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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ENERGY AND MINERALS
DIVISION

April 30, 1981

B-203064

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The Honorable James M. Shannon
U.S. House of Representatives



Dear Mr. Shannon:

RELEASED

115204

Subject: [Impact on small refiners of the decision
to decontrol crude oil prices] (EMD-81-84)

Your letter of February 2, 1981, (see encl. II) requested certain information relating to the impact on small refiners of the President's January 28, 1981, decision to decontrol the prices of domestic crude oil and the allocation of refined products. For purposes of this report a small refiner processes 50,000 barrels of oil per day or less.

Specifically, you requested information on a selection of small refiners which included ownership and/or affiliation, product slate, regional economic role or markets served in relation to the nearest integrated refinery, and capacity utilization. You also requested financial data, if readily available, and employment data, if time permitted. Enclosure I contains the information requested except that financial data on refinery operations was not readily available. We are also providing information your office requested on the refiners' ability to obtain crude oil and their opinions on how decontrol will affect them.

To assist in selecting the refiners visited, we obtained information on all U.S. refiners from the Department of Energy's (DOE's) Energy Information Administration and from the Department of the Interior's U.S. Geological Survey on 109 small refiners that applied to purchase oil from the Government. (See pp. 3, 4, and 5 of encl. I for a detailed discussion of the methodology used to select the refiners). We then visited seven refiners of varying size, geographic location, product slates, methods of crude oil acquisition,

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markets served, employment and ownership to obtain the information requested. Due to the time constraints of the request, we did not verify the information provided.

Concerning ownership of the seven refiners we visited, three are privately held companies, one is owned and operated by a cooperative, and three are affiliated with or owned by publicly traded corporations. In all seven cases, the refinery is not the sole business activity of its owners. Four have diverse interests in natural resources; the cooperative has interests in related farm products and activities; one owns and operates a fleet of trucks; and one owns a chain of service stations.

All of the refiners visited believe they are producing a product slate which meets a segment of the market demand. They produce diesel fuel, home heating oil, asphalt, jet fuel, gasoline, and petrochemical feedstocks. However, the seven refiners are not the sole source of supply for their respective geographic areas. Supplies can also be obtained from product terminals, pipelines, and/or other refiners. Six of the seven refiners are operating at 75 percent capacity or better compared with the preliminary 1981 average utilization rate for all U.S. refiners of 70 percent.

Together the refiners employ about 1,085 persons. All expect to stay in business and do not anticipate laying off or decreasing their number of employees. Should the refiners shut down, however, company officials pointed out there would be adverse impacts on the local economy because they are major contributors to the local tax base and in five cases officials stated that the local economy could not absorb displaced refinery workers.

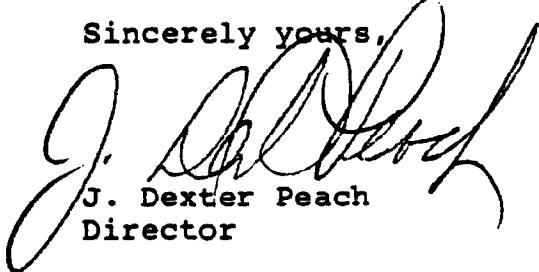
According to company officials we visited, crude oil supplies are readily available at this time. However, all are concerned about long-term crude supplies. Two have joined a consortium to buy directly from oil-producing countries and another has an international buying agent to secure its long-term contracts.

None of the refiners favors reestablishing Government subsidies such as the small refiner bias that provide favorable treatment specifically for small refiners. Six supported some other type of Government action to assist the small refiner such as tax incentives, a standby crude oil allocation program, or an import tariff on refined products.

As each refiner is differentiated not only by size but also by types of products, markets served, economies of scale, etc., conclusions cannot be drawn about the other 150 independent, small refiners in the United States from the information contained in Enclosure I on the seven refiners visited.

Because of the reporting requirements of your request, we did not obtain official comments from the refiners we visited. As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from the date of its issuance. At that time, we will send copies to the members of the Subcommittee on Trade, House Ways and Means Committee, who also expressed an interest in this request; the Secretary of Energy; and the refiners visited; and make copies available to others upon request.

Sincerely yours,



J. Dexter Peach
Director

Enclosures - 2

BACKGROUND

The Emergency Petroleum Allocation Act of 1973 (EPAA) (P.L. 93-159) mandated that DOE preserve the competitive viability of independent and small refiners. One of the intentions of the act was to alleviate concern that independent and small refiners would not be able to compete with oil companies that had access to domestic crude oil controlled at prices below imported oil.

In response to this mandate, DOE established the Crude Oil Entitlements Program in November 1974. The purpose of the entitlements 1/ program was to equalize U.S. refiners' crude oil costs by distributing the benefits of access to lower priced domestic crude oil proportionately to all domestic refiners through a system of monetary rather than physical transfers.

The Energy Policy and Conservation Act of 1974 (P.L. 94-163) amended the EPAA and authorized an explicit small refiner bias which granted refiners with 175,000 barrels per day total capacity or less additional entitlements to offset their relatively higher operating and capital costs due to their size. The amount of the additional benefits in 1979 ranged from \$0.06 to \$1.89 a barrel depending on the size of the refinery and was scaled in an inverse relation to refinery capacity so that the greatest benefits were derived by refiners processing 10,000 barrels per day or less.

The favorable Federal legislations discussed above encouraged the construction of small, independent refineries; that is, those with total throughput of 50,000 barrels per day or less and not associated with a major oil company.

1/The entitlements program was designed to distribute the benefits of price controls on domestic crude oil among refiners. An entitlement was the right to refine a barrel of price-controlled domestic oil. Refiners bought and sold entitlements at a price calculated monthly by DOE as the difference between the average price of controlled and uncontrolled oil adjusted by volume of each category of oil sold, to permit them to process their monthly volume of controlled oil. Refiners bought entitlements to process more than the national average of controlled oil. Cash received in exchange for entitlements sold in effect reimbursed refiners who were selling entitlements for part of the higher purchase cost of uncontrolled oil.

Between 1974 and 1980, 64 refineries began operating, and all but two have crude distillation capacity below 50,000 barrels per day. About 160 small refiners are located in 29 States; have a cumulative maximum capacity of approximately 2 million barrels per day or 720 million barrels per year; and produce about 20 percent of the petroleum products refined in the United States.

According to DOE information, domestic refiners produced about 5.5 billion barrels of refined petroleum products in 1980. The following table shows by product type how much the major refiners and small refiners produced in 1980:

| | Major Refiners | | Small Refiners (note a) | |
|---------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------|
| | <u>Amount</u> (in thousands of barrels) | <u>Percent of</u> <u>products</u> <u>produced</u> | <u>Amount</u> (in thousands of barrels) | <u>Percent of</u> <u>products</u> <u>produced</u> |
| Motor gasoline | 2,086,057 | 47.0 | 343,371 | 33.8 |
| Distillate fuel oil, less than No. 4 <u>(note b)</u> | 822,797 | 18.5 | 226,191 | 22.2 |
| No. 4 fuel oil <u>(note c)</u> | 3,839 | .1 | 15,656 | 1.5 |
| Residual fuel oil | 516,236 | 11.6 | 182,114 | 17.9 |
| Others | <u>1,010,285</u> | <u>22.8</u> | <u>249,692</u> | <u>24.6</u> |
| Total | <u>4,439,214</u> | <u>100.0</u> | <u>1,017,024</u> | <u>100.0</u> |

Source: Unpublished DOE data on input/production dated March 17, 1981.

a/Refiners with 50,000 barrels per day or less throughput.

b/Diesel fuel and some heating oils.

c/A fuel oil for industrial uses.

About 34 percent of the product slate of small refiners was gasoline and over 22 percent is lighter distillates as compared with the majors which produced about 47 percent gasoline and over 18 percent lighter distillates.

Under existing legislation, all price and allocation controls would have expired on September 30, 1981. In April 1979, President Carter ordered the phased decontrol of crude oil prices between June 1, 1979, and September 30, 1981. However, on January 28, 1981, President Reagan mandated the immediate elimination of remaining price controls on crude oil and allocation controls on some petroleum products as well as the explicit subsidy conferred by the small refiner bias.

Thus, U.S. refiners--both large and small--will no longer have the advantage of a lower average cost of crude oil than foreign refiners. This lack of a cost advantage plus reduced U.S. petroleum consumption have resulted in a changed environment for the U.S. refining industry. Average utilization rates for all U.S. refiners are down from 86.9 percent in 1978 to about 70 percent in 1981. Some U.S. refineries are being closed. For example, Standard Oil Co. (Indiana) plans to mothball its refinery with 104,000 barrels per day capacity at Wood River, Illinois, and Gulf Oil Company plans to close refineries in Toledo, Ohio (50,300 barrels per day) and Venice, Louisiana (28,700 barrels per day). Mobil Oil, Atlantic Richfield, and Conoco have also announced plans for closing refineries.

SCOPE AND METHODOLOGY

Congressman Shannon asked us to obtain information for a selection of small refiners on ownership and/or affiliation, product slate, regional economic role or markets served in relation to the nearest integrated refinery and capacity utilization. He also requested financial data, if readily available, and employment data, if time permitted. We were unable to provide financial data on refinery operations because it was not readily available. We are also providing information which Congressman Shannon's office requested on the refiners' ability to obtain crude oil and their opinions on how decontrol will affect them.

To assist in selecting small refiners included in our review, we obtained information on all U.S. refiners from the Department of Energy's (DOE's) Energy Information Administration and on small refiners from the Department of the Interior's U.S. Geological Survey (USGS). DOE provided us data on all domestic refiners--large and small--concerning the type of crude oil processed, product yields, production, and operating capacity. USGS provided information on

109 small refiners that applied for royalty oil 1/ in 1980. This consisted of data on any known corporate affiliations or associations, number of employees, sources of crude, and refinery location in addition to data similar to that provided by DOE.

Criteria for our selection of the seven small refiners required that they:

- range in size from 1,000 barrels per day to 50,000 barrels per day. Of the refiners visited, two process less than 20,000 barrels per day; three process between 20,000 barrels per day and 40,000 barrels per day; and two process between 40,000 barrels per day and 50,000 barrels per day.
- provide a wide range of geographic locations. About 80 percent of all U.S. refineries are located in coastal areas. Five of the refiners we visited are located in sparsely populated areas outside the Gulf, East, or West Coasts and two are located in the coastal areas where many other U.S. refineries are located.
- produce not only heavy products such as asphalt and residual fuel oils but also lighter products such as gasoline and jet fuel. Two of the refiners visited produce a large percentage of asphalt, four produce gasoline, four produce jet fuel, one supplies gasoline and diesel fuel for agricultural needs, and two supply feedstocks to other refiners.
- serve different markets. Four supply jet fuel for military needs, one serves agricultural markets, two supply other refiners, and two directly supply industrial users.
- range in years of operation. Five of the seven refiners we visited have operated for 25 years or more although in two cases the present owners acquired the refineries in 1977. The other two refineries began operating in 1975.

1/Royalties--either monetary or crude oil--are collected from oil produced either on State controlled lands or leased Federal onshore lands or from the Outer Continental Shelf.

--represent diversity in ownership. Of the seven refiners we visited, three are privately-held, one is owned by a cooperative and three are affiliated with or owned by publicly-traded corporations.

Congressman Shannon's office agreed with the appropriateness of the criteria, the refiners selected, and the presentation of data in aggregate form. We then visited the seven refiners selected to obtain information not available from Federal Government sources. Due to the time constraints of this request, we did not verify the information provided by these refiners.

As each refiner is differentiated not only by size but also by types of products, markets served, economies of scale, etc., conclusions cannot be drawn about the other 150 independent, small refiners in the United States from the information contained in Enclosure I on the seven refiners visited.

Following is a discussion of what we found at the seven refiners visited.

OVERVIEW OF SEVEN SMALL REFINERS

Ownership

Three of the refiners are privately-held companies, one is owned and operated by a cooperative, and three are affiliated with or owned by publicly-traded corporations. All the refiners visited had other business activities. The following describes each of these:

- One owns a fleet of trucks to market its products.
- One owns a chain of retail service stations and truck fleet to handle both its crude oil and refined products.
- One refinery is owned by a company which has activities in real estate, farming, and ranching in addition to oil and gas exploration and drilling, and well servicing.

--One refinery is owned and operated by a cooperative which is also a wholesale supplier of refined fuels, agriculture chemicals, plant food, and farm and home maintenance products.

--One is a wholly-owned subsidiary of a publicly-traded natural resource company with major interests in gas distribution at the retail level; gas processing, gathering, and transmission; and oil and gas exploration and production. This company also merchandizes and sells gas and electrical appliances as well as having activities in real estate development and financial services.

--One refinery is a subsidiary of an energy company with activities in gas and oil exploration and production and a wholesaler of liquid natural gas.

--The seventh refinery is 50 percent owned by a U.S. corporation and 50 percent owned by a foreign corporation. The publicly-traded U.S. corporation is an energy company whose major activities are the exploration for and production of crude oil and natural gas. The company's activities also include oil supply, terminaling, gas gathering and processing, coal mining, and offshore production services. It also has foreign interests to explore and develop oil and gas internationally.

In summary, four owners have diverse interests in natural resources; the cooperative has interests in related farm products and activities; one owns and operates a fleet of trucks; and one owns a chain of retail service stations.

Product slate

All of the refiners we visited believe they are producing a product slate which meets a segment of the market demand in their service area. They produce diesel fuel, home heating oil, asphalt, jet fuel, gasoline, and petrochemical feedstocks. For example, two produce a large percentage of the asphalt for road building and roofing needs within their service area; four produce gasoline which ranges from 23 percent to 51 percent of their product output; four supply jet fuel to the Defense Fuel Supply Center for military use; one supplies gasoline and diesel fuel for agricultural needs within a 13 State area; and two supply feedstocks to other refiners for petrochemicals and a variety of other products.

The proportions of these products vary with the refinery design, location, and time of year. Company officials told us they adjust their production to meet seasonal or changing demand. For example, gasoline production is increased during the tourist season or heating oil production is increased during the winter months. The following table shows refined petroleum products of these seven refiners for 1980.

| <u>Products</u> | <u>Thousands of barrels produced</u> |
|--------------------------------------|--------------------------------------|
| Motor gasoline | 12,841 |
| Distillate fuel oil, less than No. 4 | 10,550 |
| No. 4 fuel oil | 6,389 |
| Residual fuel oil | 10,479 |
| Others | <u>13,705</u> |
| Total | <u>53,964</u> |

This table shows 1980 production for these products. However, four of the refiners are in the process of upgrading their refineries to modify their product slates. Two are expanding gasoline production, one will increase gasoline, jet fuel, and diesel fuel production while reducing residuals and asphalt, and the fourth will increase its processing of products from other refiners which will be upgraded and sold as fuel oil, bunker(ship) fuel, or asphalt.

Market served and capacity utilization

The seven refiners are not the sole source of supply for their respective geographic areas. Supplies could also be obtained from product terminals, pipelines, and/or other refiners. No information was provided on the refiners' relationship in the market to the nearest integrated refinery which might serve the market now served by the small refiner. With one exception, refinery officials believed their market areas could be served by terminals, pipelines, or other refiners if they shut down but believe the products would probably cost more because of added transportation costs or reduced competition. Refinery officials, however, did not substantiate these opinions. In the one case, refinery

officials stated that at least three companies which are wholly dependent on it for specialty products would also be forced to close down if the refinery stopped supplying their specialty needs.

Six of the refiners we visited are operating at 75 percent capacity or more. One refiner is operating at 65 percent capacity since its product supplies are exceeding demand. When this market situation stabilizes, company officials expect to operate at least at 70 percent capacity.

Employment and other local economic concerns

All the refiners expect to stay in business and do not anticipate laying off or decreasing their number of employees. In fact, one is expanding its operations and plans to hire 200 employees over the next 3 years. Together the seven refiners employ about 1,085 persons. With the exception of the two refiners located in the coastal refining areas, company officials told us that employees would have a difficult time finding employment in the local area if the refinery closed down. They further pointed out that there would be adverse impacts on the local economy. Company officials told us they are major contributors to the local tax base. Only one official, however, provided an estimate of this effect. He stated that his refinery contributes 68 percent of total municipal tax receipts.

Of the two refineries located in the coastal refining areas, one felt that displaced employees could be hired by other refiners in the area and the other estimated that perhaps as many as half of its employees could be hired by other industries but at reduced salaries.

Access to crude oil

The refiners visited buy domestic or foreign oil in the open market or on long-term contracts and all depend to some extent on State or Federal royalty oil. All the refiners also trade some of their oil. Only one refiner owns or controls part of its crude needs (about 26 percent). Three refiners purchase some of their crude oil requirements from foreign sources, four purchase from the spot market; seven depend to some extent on Federal and State royalty oil, three purchase from fields near the refinery; and one buys residual oil or other heavy products from other refiners and has a foreign contract to purchase additional residual oil for further processing.

While all are able to meet their current oil requirements through the options mentioned above, all are concerned about obtaining long-term supplies at competitive prices. Two of the refiners in this study joined with three other small refiners (not included in this study) and formed a buying consortium to secure long-term supply contracts directly from oil-producing countries. While no contracts have as yet been finalized, the consortium representative was optimistic that one would be forthcoming in the near future. Another refiner uses an international negotiator or buying agent to seek long-term foreign contracts.

Opinions on impact
of decontrol

All of the refiners visited believe they will continue operating in an unregulated environment, although all said that rising crude costs and stable product prices are currently causing them to operate near their breakeven point. No financial data was provided to support these claims. All of the refiners we visited modernized or upgraded their refineries before decontrol and some are continuing to do so. All stated these activities would have taken place without Federal programs because increasing their ability to accommodate heavier, high-sulfur crude oil and changing or increasing their product slates is crucial for their continued survivability in the industry.

None of them favors reestablishing Government subsidies such as the small refiner bias that provides favorable treatment specifically for small refiners. Two refinery officials stated that regulatory programs provided financial hardships and disincentives for investment.

Four of the refiners visited were entitlements buyers and sellers. For example, one received \$10 million prior to 1978 and paid out \$5 million, \$8 million, and \$18 million in 1978, 1979, and 1980, respectively; one official stated his company received about \$12 million in 1979 and 1980, and based on information provided, we estimated the company paid out a total of about \$3.6 million in 1979 and 1980; another received payments totalling \$6.5 million in 1980 and sold \$11 million worth of entitlements; and the fourth refiner sold about \$10 million worth of entitlements between October 1979 and May 1980 and estimated that between June and October 1980 the difference between entitlements sold and bought would be a net gain to the company of about \$129,000. Three of the refiners received funds through the small refiner bias--one received \$11 million between

April 1978 and December 1980, another received about \$29.5 million between 1975 and 1980, and the third received about \$2.8 million in 1980.

Nevertheless, none supported reestablishing the entitlements program or the small refiner bias. However, six supported some other type of Government action such as tax incentives, a standby crude oil allocation program, or an import tariff on refined products.

ENCLOSURE II

JAMES M. SHANNON
5TH DISTRICT, MASSACHUSETTS

COMMITTEE
WAYS AND MEANS

SUBCOMMITTEES
HEALTH
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Congress of the United States
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February 2, 1981

Honorable Elmer B. Staats
Comptroller General of the
United States
General Accounting Office
441 G Street
Washington, D.C. 20548

Dear Mr. Staats:

In follow-up to the letter of December 12, 1980, from former Congressman Vanik and me, I would like to request the assistance of the General Accounting Office in examining several specific issues relating to the small refinery industry.

Because I anticipate legislation relating to small refineries in the near future, time is of the essence in obtaining certain data necessary for proper consideration of such legislation by Congress.

Therefore, I request two letter reports from the GAO:

- 1.) a letter report provided to me by the end of April which analyzes five to ten small refiners (those with less than 50,000 per day throughput) in several regions of the country to determine
 - a) their ownership, affiliation or control. I am particularly interested in any indications that a small refiner is part of a "chain" of small refiners under common ownership and/or is affiliated with larger, diversified companies;
 - b) the produce sold by the sample of refiners, the role those refiners play in the regional economy, their relationship in the market to the nearest integrated refinery (those with production of more than 175,000 barrels per day), and the capacity utilization of the small refinery and the integrated refineries which might most logically serve the market now served by the small refinery;
 - c) to the extent you believe the data reasonable and accurate (e.g., certified by independent accountants and auditors for GAAP, etc.), financial data (including if readily available and public, executive compensation schedules) on the small refineries

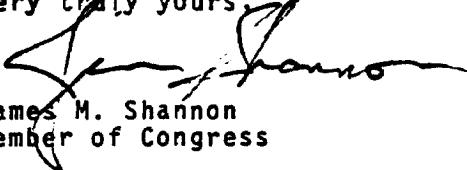
Honorable Elmer B. Staats
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relating to their net income, profit and loss, etc.

- d) if time is available, information on the employment provided by small refiners and estimates by experts in the refinery industry as to the ability of the regional industry to absorb any workers which might be displaced by the closing of the small refiner.
- e) A letter report provided to me by the end of July on the ownership of the approximately 150 to 170 small refiners (those with daily throughput of less than 175,000) as per the request in 1(a) above.

Thank you very much for your early assistance on this important informational project. My staff and I look forward to working with you on this issue.

Very truly yours,



James M. Shannon
Member of Congress

JMS:jk