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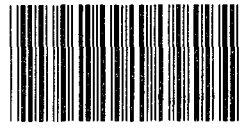
UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS DIVISION



B-178205

JUNE 14, 1979

The Honorable Harold Brown
The Secretary of Defense AGC00005

Dear Mr. Secretary:

We have completed our study of the storage and distribution of bulk petroleum products by the Defense Logistics Agency. While we found the functions to be generally well managed, we observed several opportunities for improvement, such as: 378

--The use of inaccurate or inappropriate transportation cost data in the computer model used by the Defense Fuel Supply Center to evaluate bids from suppliers has in some instances distorted the results.

--The overall cost of petroleum products could be reduced if maximum use were made of existing pipelines for distribution.

--Inventories at some fuel storage points have been maintained at higher levels than can be justified by usage or war reserve requirements.

--The loading of fleet oilers at supply points away from the source of supply has resulted in unnecessary double handling of fuels, thus increasing costs.

The Defense Logistics Agency is the single manager for wholesale bulk petroleum products. Its Defense Fuel Supply Center has a worldwide mission of procuring and distributing fuel used by the armed forces and certain other Federal activities. These responsibilities are carried out by the Center's headquarters office and eight regional offices in the United States and overseas. Our study was done at the Center's headquarters office and at the Los Angeles region.

Letter Report

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In fiscal year 1978 the Defense Fuel Supply Center contracted for 222 million barrels of fuel costing $3.4 billion. At the end of fiscal year 1978, the worldwide inventory totaled 70.6 million barrels. At that time the Center controlled 79.4 million barrels of useable wholesale storage capacity worldwide.

INACCURATE OR INAPPROPRIATE TRANSPORTATION COST DATA USED IN BID EVALUATIONS

Correct cost data has not always been used in evaluating bids from suppliers. The Defense Fuel Supply Center has developed a computer model to help evaluate bids received from suppliers during the annual procurement cycle. The model produces an overall minimum cost distribution plan by evaluating the bids received in conjunction with available transportation rates. The distribution plan indicates which bids should be accepted and the specific supplier and transportation mode for meeting each customer's needs.

The use of inaccurate or inappropriate transportation cost data in the bid evaluation model has in some instances distorted the resulting distribution plans. If such errors remain uncorrected or undetected they can result in petroleum products being purchased from other than the low-cost suppliers or in customers being served from the wrong sources, thus increasing costs to the Department of Defense.

For example, the fiscal year 1978 bid evaluation for supplying JP-4 jet fuel to Davis-Monthan Air Force Base, Arizona, used a tank truck rate of $0.053856 a gallon for shipments from Monument, New Mexico, rather than the correct rate of $0.081600 a gallon. As a result of this erroneous cost data, the bid evaluation called for the purchase of 12.2 million gallons of fuel from a supplier in Monument. If the correct transportation rates had been known, the Department of Defense could have satisfied Davis-Monthan's needs at a lower cost from suppliers on the Southern Pacific pipeline.

Similarly, when evaluating bids for supplying diesel fuel to Port Hueneme, California, a commercial barge transportation rate applicable only in the immediate San Francisco Bay area was used as the cost of delivery from the bay area to the activity more than 300 miles away. Not only was the rate incorrect, but regional personnel told us that Port Hueneme's capacity for storing diesel fuel was limited, thereby precluding its receiving delivery by commercial barge.

Instead, the activity is served by a Navy yard oiler from fuel delivered by suppliers to the San Pedro Defense Fuel Support Point.

We also observed other instances in which inappropriate transportation modes, such as the use of pipeline service where none was available, were included in the bid evaluations.

Although the automated bid evaluation model is an excellent management tool, its effectiveness depends on the accuracy of the cost data analyzed. To insure that the distribution plan produced by the model reflects the lowest possible overall cost to the Department of Defense, the transportation data used in bid evaluations should be reviewed for accuracy.

One way to improve accuracy is to have regional personnel review the transportation data used in the bid evaluation process. Currently, the bid evaluation function is handled almost exclusively by the headquarters staff. Regional office assistance would take advantage of the expertise of personnel who are most knowledgeable about the installations and the available distribution facilities. This additional task should not be burdensome since the bid evaluation process for a particular region would occur only once a year.

BETTER USE OF EXISTING DISTRIBUTION FACILITIES WOULD REDUCE COSTS

The overall cost of petroleum products could be reduced if maximum use were made of existing pipelines for distribution. Generally, pipeline service is the least costly mode of transporting bulk petroleum products. However, optimizing usage of pipelines would in some instances require cross-servicing between installations and we found that this generally was not being done.

For example, the fiscal year 1978 distribution plan for JP-4 jet fuel indicated that several activities in Arizona should be served through the Southern Pacific pipeline from the Los Angeles area, using Luke Air Force Base as a reshipment point for loading tank trucks. However, one of the activities was actually served through Williams Air Force Base and the other activities were served by trucks directly from Los Angeles, at distances ranging from 270 to 390 miles.

This deviation from the plan increased costs by more than $45,000 annually and occurred because Luke Air Force Base would not agree to serve as a reshipment point.

As another example, two activities in the Fresno, California, area receive JP-4 fuel by tank truck from the Ozol Defense Fuel Support Point, about 170 miles away, even though Castle Air Force Base is about 60 miles away and served by commercial pipeline. If the Fresno activities were served through Castle, annual savings of about $27,000 in transportation costs could result.

Even greater savings could result if the Fresno activities received fuel through the Navy-owned pipeline serving the Lemoore Naval Air Station about 45 miles away. Although this alternative might require the addition of storage facilities at Lemoore and Estero Bay, on the other end of the pipeline, we estimate that annual savings in transportation costs of about $130,000 would be possible.

As stated previously, available commercial- or Government-owned pipeline service is usually the least expensive means of transporting bulk petroleum products. This is true not only for shipments to installations served directly by pipelines, but for shipments to other customers in the vicinity of these installations.

To satisfy the Department's petroleum needs at the lowest possible cost, pipeline service should be used wherever it reduces costs. To achieve this objective, the Defense Fuel Supply Center needs to study all existing pipeline networks to identify opportunities for cost reduction. To implement optimum distribution plans, the Center also needs the cooperation of the military services in getting installations to share distribution facilities.

STOCK LEVELS AT SOME DEPOTS SHOULD BE REDUCED

Inventories at some fuel storage points have been maintained at higher levels than can be justified by usage or war reserve requirements. This has increased storage and inventory holding costs.

In reviewing the use of major storage facilities under the control of the Defense Fuel Supply Center, we found that the stock levels at several facilities, primarily in the Midwest, were unrealistically high.

For example, during fiscal year 1977 the JP-4 fuel stock level at the Escanaba Defense Fuel Support Point (a facility with little war reserve responsibility) ranged from 257,000 barrels to 570,000 barrels with an average level of 404,000 barrels. The peacetime stockage objective of 613,870 barrels appears to have been based on the capacity of the available tanks rather than on experienced or projected requirements. The Defense Audit Service made a review of the stockage objective for Escanaba and concluded that the appropriate objective was 63,945 barrels.

Similarly, the JP-4 fuel stock level at the Harrisville Defense Fuel Support Point ranged from 149,000 barrels to 298,000 barrels with an average level of 237,000 barrels. The Defense Audit Service concluded that the correct objective for Harrisville was 55,224 barrels. Again, the peacetime stockage objective of 383,198 barrels was based on the capacity of available storage.

The Defense Audit Service's stockage objective figures for Escanaba and Harrisville were arrived at during an overall review of the Defense Fuel Supply Center's computations of peacetime stockage objectives. The Defense Audit Service concluded that stockage objectives generally were high, based on Department of Defense regulations. In June 1978, when commenting on the Defense Audit Service findings, the Deputy Assistant Secretary of Defense (Energy, Environment, and Safety) agreed that fuel inventories should be computed in accordance with Department of Defense regulations, and he stated that the full tank policy followed by the Defense Fuel Supply Center was not an approved policy.

Our review showed, however, that the full tank policy has continued. The Defense Fuel Supply Center has not only continued to advise its regions to maximize stock levels but, in addition, prior to the end of fiscal year 1978 the Center purchased about 683,000 barrels of fuel to be stored at the suppliers' facilities until it could be loaded on tankers. This quantity was included along with the fuel onhand and in transit in computing the year ending inventory.

By establishing peacetime stockage objectives for some storage depots on the basis of tank capacity rather than need, inventory levels have been maintained at unrealistically high levels and fuel storage and holding costs have been increased.

We believe that peacetime stockage objectives should be recomputed on the basis of documented requirements and in accordance with Department of Defense regulations. After this is done, the Defense Fuel Supply Center will be in a position to reconsider the need for all of the storage capacity presently used at the various depots and whether a portion of it could be eliminated or released for other use.

UNNECESSARY HANDLING OF FUELS INCREASES COSTS

The loading of fleet oilers at supply points away from the source of supply has resulted in unnecessary double handling of fuels, thus increasing costs. To the extent that these vessels can be loaded at or near the source of supply, costs of transportation, handling, and storage can be reduced.

The conditions at Point Loma, California, illustrate this situation. Diesel fuel and JP-5 jet fuel are supplied to the Point Loma Defense Fuel Support Point by Navy-controlled tankers from the San Pedro Defense Fuel Support Point, about 100 miles away, or directly from suppliers near San Pedro. In fiscal year 1978 about 114.4 million gallons of diesel fuel and 101.3 million gallons of JP-5 fuel were delivered to Point Loma.

During the period April through June 1978, about 50 percent of the diesel fuel and 15 percent of the JP-5 fuel issued by Point Loma was loaded on fleet oilers serving Navy ships at sea. In some instances, the oilers arrived at Point Loma with little or no forewarning, drawing down the stock level to a point where it was necessary to divert resupply vessels destined for other stock points. Regional personnel told us that the fleet oilers load at Point Loma even though in some cases they might be operating closer to San Pedro when they serve the ships at sea.

The primary reason for loading oilers at Point Loma appears to be that their home port is in the San Diego area. We believe that fleet oilers should be required to load as near to the source of supply as is feasible.

RECOMMENDATIONS

This report discusses four areas where the Defense Logistics Agency can improve its management of bulk petroleum products. To bring about these improvements, we recommend that you have the Director, Defense Logistics Agency, take the following actions:

--Adopt quality control measures to make sure the proper transportation data is included in the bid evaluation model.

--Have regional personnel review the transportation data used in the bid evaluation process to take advantage of their knowledge of specific installations and distribution facilities.

--Change distribution patterns to make the best use of less costly pipeline services.

--Work with the individual services in getting them to share distribution facilities that will result in the lowest overall cost to the Government.

--Recompute peacetime stockage objectives on the basis of documented requirements and in accordance with Department of Defense regulations.

--Evaluate storage needs on the basis of the revised stockage requirements and release facilities no longer needed.

--Ask the Navy to require that fleet oilers be loaded as near to the supply source as is feasible.

We further recommend that you direct the Secretaries of the military services to cooperate with the Director, Defense Logistics Agency, in bringing about these improvements, particularly in the areas involving the sharing of distribution facilities and the loading of fleet oilers.

We discussed this report with officials of the Defense Logistics Agency. They generally agreed with our findings and recommendations.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement of actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Director, Defense Logistics Agency; the Secretaries of the Army, Navy, and Air Force; and the chairmen of the appropriate congressional committees.

Sincerely yours,

R. W. Gutmann
Director