

AMERICAN PETROLEUM INSTITUTE

PROCEEDINGS 1965

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SECTION II—MARKETING

General Committee—Minutes and Reports, available from the API Division of Marketing at no charge, contains, in addition to the minutes of the midyear meeting, complete papers which are listed in this Table of Contents under "General Committee" (except the first paper).

Minutes of other committee meetings, as well as complete papers of those abstracted herein and listed in this Table of Contents under each of the other committee headings, are also available on request from the Division of Marketing.

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MEETING THE CHALLENGES OF 1966 †

FRANK N. IKARD*

Welcome to the 45th Annual Meeting of the American Petroleum Institute.

As always, it is good to see so many in attendance. These meetings of ours provide a yearly opportunity to reflect on past performance, assess current problems, and formulate future programs. But they mean much more than that. They offer concrete evidence of the need for industry people to explore these matters not separately, but together; to advance our best thinking not in private isolation, but in open convention.

It is commonplace and almost trite to observe that the challenges we face together, in noncompetitive areas, grow in number, size, and complexity year by year. But perhaps it's worth observing that as they do, they tend to involve more segments of our industry and more people in our industry more deeply than in the past.

The year 1965 has been no exception. A broad stream of activities has called for an unusual degree of leadership by the Board of Directors, particularly by Chairman J. Ed. Warren. Chairmen in the past have observed that the first year of their term tended to be the more active year, with the second affording some time for reflection and forward planning. I doubt if Ed *found* time for that—he had to *make* it—on top of an extraordinarily active schedule.

The year 1965 has also been a year in which we've heavily depended on the help of the thousands of volunteers throughout the industry. I wish to thank them at this time for their extensive participation, and the entire API staff joins me in this expression of appreciation. We hope their enthusiasm will inspire many more to take part in industry affairs in the coming year.

Federal and State Legislative Activity

In observing that this has been a most active year, particularly in government relations, I have in mind the readings of a fairly reliable thermometer—federal and state legislative activity. The record shows that in the first session of the 89th Congress, just completed, more than 14,000 bills were introduced. This is almost as many as were introduced in *both* sessions of the 88th Congress. So the thermometer tells us that federal legislative activity is running at double speed. Going right along with the trend, the number of bills of interest to our industry was also up. In 1965, our industry kept a close watch on no fewer than 200 pieces of proposed federal legislation.

State governments were also very legislative-minded, with about 100,000 bills introduced. Of these, about

4,000 would have affected our industry in some way and required close study.

It takes no crystal ball to see that our involvement in government matters will intensify in the year ahead.

The industry is well-positioned to meet the challenges and opportunities of 1966. The issues that concerned us in 1965—air and water conservation, oceanography, taxes, wage and hour legislation, and highway sign legislation—to name just a very few—alerted industry people to the need for doing their homework. Many more people in our industry had to learn more about some unfamiliar subjects. And many more of us learned not only *why* it was important to make the industry's voice heard and its opinions felt, but also *how* to do it. As a result of the experiences of 1965, then, we can face the issues of 1966 with a feeling that we are at least better prepared.

A swift review—of just a few of the upcoming issues—suggests the variety of challenges 1966 will hold out to us. As Mr. Dunlop said, I think it is really opportunity.

Government Fact-Gathering

First, consider the area of government fact-gathering.

A year ago at this time, I commented on the government interagency group that is studying government facts and figures. Shortly afterward, the study group criticized the present industry fact-gathering as being inadequate, particularly in the areas of reserves, productive capacity, wells drilled, transportation and deliverability, and expenditures and revenues.

We believed a year ago—and we believe now—that any facts and figures the industry is asked to provide ought to be relevant to national needs—not just a display of federal curiosity. Figures we are asked to provide ought to be obtainable without placing an undue physical or financial burden on the industry. And if the figures we do provide are to be used as the basis for framing new policies, they ought to be *firm* figures—not just informed guesses, as in the case of indicated or ultimate reserves.

Industry itself has recognized the need for more complete data. Our response to this recognized need, and to the findings of the government study group, has been constructive. Task groups, under the chairmanship of Mr. Guinness, will be developing improved fact-gathering in three areas—reserves and productive capacity, drilling statistics, and the economics of exploration and drilling.

These, of course, are just the initial steps in the general overhaul of our fact-gathering services. Much remains to be done in 1966 and beyond. But you can be sure that our positive action in this area lends weight

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 † Presented at a general session during the 45th Annual Meeting of the American Petroleum Inst., in the Conrad Hilton Hotel, Chicago, Ill., Nov. 8, 1965; presiding, J. Ed. Warren, chairman, API Board of Directors.

to our opinions in the whole area of government fact-gathering.

Oil and Gas Taxation

Another issue worth comment at this time—one that especially underscores the need for wider participation in industry affairs—is that of percentage depletion.

The historic 27½-percent depletion rate has been maintained for decades, despite many challenges, for several important reasons. First, the wisdom of the provision and the established rate have been self-evident. Time and time again, Congress has correctly traced the continued discovery of new petroleum and the continued expansion of reserves to the historic and appropriate tax treatment of the industry. But equally important is the fact that the industry people have supported percentage depletion with a united voice. And because we spoke in a single voice, our position was clearly understood.

Now it appears that percentage depletion will once again go under a microscope—partly, at least, in the study of the balance of payments question.

Any policy—even a good policy—ought to be subject to periodic review. But it is one thing to review a policy to see if it is working; it is quite another to suggest that it has to be tinkered with or dismantled to see if it is working.

Land Law Review

Another area that will demand our wider interest and attention involves the work of the Public Land Law Review Commission. This commission was drawn up by Congress to review all laws dealing with public lands. Its duties come into important focus when you consider that one-third of the land area of the United States falls within the purview of these laws.

There are indications that this will be no routine examination. It could well develop into a thorough-going review of policies relating to domestic and foreign development of oil and gas. Chairman Wayne Aspinall says that his commission will be following the course of tariffs, quotas, proposed international commodity agreements, and the development of petrochemical complexes. Along with it will be further study of depletion provisions.

The industry is assisting in the work of that commission through representation by several of its outstanding members. But many more people in our industry will ultimately become involved. The findings and announcements of the commission will trigger lively discussion and debate. Industry people at all levels must be prepared to take part. Many more of us will have to become practitioners of public affairs—articulators of the industry's point of view.

Now, the three issues I've touched on—government fact-finding, oil and gas taxation, and land law review—were selected primarily for illustrative purposes—to show why more participation in industry affairs will be necessary in 1966. But none of them ranks in immediacy with the final issue I want to discuss. It will,

without question, overshadow all others in the demands it will make on us. I refer, of course, to air and water conservation.

Air and Water Conservation

The fact that our industry will continue to be confronted with problems of air and water conservation for many years to come is demonstrated by the massive report of the Environmental Pollution Panel of the President's Science Advisory Committee, which was presented to President Johnson over the weekend.

This report unquestionably will fan emotions, raise fears, and bring demands for action. The substance of the report is that there is still time to save the world's peoples from the catastrophic consequence of pollution, but time is running out.

One of the most important predictions of the report is that carbon dioxide is being added to the earth's atmosphere by the burning of coal, oil, and natural gas at such a rate that by the year 2000 the heat balance will be so modified as possibly to cause marked changes in climate beyond local or even national efforts. The report further states, and I quote: ". . . the pollution from internal combustion engines is so serious, and is growing so fast, that an alternative nonpolluting means of powering automobiles, buses, and trucks is likely to become a national necessity."

The report, however, does conclude that urban air pollution, while having some unfavorable effects, has not reached the stage where the damage is as great as that associated with cigarette smoking. Furthermore, it does not find that present levels of pollution in air, water, soils, and living organisms are such as to be a demonstrated cause of disease or death in people; but it is fearful of the future. As a safeguard, it would attempt to assert the right of man to freedom from pollution and to deny the right of anyone to pollute air, land, or water.

There are more than 100 recommendations in this sweeping report, and I commend it to your study. Implementation of even some of them will keep local, state, and federal legislative bodies, as well as the petroleum and other industries, at work for generations.

The scope of our involvement is suggested, once again, by the thermometer of legislative activity this past year. On the federal level, hearings and committee meetings relating to air and water conservation were held almost continuously. The results, of course, are the Water Quality Act of 1965 and an important amendment to the Clean Air Act of 1963.

Turning to the state level, more than 350 bills dealing with air and water conservation were considered by 41 state legislatures. One hundred and seventy-five of these related to air pollution control, and 190 were related to water pollution control. As for the results of all this, 30 air pollution bills passed in 18 states, and 35 water bills in 19 states.

The signs of heavier industry involvement next year are unmistakable. The Water Quality Act, for example, provides that states are to set water quality criteria by

June of 1967—criteria that must be acceptable to the Department of Health, Education, and Welfare (HEW). If an individual state fails to act, the department will set water criteria in its stead.

As for the Clean Air Act amendment, the new provision gives HEW the authority to set standards for exhaust emissions from new motor vehicles. And it provides for increased federal air pollution research, including a study of automotive hydrocarbon emissions from the carburetor and fuel tank. There will also be further studies on ways to cut down sulfur oxide emissions resulting from the burning of residual oil and coal.

Obviously, a large and necessary job lies ahead for this nation. Our industry must give its fullest cooperation in this national effort to improve our air and water resources. At the same time, we must also do what we can to put a good cause on a rational track.

Industry cooperation is not made easier by the emotionalism with which the matter is now charged—an emotionalism we can expect to see intensified. Some writers, politicians, and even research people have found that strong words on pollution are a short way and a certain route to attention.

We *must* not permit the job ahead of us in air and water conservation—either its size or its complexity—to become obscured by rash statements and fanciful notions. Clear water and clear air will only come about through clear thinking.

Our position was put forward in a letter to the President last January, in response to his comments about air and water conservation in his State of the Union message. We pointed out that past experience in this field indicates the waste of money and time that can be involved in false starts. And we firmly stated our belief that well-meaning programs can founder where they are based on supposition unsupported by scientific knowledge; developed through inadequate research.

We pointed out to the President—and it is worth reminding ourselves here today—that our industry's concern for water quality is sincere and long standing. Thirty-seven years ago, at a time when many local governments scarcely gave thought to water purity, the industry formed the API Committee on Disposal of Refinery Wastes. The industry can take a great deal of pride, too, in its solid support of this effort all during the 1930's—when there were perhaps more pressing economic problems.

Nor is industry concern with clean air a recent matter, provoked by headlines of the moment. We have been sponsoring research and publishing our findings for more than 10 years—starting long before the national spotlight was thrown on this problem.

I thought you would be interested in the results of some recent studies that indicate the extent of our industry's commitment in air and water conservation.

API sponsorship of basic research over the years has involved substantial sums. This basic research has been carried on in some 20 different university laboratories and research institutions. It has ranged from

studies of the effect of pollutants on crustaceans to studies on the composition of diesel exhaust. In continuation of these efforts, further research—principally to establish needed factual information on matters of current interest in the area of air conservation—is right now under consideration within the API Board of Directors.

The API research effort is, of course, only a small part of industry spending. A study of expenditures by companies for water conservation is not completed, but we *do* have figures on air conservation. They show that in the past 10 years, companies have spent more than \$210 million on air conservation research and new and improved control facilities. For 1966, these companies have earmarked more than \$41 million for these purposes—almost double the average annual rate of the previous 10 years.

Expenditures by individual companies on water conservation have led to achievements worth talking about. A typical example is the East Coast refinery with a water treatment system so efficient that an oyster bed thrives just below the point where treated waters are released. Or the inland refinery—again typical—with a water reclaim system so efficient that it has greatly reduced its requirements from city water mains and recently won compliments from water officials. Or the California refinery that uses schools of small fish to check the quality of effluent in its refinery ponds.

Such achievements have not been spectacular in the newspaper headline sense. None have been crash programs to seek one-shot solutions. Rather, they have proceeded in a calm, sensible, programmed way and have made—and will continue to make—a real and lasting contribution to air and water conservation.

One recent industry effort has seen the development of a procedure to avert potentially harmful air pollution episodes. Any city could use it. When alerted by a monitoring system and weather forecast to a threatened buildup of pollutants, the community would take control steps to reduce emissions. These steps might include temporary fuel switching, changing of plant operations, and cutting down on incineration and open burning.

In short, we have an achievable, economical solution to a real pollution problem.

Our overall record in air and water conservation is good—a record of which we can be proud. But in 1966 it can serve a larger purpose than merely giving us a chance to point with pride. These past and present efforts, and our record of concern over many years, merit the deep attention of anyone seriously interested in conserving air and water. Industry people with expertise in these areas—and many more of them now exist than in the past—must make their expertise available.

Conclusion

In conclusion, then, the challenges of 1966 will be many and varied. They call, first of all, for even wider

and more active participation by all of us. Those among us who have been reluctant to take part in these matters must be urged toward a more active role.

But, of course, we need more than just added participation—more voices added to the chorus. Success in any program depends also upon unity. Certainly we benefit from diversity of opinion and individuality of viewpoint. But our industry is best understood, and its needs are more readily appreciated, when it can strike

a single note. Our industry thrives today because it has identified those areas that could help, or impede, its progress; and when it has responded, it has done so in a clear voice, easily understood.

So, we look toward 1966 as a year of great challenge and opportunity. It can also be a year of achievement if we have broad participation and strong support, which I know we will have, in these areas of common concern.

HIGHLIGHTS OF THE YEAR 1965

A REVIEW OF THE FOURTH YEAR OF THE API DIVISION OF SCIENCE AND TECHNOLOGY

Vice President's Fifth Report to the Board of Directors

C. E. Reistle, Jr., vice president for science and technology, presented the following report to the API Board of Directors on April 23, 1965:

This is my first report to the Board of Directors as vice president for the Division of Science and Technology. This division is now in its fourth year of operation, and it has continued in this period its efforts to adjust its organizational structure for maximum efficiency.

As previously reported, our General Committee has five central committees reporting to it; this report will be presented on the basis of these five basic groups.

Activities to Date

RESEARCH

The Central Committee on Research has continued their function of administering certain phases of the research program of the Institute. During the 16 months since I became vice president of the division, their efforts to streamline some of the committee structure have resulted in a large reduction in the number of personnel involved. In one area, that of exploration and production research, an entire level of four committees has been eliminated, reducing the membership by 77.

Close contact has been maintained with the operating divisions of the Institute and, as a result, several changes have been made in our research program. Acting on the recommendations of the Division of Production, the financial support of one of the API research projects on the physics of rock fracture was increased markedly. A liaison member from the Division of Production has been appointed to this project committee. Several contacts have been established with the Division of Refining on enthalpy-type projects to avoid duplication and preclude costly errors on projects of a thermodynamic nature.

The research program is being reoriented to place emphasis on specific projects as opposed to simple grants. All grants-in-aid will be eliminated during this current year. Within the next 18 months, several projects will be completed: on June 30, 1965, it is planned to terminate the project on fluid mechanics; on December 31, 1965, it is planned to terminate the multiphase flow project, which has been conducted in cooperation with the American Gas Association; and on June 30, 1966, it is planned to terminate the project on clays.

Also, as reported to you in 1963, we plan to terminate, on June 30, 1966, four of our research projects which

have been dealing with the individual components of crude oil, such as sulfur, nitrogen, metals, and hydrocarbons. A committee has been appointed to study the possibility of combining all of the activities in this field into a single project on the heavy components of crude oil. It is planned to initiate this new project on July 1, 1966. At the same time, a thermodynamics section will probably be added to the project on "Data on Hydrocarbons and Related Compounds" so that the past experience in obtaining worthwhile information on sulfur and nitrogen thermodynamic properties can be continued for the heavy components of crude oil. It is hoped to apply the method of increments to hydrocarbons so that, with internally consistent data, we can predict the thermodynamic properties of hydrocarbons. This realignment, if initiated, will result in a very important shift in activity, with an increase of very valuable data at only a possible slight increase in cost.

Acting on the recommendation of the Program and Budget Review Committee, a plan has been devised to convert the project on "Data on Hydrocarbons and Related Compounds" to a self-sustaining basis. Starting July 1, 1965, the project will be supported by the income received from the sales of the data and spectral sheets. The success of handling the samples project in this manner prompted the decision to convert the data project. No longer will an API budget item be required for either of these projects.

A special study committee of the Central Committee on Research is investigating the current research underway on corrosion as it affects the petroleum industry, not only within the American Petroleum Institute but within other associations.

Several members of the Central Committee on Research met with representatives of the U.S. Bureau of Mines and the U.S. Geological Survey to discuss the research programs of the API, the petroleum industry, and these government agencies. There is an indicated need for continued liaison between the API and the various government groups. Steps have been taken to provide the petroleum companies with copies of the U.S. Bureau of Mines and the U.S. Geological Survey publications on research. Also, arrangements were made to establish an API liaison committee, which visited the U.S. Bureau of Mines stations in Bartlesville, Okla., and Laramie, Wyo., as well as the U.S. Geological Research Station in Denver, Colo. The purpose of this meeting was twofold; one was to learn firsthand about government research programs in the petroleum field as a first step toward advising the government on its future research programs, and the second and perhaps more important was to assist in the development of an API position on the role of government research. The

document covering this second phase is under preparation and, after approval by the General Committee, will be submitted to the Board of Directors for their consideration. Another Washington session was held, with API representatives discussing the relationship between government and industry research with D. F. Hornig, Special Assistant to the President for Science and Technology, and J. H. Hollomon, Assistant Secretary of Commerce for Science and Technology.

ENGINEERING

The Central Committee on Engineering has participated in the development of a number of new and revised American Standards Association (ASA) standards, and various proposed changes in the *ASME Boiler and Pressure Vessel Code*. This committee has also maintained surveillance over the activities concerned with the establishment of the new ASA Fluid and Bulk Processing Equipment Standards Board, and with various national and international engineering standardization activities of other organizations.

Through API's representation on the ASA Fluid and Bulk Processing Equipment Standards Board, the committee is attempting to have various committee activities of direct concern to the petroleum industry now under the auspices of other ASA standards boards transferred to the new standards board. One such sectional committee activity is *ASA B31: Code for Pressure Piping*. The Central Committee on Engineering is also taking steps to fulfill, in both national and international matters, the rather difficult task transferred to it from the Coordinating Committee on Material and Equipment Standards by the President's Advisory Committee on Standardization of coordinating the standardization activities relating to materials and equipment used in more than one area of the petroleum industry.

A task force of the Central Committee on Engineering has been working for some time on a guide for engineering standards which may become law. It is hoped that this guide will help the industry's committee members to avoid pitfalls when dealing with this type of proposed legislation.

The Central Committee on Engineering's reporting committees have also been quite active.

The Committee on Storage Tank Venting's revision of *RP 2000: Guide for Venting Atmospheric and Low-Pressure Storage Tanks* has been printed. Through agreement with representatives of the National Fire Protection Association, it is now virtually identical with their Code 30 on flammable liquids, which is accepted as a basis for regulations in most states.

The Committee on Liquefied Petroleum Gas has revised *API Standard 2510: Design and Construction of Liquefied Petroleum Gas Installations at Marine and Pipeline Terminals, Natural Gas Processing Plants, Refineries, and Tank Farms*. This revised standard is currently being letter balloted by the Operating Committee.

The Evaporation Loss Committee's *Bulletin 2520: Use of Variable-Vapor-Space Systems to Reduce Evap-*

oration Loss has been printed and *Bulletin 2521: Pressure-Vacuum Vent Valves for Atmospheric Pressure Tanks* is currently being prepared for approval of the division's Operating Committee.

MEDICINE AND HEALTH

The Central Committee on Medicine and Health has become increasingly active in the area of atmospheric pollutants. The research project established in 1962 at The Chicago Medical School is developing data on which hydrocarbons will produce lung cancer. The work being done is basic in nature and the project is receiving very favorable comments from other scientists, including members of the public health services.

The city of New York has passed an ordinance limiting the sulfur content of fuels burnt in the city. This ordinance defined a first, second, and third alert for an air pollution warning system and corrective steps to be taken at each alert. The same reason was given for such action as was used in Los Angeles, that the sulfur dioxide produced from burning fuels containing sulfur resulted in a health hazard. The evidence presented to support this claim has been quite confusing and far from conclusive. To better understand what is known and what is unknown about the health effect of sulfur oxides, seven of the country's leading experts met with the Committee on Atmospheric Pollutants and reviewed the knowledge on the subject. This committee is now reviewing all the facts in an effort to determine if an area exists where the API might materially assist in securing badly needed information. This consideration will include the possible need for establishing a research project. The Central Committee on Medicine and Health hopes soon to be in a better position to evaluate what information is available and what is needed to present to local officials who are considering establishing ordinances to limit the sulfur content of fuels.

The Food and Drug Administration (FDA) has now issued a regulation permitting the use of wax as a food additive or when used in contact with food. Regulations have been issued on the use of technical white mineral oil in animal feed and of white mineral oil in food for human consumption. Objections were received from five petroleum companies by the Hearing Clerk of the FDA on the proposed regulation on technical white mineral oil. At a meeting on February 8 the Petroleum Food Additives Committee took action to request the FDA not to specify the method of manufacture to obtain a quality product (in this case, technical white mineral oil), but rather to describe the product desired and let the producers meet these specifications by whatever manufacturing method they deem proper. Petitions are still pending for regulations on odorless, light petroleum hydrocarbons and petrolatum for use as a food additive or when used in contact with food.

The API has issued a revision of its bulletin on "Precautionary Labels" to comply with the new federal labeling requirements for household products. Toxic-

health group of that division. The chairman of the Research Coordinating Committee should be appointed by the vice president of the Division of Science and Technology from among the Research Coordinating Committee members, provided, however, that the chairmanship will rotate annually between the Divisions of Refining, Production, and Science and Technology.

Concurrent with the creation of the Research Coordinating Committee, the various committees and subcommittees now reporting to the Central Committee on Research with respect to specific research projects will, to the extent feasible, be transferred to the appropriate functional divisions of the Institute, including full responsibility for these projects. Any project which may be of a multidivisional nature and the committees concerned with such a project will be retained under the supervision of the Central Committee on Research of the Division of Science and Technology.

The role of the Research Coordinating Committee will be, as its name implies, primarily of a coordinating nature. Accordingly, responsibility for the development of research proposals, their implementation, and surveillance once approved in the budget will rest with the respective functional Divisions of Production, Refining, Marketing, and Transportation. The Division of Science and Technology will have similar responsibilities only for such projects as may be of interest to two or more divisions.

If this proposal meets with the approval of the board, the Division of Science and Technology is prepared to begin implementing the program at its Operating Committee meeting next month. With this board approval, it should be possible to process the 1966 budget following these procedures.

* * *

The Board of Directors approved the report and the proposed policy statement on API research. They also authorized the establishment of a Research Coordinating Committee to be composed of selected members from the functional divisions and to have responsibilities as enumerated in the report.

Vice President's Sixth Report to the Board of Directors

At the November 8, 1965, meeting of the API Board of Directors, the following report was presented by C. E. Reistle, Jr., vice president for science and technology:

Since my last report to you, the Division of Science and Technology has continued to make progress in a number of areas, and I would like to report briefly to you today on a few of the more significant items. We will, as in the past, submit a complete report of all of our activities in April at the Board of Directors meeting.

Research

In addition to following the investigative efforts at the 23 locations where the Division of Science and Tech-

nology currently supports research, we have recently increased our efforts with regard to government liaison. At the request of the U.S. Bureau of Mines, we have surveyed several of our research groups regarding government research proposals which have been submitted to us. Our comments have been transmitted to the Bureau, and we have been assured that every consideration will be given our suggestions. The research Government Liaison Committee again spent a week during October visiting several laboratories of the U.S. Bureau of Mines and the U.S. Geological Survey, and we feel that the rapport which is being established between these groups will serve us well in the future. Our advice and suggestions to these laboratories seem to be well received.

We are also surveying the research activities of the Atomic Energy Commission and the Office of Coal Research in order to be informed of research developments across the entire energy field.

The Central Committee on Research is continuing its task of preparing a policy statement on government research, and we hope to have this to you for your consideration early next year.

One of the most important efforts of the group during the year has been its participation in the Research Coordinating Committee's activities. A few brief comments about this latter group are appropriate at this point.

RESEARCH COORDINATING COMMITTEE

The Research Coordinating Committee should play a vital role in assuring the effectiveness and efficiency of the Institute's overall research program. During this first year of its existence, the committee confined its activities to reviewing as an overall program all of the research proposals sponsored by the various divisions and making its recommendations to the Program and Budget Review Committee. As a result of its recommendations, responsibility for several projects was re-assigned among the various divisions. The committee should continue this vital coordinating effort in the future. In addition, however, it should be urged to assume broader responsibilities for the Institute's research activities. Specifically, it should be encouraged to develop recommendations on the API research policy for the future. Included in the matters which it should consider are guidelines on the areas of interest appropriate to API research, the types of projects which should be supported in the program, and the total level of expenditures on research which is appropriate for the API. Constituted as it is of senior management representatives from each of the divisions, this group should be uniquely qualified to assure that the API research activities are the result of a program planned within well-defined policies to meet specific objectives.

Engineering

The Central Committee on Engineering has continued its review of various standards which are currently

being proposed for adoption as American standards through the American Standards Association. The increased number of standards being proposed for adoption is quite probably a direct result of the Report of the Panel on Engineering and Commodity Standards, better known as the LaQue Report, which calls for increased government intervention in the U.S. standardization activity if industry is not willing or is unable to fulfill the nation's alleged void in this area. The Central Committee on Engineering has, through a small panel, prepared a list of comments on the LaQue Report. These comments were reviewed by various groups in the API and were then submitted to the Department of Commerce by Mr. Ikard, as requested by J. H. Hollomon, Assistant Secretary of Commerce for Science and Technology.

The Central Committee on Engineering's Committee on Liquefied Petroleum Gas has published a revision of *API Standard 2510: Design and Construction of Liquefied Petroleum Gas Installations at Marine and Pipeline Terminals, Natural Gas Processing Plants, Refineries, and Tank Farms.*

Medicine and Health

Considerable activity of the Central Committee on Medicine and Health in the past few months has centered on air pollution matters. Industry reacted strongly to the Public Health Service's proposed order limiting the sulfur content of fuels used in new government installations which, if required of other installations, would have subjected the nation to a multimillion-dollar bill for changing to low-sulfur fuels, which is not justified from a health standpoint. Through the API Coordinating Committee on Air and Water Conservation, the Central Committee on Medicine and Health participated in studying this problem in depth. A workable air-monitoring plan to guard against health-affecting episodes of air pollution was devised as an alternative to fuels controls. This plan has been presented to the federal government through the President's Office of Science and Technology and to city and state officials in several areas; further presentations are also planned. The proposed federal requirements for low-sulfur fuels in new federal installations were not adopted, pending further study of economic and other aspects.

Research programs related to air pollution are being continued under sponsorship of the medicine and health group. Work at The University of Chicago has been highly successful in developing a technique for creating lung cancer in laboratory animals through inhalation of carcinogens in combination with particulate matter. API participation in this project is nearing termination. A broad program is being mounted at this school on environmental health studies. Included under joint API-government sponsorship will be work to develop factual data on the health aspects of asphalt.

Safety and Fire Protection

The Central Committee on Safety and Fire Protection continues its efforts to improve the industry's pro-

grams in these two fields. For the third consecutive year, the Institute is receiving the National Safety Council Association Award in recognition of its significant achievements in the overall safety program towards the reduction of accidents in the petroleum industry.

Petroleum Measurement

The Central Committee on Petroleum Measurement has received approval as an American standard of its *API Standard 1101: Measurement of Petroleum Liquid Hydrocarbons by Positive Displacement Meter* and *API Standard 2531: Mechanical Displacement Meter Provers.* These standards were subsequently presented to the International Organization for Standardization Technical Committee No. 28, "Petroleum Products"; ISO approval is pending.

Final API approval is expected in the very near future on the last eight joint API-ASTM standards prepared from material previously included in widely accepted API and ASTM publications. The Central Committee on Petroleum Measurement is currently evaluating these standards to see which should be processed through the ASA as American standards and subsequently submitted to the ISO for adoption as international recommendations. To date, five standards have been approved for issuance as joint API-ASTM standards.

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I do not intend to review the regular report of the division vice president which has been filed with the secretary and was previously distributed, with the exception of one item which needs board action. I would like to dispose of it before proceeding to several other matters which I would like to bring to the board's attention.

Engineering Budget Supplement

The Central Committee on Engineering requests that a sum of money, not exceeding \$4,000, be appropriated by the Division of Science and Technology for support of the Underwriters' Laboratories, Inc., proposed program to obtain data on characteristics of 15 common chemicals for possible use as a basis for revision of the *National Electrical Code* with respect to its requirements concerning the use of explosionproof electrical equipment in various chemical atmospheres. This proposal is made on the basis that the API will have an active role in determining the specific chemicals to be tested.

Mr. Chairman, I move that this budget addition be approved.

[Note: The board approved the request that a sum of money not exceeding \$4,000 be appropriated by the Division of Science and Technology for support of Underwriters' Laboratories, Inc.]