

During production, two separate chemical processes yield two products called "foamer" and "filmer" which are blended to form the final product--fire extinguishing foam. Under the contract, 3M delivered 400,000 gallons of FC-199 foam. 3M subsequently delivered 690,000 gallons of the successor FC-200 foam which was qualified to Navy specifications in December 1971.

3M's Chemolite plant is used to develop new chemical production processes and is capable of producing either pilot plant or production quantities. Chemolite produced the filmer intermediate used in producing FC-199, but for FC-200, it blended a portion of the filmer and foamer intermediates produced at Decatur. 3M's Decatur plant is primarily a production facility and was used to make the foamer intermediate for FC-199. Since about March 1972, Decatur produced both the filmer and foamer intermediates for FC-200 and blended the two for shipment of foam from that plant. Decatur was 3M's more efficient plant, due to lower labor and electrical power costs, and had a greater capacity to manufacture FC-200 foam due to the new equipment installed at Decatur during the period between January 1971 and January 1972.

3M submitted a proposal dated November 18, 1971, for a price of \$6.50 per gallon for 708,000 gallons of FC-199 foam. After the delivery requirement was amended, 3M revised its proposal on December 14, 1971, to \$6.15 per gallon for 700,000 gallons of FC-199. A Defense Contract Audit Agency (DCAA) audit was waived because an audit had been made of an earlier November 1971 proposal for FC-199. Contract negotiations were held by telephone on January 6, 1972, and DSA accepted the \$6.15 price. The pricing certificates required by Public Law 87-653 were submitted concurrently with 3M's proposals. The delivery requirement was for shipment of FC-199 in 50-gallon drums or 5-gallon pails on pallets to the using activity. 3M received notification of contract award on January 21, 1972, and signed the contract on February 2, 1972.

RESULTS OF REVIEW

Bases for proposal

3M prepared its proposal from the third quarter 1971 factory costs for FC-199 combined for both the Chemolite and Decatur plants. To these amounts 3M added estimated costs for a new shipping pallet requirement plus estimated increases in material, labor, and manufacturing overhead costs to arrive at a proposal price of \$5.28 per gallon for FC-199. For the 6 months ended December 1971, 3M's actual combined costs for FC-199 produced at both plants were \$4.80 per gallon or 48 cents below the December 14, 1971, proposal. For the 400,000 gallons of FC-199 foam delivered under contract -0030, the

price overstatement amounted to \$192,000. 3M contended the second 6 months' actuals were not available until later in February or March 1972, after negotiation. 3M cost accounting files show factory cost data is available about 3 weeks after the end of the month for pricing purposes, i.e., the cost data was available prior to the contract agreement on February 2, 1972.

Consolidation of manufacturing

3M's preparations to consolidate the manufacture of the foam product at its Decatur plant were not disclosed to DSA at the time of negotiations in January 1972. To accommodate the increased requirement for foam production at Decatur, 3M installed new blending and filtration equipment during the period January 1971 through January 1972. The installation of the equipment and its capability to increase the production of foam to more than 5 times the existent capacity were not divulged by 3M.

Before contract -0030 was signed, preparations had been made by 3M to convert all foam production to FC-200 by April 30, 1972. On March 13, 1972, the contract was amended to specify FC-200, and on May 3, 1972, the first shipment of FC-200 was made.

DSA's memorandums of negotiation contained no reference to FC-200 nor to 3M's plans to produce the intermediates exclusively at the Decatur plant. Moreover, a 3M official acknowledged that production of FC-199 would have been consolidated at Decatur because of the increased volume requirement even if the Navy had not qualified FC-200.

To establish the facts about the consolidation of foam production known at the time of negotiation, we requested 3M to furnish that portion of the Chemical Division's 1971 long-range plan. We received a number of internal memorandums describing events occurring in the scaleup of production of FC-200. We requested 3M's Chemical Division's 1971 and 1972 annual production forecasts for both the Chemolite and Decatur plants for FC-199 and FC-200. We were given a document dated September 29, 1971, showing 1971 forecast and projected sales of foam of \$4.2 and \$6.7 million, respectively, and the 1972 sales forecast of \$5.8 million. The 1970 authorization to purchase the blending and filtration equipment showed that 3M forecasts projected a need to increase Decatur production capacity for foam from 18,000 to 100,000 gallons per month.

We also requested 3M's planning documents for the initial production of FC-200 and the management directives authorizing the change in production of the filmer intermediate from Chemolite to Decatur. 3M did not provide the information necessary to establish the effect on costs of consolidating production at its Decatur plant known at time of negotiations.

Change to FC-200 foam

Because of the change in product specifications, we believe that DSA should have required 3M to submit a new price proposal when the decision was made to change from FC-199 to FC-200 foam. Had this been done, DSA could have learned that the cost of producing FC-200 was \$4.11 per gallon or \$1.17 per gallon below the estimated cost of \$5.28 per gallon used in 3M's proposal for FC-199. For the FC-200, 3M decreased the per gallon price to \$5.65 for the first 490,000 gallons and then to \$5.25 for the remaining 200,000 gallons of foam delivered on the contract. Despite the decreases, we estimate that 3M overstated the FC-200 price by \$513,000 based upon the same profit rate used in the December 1971 proposal.

3M records showed that DSA was aware of the change to FC-200 about the time contract -0030 was signed. DSA was also aware at the same time that 400,000 gallons of FC-199 were going to be delivered under the contract. In view of the quantity of foam product and the waiver of the DCAA audit, we believe DSA should have required updated cost or pricing data in establishing the price for the FC-200 foam.

Pallet costs overstated

The contract price included \$48,750 for pallets that were not required for the 375,000 gallons of foam shipped in 50-gallon drums. 3M's proposed price incorrectly included pallet costs of 13 cents per gallon on the basis of all shipments requiring pallets. The solicitation for proposal specified shipment in 5-gallon cans on pallets and 50-gallon drums.

DCAA audit of contracts

DCAA conducted a postaward review of contract -0030 and two preceding contracts to determine whether 3M's prices were increased significantly because the contractor furnished inaccurate, incomplete, or noncurrent cost or pricing data. In the audit report, dated April 8, 1974, DCAA recommended a price adjustment of \$52,000 for the 400,000 gallon portion of FC-199 delivered on contract -0030. DCAA concluded that defective pricing occurred because 3M certified that its proposed manufacturing costs were based on actual experience for the third quarter of 1971. 3M failed to disclose that a significant portion of the quality control costs was based on actual higher cost experience for the first 6 months of 1971. DCAA contended that the necessary third quarter data would have been reasonably available prior to 3M's certification.

In a review of cost and pricing data on four earlier FC-199 foam contracts, DCAA found that 3M had used engineering estimates in its

proposals, rather than actual experienced costs. Also, 3M had included unallowable selling expenses in its proposals. The audit report, dated August 31, 1972, recommended a price adjustment of \$1,143,891 out of a total price for the four contracts of \$4,391,513.

CONCLUSION

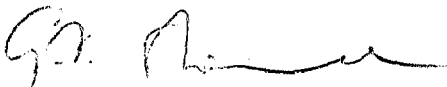
In our opinion, 3M did not provide current, accurate, or complete data at time of negotiations. We believe that the disclosure of the material facts could have resulted in a decrease of about \$705,000 in the price of the FC-199 and the FC-200 foam products delivered under contract -0030. While we cannot identify all of the economies that would have predictably occurred, we believe that the negotiating parties should be able to arrive at an equitable adjustment of the costs and prices for the foam product.

RECOMMENDATIONS

We believe that the procurement office should consider the above findings, with any additional information available, to determine the extent to which the Government may be entitled to a price adjustment, and to identify improvements needed in management procedures and controls to ensure that the required contractor cost or pricing data is provided.

We would appreciate a written reply within 45 days expressing your views and comments on matters discussed herein, as well as advice on any action taken or planned.

Sincerely yours,


G. F. Stromvall
Regional Manager

Enclosure

PERTINENT EVENTS OCCURRING DURING AWARD AND
PERFORMANCE PERIOD OF CONTRACT DSA 700-72-D-0030

<u>Date</u>	<u>Event</u>
9- 1-71	3M submitted applications for qualification testing of FC-200 foam from both Chemolite and Decatur plants.
11-18-71	Date of proposal for 708,000 gallons FC-199 at \$6.50 per gallon.
11-29-71	Final Chemolite plant scaleup run of FC-200 foamer intermediate scheduled for December 1971.
12-14-71	Date of revised proposal for 700,000 gallons of FC-199 at \$6.15 per gallon.
12-16-71	Chemolite sample of FC-200 passed qualification tests.
12-30-71	Decatur sample of FC-200 passed qualification tests.
1- 6-72	Negotiations of contract -0030.
1/71-1/72	Installation of equipment at Decatur.
1-27-72	3M notified Naval Ship Engineering Center of preparations to convert all production facilities to FC-200 foam by April 30, 1972.
2- 2-72	Contract -0030 signed by DSA and 3M.
2-22-72	3M set May 1, 1972, for 100 percent conversion from FC-199 to FC-200.
3-13-72	Contract amended to specify FC-200.
3-18-72	Date of first delivery order for FC-200.
5- 3-72	First shipment of FC-200 made.
6- 7-72	Price of FC-200 decreased 50 cents per gallon below price of FC-199 in amendment to contract -0030 or \$5.65 per gallon.
4-25-73	Price of FC-200 decreased an additional 40 cents per gallon to \$5.25 per gallon.