DISTRIBUTION, ENERGY AND ENGINERING DIVISION

I. SUMMARY

The Division is responsible for managing three CMA standing committees -- Distribution, Energy and Engineering Advisory. Government presence -- federal, state and local -- demands total attention, particularly regarding distribution and energy programs. All programs are based on safety, good engineering and economic issues.

On 54 occasions, CMA positions and views were advocated through speeches and written comments to regulatory agencies, congressional committees, the Administration and the courts. Also, division staff and committee representatives participated in several discussions with high-level Administration officials concerning regulatory reform. Close working relationships were maintained with divisions and bureaus of the Department of Transportation and the Department of Energy to maintain, when appropriate, a full exchange of views on all important matters.

Major issues during the year involved:

- Deregulation of natural gas;
- Emergency preparedness;
- Energy taxes;
- Fuel use and cogeneration;
- Energy conservation;
- Revisions to the Shipping Act of 1916;
- Implementation of the Staggers Rail Act through proceedings of the Interstate Commerce Commission and the courts;
- Development and promotion of Good Samaritan legislation (states);
- Regulatory proposals regarding packaging, tank cars, tank trucks and barges for chemicals;
- Uniformity of hazardous materials regulations;
- Public safety during the transportation of chemicals; and
- Review and development of CMA positions on proposals to amend 1,600 engineering codes and standards affecting design, construction and operation of the chemical processes.

Division staff continued to maintain liaison with other trade associations.

Member Company Resources

Member company participation remained about the same as the previous year with 235 specialists contributing to CMA distribution, energy and engineering programs. This does not include other company personnel whose experience and expertise were brought to bear in many instances by committee and task group members. Company representative participation is estimated to exceed the equivalent of 40 work years.

Division Resources

Four professional and three support staff manage the Division's programs. The Division also receives support from Government Relations, Legal and Communications Departments.

II. COMMITTEE ACHIEVEMENTS 1981-82

DISTRIBUTION COMMITTEE

Major achievements of the Committee were related to improving transportation safety and the changing regulatory environment. In recent years, there has been significant deregulation of rail, highway, and air transportation. Revisions to marine transportation regulations and greater shipper support of transportation systems through user fees were proposed and will continue to be major issues.

CMA presented oral or written comments to congressional committee and key administrative officials on eight occasions. Briefs and statements were filed on 13 important economic regulatory matters before the Interstate Commerce Commission and the U.S. District Courts (4 cases). Also, CMA participated in several discussions with high level department and Administration officials concerning their reorganization and regulatory reform.

About 10% of the chemical sales dollar, or approximately $18 billion during 1981, was used for the distribution of chemicals. Approximately 70% of the distribution costs, or $13 billion, resulted from direct transportation costs. Rail freight charges alone accounted for $5.5 billion. Listed below are some of the committee actions that affected these costs.

- In 1982, the level of car compensation payments from rail carriers to chemical shippers furnishing private cars totaled $400 million. The annual adjustment, currently scheduled on September 1, 1982, should increase payments to about $450 million.

- CMA developed a revised tank car bottom outlet protection program which reduced the cost to member companies by about $70 million.

- CMA participation in several key ICC and appeals court proceedings could prevent freight overcharges by an estimated $500 million annually.

- Other improvements to transportation safety cannot be assigned a dollar figure. Preventing unnecessary accidents and incidents avoids a direct expense and the indirect impact of new restrictive uses and regulations.

Proposed Revisions to the Shipping Act of 1916

Chemical industry exports total about $11 billion more than imports. Member companies depend on reasonably priced ocean transport to remain competitive. Foreign competitors are often able to ship their products to distant destinations at less cost than U.S. companies from U.S. ports. Lower foreign costs result from several factors including government subsidies, lower crew costs and less government regulation. CMA supports legislative changes. Granting anticompetitive powers to those cartels, as proposed in the original maritime legislation, could have raised costs while protecting inefficient carriers.

The initial maritime legislation proposed in Senate Bill S. 1593 and House Bill H.R. 4374 strongly favored carriers over shippers. The Administration viewed this legislation as a means of achieving a strong merchant marine without government subsidy.

Although the two bills differed, both would have created cartel-like carrier conferences with antitrust protection and would have worked against independent carriers.

A shipper coalition, including CMA representatives, met with U.S. carriers and developed alternate legislation which would benefit carriers and provide balance with shipper interests. This proposal, incorporated in S. 1593, provided:

- Open carrier conferences,

- Service contracts with individual carriers,

- Mandatory right of independent action,

- Shipper councils, and

- The right to exclude specific classes of products, origins and destinations from loyalty contracts.

House Bill H.R. 4374 was recently amended to include these same features.

Good Samaritan

CMA has developed draft "Good Samaritan" legislation which would provide liability protection for persons responding to transportation emergencies. This draft forms the basis for model Good Samaritan legislation which is being promoted at the state level by CMA and associations representing other shippers of hazardous materials and carriers. Nine states have adopted Good Samaritan legislation.

Staggers Rail Act

CMA presented oral and written statements at the Senate oversight hearing regarding the Interstate Commerce Commission's (ICC) effort to implement the Act.

CMA advised the Senate that the provisions of the Act providing protection for captive shippers were being weakened through ICC's proposed regulations. Similar testimony will be presented during pending House oversight hearings.

The original legislation provided needed freedom from regulation restraints to the rail industry while providing essential restraints on their exercise of monopolistic power. CMA continues efforts to assure that the Act is appropriately implemented to ensure the retention of this balance.

Regulations

Consistent with the Administration's efforts to reduce unnecessary regulations, fewer new regulations were issued in 1981-1982.

Uniform National Hazardous Material Regulations

CMA played a lead role in preserving a strong federal presence in the regulation of hazardous materials.

Over the years, CMA developed an excellent working relationship with the Department of Transportation/Materials Transportation Bureau (DOT/MTB). The hazardous materials regulations issued by DOT/MTB have taken industry concerns into account.

Downgrading of the federal presence would have resulted in more regulations by states and cities. Local regulations tend to be inconsistent with the federal regulations and may include curfews, prenotification, and special routing. Adoption of such requirements would seriously disrupt interstate and international commerce, both extremely important to the distribution of chemicals.

Interstate Commerce Commission (ICC)

The following ICC actions were part of the effort to implement the Staggers Rail Act. All would affect the level of rates rail carriers could charge captive rail traffic. Most chemical plants are considered "captive" because of the lack of, or deficiencies in, alternate methods of transportation.

- Market Dominance -- CMA opposed the elimination or weakening of tests which were used to establish the existence of market dominance. Currently under appeal.

- Revenue Adequacy -- CMA opposed the high rate of return allowed railroads before they were determined to be revenue adequate. Currently over 16%.

- Cost Index -- Rail Carriers are allowed automatic rate increases based on their increased costs. CMA opposed basing this index on a rail-generated price index. Defects inherent in deficient rail data could affect the chemical industry's $5.5 billion freight bill by several percent. A CMA study established that the rail price index overstated increased rail costs by 36% over the last ten years. Additionally, a recent ICC audit established that some railroads were inflating their cost figures, causing further errors in the index.

  ICC has now reopened their proceeding to consider factors recommended by CMA.

- Joint Rates Study -- CMA opposed cancellation of joint freight rates by the railroads because the effect would be to reduce competition.

- Coal Rate Guidelines -- As member companies are major users of coal, CMA filed summary comments on the method to be adopted to set maximum rates for the movement of coal by rail.

- An agreement among 74 member companies was filed with the ICC to permit discussion of compensation for privately owned rail cars. This agreement, required by the Staggers Rail Act, enables CMA member companies to participate in developing compensation levels. Compensation resulting from prior CMA involvement in a series of ICC proceedings totals about $400 million annually.

Performance-Oriented Packaging Standards

The DOT Materials Transportation Bureau proposed a major revision to the hazardous materials regulations changing

current design specifications for packaging to performance standards. In general, CMA supports the concept of performance-oriented criteria. However, the potential implications for company liability, cost, and other impacts are being evaluated. Final action by DOT/MTB is not likely soon.

Public Safety

Many of the chemicals sold and distributed throughout the country are potentially hazardous if not handled safely. In 1981, the DOT/MTB recorded three deaths from separate accidents involving trucks carrying hazardous materials (chemicals). There were none involving rail transportation during 1981. These figures represent a significant improvement over those of only a few years ago.

The substantial improvement in the transportation safety record is a result of the cooperative effort between shippers and carriers, especially the 1978 Inter-Industry Task Force which involved CMA, the Association of American Railroads (AAR), and the Railway Progress Institute (RPI).

Improvements in tank car design and protection of fittings developed through the cooperative efforts of CMA, AAR and RPI reduced the danger to the public from chemical transportation. The joint CMA/AAR/RPI efforts were renewed in 1982.

ENERGY COMMITTEE

The CMA Energy Committee focused its efforts on developing support for legislative action in FY 81-82. This activity will continue to require close attention since legislation on complex issues is rarely completed during one session of Congress. Progress on energy issues was, however, unusually ponderous this year because the budget and other economic issues were given higher priority. The Reagan Administration initiated a policy of greater reliance on market forces to determine fuel choices, and to some extent, energy prices and supplies. The Energy Committee also initiated some positive steps toward energy regulatory reform.

CMA Energy Committee attention is concentrated on the following selected issues:

Natural Gas Issues

Legislation to deregulate natural gas was introduced and CMA remains active in congressional hearings on this priority issue. CMA advocates total phased deregulation of all natural gas wellhead ceiling prices by a certain date and the coordinated removal of gas market restrictions such as incremental pricing, Fuel Use Act prohibitions and limited access to gas supplies.

CMA was identified as a key player in the natural gas debate when it sponsored a major study that compared and evaluated ten studies on natural gas deregulation. The analysis prepared by Foster Associates indicated that the more comprehensive studies agree with CMA's view that substantial economic benefits to the nation would result from phased total deregulation of natural gas. Strong CMA communication efforts publicized the results of the study through a press conference, Capitol Hill briefings for congressional staff, and support of lobbying activities.

Emergency Preparedness

Unnecessary legislation for standby petroleum price and allocation controls was defeated. CMA advocated maximum reliance on market forces in the event of a petroleum disruption.

Energy Taxes

CMA successfully opposed an oil import fee and new energy taxes. In our view, any tax or fee would render the U.S. industry uncompetitive internationally and distort interfuel competition.

Fuel Use and Cogeneration

CMA successfully supported the Department of Energy (DOE) efforts to simplify and reduce the burden of regulations by removing unjustified obstacles for petitioners seeking exemptions from Fuel Use Act prohibition.

Energy Conservation

CMA forestalled counterproductive energy conservation standards for existing industrial buildings proposed by the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE).

CMA maintained a formal procedure for member companies to report to DOE on energy conservation progress. CMA members, on the average, increased energy productivity by 24.2% in 1981 compared to 1972. CMA was the first trade association to establish an energy conservation goal (30%) for 1985. This was an important factor in convincing DOE to recommend that industry establish targets voluntarily.

Natural Gas Issues

CMA made progress toward gaining new natural gas legislation. CMA advocated total phased deregulation of all natural gas wellhead ceiling prices to free market clearing levels by

a certain date and the coordinated removal of gas market restrictions (such as incremental pricing, Fuel Use Act prohibitions and limited access to gas supplies). Congress is holding hearings and new legislation has been proposed.

CMA testified on shortcomings of the Natural Gas Policy Act (NGPA), November 6, 1981, before the Senate Committee on Energy and Natural Resources. In our view, the NGPA fails to provide adequate supply incentives, perpetuates disparities in pricing and supply, impedes efficient use of all national energy sources, and contributes to an imbalance between supply and demand. CMA also testified on this subject March 23, 1982, before the Senate Committee on Energy and Natural Resources and on July 30, 1982, before the House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels. The committee prepared additional background educational materials such as a question and answer listing to respond to congressional concerns regarding natural gas decontrol.

There is improved recognition of CMA as a major participant in the natural gas debate. A CMA-sponsored study of ten natural gas deregulation studies was a major contribution. Strong communication efforts publicized the results of the study through a press conference, Capitol Hill briefing for congressional staff and other lobbying activities.

The natural gas study by Foster Associates of Washington, DC cost CMA $40,000. It was distributed widely to members of Congress, the Administration, federal and state regulatory agencies, other trade associations, the press and CMA members. Consulting services in support of the press and Capitol Hill briefings were $3,314. This was the extent of CMA expenditures for Energy Committee consultant services in FY 81/82.

Contacts with Capitol Hill and the Federal Energy Regulatory Commission (FERC) have improved. FERC has initiated efforts to deal in part with problems under the Natural Gas Policy Act by issuing a Notice of Inquiry.

The committee also improved trade association liaison and energy-user coalition efforts. Other industrial energy users share CMA goals, but further discussions with the pipelines and distributors will be necessary to achieve CMA objectives.

Emergency Preparedness

CMA testified in September before the House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels opposing new legislation. CMA advocated maximum reliance on market forces in the event of a petroleum supply disruption.

CMA was successful in its efforts to sustain a veto of the Standby Petroleum Allocation Act and in convincing DOE

that rationing and allocation of petroleum products should not be proposed.

CMA developed a recommended plan for emergency preparedness including a plan for distribution of materials from the strategic petroleum reserve (SPR). This information was communicated to Congress and the Administration.

Energy Taxes

CMA successfully opposed an oil import fee and new energy taxes. In our view, any tax or fee would result in rendering the U.S. industry uncompetitive internationally and distort interfuel competition. CMA favors reduction of expenditures and corrective legislation within the existing tax structure.

CMA participated in a joint press conference to communicate opposition to any tax or fee on imported oil. The conference included a coalition of very diverse representatives from consumer activists' organizations, labor, oil marketing and distribution, utilities, agriculture, transportation and tourism in addition to other industrial energy users. Our opposition was also communicated directly to the Administration and Congress.

Fuel Use and Cogeneration

CMA successfully supported the Department of Energy efforts to simplify and reduce the burden of Fuel Use Act (FUA) regulations by removing unjustified obstacles for petitioners seeking exemptions from FUA prohibitions.

Other Issues

CMA members forestalled counterproductive energy conservation standards for existing industrial buildings that were proposed by the American Society of Heating, Refrigeration and Air-Conditioning Engineers. The CMA Communications Department initiated a program for television and radio shows on key energy topics.

ENGINEERING ADVISORY COMMITTEE

Working through five major task groups, during fiscal year 1981-1982, the committee continued to provide major cost savings to the industry through participation in development of engineering codes and standards.

The committee reviewed and submitted recommendations on proposals to amend approximately 1,600 engineering codes and standards, and on related issues.

Member companies were surveyed to determine their support of technical education. The committee hopes to forestall a future shortage of qualified engineers and scientists, which would eventually lead to severe problems for all member companies, and to forestall curtailment of institutional research and its benefit to industry.

The committee conducted a third highly successful forum on Computers for Process Control. These forums provide a unique opportunity to assess the continued rapid growth in digital technology. This growth has a major favorable impact on the cost of operating chemical plants.

Codes and Standards (Background)

The chemical industry depends on codes and standards to safeguard its employees and the public. Without them, added engineering costs in specifying every detail of purchased equipment would increase plant investments 15-20%.

A company may rely upon thousands of codes and standards. A typical member company has 40 employees spending 4% of their time participating in ten different standards-developing organizations. Larger companies may have 100 to 300 employees participating in standards-developing organizations such as ASHRAE, ASTM, IEEE, ISA, and NFPA.

One of the most important functions of the Engineering Advisory Committee is to coordinate industry participation in developing codes and standards.

Electrical Codes and Standards

Committee achievements in fiscal 1981-1982 were focused largely on the National Electrical Code. Savings to the industry, through committee actions during fiscal 1981-1982 and those to be taken, will be significant.

To elaborate, proposed changes to the 1981 National Electrical Code (NFPA 70) submitted by outside organizations could cost the chemical industry over $50 million a year, barring unlikely acceptance of certain proposals which would greatly increase this amount. Amount of savings to the industry will depend on the extent that CMA is successful in defeating these outside proposals, and on the extent that CMA is successful in securing adoption of its own proposals. The 13 CMA proposals involve savings of about $5 million a year.

Also during fiscal 1981-1982, the committee prepared CMA positions on three other NFPA standards: NFPA 70B (Electrical Equipment Maintenance), Part III (Safety-Related Maintenance Requirements) of NFPA 70E (Electrical Safety Requirements for Employee Workplaces), and NFPA 497M (Classification of Gases,

Vapors, and Dusts for Electrical Equipment in Hazardous Locations).

Further, during this period the committee prepared CMA positions on NEMA MG-1 (Motors and Generators), and on 14 UL standards, all proposed for adoption as American National Standards. The UL standards include:

- UL 198E (Class R Fuses)
- UL 198H (Class T Fuses)
- UL 486A (Wire Connectors and Solderings Lugs for Use with Copper Conductors)
- UL 486B (Wire Connectors for Use with Aluminum Conductors)
- UL 489 (Circuit Breakers)
- UL 493 (Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables)
- UL 508 (Industrial Control Equipment)
- UL 698 (Industrial Control Equipment for Use in Hazardous Locations)
- UL 869 (Service Equipment)
- UL 943 (Ground-Fault Circuit Interrupters)
- UL 977 (Fused Power-Circuit Devices)
- UL 1008 (Automatic Transfer Switches)
- UL 1097 (Double Insulation Systems for Use in Electrical Equipment)
- UL 1441 (Coated Electrical Sleeving)

Pressure Vessel Inspection Codes

The committee continued to participate in the development of pressure vessel inspection codes, because of the potential for huge costs stemming from unreasonable inspection intervals.

One complete inspection of all the pressure vessels (about 500,000) in the chemical industry would cost $100 million or more. Obviously, this is one reason for concern about unreasonable inspection intervals.

Another reason for concern is the cost of providing additional capacity to offset unnecessary inspection downtime. If code proposals for inspection frequency by state officials had been successful, offsetting investment in added facilities would have been $1.7 billion.

Acceptance of two pressure vessel inspection codes as American National Standards will help insure reasonable inspection intervals. During fiscal 1981-1982, the committee prepared CMA positions on these two codes: API 510 (Pressure Vessel Inspection Code), and the National Board Inspection Code of the National Board of Boiler and Pressure Vessel Inspectors.

Other Codes and Standards

The committee continued to participate in activities of standards groups dealing with piping systems and their components, pumps, compressors, heat exchangers, and tanks; and continued to develop CMA positions on codes and standards in these same areas for adoption as American National Standards. Collectively, this activity has represented substantial savings to the industry over the years.

During 1981-1982, the committee prepared CMA positions on UL 142 (Steel Aboveground Tanks for Flammable and Combustible Liquids), UL 536 (Flexible Metallic Hose), MSS SP-58 (Pipe Hangers and Supports), and revised American National Standard B78.1 (Tubular Heat Exchangers in Chemical Process Service).

Standards-Related Activities

Apart from standardization, the committee participated in associated activity necessary to keep the standardization process functioning smoothly. During fiscal 1981-1982, CMA:

- Submitted comments on ANSI Draft Procedures for the Development and Coordination of American National Standards.
- Voted on nominees to the ANSI Board of Directors, and to the ANSI Organizational Council's Officers and Executive Committee.
- Supported a proposal for information of a Standards Developers Council with ANSI.
- Submitted conversion of American National Standards Committees B16 (Valves, Fittings, Flanges, Gaskets, Valve Actuators), B19 (Compressor Systems), and B73 (Pumps) to ASME Accredited Organization Committee.
- Nominated eight CMA representatives to panels of the NFPA 70 Committee (National Electrical Code), and a

CMA representative to the IEEE C40 Committee (Storage Batteries).

- Approved withdrawal of American National Standard B78.2 (External Dimensions of Shell and Tube Heat Exchangers for Chemical Process Service).

- Approved disbandment of American National Standards Committee B95 (Terminology for Pressure Relief Devices).

- Approved broadened scope for American National Standards B78 (Heat Exchangers for Chemical Industry Use), to remove pressure limitation.

- Requested formation of an NFPA group to determine realistic ampacities for all sections of NFPA 70 (National Electrical Code).

- Requested voting privileges for National Electrical Code Articles 610 (Cranes and Hoists), 620 (Elevators, etc.), 630 (Electrical Welders), 645 (Data Processing Systems), and 705 (Cogeneration).

- Approved handling of inquiries about wall thickness of full port valve bodies, and radiographic and ultrasonic examinations, as specified in American National Standard B16.34 (Steel Valves).

Internally, the committee surveyed membership of ASME Codes and Standards Committee to determine need for additional chemical industry participation.

Regulations

The committee prepared CMA comments on proposed revision of OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Standards." These comments assisted in obtaining favorable revision of the circular.

Also, the committee assisted the CMA Special Program on Polychlorinated Biphenyls in matters involving electrical equipment. This program is linked with EPA regulations.

Education, Research, and Communication

During fiscal 1981-1982, the committee surveyed member companies on their financial support to technical education. Their purposes were to forestall a shortage of qualified engineers and scientists, which will eventually lead to severe problems for all member companies, and to forestall curtailment of institutional research and its benefit to industry.

Results of this survey, to be published as a CMA News Special Report, will encourage support by companies not already contributing, and encourage further support by contributors.

Evidence of substantial support to education will be made available to the press through the CMA Communications Department. This will supplement ongoing efforts to enhance the industry's public image.

Also the committee conducted a third highly successful forum on Computers for Process Control. These forums provide a unique opportunity for assessing the continued rapid growth in digital technology. This growth has a major favorable impact on the cost of operating plants. New applications usually pay for themselves within three years.

The 1982 forum explored integrated control systems for the first time.

Integrated control systems are those which integrate management functions (such as quality, yield, production, and inventory control), and process functions (such as pressure, temperature, and flow rates), into computer control systems.

III. NEW ISSUES

Distribution

Car Compensation -- On July 20, 1982, the AAR petitioned ICC to suspend the "annual update" of the tank car allowance formula that adjusts the compensation to private owners of rail tank and hopper cars. Also the AAR requested that the Commission direct the participating parties to negotiate a new compensation system. CMA will oppose the suspension request and will ask that the Commission not rule on any aspect of the petition until CMA's application for antitrust immunity is approved.

- Distribution System Safety -- CMA/AAR/RPI Task Force is studying ways to reduce injuries, leakage, and improve communications related to hazardous materials transportation.

  A similar program will be instituted with highway carriers.

Uniform National Hazardous Material Regulations -- In reaction to perceived dangers, states and cities have proposed unique rules that interrupt the interstate movement of hazardous materials. Improved understanding of the actual safety record of chemical shipments and the help available from industry would reduce fear and unwarranted local action.

CMA is considering both model legislation, which would delineate federal vs. local responsibility, and education for local and state leaders so that they do not overreact to news about transportation incidents.

- Maritime Legislation -- The Ocean and International Task Group plans to develop model legislation that should enhance the competitiveness of freight rates on export cargo. Development of a policy on deregulation of marine transporation, similar in principle to the effect of highway and rail deregulation, is under study.

Natural Gas

CMA will follow current legislative proposals for deregulation of natural gas and new proposals including a specific Administration bill, anticipated sometime after the election.

The Federal Energy Regulatory Commission will continue to seek evidence of gas marketing problems which might be corrected in part by a new regulation. CMA members could be affected adversely by the wrong utility rate design.

The Supreme Court has yet to rule on the constitutionality of the one-house veto which could extend incremental pricing to feedstocks.

Emergency Preparedness

In the absence of federal legislation, individual states could enact legislation for standby price and allocation controls on crude oil and petroleum products.

Energy Taxes

Under pressure of budget deficits, Congress may propose new energy taxes. States may also become interested in this potential source of revenue. The Committee is developing information to support lobbying activity.

Fuel Use and Cogeneration

CMA is gaining support for repeal of the Major Fuel-Burning Installations provisions of the Fuel Use Act.

CMA will continue to follow court action regarding rules which encourage industrial cogeneration under the Public Utility Regulatory Policies Act.

Other Emerging Issues

New legislation proposals on energy use and availability, such as the coal slurry pipeline, which merit CMA attention are anticipated.

Education and Research

Institutions of higher learning are losing their technical educators to industry, and unless there is some action this will lead to a future shortage of qualified engineering and science graduates. These institutions are also losing their technical graduate students available for research to industry, and this will lead to a loss of the direct benefit resulting from academic research.