

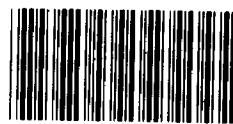
**GAO**

**Fact Sheet for Congressional Requesters**

September 1986

**PARKS AND RECREATION**

**Construction Contract at Jean Lafitte National Historical Park**



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

Resources, Community, and  
Economic Development Division

B-224673

September 26, 1986

The Honorable James A. McClure  
Chairman, Committee on Energy  
and Natural Resources  
United States Senate

The Honorable J. Bennett Johnston  
Ranking Minority Member, Committee  
on Energy and Natural Resources  
United States Senate

On January 27, 1986, you requested that we review the administration and supervision of a contract to construct a visitor-use facility at the Jean Lafitte National Historical Park in Jefferson Parish, Louisiana. Specifically, you referred us to certain performance problems relating to this contract and requested that we assess whether the problems had been corrected and whether all the standards for the work would be met when the facility was completed. Because the completion date for this contract had slipped over 1 year, you also asked us to identify any procedural and/or personnel changes that should be made to avoid similar contract delays in the future.

On June 26, 1986, we briefed your offices on the status of our ongoing review. At that time, we noted that (1) the contractor and the National Park Service's Denver Service Center appeared to share responsibility for the delays in completing the visitor-use facility at Jean Lafitte National Historical Park, (2) the increase in the contract cost was caused by design changes, which were due in part to the shorter than normal time allotted for designing this project, and (3) the statistics on contractor claims and contract modifications did not indicate an unusual number of problems with other projects designed by and contracted for by the Service Center. As a result, your offices agreed that no additional audit work was needed and that we should summarize our information in a fact sheet.

BACKGROUND

Jean Lafitte National Historical Park has three major operational units--the Barataria, the Chalmette, and the French Quarter. Park plans were to develop the Barataria

unit in three phases, with a visitor-use facility--consisting of an interpretive center, unit office, associated deck and boardwalk, maintenance building, and parking area and roads--being constructed during phase 2. On November 30, 1983, a contract to construct the visitor-use facility was awarded to Atlas Contractors, Inc., of Fort Worth, Texas, for \$1,687,758. The contractor was given until October 11, 1984, to complete the work; however, because of subsequent contract modifications and construction delays, the contract cost increased by \$376,106 and work was not completed until June 1986.

In summary, much of the cost increase and delay in completing the facility resulted from (1) problems with specifications for pilings used to support the interpretive center building, (2) wet grounds or flooded conditions at the construction site, and (3) modifications made to the original contract. Once the facility was completed, however, both the park superintendent and Denver Service Center officials were satisfied that the contractor's work met the standards called for in the contract. Information obtained on other construction projects designed by the Service Center disclosed that (1) during fiscal years 1979-85, only one other contractor submitted a claim alleging defective specifications and (2) the dollar value of modifications made to fiscal year 1983 contracts (the last year for which all contracts had been completed) was less than the amount the National Park Service routinely budgets for contract modifications.

#### CONSTRUCTION DELAYS

Construction delays were attributed to several factors, such as problems with the pilings specifications, unforeseen site conditions, and contract modifications. For example, the contractor claimed that the design specifications for the pilings supporting the interpretive center were defective. A consultant hired by the Denver Service Center determined that the National Park Service and Atlas Contractors shared responsibility for the specifications problem. Among other things, the consultant concluded that the contractor appeared to have not become aware that there would be a problem meeting the tolerances contained in the pilings specifications until long after bid time and had not realized the importance or meaning of the words ". . . hand picked for uniformity of appearance and size." On the other hand, the consultant also concluded that the Service Center's contract specifications were overly restrictive (compared with industry standards) and the Service Center could have administered that aspect of the contract better. The contractor's claim of defective specifications was settled for \$84,000, although the original claim was for \$378,479.

The contractor also claimed that the project was delayed because of unforeseen site conditions (i.e., wet or flooded grounds). However, according to the Denver Service Center contracting officer, had the contractor attended the pre-bid meeting he would have seen the wet or flooded condition of the job site. In addition, a soil investigation report, available to all bidders, disclosed that there was standing water at the job site, thus indicating very high groundwater conditions. For these reasons, the contracting officer rejected the contractor's claim. The contractor did not appeal the decision.

In the last example, nine modifications were made to the contract that increased its cost by \$292,106 and extended its completion date by about 8 months. Two modifications, that accounted for 7 months being added to the contract, arose from design changes made to (1) meet state and local governments' building codes and National Park Service regional office construction requirements (2) accommodate visitor center exhibits being provided by another National Park Service unit, and (3) correct deficiencies in the design of the heating, ventilating, and air conditioning system. According to the contracting officer, these design changes would probably have been made before the contract was put out for bid had this not been an expedited project. When the project was undertaken, the intent was to have the facility completed for use during the 1984 World's Fair in New Orleans. However, the contracting officer also believed that the National Park Service regional office could have been more timely in providing its design review comments. The Denver Service Center had provided the regional office with the preliminary design in April 1983, and the contract was not awarded until November 30, 1983. Detailed information regarding the problems encountered with the visitor-use facility contract is in section 1.


#### OTHER DENVER SERVICE CENTER DESIGNED PROJECTS

To determine if similar problems existed on other projects designed by the Denver Service Center, we obtained information on contractor claims and contract modifications. Data obtained from the Service Center disclosed that 18 formal claims were submitted by contractors during fiscal years 1979 through 1985; of those, 7 were on projects designed by the Service Center and 11 were on projects designed by firms under contract to the Service Center. Only two of the claims on Service Center-designed projects, including the claim on the Jean Lafitte project, involved alleged defective specifications. The other claim was denied and was not appealed. Data on contracts awarded by the Service Center during fiscal year 1983 disclosed that contract modifications amounted to 11.8 percent of the contract award value of the 46 projects designed by the

Service Center. The National Park Service budget routinely allocates 15 percent for contract modifications. Detailed information on the contractor claims and contract modifications data obtained from the Service Center is in section 2.

To develop the information included in this fact sheet, we interviewed the park superintendent and other park personnel; reviewed correspondence and contract files; and obtained copies of the park's development plans, the contractor's construction schedules, and other data pertinent to the construction of the visitor-use facility. At the Service Center, which designed the project and both awarded and administered the construction contract, we interviewed the cognizant contracting officer and contract administrator, reviewed the contract files, and obtained documents relating to the contractor's claim alleging defective pilings specifications. At the Service Center, we also obtained information on (1) all claims filed by contractors during fiscal years 1979 through 1985 and (2) modifications made to contracts the Service Center awarded during fiscal year 1983.

We obtained the views of National Park Service officials on the information discussed in this fact sheet and included their views where appropriate. At your request, unless you publicly announce its contents earlier, we plan no further distribution of this fact sheet until 5 days from the date of this letter. At that time, we will provide copies to the National Park Service and make copies available to others upon request. If you have any further questions on these matters, please contact me at (202) 275-7756.

  
Michael Gryzkowicz  
Associate Director

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ABBREVIATIONS

A&E	architectural and engineering
DSC	Denver Service Center
NHP	National Historical Park
NPS	National Park Service

## SECTION 1

### CONTRACT TO CONSTRUCT A VISITOR-USE

#### FACILITY AT THE JEAN LAFITTE

#### NATIONAL HISTORICAL PARK

### BACKGROUND

The Jean Lafitte National Historical Park (NHP) and Preserve was established by Public Law 95-625, on November 10, 1978, to preserve the natural and historical resources of the Mississippi Delta Region. The park has three major operational units--the Barataria, the Chalmette, and the French Quarter. Plans to develop these units are contained in the park's general management plan, which was approved by the National Park Service's Southwest Region in April 1982. According to the plan, the Barataria unit was to be developed in three phases, with a visitor-use facility being included in the second phase.

The National Park Service's (NPS') fiscal year 1984 budget request included no funds to construct the visitor-use facility. However, at the suggestion of the park superintendent and with support from the Louisiana congressional delegation, funds to construct the facility were added to NPS' fiscal year 1984 appropriation in order that the facility could be available for use during the 1984 World's Fair in New Orleans, Louisiana.

### Project design and construction contract

NPS' Denver Service Center (DSC), located in Denver, Colorado, designed the Barataria visitor-use facility and awarded and administered the contract to construct the facility. According to the DSC's mission statement, DSC is responsible for planning, designing, and constructing major



roads, trails, buildings, and utility/sewerage facilities in the park units of the national park system.

According to the DSC contract administrator, in an attempt to complete the facility for use during the World's Fair, the contract design package was completed in approximately 6 months rather than the normal period of almost 2 years.

A contract to construct the visitor-use facility--consisting of an interpretive center, unit office, maintenance building, boardwalk and associated deck, parking area, and roads--was awarded to Atlas Contractors, Inc., of Fort Worth, Texas, on November 30, 1983. Atlas submitted the lowest of four bids--\$1,687,758. The other three bidders and their bids were as follows.

Table 1.1: Other Bids Submitted

<u>Bidder</u>	<u>Bid amount</u>
Gibbs Construction Company Harahan, Louisiana	\$1,689,114
Lamar Contractors Kenner, Louisiana	1,768,417
J.W. Rombach, Inc. Chalmette, Louisiana	1,972,052

On February 27, 1984, Atlas Contractors was notified to begin work on March 1, 1984, for a contract period of 225 calendar days, or through October 11, 1984, unless extensions were granted. Nine contract modifications were subsequently made which extended the contract completion date by about 8 months (to June 10, 1985) and increased the contract amount by \$292,106 (to \$1,980,797). Table 1.2, briefly describes each of the nine contract modifications.

Table 1.2: Modifications Made to the Jean Lafitte NHP Visitor-Use Facility Contract

<u>Modification</u>		<u>Amount</u>	<u>Days</u>	<u>Primary purpose(s)</u>	
<u>Number</u>	<u>Date</u>				
1	June 28, 1984	\$85,327.48	95	To add four new work items and increase or upgrade seven existing work items, most of which were associated with the facility's waterlines and sewage system.	
2	Oct. 31, 1984	1,135.00	3	To furnish and install five shock absorbers in waterlines.	
3	Nov. 13, 1984	69,654.65	120	To modify the visitor center, toilet rooms, deck, stairs, and ramps.	
4	Nov. 14, 1984	46,065.00	-	To provide for the completion of the interior of the maintenance building.	
∞	5	Jan. 8, 1985	6,655.00	-	To enlarge the excavation and modify the sewage treatment plant.
6	June 20, 1985	14,818.31	3	To modify stairs, handrails, and guardrails.	
7	Oct. 25, 1985	4,390.00	18	To add supports in the walls of the visitors center building.	
8	Mar. 12, 1986	64,993.88	3	To change the quantities of various materials required for the project, including fill materials, concrete walk, wheelstops, and boardwalk bents.	
9	June 26, 1986	<u>- 933.40</u>	<u>-</u>	To make further changes to quantities of various materials.	
Total		<u>\$292,105.92</u>	<u>242</u>		

REASONS FOR NOT MEETING  
CONTRACT COMPLETION DATE

By June 1984, the visitor-use facility project had fallen significantly (43 percent) behind schedule and on June 18, 1984, the DSC on-site project supervisor had begun contacting Atlas Contractors about the lack of progress. On October 3, 1984, the DSC contracting officer sent Atlas a notice which stated that unless the government received a revised progress schedule within 10 days after receipt of the notice, the contract would be subject to termination for default.

Atlas' October 12, 1984, response to the notice included the revised progress schedule as requested. In addition, Atlas stated that delays had been incurred, in part, because of site flooding and problems with the pilings specifications. In the following months, there were numerous communications between DSC representatives and Atlas regarding the problems, and ultimately Atlas submitted claims asking for a contracting officer's final decision on whether it should be granted extended contract time and financial reimbursement in consideration of these problems. The contracting officer denied both claims. Atlas appealed the claim regarding the pilings specifications to the Department of the Interior Board of Contract Appeals. However, a negotiated settlement was reached between DSC and Atlas before the Board acted on the appeal.

Pilings specifications problem

According to the Invitation for Bids, the facility's buildings and deck were to be supported by pole pilings driven into the earth in a uniform alignment sufficient to support both the floor/deck and the eaves and ridges of the building. The specifications required that the pilings be handpicked for uniformity of appearance and size and that the pilings be driven, tip down, with maximum deviations of not more than one-eighth of an inch per foot from the vertical and

--1 inch out of horizontal alignment at the floor/deck elevation or

--2 inches out of horizontal alignment at the eaves and ridges.

A subcontractor hired by Atlas Contractors began driving the building pilings on October 3, 1984, and completed the driving of these pilings on November 16, 1984. The contracting officer's representative rejected 60 of the 83 pilings, however, based on nonconformance with the specified tolerances.

On January 22, 1985, Atlas sent the contracting officer a proposed method for correcting the problem with the rejected pilings and also gave notice that it intended to submit a claim for all costs connected with this work. The work done to correct the problem was completed May 2, 1985.

On January 23, 1985, Atlas submitted a claim alleging defective pilings specifications, but the claim was not quantified as to cost or number of days. On May 3, 1985, Atlas quantified its claim at \$378,479.23 and requested that the contract time be extended 167 days. On October 9, 1985, the contracting officer denied Atlas' claim, stating that he had found the claim to be without merit.

The contracting officer's decision was appealed to the Department of the Interior Board of Contract Appeals on November 5, 1985. After the appeal was submitted, DSC's Central Team Construction Chief suggested to other DSC officials that an expert in the area of deepwood piling foundations be hired to independently review the contractor's claim and advise DSC concerning the government's potential exposure should the matter go to a hearing. On February 12, 1986, the consulting firm of William F. Loftus Associates, Inc., was hired to perform the review.

In a letter to DSC dated March 25, 1986, the consultant recommended that the case be settled and not allowed to reach litigation because the government had weaknesses in its wood pilings specifications; e.g., the tolerances in the pilings specifications were above and beyond industry standards. In addition, the consultant reported that the DSC on-site representative could have administered the contract's pilings specifications provision better; e.g., the representative did not insist that above-ground alignment procedures be followed.

NPS and contractor representatives met on March 18, 1986, to discuss an initial price settlement, but no agreement was reached. Then on March 31, 1986, NPS agreed to pay the contractor \$99,000 for the additional work required to correct the rejected pilings and the contractor agreed to being assessed liquidated damages totaling \$15,000 for exceeding the contract completion date by 75 days.

According to the DSC contracting officer, the NPS and contractor representatives that negotiated the agreement agreed that a sharing of the liability and cost for fixing the pilings (i.e., making the pilings acceptable in their as-driven location) was in order. By combining the DSC pilings specification with the construction industry's standards, the pilings tolerances were expanded 2-1/2 inches; this expansion increased the horizontal tolerance for the deck level from 1 inch to 3-1/2 inches and for the eaves level from 2 inches to 4-1/2 inches. Using the revised tolerances, it was determined that 27, or 45 percent, of the 60 rejected pilings would have been accepted and therefore the government should accept the responsibility for the time and cost of fixing these pilings. The remaining 33 pilings would still have been rejected and therefore were the contractor's responsibility. The developed

percentages were then used as the basis for settling costs claimed in areas such as direct labor, equipment, expended field overhead, and liquidated damages for exceeding the contract completion date.

#### Differing site conditions

In a letter dated July 27, 1984, the DSC on-site project supervisor expressed concern over the lack of progress on the project. Atlas' response dated August 8, 1984, and other subsequent letters, stated that time had been lost because the job site was too wet or underwater. The project supervisor disagreed and, in an October 2, 1984, letter to the contractor, stated that had Atlas attended the pre-bid walk through on October 20, 1983, it would have noted that the site was flooded.

The disagreement continued and on November 21, 1985, Atlas requested a contracting officer's final decision on a claim for extended contractual time (20 days) and financial reimbursement (\$25,490.28). According to Atlas' claim, the contract plans and specifications made no reference to the job site areas being subject to periodic flooding by the tides and, therefore, Atlas had made no provisions in its estimates for the cost of time lost due to this potential site condition.

In his February 5, 1986, decision, the contracting officer stated that Atlas' claim was without merit. Once again stating that had Atlas attended the pre-bid meeting, it would have seen the flooded condition of the job site. In addition, the soil investigation report that was available to all bidders disclosed that there was standing water, thus indicating very high groundwater conditions. Atlas did not appeal this decision.

## Contract modifications

Nine modifications were made to the contract that increased its cost by \$292,106 and extended its completion date by about 8 months. Two of the modifications, that accounted for 7 months of the added time, were necessitated by design changes made to (1) meet state and local governments' and NPS regional office requirements, (2) accommodate visitor center exhibits being provided by another NPS unit, and (3) correct deficiencies in the design of the heating, ventilating, and air conditioning system. According to the DSC contracting officer, these design changes would probably have been made before the contract was put out for bid had this not been an expedited project. However, the contracting officer also believed that the NPS regional office could have been more timely in providing its design review comments. According to the design team manager, DSC had provided the regional office the preliminary design for the project in April 1983, and the contract was not awarded until November 30, 1983.

## ADEQUACY OF THE COMPLETED FACILITIES

A final inspection of the contractor's work on the visitor-use facility was initiated on February 19, 1986, and completed on February 26, 1986. The inspection report concluded that work had been completed substantially in accordance with the plans and specifications and stated that the facility was accepted as of February 19, 1986, subject to the terms and conditions of the contract and subject to the satisfactory completion of 98 open items. The park superintendent said that the last of these open items was completed near the end of June 1986.

According to the park superintendent and the park engineer, the facility was accepted before all the work was finished so that interpretive items (exhibits and displays for visitor

viewing) could be installed in the facility. (The interpretive items were incurring a rental storage charge while awaiting installation.)

We visited the facility and discussed the contractor's workmanship with the park superintendent. The superintendent told us that once the problem with the pilings was corrected the work had proceeded quite smoothly and that he was satisfied that the contractor's work met the standards called for in the contract.



## SECTION 2

### DENVER SERVICE CENTER CONTRACTS--DESIGN

#### SPECIFICATIONS CLAIMS AND CONTRACT MODIFICATIONS

The negotiated settlement of the pilings specifications appeal by Atlas Contractors, discussed in section 1, indicated that the problems resulted in part from DSC's design specifications and its administration of the contract. Accordingly, we obtained and analyzed two types of data applicable to all DSC-designed projects and contracts--contractor claims and contract modifications--to see if these data indicated similar problems existed with other DSC-designed/administered contracts.

#### DESIGN SPECIFICATIONS CLAIMS

According to information obtained from the DSC contracting officer, 18 formal claims were submitted to DSC by contractors during fiscal years 1979-85--7 of these claims were on projects designed by DSC and 11 claims were on projects designed by architectural and engineering (A&E) firms. Two of the seven claims on DSC-designed projects involved alleged defective specifications. One of the two was the claim by Atlas Contractors on the Jean Lafitte NHP visitor-use facility contract. The second claim involved a contract at Jefferson National Expansion Memorial in St. Louis, Missouri. The Jefferson Memorial contractor claimed that NPS improperly rejected cornice stones that were in compliance with standard "industry use" specifications. The DSC contracting officer denied the contractor's claim, and the contractor did not appeal the decision.

During fiscal years 1979-85, 11 formal claims were also filed against DSC on construction projects designed by A&E firms. Of those 11, one alleged design deficiencies, but the contractor's appeal was denied by the Department of the Interior Board of Contract Appeals. A second claim was for a number of reasons, including design changes, but it was dismissed by the Board of Contract Appeals because the claim was not certified and it was not within the Board's jurisdiction. The remaining claims involved differing site conditions (3), quantity variations (2), added work, ambiguous specification on payment for topsoil, underpayment of wages, and patent infringement.

#### CONTRACT MODIFICATIONS

According to the DSC contracting officer, some of the construction contracts awarded by DSC in fiscal years 1984 and 1985 were still active as of April 1986. Therefore, we obtained data on the number and value of modifications to construction contracts awarded by DSC in fiscal year 1983 for projects designed either by DSC staff or by A&E firms under contract to DSC. Table 2.1 summarizes this data.

Table 2.1: Data on Contract Modifications, Fiscal Year 1983 Contracts

<u>Designer</u>	<u>Contracts</u>		<u>Modifications</u>		
	<u>No.</u>	<u>Value</u>	<u>No.</u>	<u>Value</u>	<u>Award value (percent)</u>
DSC	46	\$22,434,856	188	\$2,645,632	11.8
A&E	11	6,894,860	53	1,478,377	21.4
DSC/A&E <sup>a</sup>	<u>1</u>	<u>206,917</u>	<u>5</u>	<u>4,477</u>	<u>2.2</u>
Total	<u>58</u>	<u>\$29,536,633</u>	<u>246</u>	<u>\$4,128,486</u>	14.0

<sup>a</sup>DSC staff did electrical design and A&E firm did mechanical design.

The data on A&E-designed projects is somewhat distorted by one contract which was awarded for \$1,342,291 but had 7

modifications totalling \$754,574. Excluding that contract, the dollar value of modifications to A&E-designed contracts would have amounted to 13 percent of the original contract amounts. The DSC contracting officer said that DSC's budget routinely allocates 15 percent for contract modifications.

The contracting officer said he thought that a higher percentage of construction projects were designed by A&E firms in 1984 and 1985, but that this trend has been reversed in 1986 with more project designs being done by DSC staff.

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