INTERIM REPORT OF JULY 10, 1947 TO THE NATIONAL PETROLEUM COUNCIL OF ITS TEMPORARY COMMITTEE ON MILITARY AIRCRAFT FUELS PRODUCTIVE CAPACITY

The Committee, appointed in February, held its first meeting in Washington on April 23, 1947. Representatives of the Army Air Forces, the Army and Navy Petroleum Board, the Aeronautical Board, the Bureau of Mines and the Oil and Gas Division were also in attendance.

As reported to the Council in April, the task of the Committee working with government agencies will be

> "to ascertain by contacts with refiners and otherwise, the emergency potential of the industry to produce aviation gasolines and jet fuels of varying specifications and in varying proportions."

The Committee found that there was a close inter-relation between the ability of any specific refinery to produce high octane gasoline and jet fuels. Maximum production of high octane gasoline would cut down or otherwise influence the productive ability for jet fuels (as well as for other products) but since more selective equipment is required for high octane gasoline than for jet fuels and more refineries can produce jet fuels than can produce high octane gasoline it was considered desirable to work out the national potential production on the basis of first assuming maximum production of high octane components, then ascertaining the maximum potential production of jet fuels.

The Committee feels that the demands for both high octane gasoline and jet fuels are apt to be enormous in another national emergency. The Committee hearily endorsed what it understood to be the military policy to design and develop jet engines capable of utilizing fuels of broad boiling range and liberal specifications. The Committee feels that it would be literally impossible to make an overnight conversion of petroleum refining from civilian products to special military products and that the greatest supply safety will lie in a program for diverting (or blending) whatever part of normal civilian products may be necessary for the servicing of jet-propelled military aircraft. Such a program, in addition to permitting almost instant supply availability (at the expense of civilian and other military products) would have the additional advantage that emergency supplies could be obtained from any area where there was a refinery or products terminal.

Because the aircraft fuel demands in an emergency will be so great and because the jet fuel demand will have to be satisfied in large part by diverting other products the Committee felt, and the Government pepresentatives agreed, that to be of real value to the military - particularly the planning agencies - the Committee should report not only maximum potential availability of high octane gasolines and jet fuels but also the approximate availability from refineries run to satisfy such a demand of other products, military and civilian.

It was agreed that the Committee would defer any consideration of new fuels, new components, or the desirability of installing any special equipment until it had provided government with a report on

what could be done with present technologies and in equipment operating or building. It was agreed also that the crude evaluation work being done for the Air Forces by the Bureau of Mines should proceed independently of the work of the Committee on productive capacity.

To aid the work of the Committee, the Chairman of the National Petroleum Council appointed three subcommittees:-

The Subcommittee on Blending High Octane Components;

The Subcommittee on Inquiries; and

The Subcommittee on Product Utilization.

Personnel lists covering the Committee and its subcommittees are appended to this report.

The subcommittees are at work and progress to date may be briefly summarized as follows.

The Subcommittee on Blending High Octane Components met in Washington with representatives of government and reviewed the data available in the files of the Petroleum Administration for War. It completed a calculation as to the national potential in the first quarter of 1945 to produce Grade 115/145 aviation gasoline and found it to have been approximately 255,000 barrels per day or approximately half of the then-production of Grade 100/130. The Committee also made an informal estimate that in the first quarter of 1945 the potential ability to produce aviation gasoline of Grade 130/160 would have been approximately 150,000 barrels per day. The Subcommittee prepared data showing the quantities of all high octane components produced by each refiner in the first quarter of 1945. These

data will be turned over to the Subcommittee on Inquiries and in due course each wartime manufacturer of high octane gasoline or components will be supplied these figures and requested to estimate the amounts that could be produced should another national emergency arise - - taking due account of equipment changes, the possibilities of rehabilitating equipment, and the effect of any newly added (or planned) productive capacity.

The Subcommittee on Inquiries in the meantime has been evaluating the various factors involved in the preparation of refinery questionaires designed to adduce the maximum amount of information as to the emergency potential of production and at the same time to impose the smallest burden on the companies asked to respond to such inquiries and to permit the compilation of the information in such a way as to be of most value to government. Conclusions thus far reached are:-

a. It should be assumed that in the event of a national emergency refineries will also have to continue to produce peak quantities of certain other petroleum war products such as butadiene for synthetic rubber, butylene for butadiene, toluol (nitration grade), lubricating oils and wax and certain other war-essential chemicals. These products, important as they are, represent only a small portion of the volume of petroleum products needed and hence the Inquiries as to military aircraft fuels productive capacity should ascertain the maximum protential production of such fuels assuming that these other demands are first met;

b. The production of high octane aviation gasolines and components should be assumed to take precedence over jet fuels;

c. The maximum amount of jet fuels producible under these conditions should be ascertained;

d. The amount of diesel fuel (702-e) producible when the refinery is running for maximum jet fuel should be ascertained; also the amount of diesel fuel when the refinery is running for one-half and one-fourth of its maximum capacity for jet fuel;

e. The production of other products -- gasoline, kerosene, civilian diesel fuel, heating oil, etc. of specifications equivalent to those prevailing during World War II should be ascertained -- assuming maximum production of high octane gasoline and components and 100%, 50% and 25% of maximum production of jet fuel;

f. While the information should be separately tabulated, data should also be sought from companies domiciled in the United States with respect to their operations in the Carribean area; and

g. Before addressing a formal inquiry on these subjects to all refiners it would be desirable to test its feasibility by requesting the companies whose employees are members of the committee and its subcommittees to supply the same information.

Several additional meetings of the subcommittees and of the main committee will be required in order to discharge the assignment and some months will elapse before the work can be completed.

Respectively Submitted

For the Committee

BRUCE K. BROWN
Chairman

PERSONNEL LIST

TEMPORARY COMMITTEE ON MILITARY AIRCRAFT FUELS PRODUCTIVE CAPACITY

Committee Membership

Bruce K. Brown	Standard Oil Co. (Ind.) (Chairman)
R. C. Alden	Phillips Petroleum Company
J. R. Bates	Sun Oil Company
Paul G. Blazer	Ashland Oil & Refining Co.
Reid Brazell	Leonard Refineries, Inc.
George Davidson	Standard Oil Co. (California)
C. E.Davis	Shell Oil Company
A. P. Frame	Cities Service Company
W. M. Holaday	Socony-Vacuum Oil Company
G. H. Taber	Sinclair Refining Company
H. D. Wilde	Humble Oil Company
J. S. Worden	Texas Company

Subcommittee on Blending High Octane Components

A. P. Frame	Cities Service Company (Chairman)
C. P. Baker	Socony-Vacuum Oil Co. (Co-Chairman)
T. L. Apjohn	Socony-Vacuum Oil Co.
David Neal	Phillips Petroleum Co.
Ray Raudruff	Sun Oil Company

Subcommittee on Inquiries

G. H. Taber	Sinclair Refining Co. (Chairman)
W. R. Argyle	Sinclair Refining Co.
Harry S. Burke	Standard Oil Co. of New Jersey
L. C. Burroughs	Shell Oil Company
J. S. Worden	Texas Company

Subcommittee on Product Utilization

W. M. Holaday	Socony-Vacuum Oil Co. (Chairman)
D. P. Barnard	Standard Oil Co. (Indiana)
J. B. Hill	Sun Oil Company
S. D. Heron	Consultant