence of other interests, the Panel terminated in 1987. In 1991, EPA published the proposed end-point rule requiring testing for developmental and reproductive toxicity. 2,4-Toluenediamine was among the chemicals included in the proposed rule. The Panel was reactivated by manufacturers to address this rule.

ACCOMPLISHMENTS: During 1991, the Panel developed chemical-specific comments which were transmitted to EPA in response to the proposed end-point rule under TSCA Section 4 requiring testing for developmental and reproductive toxicity. Additionally, the Panel participated in the EPA public meeting on the proposed rule. The Panel has since remained dormant pending issuance of the final rule.

PLANS: Upon issuance of the final test rule, the Panel will work with EPA and conduct testing as required.

Total Quality Council

ACCOMPLISHMENTS: In February, the Council released the first of several documents developed as part of a joint project with CMA's Environment, Health, Safety & Engineering Committee. "Integrating Process Safety, Total Quality: A Matrix" depicts in graphic form the connections between the 22 elements of the Responsible Care® Process Safety Code, elements of ISO 9000, the Malcolm Baldrige National Quality Award, the OSHA Process Safety Management regulation 29 CFR 1910, and the Council's "Criteria for Continuous Improvement." Aimed at plant managers, the "Matrix" shows how activities begun in support of one initiative can satisfy requirements of others. This will help avoid overlapping efforts and allow for management of all continuous improvement activity as a single, logical process. The "Matrix" is in its second printing and will serve as a model for similar efforts on the other five Responsible Care® codes.

In March, CMA began to train staff and Committee leaders in effective meeting management. This activity, strongly supported by the Council's CMA Support Group, seeks to improve the value of member participation in association activities by making the many committee, task group, etc. meetings more efficient and effective.

In April, four years of work by the Council, other industry leaders, standard setting organizations and the Government resulted in NIST establishing the National Voluntary Conformity Assessment Systems Evaluation program. NVCASE will provide a basis for the U.S. Government to assure foreign governments that qualified U.S. conformity assessment bodies are competent to satisfy foreign regulatory requirements. 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 efforts aimed at improving access for U.S. goods and services to foreign markets.

PLANS: The Council is increasing its support of CMA's implementation of a Quality Improvement Process through a number of projects. The Council will become more actively involved in promoting the U.S. voluntary standards system and will support development of international environmental management standards using quality concepts. In addition, the Council will intensify efforts to promote the use of total quality management methods to implement Responsible Care®.

Tris(chloroalkyl)phosphates Panel

HISTORY: Manufacturers of tris(1-chloro-2-propyl)phosphate (TCIP) formed the Panel to collect, generate and evaluate information required to complete a SIDS dossier. The Panel is compiling the dossier to as-

sess environmental and health toxicity potentials of the TCIP, and will perform any toxicity testing required as part of this effort.

ACCOMPLISHMENTS: The Panel has developed a Screening Information Data Set (SIDS) Dossier of available data on TCIP. Members have presented this information to the U.S. Environmental Protection Agency, the agency responsible for implementing the OECD High Production Volume Existing Chemicals Voluntary Testing Program in the U.S., and have proposed to further evaluate specific ecological and reproductive toxicity endpoints not addressed in the available studies. TCIP is among the 62 chemicals assigned to Phase 3 of the OECD Program. The chemical had been previously listed with Intent-to-Designate by the Interagency Testing Committee and is the subject of reporting under TSCA Section 8(d).

PLANS: Consistent with informal recommendations received following the review of the SIDS Dossiers for Phase 3 chemicals at the September 1993 OECD Meeting in Paris, the Panel plans to initiate a one-generation developmental screening test program (OECD Guideline 415) to complete the SIDS datagaps. The Panel will continue to work with the U.S. EPA to ensure that all available data are identified for consideration in voluntary and regulatory programs under OECD and TSCA.

Vinyl Chloride Panel - Health

ACCOMPLISHMENTS: In August, the Panel commissioned CanTox Inc. to review the Priority Data Needs for Vinyl Chloride identified by the Agency for Toxic Substances and Disease Registry. The CanTox report concluded that the potential hazards associated with vinyl chloride are well known and that further testing needs identified by ATSDR would not contribute any significant new information to the toxicological database on the chemical. The Panel will use the CanTox report in its discussion with ATSDR and EPA on the need for additional testing.

Also in August, the *American Journal of Industrial Medicine* published the Panel's concerns about the 1991 publication entitled, "An Industry-Wide Epidemiologic Study of Vinyl Chloride Workers," by Wong *et. al.* These concerns included the reporting of excess mortality due to brain cancer and emphysema in the Wong *et. al.* publication without a discussion of other factors that may affect the evaluation of these findings. Dr. Wong agreed with the Panel's concerns and published an article in the same journal indicating that the concerns raised by the Panel were not only important for the vinyl chloride epidemiology study but also for occupational epidemiologic studies in general.

In May, The Panel invited Dr. Richard Reitz, a consultant, to present a seminar on predicting cancer risk from vinyl chloride exposure with a physiologically-based pharmacokinetic (PB-PK) model. The risk assessment based on the PB-PK model predicted considerably fewer risks than would be calculated by non-pharmacokinetic procedures. The Panel plans to meet with EPA to discuss the risk assessment of vinyl chloride using PB-PK and multistage modeling before the Agency develops a risk number for vinyl chloride in the Integrated Risk Information System database.

Vinyl Chloride Panel - Transportation

HISTORY: The Panel was formed in 1971 by vinyl chloride manufacturers to develop and assess health and safety data on vinyl chloride monomer. The Panel expanded its scope of activities in 1991 to address safety issues in the transportation of vinyl chloride monomer. In 1992, the Panel formed the Vinyl Chloride Transportation Network to provide technical expertise and assistance by the industry and contractors to emergency responders at vinyl chloride railroad transportation incidents. Shippers of vinyl chloride are able to activate the network through CHEMTREC, CMA's hazardous materials hotline. VCNet is the first mutual-aid network to be formed under CHEMSTAR.

ACCOMPLISHMENTS: In September, VCNet updated an Emergency Response Operation Manual to facilitate the operation of the mutual aid network among CHEMTREC, vinyl chloride manufacturers and users, "for-hire" contractors, and railroad emergency response teams.

Also in December, CHEMTREC conducted a VCNet emergency response drill to test the operation of VCNet. The drill demonstrated that VCNet can be successfully activated in case of an emergency involving vinyl chloride.

Panel members, on a periodic basis, shared non-proprietary safe-handling and distribution incident information on vinyl chloride to promote safety and to protect environmental quality during manufacturing and distribution.

PLANS: VCNet will identify additional "for-hire" contractors to provide emergency response services when the shipper cannot be contacted by CHEMTREC or when the shipper cannot reach the incident site quickly. VCNet will continue to conduct periodic mock emergency response exercises to ensure that CHEMTREC, "for-hire" contractor response teams, and company response teams are aligned and can act quickly in case of an emergency. The Panel will work with CMA's Interindustry Rail Group to recommend to the American Railroad Association that future vinyl chloride railcars be constructed in a manner that would make them adaptable to a capping kit. The Panel will continue its technical support for the Vinyl Chloride Safety Awareness Training Workshops to be held throughout the U.S. The Panel will prepare a media communication brochure for VCNet and a video on the safe handling of vinyl chloride.

Vinylidene Chloride Panel

HISTORY: The Panel formed to sponsor research on the potential toxicologic effects and pharmacokinetics of VDC. The objective was to develop data for ensuring the safety of workers involved in the manufacture, handling, and use of the chemical, as well as the safety of communities surrounding production facilities.

ACCOMPLISHMENTS: The Panel tracked the California Air Resources Board Compound Review for VDC, contained in CARB's Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds. CARB did not include VDC in its recommendation for further research.

PLANS: The Panel will continue to respond to potential regulations affecting vinylidene chloride.

Water Additives Panel

HISTORY: The Panel formed to address regulations of direct and indirect potable water additives. The objectives are to monitor regulatory policies, improve communication, review toxicology data, develop advocacy positions, ensure that any water additives program is designed and administered in a cost-effective manner, and ensure that water additives are used in a manner that does not compromise public health, safety, or the environment.

ACCOMPLISHMENTS: The Panel continued to work with the National Sanitation Foundation (NSF) in an effort to have NSF accept the water additives certification packages for the following chemicals: polydiallyldimethylammonium chloride (PDADMAC), copolymers of epichlorohydrin and dimethylamine (EPI/DMA), and polyacrylamide (PAM). The Spring of 1994, after several meetings with NSF and addressing many issues, the certification packages were finally accepted. Two companies have now used these certification packages along with their own company application to receive NSF certification for one water additive. Other Panel member companies are also seeking this certification. Eventually all Panel members will have their own water additives certified by NSF and the accepted certification packages will be used to benefit each Panel member. The data in the certification packages is confidential and is to be used only for the certifications of Panel members. The data is compensable and can be purchased by non-Panel members.

PLANS: The Panel and Panel members will continue to work with NSF to receive water additives certification for all three chemistries. At their Spring 1994 Planning Meeting, the Panel identified a value in continuing the Panel after NSF certification. The Panel will continue to monitor water additive regulations world-wide, share information, be a forum to address other generic polyelectrolyte issues, maintain a centralized data compensation agents, and develop joint data on other water additive chemistries.

The CHEMSTAR Mission

CHEMSTAR will provide technical and management services to facilitate chemical industry coalitions of all types within the Responsible Care® framework. We will add value to customers' efforts in:

Advocacy . . . by managing advocacy efforts so that customers can promote and defend their needs in a credible and ethical manner, integrated with CMA and other consensus industry policies and practices;

Research . . . by managing research projects to ensure the development of the highest quality information on health, safety, economics and the environment, and by serving as a technical resource;

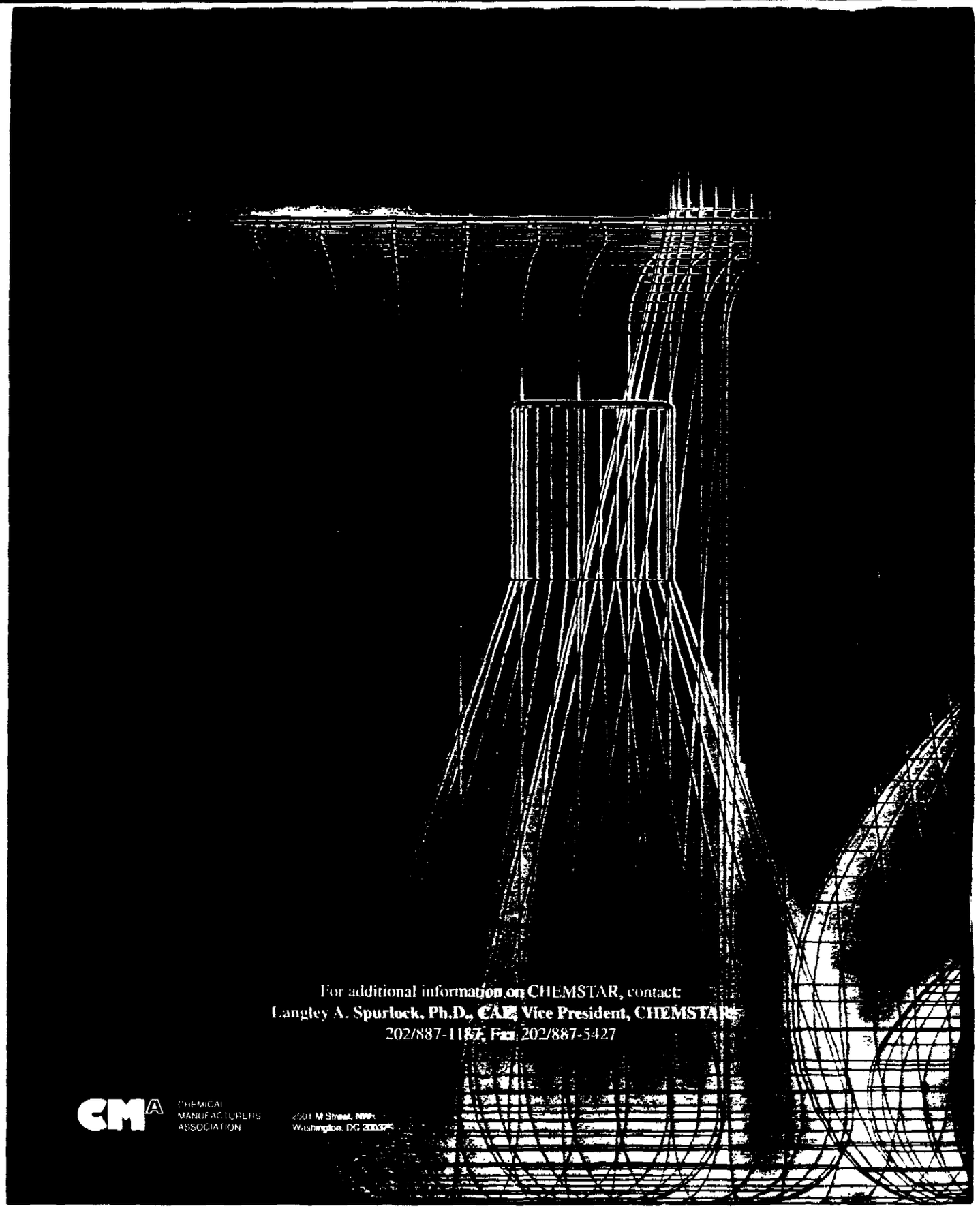
Education . . . by managing the development of forums and materials in a variety of media for customers use in educating employees, government officials, academia, other industry organizations, and the public;

Communication . . . by managing the development and dissemination of messages that aid the understanding of customers' products and positions;

Evaluation . . . by managing the development and dissemination of industry benchmarkig tools;

Litigation . . . by providing a last-resort mechanism for cost-effective, industry-supported resolution of contentious issues; and,

Responsible Care® . . . by facilitating customers' development and implementation of Responsible Care® programs.



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