U.S. DEPARTMENT OF COMMERCE
Office of Inspector General

PUBLIC RELEASE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NWS's New Supercomputer Should Be Located at Federal Building 4 in Suitland, Maryland

Audit Report No. STD-10925-8-0001 / September 1998

Office of Audits, Science and Technology Audits Division

UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

September 30, 1998

MEMORANDUM FOR: Dr. D. James Baker
Under Secretary for Oceans and Atmosphere

FROM: Johnnie E. Frazier
Acting Inspector General

SUBJECT: *NWS's New Supercomputer Should Be Located at Federal Building 4 in Suitland, MD*
Final Report No. STD-10925-8-0001/September 1998

The Office of Inspector General has completed its review of NOAA's proposal to locate a Class VIII supercomputer at the Goddard Space Flight Center in Greenbelt, Maryland in 1998. The Goddard site is also where NOAA proposed to build its Operations and Research Center. NOAA proposed to install the Class VIII into Building No. 28 at Goddard rather than Federal Building 4 (FB-4), in Suitland, Maryland, where NOAA's current Class VII supercomputer is located. NOAA's cost proposal indicated that it would be less expensive to locate its new Class VIII at Goddard rather than FB-4.

We found that FB-4 has adequate space and is capable of handling a Class VIII supercomputer, either liquid cooled or air cooled, if necessary improvements are made to the FB-4 electrical and cooling systems. While the initial installation costs at FB-4 are higher because of the needed improvements, Goddard has higher leasing, renovation, and maintenance contract costs. Consequently, the five-year life cycle costs to install the Class VIII at FB-4 are lower. We found that FB-4 and Goddard are the only federal sites in the Washington, D.C., area that can currently accommodate the Class VIII. We also found that although a health and safety issue was raised by NOAA concerning FB-4, GSA officials determined there would be no asbestos problems encountered with installing the Class VIII at FB-4. Additionally, NOAA's timeline for transitioning to the Class VIII is reasonable.

In its response to our draft report, NOAA concurred with the report's recommendation to locate the supercomputer in Federal Building 4 at the Suitland, Maryland complex. However, NOAA disagreed with the finding on the attendant costs associated with the infrastructure, including space, asbestos and equipment. NOAA's response is provided as Attachment 4.

Since NOAA agreed to the principal conclusion of our report to locate the supercomputer at Federal Building 4, we consider the report recommendation resolved and it is not necessary to submit an Audit Action Plan.

We appreciate the cooperation and courtesies extended to us by NOAA officials during the audit.

INTRODUCTION

NOAA is responsible for collecting, analyzing, and disseminating data relating to the Earth's oceans and atmosphere. NOAA accomplishes its mission through a nationwide system of laboratories, observatories, and science centers. The largest of these is the National Weather Service's (NWS) central computer facility, known as the National Centers for Environmental Prediction (NCEP), which is located in leased space at FB-4 and in the World Weather Building (WWB) in Camp Springs, Maryland.

According to NOAA's strategic plan for the modernization and associated restructuring of NWS, the outmoded condition of FB-4 constrains NOAA from fulfilling its mission. NOAA officials have described FB-4 as an aging building with a leaky roof and windows. They believe that its outdated infrastructure cannot adequately house sensitive automated data processing (ADP) equipment such as the Class VIII supercomputer. In 1991, NOAA began developing a strategic plan for a new science center that would relocate NCEP's FB-4 operations and research functions into a new building that would be constructed at Goddard. The proposed facility, to be known as the NOAA Operations and Science Center, has never been funded.

NOAA is currently leasing a Class VII supercomputer (Cray-C90) at the NCEP in FB-4. The supercomputer, which is used exclusively by NWS and is critical to its mission of protecting life and property, is about five years old. The lease for the Class VII supercomputer will expire in February 1999.

NOAA is proposing to upgrade to a Class VIII, the next generation of supercomputers, and has proposed to install it in Building No. 28 at Goddard. The Class VIII, which will provide NWS with continuous on-line weather information, can be purchased either as an air cooled or a liquid cooled system. If NOAA awards a contract by October 1, 1998, it estimates that the Class VIII supercomputer could be fully operational by August 1999. NOAA told us that the Class VIII has an estimated life of three years and will need to be replaced with the Class IX about March 2002.

NOAA's supercomputer proposal was supported by a cost proposal completed on April 30, 1998 (see attachment 1). The proposal indicated that it would cost about $366,000 less to install and operate the Class VIII at Goddard ($3.121 million) than at FB-4 ($3.487 million) over a five-year life cycle. NOAA has not yet received funding for the Class VIII and has only approximately $706,000 to cover the installation costs. NOAA will need approximately $500,000 to $600,000 to cover the remainder of the installation costs, depending on the system selected.

PURPOSE AND SCOPE OF AUDIT

The purpose of our audit was to review NOAA's proposal to install the Class VIII supercomputer at Goddard. We focused primarily on determining the suitability and cost of installing the Class VIII at FB-4, because this is where NCEP's central computer operations are located.

We reviewed NOAA's cost analysis, which compared the costs of installing the Class VIII at Goddard and FB-4. Our review included re-examining certain costs used in NOAA's analysis for space, flooring, communications, electrical protection, and cooling improvements in FB-4. We also reviewed selected high cost items such as generators, paralleling units, and chillers associated with installing the Class VIII at Goddard because they made up most of the costs associated with the Class VIII installation. Our analysis also compared the costs of an air cooled versus a liquid cooled system.

In addition to reviewing the installation costs, we examined the space and operating requirements of both alternatives and assessed whether FB-4 provides a safe operating environment for the supercomputer. We also reviewed the suitability of 10 other sites initially considered by NOAA. Finally, we evaluated the reasonableness of NOAA's proposed time line for the transition from a Class VII to a Class VIII supercomputer.

We interviewed NOAA officials, General Services Administration (GSA) personnel, the Department's budget examiner and contracting officer handling the supercomputer acquisition, and various suppliers of electrical and water chiller equipment, and NOAA space planning officials. In addition, we visited several supercomputer sites including FB-4, Building No. 28, the National Institute of Standards and Technology at Gaithersburg, MD, and the Census Bureau's Bowie, MD computer center. We conducted our field work from April through May 1998.

We assessed NOAA's internal controls over its decision process, including the accuracy and completeness of its management reports, and the extent and nature of its analysis of those reports. The weaknesses we identified in these controls are discussed on pages 3 and 4.

We did not rely on the limited computer-processed data provided by NOAA in performing the substantive portions of our audit work. Therefore, we did not assess its reliability.

Tests were not performed to determine if NOAA was in compliance with applicable laws and regulations. We did not feel there would be any material instances of noncompliance in NOAA's preparation of its cost proposal. However, we did find that NOAA did not comply with principles of good business practice or the Federal Acquisition Regulation (FAR 31.201.2) in determining whether a cost is allowable, taking into account reasonableness and allocability. NOAA's proposed costs that we felt were not reasonable are discussed on pages 3 and 4.

Our review was conducted in accordance with generally accepted government auditing standards and performed under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended.

NWS's NEW SUPERCOMPUTER SHOULD BE LOCATED AT FEDERAL BUILDING 4 IN SUITLAND, MD

Our audit found that FB-4 has adequate space and is capable of housing a Class VIII supercomputer, if modest improvements are made to the electrical and cooling systems. The

improvements would not require the removal of asbestos, as NOAA had earlier thought. Moreover, it would be less expensive to locate the Class VIII in FB-4 than at Goddard. While the initial installation costs at FB-4 are higher because of the needed improvements, Goddard has higher leasing, renovation, and maintenance contract costs that make it the more costly alternative over the life of the supercomputer. FB-4 and Goddard are the only federal sites in the Washington, D.C. area that can currently accommodate the Class VIII. In addition, NOAA's timeline for transitioning to the Class VIII is reasonable. The transition process consists of the contract award, delivery, installation, acceptance testing, and a six month conversation period. This process is estimated to take 11 months from the contract award to having the Class VIII fully operational. NOAA expects to sign the contract October 1, 1998 and be fully operational by August 31, 1999.

NOAA's Proposal Overstated Cost of Locating Computer at FB-4

NOAA's projections of the costs of locating the Class VIII supercomputer at FB-4 significantly overstated both the initial installation and life cycle costs involved. Specifically, we found that the cost analysis in NOAA's proposal overestimated the costs associated with improving FB-4 because NOAA overstated its requirements in its cost projections, and did not seek competitive price quotations. NOAA also overestimated the amount of space that would be needed at FB-4. In total, NOAA overstated the cost of locating the Class VIII at FB-4 by as much as $1.1 million over the five-year life cycle used in its analysis.

While the adjusted installation costs at FB-4 would still be higher than at Goddard, savings realized over the five-year life cycle indicate that FB-4 is the more economical alternative. For an air cooled supercomputer, the installation cost is $609,100 greater at FB-4 than Goddard, but the five-year life cycle costs are $779,600 lower (see attachment 2). For a liquid cooled supercomputer, the installation cost is $515,100 greater at FB-4 than Goddard, but the five-year life cycle costs are $715,600 lower (see attachment 3). The installation costs are greater at FB-4 than Goddard because NOAA needs to install equipment such as emergency backup generators, a paralleling unit, and an uninterrupted power supply system that FB-4 is lacking. Installation and life cycle costs are discussed below.

Installation Costs:

The cost to install the Class VIII liquid cooled supercomputer in FB-4 is $625,000 lower than what NOAA estimated ($1.8 million) in its cost proposal. The $625,000 represents the difference between the OIG and NOAA's estimate for a liquid cooled system. After reviewing significant estimated costs used by NOAA for ADP space (rent), flooring, electrical, and cooling, we found that NOAA's projections were flawed in several important respects:

- NOAA assumed that it would need to replace 8,315 sq. ft. of raised-floor space in Room 1300 at a cost of $94,200. This represents over 54 percent of the total 15,432 square feet of raised-floor space NOAA is currently leasing. This space was used in the past to accommodate two computers and is now empty. The space is not needed to operate the Class VIII. Currently, the Class VII supercomputer and two other computers are in the

remaining space which totals 7,027 square feet. An inspection of the raised-floor tiles, confirmed by GSA, indicates that, except for a few chipped tiles, the floor does not need to be replaced. Since a new raised floor is not needed, we eliminated this cost from our analysis (see attachments 2 and 3).

- The estimated cost of NOAA's electrical upgrades was too high because NOAA failed to obtain competitive price quotes as a basis for its projections. We made inquiries with one vendor that offers GSA up to 40% discount on generators and paralleling units. The vendor provided us with the quote in writing. NOAA will need to install one or two emergency backup generators to protect the Class VIII in case of a loss of electrical power or "brownout" at Suitland. (The number of generators needed will depend on the type of Class VIII supercomputer selected.) We were able to obtain lower price quotes than NOAA on the same type of generator (750KW) and paralleling unit (digital) by seeking several price quotations. Savings from competitive pricing totaled between $200,000 and $294,000 (see attachments 2 and 3).

- Projected cooling system costs were also overstated. NOAA officials included two new emergency backup chillers (105 tons) at a cost of $362,000 because they believe they need a degree of reliability higher than the three existing units provide to supplement the three existing emergency backup chillers (100 tons). We determined that the existing three chillers are operational with a useful life of five additional years. We obtained a price quotation of $125,000, which included installation (see attachments 2 and 3) for two 110-ton chillers by calling a GSA supplier. This will give NOAA two emergency backup chiller systems for its Class VIII supercomputer.

- NOAA's proposal did not account for significant differences between the cost of installing an air cooled system versus a liquid cooled system. NOAA used a liquid cooled system in its cost proposal which was the most expensive of the two systems in life cycle costs. The liquid cooled system costs approximately $100,000 less to install than the air cooled system. Either system is acceptable to meet NOAA's requirements. We prepared separate cost projections for each system (see attachments 2 and 3).

Life Cycle Costs:

NOAA overstated the amount of space needed at FB-4 to accommodate the Class VIII thereby adding $614,700 in rent to the total life cycle cost. NOAA's projections assumed that the computer would require 15,342 sq. ft. at FB-4 (the same amount currently being leased), but assumed only 8,900 sq. ft. at Goddard. The total life cycle costs of occupying FB-4, including installation, were overstated by as much as $1.1 million, based on excessive space planned at FB-4.

Room 1300 at FB-4 currently holds the Class VII supercomputer in 3,202 sq. ft. and two additional computers (J-916s) in 3,670 sq. ft. According to NOAA, the two J-916s will be eliminated when the Class VIII becomes operational, decreasing by 3,670 sq. ft. the amount of space needed. At our request, GSA evaluated the utilization of Room 1300 and found that over

7,134 sq. ft. was not being used. We reduced the rent costs claimed by NOAA in its cost proposal by $614,700 to correspond to a 7,671 sq. ft. reduction in ADP space from the 15,342 sq. ft. claimed. The space reduction is based on the assumption that the Class VIII would be fully operational by February 28, 1999. These costs could vary depending on the Class VIII operational date (see attachments 2 and 3). After adjusting for the reduced amount of space, our analysis indicates that the cost of space would be $454,000 less at FB-4 than at Goddard.

Other operating costs at Goddard make it more expensive to occupy over time than FB-4. Some of these post-installation operating expenses include electrical protection, telephone service, equipment maintenance, communications, and building renovation costs. Communications expenses at Goddard total almost $1.3 million, $712,000 more than at FB-4. These operating expenses are projected to be higher at Goddard in NOAA's analysis as well as ours. NOAA's analysis also suggests that operating expenses at Goddard, after installation, are $774,000 higher than FB-4.

FB-4 Can Adequately House a Class VIII Supercomputer

FB-4 has the necessary space and infrastructure to accommodate the Class VIII supercomputer if the electrical and cooling systems are upgraded as described in this report. NOAA determined that the Class VIII will require 8,900 sq. ft. of space, well within the capacity of FB-4. Although NOAA has expressed several concerns about the condition of FB-4, we found in each case that the problems were overstated or could be addressed at a reasonable cost.

As part of our review, we evaluated the condition of transformer vaults and switchgears that service NOAA's computers in Room 1300. Under GSA's preventive maintenance program, all the transformer vaults and switchgears have been replaced within the past 10 years at a cost of $817,000. The useful life of the transformer vaults and switchgears is approximately 30 years. GSA provided us with a letter of integrity attesting to the maintenance performed on the units and their good condition. Also, GSA recently spent $300,000 to have two chiller motors (4,000 tons) rebuilt in the main power plant in Suitland.

NOAA was also concerned that the installation of the new supercomputer at FB-4 would be complicated by the presence of asbestos in Room 1300. Specifically, NOAA believed that the asbestos might have to be removed in order to install new cables for the Class VIII. To determine whether asbestos abatement would be necessary, GSA had an industrial hygienist inspect Room 1300. Based on NOAA's requirements to remove old cables and install new cables for the Class VIII, the hygienist felt asbestos abatement would not be necessary. GSA has provided us with a letter certifying that the installation of new electrical cables for the Class VIII would not create an asbestos abatement problem.

As previously mentioned, NOAA believed that 8,315 sq. ft. of raised flooring in Room 1300 should be replaced. Two inspections of the raised flooring were made by GSA representatives in the presence of representatives from NOAA. GSA determined that the raised-floor framing simply needed to be tightened and only a few tiles replaced.

Availability of Other Sites Is Limited

The number of sites available to house a Class VIII supercomputer in the Washington, D.C., area is very limited. Initially NOAA sought GSA's help in developing a list of appropriate supercomputer sites in the area. However, NOAA decided to generate its own list because GSA's listing did not differentiate between ADP, office, or warehouse space. NOAA subsequently identified 12 possible federal supercomputer sites including FB-4, Goddard, the National Institute of Standards and Technology, the Cancer Institute, the Army Research Laboratory, the Naval Research Laboratory, the Army Space and Missile Command, the Census Bureau's Bowie computer center, the Internal Revenue Service, the Social Security Administration, Silver Spring Metro Center 1, and FB-3. After determining that a site for the Class VIII must have at least 8,900 sq. ft., chilled water, and Uninterrupted Power Supply (UPS), all but the Goddard and FB-4 sites were eliminated.

We evaluated the same 12 sites and also found that only FB-4 and Goddard could accommodate the Class VIII. We confirmed that at this time there is not sufficient available space at any of the other 10 potential sites without significant modifications. However, the Census Bureau's Bowie computer center is a state-of-the-art computer facility with over 8,000 sq. ft. that could house the next generation of Class IX supercomputers in 2001. NOAA plans to make the transition from the Class VIII to Class IX supercomputer at the same time this space becomes available, and said that it would consider the Bowie site in the future.

CONCLUSION

NOAA's comparison of the costs of locating its Class VIII supercomputer at the Goddard Space Flight Center versus Federal Building 4 is flawed because it overestimates the total life cycle costs of the FB-4 site by as much as $1.1 million. Although its proposal suggests that Goddard would be less expensive, we estimate that NOAA could save approximately $780,000 over five years by locating the supercomputer at FB-4. Moreover, FB-4 has adequate space and infrastructure to house the supercomputer once upgrades are made to the electrical and cooling systems. We found no evidence that the electrical upgrades will necessitate the removal of asbestos, as NOAA originally thought. In light of the limited number of suitable supercomputer sites in the Washington area, NOAA management should make immediate preparations for the installation of the Class VIII at FB-4.

RECOMMENDATION

We recommend that the Undersecretary for Oceans and Atmosphere undertake all actions necessary to initiate installation of the Class VIII supercomputer in FB-4.

NOAA RESPONSE

In response to our draft audit report, NOAA concurred with the report's recommendation to locate the Class VIII supercomputer at the Suitland, MD complex. However, NOAA did not agree with the attendant findings on costs associated with the infrastructure, including space,

asbestos and equipment. NOAA also believes that our report discounted the possible significant impact on the provision of forecast guidance projects to field offices. According to NOAA, these projects are relied upon for development of local forecasts across the nation. While NOAA stated that these forecast issues were germane to the effective operation of the supercomputer, NOAA indicated they do not affect the conclusion to locate the supercomputer in the Suitland Complex.

NOAA also stated that it has engaged the General Services Administration in discussions to ensure adequate facility support for the continuous operation of the supercomputer. These discussions will be finalized in a Memorandum of Understanding.

OIG COMMENTS

We commend NOAA on its decision to locate the Class VIII supercomputer in the Suitland, MD complex and believe that it is a prudent decision.

With regard to NOAA not agreeing with the attendant findings on costs associated with the infrastructure, including space, asbestos, and equipment, we reaffirm our position. NOAA has provided no details in its response that would cause us to change our position on any of the findings related to these areas or the numbers in our cost analysis.

With regard to the OIG discounting the possible significant impact of forecast guidance products to field offices, we offer the following comments. At no time during the course of the review did NOAA raise this issue. Also, NOAA provided no details or analysis in its response on this matter and stated that this issue does not affect the location of the supercomputer.

Finally, we commend NOAA for engaging GSA at this time to ensure that the supercomputer will be in a continuous safe operation.

Projected NOAA Costs

(In Thousands)

ATTACHMENT 1

Suitland versus Goddard costs ($K)	Install at Suitland (FY98)	Suitland Lifecycle (net)	Install at Goddard (FY98)	Goddard Lifecycle (net)	Lifecycle Difference (savings)
Construction	-----	-----	98.7	98.7	98.7
Space	88	1491.2	78.3	1330.3	(160.9)
Furniture/Equip/Flooring	111.1	111.1	19.8	31.7	(79.4)
Telephone service	26.6	51.8	8	106.8	55
Communications	307	545.6	418.5	1258	712.4
Electrical Protection	905.1	925.5	16.2	275.4	(650.1)
Cooling Improvements	362	362	20	20	(342)
TOTALS	1799.8	3487.2	659.5	3120.9	(366.3)

Note: The potential asbestos abatement costs have not been determined.

Life cycle is FY98-FY02

Revised 4/30/98

ATTACHMENT 2

OIG COST ANALYSIS (IN THOUSANDS)
AIR COOLED SYSTEM
NO EMERGENCY BACKUP GENERATORS
(750KW WITH PARALLELING UNIT)

Category	Suitland		Goddard		Life Cycle Difference (savings)
	Installation	Life Cycle	Installation	Life Cycle	
Construction	--	--	$98.7	$98.7	$(98.7)
Space	$88	$876.5[1]	78.3	1,330.3	(453.8)
Furniture, equipment, flooring	16.9[2]	16.9	19.8	31.7	(14.8)
Telephone service	26.6	51.8	8	106.8	(55)
Communications	307	545.6	418.5	1,258	(712.4)
Electrical protection	705.1[3]	725.5	16.2	275.4	514.1
Cooling improvements	125[4]	125	20	20	105
Total	$1,268.6	$2,341.3	$659.5	$3,120.9	$(779.6)

1. Space

NWS claimed rent for 15,342 sq. ft. ADP space, when in effect it needs no more than half that amount or about '7,761 sq. ft. We have reduced the rent cost after 2-28-99 by $614,700.

NWS cost proposal	$1,491.2
Reduced Costs	(614.7)
OIG Costs Proposed	$ 876.5

2. Flooring

GSA determined that the raised floor space did not have to be replaced based on an examination by GSA, NWS, and the OIG, with cost savings of $94,200.

NWS cost proposal	$111.1
Reduced Costs	(94.2)
OIG Costs Proposed	$ 16.9

3. Electrical Protection

The OIG was able to find the same type of generators and parralleling unit at significantly lower prices through a GSA vendor, with cost savings of $200,000.

NWS Cost Proposal	$905.1		
NWS Pricing:			
Paralleling Unit	170		
2 Generators (750KW)	260		
Sub-total	$430	Competitive Pricing:	
		430	
Competitive Pricing:		(230)	
		$200	Savings, reduction in cost
1 Generator (750KW):	80	905.1	
Paralleling Unit	70	(200)	
Sub-total	$230	$705.1	OIG proposed electrical protection

4. Cooling Improvements

NOAA currently has 3 100-ton emergency back up chillers at FB-4. The 3 chillers are 15 years old with a useful life of 20 years. The OIG was able to find new 110-ton chillers at $40,000 each, or $80,000 for two, which is what NOAA requested. This will be a second backup to the 3 100-ton chillers alread in place. NOAA estimated $45.000 for instalation, with a totoal chiller capacity of 520 tons.

NWS Proposal	$362	Competetive Pricing Savings:	
Competetive Pricing:		362	
1 Chiller (110 ton)	40	(125)	
1 Chiller (110 ton)	40	$237	Savings, reduction in cost
installation	45		
Sub-total	$125		

ATTACHMENT 3

OIG ANALYSIS OF 5-YEAR LIFE-CYCLE COSTS OF A LIQUID COOLED SYSTEM[a] AT SUITLAND VERSUS GODDARD
(Dollars in thousands)

Category	Suitland		Goddard		Life Cycle Difference (savings)
	Installation	Life Cycle	Installation	Life Cycle	
Construction	--	--	$98.7	$98.7	$(98.7)
Space	$88	$876.5[1]	78.3	1,330.3	(453.8)
Furniture, equipment, flooring	16.9[2]	16.9	19.8	31.7	(14.8)
Telephone service	26.6	51.8	8	106.8	(55)
Communications	307	545.6	418.5	1,258	(712.4)
Electrical protection	611.1[3]	789.5	16.2	275.4	514.1
Cooling improvements	125[4]	125	20	20	105
Total	$1,174.6	$2,405.3	$659.5	$3,120.9	$(715.6)

1. Space

NWS claimed rent for 15,342 sq. ft. of ADP space, when in effect, it needs no more than half that amount, 7,671 sq. ft. We reduced the rent costs after 2-28-99 by $614,700.

NWS cost proposal	$1,491.2
Reduced Costs	(614.7)
OIG Costs Allowed	$876.5

2. Flooring

We determined that the raised floor space did not have to be replaced based on an examination by GSA and NWS officials. This results in cost savings of $94,200.

NWS cost proposal	$111.1
Reduced Costs	(94.2)
OIG Costs Allowed	$ 16.9

3. Electrical Protection

We were able to determine that one generator rated at 1250KW would provide the necessary power and that NOAA did not need a paralleling unit since only one generator would be used at FB-4. We were able to locate a GSA contractor that offered a 40% discount off the list price. NOAA's proposal claimed $430,000 vs. the $136,000 we priced for one generator. ($430,000 - $136,000 = $294,000)

NWS Proposal	905.1
Reduction In Cost	(294)
Sub-total	$611.1
Paralleling Unit Not Needed	
1 Generator (1250 KW)	$136

NWS Pricing:

2 Generators (750KW)	260
Paralleling Unit	170
Sub-total	$430
	430
	(136)
Savings, reduction in cost	$294

4. Cooling Improvements:

NOAA currently has 3 100-ton emergency back up chillers at FB-4 in Suitland. The 3 chillers are 15 years old with a useful life of 20 years. The OIG was able to find new 110-ton chillers at $40,000 each, or $80,000 for two, which is what NOAA requested. This will be a second backup to the 3 100-ton chillers already in place. NOAA estimated $45,000 for installation, with a total chiller capacity of 520 tons.

NWS Proposal	$362
Competetive Pricing:	
1 Chiller (110 ton)	40
1 Chiller (110 ton)	40
Installation	45
Sub-total	$125

Competetive Pricing Savings:

	362
	(125)
	$237 Savings, reduction in cost

ATTACHMENT 4

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
CHIEF FINANCIAL OFFICER/CHIEF ADMINISTRATIVE OFFICER

SEP 30 1998

MEMORANDUM FOR: Johnnie Frazier
Acting Inspector General

FROM: Paul F. Roberts

SUBJECT: OIG Draft Audit Report: NWS's New Supercomputer Should be Located at Federal Building 4 in Suitland, Maryland (STD-10925-8-XXX)

Thank you for the opportunity to review and comment on the draft audit report on the proposed location of the National Weather Service's (NWS) Class VIII supercomputer. The National Oceanic and Atmospheric Administration (NOAA) concurs with the report's recommendation to locate the Class VIII supercomputer at the Suitland Complex.

NOAA does not agree with the attendant findings on costs associated with the infrastructure, including space, asbestos, and equipment. The report discounts the possible significant impact on the provision of forecast guidance projects to field offices. These guidance products are relied upon for development of local forecasts across the nation. While these issues are germane to the effective operation of the supercomputer, they do not affect the principle conclusion, the location of the supercomputer.

NOAA has engaged the General Service Administration (GSA) in discussions about ensuring adequate facilities support for the continuous safe operation of the supercomputer. NOAA and GSA will finalize these discussions in a Memorandum of Understanding.

We appreciate the effort expended by the OIG staff in completing the analysis.