United States General Accounting Office

GAO

Briefing Report to the Honorable John F. Kerry, U.S. Senate

May 1991

U.S. MINT

Procurement of Clad Metal for Coins

GAO

United States General Accounting Office
Washington, D.C. 20548

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General Government Division

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May 17, 1991

The Honorable John F. Kerry
United States Senate

Dear Senator Kerry:

This briefing report responds to your request concerning the U.S. Mint's procurement of clad material (layers of metal bonded together) that is used to produce coins for the Nation's commerce. The U.S. Mint purchases this material in strips from a private contractor and uses it to make dimes, quarters, and half dollars.[1]

The Mint obtains clad material from a single supplier, the only firm that has been submitting bids in response to the Mint's quarterly solicitation. The lack of competitive bids for the contract has raised concerns about the ability of the Mint to obtain a fair and reasonable price and about the possible disruption in the supply of coins if the single supplier were unable to deliver the clad material. With Congress considering the feasibility of minting a new dollar coin,[2] thereby increasing coin production, you asked us to review the Mint's procurement practices for clad material.

Specifically, this report provides information on

- the extent of competition and the trend in prices paid for clad material;
- possible alternatives to the current contract arrangement;
- the possible disruption of the U.S. coinage supply if the single government supplier were unable to meet contract requirements because of a prolonged strike, natural disaster, or other factors; and
- the capacity of the current supplier to meet potential short-term demand if a new dollar coin were authorized.

On December 20, 1990, we briefed your office on the status of our assignment. As agreed with your office, this letter summarizes the results of our work. A more detailed response is in appendix I.

[1]Pennies and nickels are made from a solid material that does not go through the cladding process.

[2]We reviewed the feasibility and effects of replacing the dollar bill with a dollar coin. See National Coinage Proposals: Limited Public Demand for New Dollar Coin or Elimination of Pennies (GAO/GGD-90-88, May 23, 1990).

Background

Since 1967, with few exceptions, the Mint has awarded the contracts for the clad material to Olin Corporation, a firm that has the capability to produce the entire product from raw material to final strip (an integrated supplier). While competing contractors may subcontract for segments of the work, the Mint requires the contractor to provide the finished clad strip to eliminate the need for the Mint to administer a production process with several contractors. During fiscal year 1990, the U.S. Mint purchased about 38 million pounds of clad strip from Olin at a cost of about $31.8 million.

To meet its needs for clad material, the Mint purchases copper and nickel and supplies the metals to the contractor. The contractor is responsible for melting the metal and forming metal bars, which are then rolled into thin metal strips and bonded together to create the clad material. This clad material—the end product of the contract—is then sent to the Mint's facilities in Philadelphia and Denver. When the Mint receives the material, it punches out blanks and stamps them with the designs and inscriptions of U.S. coins. The scrap metal remaining after blanking is returned to the contractor.

The Mint awards the contracts by requesting firms to bid on the fabrication and delivery of the clad material. The contracts are generally awarded quarterly and call for delivery during a 9-month period. Contract delivery periods are overlapped so that the Mint is ordering its clad material from three separate contracts at all times. Since the contracts are awarded using sealed bidding procedures, the winning contractor is selected solely on the basis of price.

Between 1974 and February 1982, the Mint produced some of its own clad material at its Philadelphia Mint location. Under a licensing arrangement to use Olin Corporation's processes, the Philadelphia Mint produced varying portions of the Mint's clad strip requirements. In 1982, as a result of the administration's policy of increasing dependence on the private sector to meet the government's needs, the Mint closed its Philadelphia clad operations. According to a March 1982 Department of the Treasury report, the Philadelphia facility produced clad material at about the same cost as the contract price from Olin. In 1985, the Mint removed and sold the Philadelphia equipment to Olin.

Results in Brief

While alternative sources capable of producing clad material have been identified, the Mint routinely receives only one bid in response to its invitations for bids and awards a contract to the single bidder (Olin) every 3 months. Other firms said they were not bidding because they were unable to produce clad material at a price that was competitive with the current integrated supplier. Since other potential competitors exist and the contracts are awarded solely on the basis of price, procurement regulations allow the Mint to use sealed bidding to purchase clad material.

A March 1982 Department of the Treasury report said that during the first quarter of fiscal year 1982 the Mint's production cost and Olin's price for clad material were both about 56 cents per pound. From fiscal year 1981 to fiscal year 1990, Olin's price increased 67 percent, from about 48 cents per pound to about 80 cents per pound. This increase exceeded the increases in the consumer price index, the producer price index for metals and metal products, and the hourly wage rate for fabricated metal products for the same period. But this comparison by itself is insufficient evidence to conclude that the prices paid were unreasonable, because these indicators measure general price trends and may not accurately reflect Olin's cost to produce clad material. However, because Olin is the only bidder for the contract, the Mint is potentially vulnerable to price increases exceeding production cost increases.

The Mint recognized its vulnerability to high prices and considered but rejected alternatives to change contract arrangements. Alternatives examined included (1) breaking out portions of the work for separate procurement, (2) converting from a sealed bid to a negotiated contract, and (3) using a noncompetitive contract. We found no basis to disagree with the Mint that the current contract arrangement, while not ideal, is preferable to these alternatives. None of these alternatives is likely to result in a lower cost procurement than the current contract arrangement.

The Mint's basic protection against the interruption of shipments from the current supplier is the stockpiling of inventories of coins. Mint officials said that if the current supplier could not resume its production of clad material before the Mint's estimated stockpile of coins was depleted, the Mint would obtain the clad material from other sources, though most likely at a higher price than under the current contract.

The current supplier's capacity to meet demand for the production of a new dollar coin is ultimately dependent on the metallic content of the new coin and the process used to produce it. Mint officials stressed that the exact specifications of such a coin have not been determined. We found that if the proposed dollar coin is similar to current clad coins, the current supplier has the capacity to produce the clad material.

Approach

We reviewed contract files and agency reports to assess the extent of competition and the trend in prices paid for clad material. We interviewed contracting and operations officials at U.S. Mint headquarters to assess possible alternatives to the current contract arrangement. We also visited Olin Corporation's production facility in East Alton, Illinois, and interviewed company officials to discuss issues relating to a possible disruption in the supply of clad material and Olin's capability to meet demand if a new dollar coin were authorized. Our work was done from August 1990 through February 1991 in accordance with generally accepted government auditing standards. Further details on our objectives, scope, and methodology are presented in appendix II.

Agency Comments

We discussed the information in this report with officials from the U.S. Mint. They generally agreed with the information presented. The officials also pointed out that the Mint has undertaken efforts to increase competition and is complying with all relevant federal acquisition regulations. Their comments have been incorporated where appropriate.

As arranged with your office, we are sending copies of this briefing report to interested congressional committees, the Director of the Mint, the Secretary of the Treasury, and other interested parties. Copies will also be made available to others upon request.

Major contributors to this report are listed in appendix III. Should you need additional information on the contents of this report, please contact me on (202) 275-8676.

Sincerely yours,

L. Nye Stevens
Director, Government Business
Operations Issues

Contents

Abbreviations

FAR	Federal Acquisition Regulation
VDM	Vereinigte Deutsche Metallwerke
VDN	Vereinigte Deutsche Nickel

Mint's Clad Procurement

Extent of Competition

Although there are firms that can do part or all of the work, Olin Corporation is currently the only U.S. company that has the capability to produce all segments of the clad production process. Since 1967, with few exceptions, the Mint has awarded contracts for clad material to Olin. According to Mint records, the last firm other than Olin to be awarded a competitive contract for clad material was Texas Instruments, Inc., in 1972.

The last firm to offer a price quote in competition with Olin was a German firm, Vereinigte Deutsche Nickel (VDN), in 1986. In 1986, VDN offered a price of about $1.20 per pound, compared to Olin's bid at the time of about $0.70 per pound. According to Mint officials and a VDN representative, VDN has not recently bid because currency exchange rates have been unfavorable. However, in 1985, when exchange rates were favorable for VDN, VDN bid 72.5 cents per pound compared to Olin's winning bid of 71.6 cents per pound for the delivery of 10-cent clad material to the Philadelphia Mint. This demonstrated VDN's potential to compete with Olin.

Another German-based firm, Vereinigte Deutsche Metallwerke (VDM), also has the capability to supply the Mint with clad material. A VDM official said that VDM has not bid on recent contracts because unfavorable currency exchange rates have prevented the firm from offering a price that is competitive with Olin's.

Because the Mint realized its vulnerability from having only one bid for the contract, the Mint has attempted to develop additional clad sources and to increase competition. In 1983, for example, the Mint awarded developmental contracts to three firms that were interested in competing for future clad contracts: GTE Corporation, Texas Instruments, and VDN. The results of this developmental effort showed that the three firms could produce part or all of the clad material at an acceptable level of quality. However, after the Mint issued solicitations for competitive contracts following the development effort, GTE went out of the clad manufacturing business, VDN bid higher prices than Olin, and Texas Instruments did not bid at all.

In 1986, the Mint also attempted to develop an additional source of clad material by establishing a contract for a small business to produce part of the Mint's total clad requirement. The Mint awarded the contract to the one firm that responded to the solicitation. However, after repeated attempts, the company was unable to produce the material at an acceptable level of quality.

Trend in Contract Prices

The Federal Acquisition Regulation (FAR), the primary guidance for agencies to use in their acquisition of supplies and services, requires contracting officers to determine that prices offered are reasonable before awarding contracts. According to the FAR, "particular care" should be taken when there is only one bidder for a contract. Our review of the eight clad contracts awarded from December 1988 to January 1991 shows that the Mint's analysis of price reasonableness has focused on the comparison of current proposed prices with (1) prior contract prices and/or (2) a government estimate of what the price should be.

Of the eight contracts we examined, four price reasonableness determinations included a comparison of current proposed prices with previous contract prices, two included a comparison of current proposed prices to a government estimate, and two included comparisons of both previous contract prices and a government estimate with current proposed prices. Using these comparisons, the contracting officer concluded that the bid price was reasonable in all eight cases. The FAR permits agencies to use these methods to evaluate the reasonableness of proposed contract prices.

About 1 month after the Mint ceased its clad production operations in February 1982, the Department of the Treasury issued a report stating that the Mint's clad facility in Philadelphia was producing clad strip at a cost "approximately equal" to Olin's price. The report found that for the first quarter of fiscal year 1982, both the Mint's production cost and the average cost of purchased strip was about 56 cents per pound.

From fiscal year 1981 to fiscal year 1990, the contract price for clad material increased steadily from about 48 cents per pound to about 80 cents per pound. According to an Olin official, Olin's price increased to reflect Olin's increases in cost. As shown in table I.1, Olin's price increase of 67 percent exceeded the increase for the same period in the hourly wage rate for fabricated metal products, the producer price index for metals and metal products, and the consumer price index for all items. We compared Olin's price to these three indicators because of the lack of competitive bids or recent data on government production costs to use as a price yardstick.

Table I.1: Comparison of Clad Price and Selected Market Indicators (Fiscal Years 1981 to 1990)

	Fiscal year 1981	1990	Increase
Hourly wage rate:			
Fabricated metal products ($)	8.04	10.75	34%
Producer price index:			
Metals & metal products[a]	98.5	122.8	25%
Consumer price index:			
All items[a]	88.9	128.7	45%
Olin's clad price/lb ($)	0.48	0.80	67%

[a]1982-84 = 100.

Although Olin's price has exceeded the increases in these economic indicators, this comparison by itself is not sufficient evidence to conclude that prices paid to Olin were unreasonable. These indicators measure general trends in prices and may not accurately reflect Olin's cost to produce the clad material. We did not examine records on Olin's actual production costs because, in a sealed bid procurement, the bidder does not provide the basis for the price offered.

Alternatives to Current Contract Arrangement

While we believe that the Mint is in a vulnerable contracting position, we found no basis to disagree with the Mint that the current contract arrangement is defensible and preferable to other alternatives available to the Mint. Because the Mint recognized its vulnerability in having only one bidder for the clad material, the Mint considered but rejected alternatives for changing contract arrangements. Alternatives examined included (1) breaking out portions of the work for separate procurement, (2) converting from a sealed bid to a negotiated contract, and (3) using a noncompetitive contract.

Break Out Portions of Contract for Separate Procurement

One alternative considered involves changing the contract arrangement to allow firms that are capable of producing only segments of the clad product to bid on the portion of the work they can do. Under this arrangement, the Mint would contract with these nonintegrated firms in order to meet its clad needs from raw material to final strip. Mint officials said that they do not favor this approach because of the need to administer a production process with numerous contractors. Mint officials also said that the cost of transporting materials from one contractor to another would likely increase the cost of the clad product. They also noted that nothing in the contract terms prevents two or more nonintegrated firms from joining together to compete for the clad contract.

While procurement on a total package approach can reduce competition, there are cases where an agency can reasonably conclude that such an approach is necessary to meet the agency's minimum needs. The use of a total package approach is appropriate, for example, in cases where (1) a single contractor is required to ensure the effective coordination of interrelated tasks, (2) procurement by means of separate acquisitions would involve undue technical risk, or (3) the agency wants to avoid the unnecessary duplication of costs.

Unless an agency's determination lacks a reasonable basis, the decision regarding whether to break up a contract for separate procurement is a matter generally within the discretion of the contracting agency. We believe that the Mint's decision to require the clad contractor to provide the entire product was within this discretion and that its arguments for awarding on a total package approach provide a reasonable basis for its determination.

Award Using Negotiation Procedures

The Mint also considered converting from sealed bidding to negotiation procedures. Conversion to a negotiated contract may allow the Mint to obtain cost data from Olin. According to the FAR, the contracting agency generally has discretion to procure using either sealed bid or negotiation procedures. Part 6.401(a) of the FAR stipulates, however, that sealed bidding procedures must be used when the following four conditions are met:

- time permits the solicitation, submission, and evaluation of sealed bids;
- the award will be made on the basis of price and other price-related factors;
- it is not necessary to conduct discussions with potential contractors; and
- there is a reasonable expectation of receiving more than one sealed bid.

Since the Mint, on the basis of recent experience, may not reasonably expect to receive more than one bid for the clad contract, the Mint is not required to use sealed bidding procedures. Rather, the FAR allows the Mint the discretion to use the competitive procedures that it deems best suited for the circumstances of the procurement. Olin informed us and Mint officials that it will not negotiate for a clad contract. Therefore, if the Mint were to insist on a negotiated contract and Olin refused to participate, the Mint would have to negotiate with firms that cannot compete with Olin's sealed bid price. This situation would likely result in a higher procurement cost than at present, since it is unlikely that competitors would offer a lower price in negotiation than under sealed bidding.

Convert to Noncompetitive Procedures

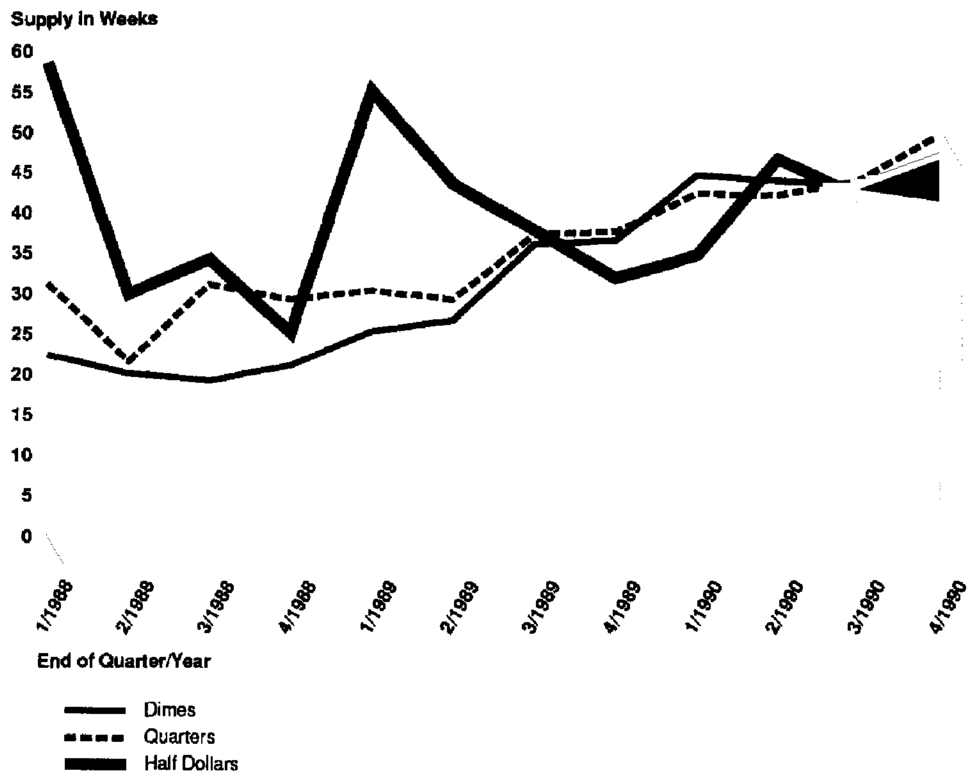
Another alternative considered involves converting to noncompetitive procedures by awarding on a sole source basis. Under a sole source acquisition, the contracting agency would contract without providing for full and open competition by negotiating with only one predetermined firm. Representatives from the Mint's procurement office said that it would be difficult to establish a justification for a sole source contract because at least one other firm has the capability to produce the clad material.

According to part 6.302-1 of the FAR, an agency may use noncompetitive procedures when there is a reasonable basis to conclude that only one responsible source can satisfy the agency's requirements. Moreover, a sealed bid procurement should not be converted into a sole source procurement when only one bid is received if it can be demonstrated that firms other than the sole responsive bidder could have met the requirements. Given that at least one other firm has the capability to satisfy contract requirements, we found that procurement regulations prohibit the Mint from using noncompetitive procedures for the acquisition of its clad material.

Possible Disruption If Contractor Unable to Supply

The Mint's basic protection against the interruption of shipments from the current supplier is the stockpiling of coins. Mint officials said that the federal government maintains supplies of coins to meet the changes in demand and that the coin supply varies throughout the year. For example, from January 1, 1988, to December 31, 1990, the government maintained a supply of quarters ranging from a low of a 21-week supply (756 million quarters) on June 30, 1988, to a high of a 49-week supply (1.5 billion quarters) on December 31, 1990. Figure I.1 shows the government's quarterly inventory of dimes, quarters, and half dollars for calendar years 1988 through 1990.

Figure I.1: Quarterly Inventory of Dimes, Quarters, and Half Dollars (1988 to 1990)



Note: Inventories include coins held by both the U.S. Mint and the Federal Reserve banks.

Source: U.S. Mint

Mint officials said that the Mint does not have a written contingency plan for addressing the possible disruption of the current supplier's capability. If the current supplier could not resume its production of clad material before the Mint's estimated supply of coins is depleted, Mint officials said that the Mint would obtain the clad material from other sources. They said the Mint could obtain the material from an integrated firm or from various nonintegrated firms.

Olin representatives said that the company has taken measures to minimize the risk of an interruption in the supply of clad material to the Mint. Company officials said that spare parts are maintained for all major machinery used in the clad production process. Officials also said that in the event of an employee strike, most of Olin's direct line managers are knowledgeable in the operation of clad production and would assist in operating the machinery.

Based on the above information, we believe that if Olin were unable to produce, the Mint could obtain the clad material from other sources. Whether the Mint obtained the material from an integrated firm or from various nonintegrated firms, the price would likely be higher than under the current Olin contract.

Current Supplier's Capacity to Meet Demand for Possible Dollar Coin

In discussing the current supplier's capacity to meet demand for the production of a new dollar coin if authorized, Mint officials stressed that the exact specifications of such a coin have not been determined. If the proposed dollar coin is very similar to the current clad coins, however, Mint officials said that Olin has the capacity of producing the clad material. Using a cost model developed for a previous report,[1] we estimated that the Mint could produce a maximum of 2 billion dollar coins per year.

According to Mint officials, if the proposed dollar coin were of similar design to the Susan B. Anthony dollar coin, the Mint could produce about 41 million coins per 1 million pounds of clad material. Thus, to produce 2 billion dollar coins per year, the Mint would need about 49 million pounds of clad material per year. With the current demand for clad at about 40 million pounds per year and the proposed dollar coin requiring a maximum of about 49 million pounds per year, the current supplier of clad material would need a total capacity of about 89 million pounds per year.

Olin officials said that the company could meet the capacity requirements of the Mint if the government decides to establish a new dollar coin. According to Olin officials, the current capacity of Olin's clad operations is 55 to 60 million pounds per year. Company officials also said that Olin has spare equipment that can be used to increase clad production capacity another 60 million pounds per year to a total capacity of about 120 million pounds per year. Officials said this spare equipment consists of the machinery that was purchased and removed from the Philadelphia Mint location when the Mint ceased production of its own clad material.

Olin's capability to produce the material for a new dollar coin is ultimately dependent on the metallic content of the coin and the process used to produce it. However, on the basis of interviews with Mint and

[1] National Coinage Proposals: Limited Public Demand for New Dollar Coin or Elimination of Pennies (GAO/GGD-90-88, May 23, 1990).

company officials, we found that the current supplier has the capacity of producing the clad material if the coin is similar to current clad coins. It is also possible that with the increase in demand for clad material that a new dollar coin would stimulate, other competitors might emerge to make the investments necessary to compete with Olin's price.

Objectives, Scope, and Methodology

In response to Senator Kerry's request, we reviewed the U.S. Mint's procurement of clad material that is used to produce coins for the Nation's commerce. The objective of our review was to evaluate the Mint's procurement of clad material by assessing

- the extent of competition and the trend in prices paid for clad material;
- possible alternatives to the current contract arrangement;
- the possible disruption of the U.S. coinage supply if the single government supplier were unable to meet contract requirements because of a prolonged strike, natural disaster, or other factors; and
- the capacity of the current supplier to meet potential short-term demand if a new dollar coin were authorized.

To assess the extent of competition for the clad contract, we interviewed contracting and operations officials at U.S. Mint headquarters in Washington, D.C. We examined contract files for awards made between December 1988 to January 1991 to determine the method the Mint used to award clad contracts. We also examined documents and reports outlining the Mint's efforts to encourage competition and develop additional sources of clad material.

To gather information about the trend in prices paid for the clad contract, we reviewed contract files and background documents about prices paid from fiscal year 1981 to fiscal year 1990. We compared the increase in contract price from fiscal year 1981 to fiscal year 1990 with the increase in the (1) hourly wage rate for fabricated metal products, (2) consumer price index, and (3) producer price index for metals and metal products. We also examined the eight awards made between December 1988 to January 1991 to determine the method the Mint used to evaluate prices.

To examine alternatives to the current contract arrangement, we interviewed Mint officials and reviewed files to learn about the procedures used to award contracts. To evaluate contract arrangements, we compared the Mint's practices to the Federal Acquisition Regulation, which agencies generally follow in awarding contracts. We also reviewed Comptroller General's decisions relating to the use of noncompetitive procurement procedures and the breakout of portions of a contract for separate procurement.

To assess the possible disruption of the U.S. coinage supply if the single supplier were unable to meet contract requirements, we interviewed Mint officials and determined the Mint's contingency plans for such a situation. We also obtained information on the Mint's estimates of the inventory of coins on hand for calendar years 1988 through 1990. In addition, we interviewed officials representing Olin Corporation (the single supplier) to find out what the supplier has done to minimize the risk of such an occurrence.

To evaluate the capacity of the current supplier to meet potential short-term demand if a dollar coin were authorized, we interviewed Mint officials about the possible requirements of producing the dollar coin. We also interviewed Olin representatives to obtain their views on Olin's capability to meet the possible requirements.

To better understand the clad manufacturing process, we toured the Olin facility in East Alton, Illinois, and discussed the process with company officials. We also met with representatives of Texas Instruments, a firm that would like to contract for a segment of the clad contract. We also contacted representatives of Vereinigte Deutsche Nickel (VDN) and Vereinigte Deutsche Metallwerke (VDM) to confirm that these firms have the capability to produce the clad product and to determine why they have not bid on recent clad contracts.

We discussed the results of our work with Mint officials and incorporated their comments where appropriate. We did our work from August 1990 through February 1991 in accordance with generally accepted government auditing standards.

Major Contributors to This Report

General Government Division, Washington, D.C.

William F. Engel, Assistant Director, Government Business Operations Issues
Scott Derrick, Evaluator-in-Charge

Office of General Counsel, Washington, D.C.

V. Bruce Goddard, Senior Attorney

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