

REPORT TO THE BOARD OF DIRECTORS
MANUFACTURING CHEMISTS ASSOCIATION

WILLIAM R. CHALKER, CHAIRMAN
AIR QUALITY COMMITTEE

APRIL 12, 1977

It is a privilege to appear before you. In discussing the activities of the Air Quality Committee, I will highlight a key problem with the Clean Air Act and amendatory efforts; point out flaws in the EPA interpretive ruling on offset of hydrocarbons in nonattainment areas; cite our involvement in the EPA synthetic organic chemical industry study; touch on our MCA hydrocarbon control cost study and oxidant episode study; and, describe several new areas of coming concern.

The regulatory tempo in the air pollution field keeps rising, but our objective remains the same -- to get permits to construct plants or modify existing ones expeditiously and within realistic environmental constraints. In going down the permit trail, we face an ever-widening array of regulations and concepts. The decisions of control agencies are transcending their past areas of concern and are influencing such widely different facets as land use, life style, industrial production techniques, and return on investment. It is amazing that we have coped as well as we have with this complex situation.

Oxidant Air Quality Standard and Control Strategy

The oxidant or ozone air quality standard is the focal point of much of our current dilemma. There are those who say there is too much ozone near the ground, and there are those who say there is not enough in the stratosphere. All we have to do is restructure the atmosphere -- our problems are just about that complex and the outcome just about that unclear. You received a briefing on the Houston Area Oxidant Study from Mr. Files and others at your Board meeting last month. Our Committee thinks it is an important study and one that EPA will not be able to ignore. I believe it will be useful to emphasize several aspects of the oxidant problem.

EPA's oxidant standard is being exceeded in every state that has taken measurements. It is not a Texas problem alone. Few believe in the standard, including Dr. Knelson, Director of EPA's Health Effects Research Laboratory. The API petition to EPA, which MCA supports, questions the standard and the control strategy to attain the standard. Best evidence indicates the standard will not be changed significantly. However, EPA strategy to attain the standard is being tightened and will require offsets for new sources. For example, new hydrocarbon emissions located in areas where the oxidant standard is not being met must somehow accomplish reductions in existing emissions to more than offset the added emissions. This problem and EPA's proposed offset solution are the result of Clean Air Act language. Mr. Polzer's recent testimony on behalf of MCA before the Senate and House strongly emphasized the need for relief if orderly development in the nation is to continue.

Actually, we are on strong technical ground in saying that oxidant is relatively insensitive to changes in hydrocarbons and that hydrocarbons cannot be controlled sufficiently in most places to attain the oxidant standard. Los Angeles is a prime example. In 25 years, that county has reduced hydrocarbons from stationary source emissions by 88% and from vehicles 65%. Last year, they exceeded the oxidant standard on over 100 days. EPA knows we cannot attain the standard in many places, but their new strategy is to make progress towards it by attempting to reduce high oxidant concentrations in large metropolitan areas and hence reduce the numbers of people at risk. This philosophy agrees with MCA's recent Congressional testimony urging Congress to modify the zero risk concept currently inherent in the Act. There is technical evidence that we can make progress but at enormous cost to control stationary sources and by imposition of drastic curtailment of vehicles by an unwilling public. There are potential environmental hazards, however, to EPA emphasis on hydrocarbon controls. The de-emphasis on controlling oxides of nitrogen, a partner in photochemical reactions, can cause the "smog" problem to spread further into rural areas and lead to a buildup of oxides of nitrogen and pose yet another potential health risk. This is precisely what is happening in the areas contiguous to Los Angeles. MCA has conveyed to EPA our Committee's belief that hydrocarbon offset is unworkable.

While some adjustments in offset requirements now appear likely, EPA is not abandoning its broader thesis and has notified 29 states to revise their hydrocarbon control regulations by mid-1978. We face public hearings in all these states. Presently, it is unclear if or how the Association should handle these individual states. I certainly recommend we gear up to handle regional problems such as the 12 northeastern states currently banding together to write uniform hydrocarbon standards.

Clean Air Act Amendments

While I have mentioned problems with nonattainment of the oxidant standard and offsets, we have concerns with other aspects of the Clean Air Act. MCA has been most active in testifying, writing, and visiting Congressmen and in meeting with their staffs to seek all the amendments proposed in Mr. Polzer's testimony. At the moment, the situation is too fluid to say more than we are cautiously optimistic that some of our concerns are being heard and dealt with.

Synthetic Organic Chemical Manufacturing Industry Study

Another area of concern to us is the EPA study of the synthetic organic chemical industry. Their purpose is to develop federal new source performance standards and guideline documents for states to use in developing retrofit regulations for existing sources. This is a two to three year effort. EPA's reasons for this study are that organics form photochemical oxidants and organics are toxic with some being carcinogenic.

EPA states that synthetic organic chemicals contribute 10% of the total hydrocarbon emissions from stationary sources. They state that control hinges primarily on proper plant design and operation that will require a depth of knowledge by EPA of our operations that is unprecedented. We have set up a task group to handle this and to coordinate with SOCMA. A total of about 40 chemicals will be studied. A first meeting of our task group with EPA was held on January 21. Almost immediately, the orderly procession of this program was upset to handle benzene on an emergency basis because of strong criticism against EPA by the Environmental Defense Fund that benzene was

a significant health hazard and a carcinogen. A special MCA task group to handle this item alone met with EPA on February 15. Since this is a single product, response to EPA is being made on an individual company basis. Eleven MCA member companies are participating. EPA wants emission data, ambient air data, and views on control techniques, etc. Attached to this presentation is a tentative list of the next nine chemicals and processes to be considered. We are setting up task groups to handle them.

MCA Hydrocarbon Control Cost Study - By Foster D. Snell, Inc.

Your companies have been in receipt of the Foster D. Snell, Inc. hydrocarbon control cost questionnaire for about three weeks. Although it may not have reached your ears, I am sure your people are fuming over it because it is comprehensive. We have never attempted anything to this depth before, but then, we've never faced \$5-\$15 billion in investment cost for control of a single class of pollution before. I use these cost figures with some confidence because my own company last year in a similar type study estimated an investment cost of \$350 million to retrofit existing hydrocarbon sources if the toughest projected pollution control regulations were adopted. In many cases, this study is going to be an eye opener and hopefully have valuable spin-off information for use in your individual companies. It will show we discharge a greater tonnage of hydrocarbons than we thought; that we do not have a good estimate on emissions from a number of sources; that likely the majority of our total poundage emissions derive from only a fraction of our total sources. The results can force another look at raw material losses and perhaps spotlight more candidates for waste heat recovery. Further, there is a new EPA directive that all states prepare a hydrocarbon emission inventory by mid-year. Finally, management will be better able to judge the cost impact of proposed new hydrocarbon regulations. Lack of emission data last year posed a serious problem to the New Jersey Industrial Advisory Committee in evaluating, at the request of the state, the financial impact of the Moodus Conference model hydrocarbon regulation.

MCA - Oxidant Episode Study - By Radian Corporation

The study of ambient air oxidant during high and low concentration periods and its relationship to the concentration of its principal precursors, oxides of nitrogen and hydrocarbons,

and their relationship, in turn, to hydrocarbon emissions in ten metropolitan areas is proceeding on schedule. Results are expected this summer.

Atmospheric Dispersion Modeling

Proposed amendments to the Clean Air Act call for the use of atmospheric dispersion modeling for use in evaluating significant deterioration, nonattainment, etc. Argonne National Laboratory held a Specialist Conference for EPA in February to develop consensus models to be issued to the states as a further tool to evaluate permits. Our Committee had representation and when the effort becomes more crystallized, we will consider holding a workshop.

New Areas of Concern

EPA is revising the six existing air quality standards and will be adding new ones. Our Committee will need medical and epidemiological input if we are to react. Part of our problem today, e.g., on oxidants, may be that our Association and others were not in a position to comment vigorously when the several standards were set six years ago. Unless you object, it is my intention to seek a nucleus of medical representation from your companies to determine the feasibility of a rebuttal. A second item needing medical input is advice on the concentrations in the community environment that are considered safe for all our chemicals. The current procedure is to use the OSHA standards and arbitrarily take a percentage of them and call this safe for the public. We will have to do better than this for benzene, acrylonitrile and eventually all the rest. We would plan to use your aforementioned medical representatives to guide our Committee in this crucial area also. A third item is that relatively little attention has been paid by control agencies to our emissions during start-up and shutdowns, emergency releases, and fugitive losses. Various estimates indicate they may be as large as our normal emissions and control agencies are starting to note this. We anticipate greater regulatory attention to these types of emissions. Some questions of this type appear in our hydrocarbon cost study.

Conclusions

In conclusion, I understand the Board approved adding a General Counsel to the MCA Staff. Despite the strength of present staff support, we welcome this and, being pushy, hope the time will come when an environmental lawyer is also hired. Lastly, the system wouldn't work without the major contributions of our Committee members. I appreciate your making this possible. Even so, we sometimes feel like a platoon fighting an army.

Thank you.

ATTACHMENT

EPA Synthetic Organic Chemical
Manufacturing Industry Study

EPA very recently identified the following products and processes as the first for which federal new source performance standards will be written.

<u>Product</u>	<u>Process</u>
1. Acrylonitrile	SOHIO Amoxidation of Propylene
2. Ethylene Dichloride	Ethylene Oxychlorination
3. Ethylene Oxide	Oxidation of Ethylene
4. Ethylbenzene	Benzene Alkylation
5. Styrene	Ethylbenzene Dehydrogenation
6. Formaldehyde	Silver Catalyst, High Methanol
7. Maleic Anhydride	Benzene Oxidation
8. Phenol/Acetone	Cumene
9. Nitrobenzene	Benzene Nitration

EPA has contracted with Hydrosience to develop the data base for the regulations. An important input of the study will be measurement of process emission sources. Certain member companies can anticipate contacts from EPA and/or Hydrosience to set up such tests.