

CONTRACT NAS1-19570

The following information has been determined to be exempt from disclosure and has been deleted from the contract:

- Article H.2: Names of Key Personnel, p. 11;
- Article H. 17; Advance Agreement on Certain Costs, p. 18;
- Exhibit F, Subcontracting plan: Master Subcontracting Plan, pp. 114-123.

The deleted material is exempt from disclosure under 14 C.F.R. 1206.300 (b) (4) which covers trade secrets and commercial or financial information obtained from a person and privileged or confidential. It has been held that commercial or financial matter is "confidential" for purposes of this exemption if its disclosure would be likely to have either of the following effects: (1) impair the Government's ability to obtain necessary information in the future; or (2) cause substantial harm to the competitive position of the person from whom the information was obtained, National Parks and Conservation v. Morton, 498 F2d 765 (D.C. Cir. 1974).

Regarding the names of key personnel withheld from the contract, disclosure of such information, which was submitted to the Government in confidence, would allow potential competitors to benefit from the company's efforts to build up a highly successful management team which possesses unique experience and expertise. Such information is not readily available upon request by a third party.

Disclosure of the financial information could cause substantial competitive harm to the contractor by providing its competitors insight into the company's costing practices and management approaches. Furthermore, disclosure would discourage other companies from participating in future competitive procurements, thereby impairing the Government's ability to obtain complete and accurate cost data, and in turn, frustrating the mandate to obtain maximum competition in negotiated procurements.

Disclosure of the information in the Subcontracting Plan would discourage future submission of detailed data concerning the company's implementation of their Subcontracting Plan and impair the Government's ability to obtain necessary information in the future as well as cause substantial harm to the competitive position of the company.

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING DO-C9	PAGE OF 1	PAGES 123
2. CONTRACT (Proc. Inst. Ident.) NO. NAS1-19570		3. EFFECTIVE DATE May 1, 1992	4. REQUISITION/PURCHASE REQUEST/PROJECT NO. PR: 6200.0577		
5. ISSUED BY National Aeronautics and Space Administration Langley Research Center Hampton, VA 23665-5225		6. ADMINISTERED BY (If other than Item 5) CODE			

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP Code) Science Applications International Corporation 1710 Goodridge Drive McLean, VA 22102		8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below)
		9. DISCOUNT FOR PROMPT PAYMENT N/A
		10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: ITEM G.4

11. SHIP TO/MARK FOR See F.3	FACILITY CODE	12. PAYMENT WILL BE MADE BY Financial Management Division, M/S 175 NASA, Langley Research Center Hampton, VA 23665-5225
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13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 41 U.S.C. 253(e)	14. ACCOUNTING AND APPROPRIATION DATA See next page.
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15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT	
	Atmospheric Sciences Research and Technology Support Services			Est. Cost	Fee	Total
		Base		\$18,375,000	\$1,280,100	\$ 19,655,100
		1st Opt.		18,500,000	1,294,100	19,794,100
		2nd Opt.		18,900,000	1,322,100	20,222,100
		3rd Opt.		19,050,000	1,332,600	20,382,600
		4th Opt.		19,600,000	1,371,100	20,971,100
		10-yr. Total		\$94,425,000	\$6,600,000	\$101,025,000
		Optional LOE		\$46,091,495	\$3,460,125	\$ 49,551,620
		15G. TOTAL AMOUNT OF CONTRACT			\$	150,576,620

V)	SEC.	DESCRIPTION	PAGE(S)	V)	SEC.	DESCRIPTION	PAGE(S)
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.
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19A. NAME AND TITLE OF SIGNER (Type or print) STUART L. PHILLIPS, Contracts Manager	20A. NAME OF CONTRACTING OFFICER MICHAEL F. CAVELLI
19B. NAME OF CONTRACTOR BY _____ (Signature of person authorized to sign)	20B. UNITED STATES OF AMERICA BY ORIGINAL SIGNED BY _____ (Signature of Contracting Officer)
19C. DATE SIGNED	20C. DATE SIGNED APR 30 1992

NAS1-19570

PR NO.	PY	FSMA	RTR	J.O.	AMOUNT
1190.1102	92		992-18-04-03	M1789	\$9,500
1540.3569	92	400	618-32-33-01	R11865	\$25,000
1540.3615	92	400	590-32-21-02	R13775	\$44,000
1540.3720	92	400	590-31-31-06	R17386	\$37,000
1550.0078	92	400	590-31-31-06	R17386	\$65,000
1570.0083	92	400	590-31-31-01	R13801	\$168,000
5533.2006	92	400	506-48-01-01	R14566	\$15,000
5560.0755	92	451	665-25-30-04	R17250	\$7,500
6210.0785	92	400	460-21-49-70	R14629	\$5,000
6210.0785	92	400	460-41-41-70	R14631	\$5,000
6210.0785	92	400	460-42-90-70	R14647	\$3,000
6210.0785	92	400	464-54-11-70	R14675	\$5,000
6210.0815	92	400	665-45-20-01	R11795	\$35,000
6210.0816	92	400	665-45-20-01	R11795	\$480,000
6220.0758	92	400	464-34-02-70	R14663	\$23,000
6220.0829	92	400	618-21-00-01	R10770	\$60,000
6220.0835	92	400	464-34-02-70	R14663	\$40,000
6220.3021	92	400	464-51-01-70	R14666	\$38,000
6220.3021	92	400	579-21-51-70	R14911	\$35,000
6220.5142	92	400	618-32-33-07	R11564	\$170,000
6230.1287	92	400	579-21-44-70	R14694	\$60,000
6230.1292	92	421	579-22-42-70	R14695	\$80,000
6230.1325	92	400	464-54-07-70	R14673	\$44,000
6230.1325	92	400	464-54-07-70	R14673	\$41,000
6230.1390	91	400	307-51-11-03	R14735	\$82,978
6230.1425	92	400	579-22-42-70	R14695	\$9,640
6230.1458	91	400	307-51-11-05	R17185	\$55,000
6230.1471	92	400	199-30-76-01	R12933	\$50,000
6230.1471	92	400	199-52-26-01	R11942	\$25,000
6230.1494	92	451	665-25-30-02	R17248	\$35,000
6250.9222	92	400	665-45-30-21	R11743	\$500,000
6250.9225	92	400	578-12-23-70	R14893	\$10,000
6260.1670	92	400	665-45-30-01	R11801	\$150,000
6260.1671	92	400	665-45-30-01	R11801	\$26,000
6260.1741	92	400	429-81-02-70	R14626	\$35,000
6260.1750	92	400	665-45-30-01	R11801	\$270,000
6270.2449	92	400	464-54-09-70	R14855	\$1,157
6270.2476	92	400	464-54-07-70	R14673	\$47,000
6270.2476	92	400	466-54-18-71	R14682	\$5,331
6270.2499	92	400	464-54-07-70	R14673	\$1,000,000

TOTAL= \$3,797,106

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS

B.1 SCOPE OF WORK--ALTERNATE II (LARC 52.212-90) (JUN 1988)

A. The Contractor shall, except as otherwise specified herein, furnish all personnel, facilities, services, equipment, supplies, and materials necessary for performance of Atmospheric Sciences Research and Technology Support Services as broadly described in Section C, Description/Specifications/ Work Statement.

B. Specific detailed performance requirements within the Statement of Work will be directed by the Government in accordance with the procedures outlined in G.2, Work Orders.

B.2 LEVEL-OF-EFFORT

A. In performing Government assigned work orders under this contract, the Contractor is obligated to provide up to 408,750 direct productive labor hours as defined in paragraph B. below.

B. Direct productive labor hours are defined as those hours expended by personnel in the performance of the effort set forth in Section C, Description/Specifications/Work Statement. This does not include management, or administrative and support effort such as financial, clerical, procurement, or any other labor allocated as indirect. Further, direct productive labor hours shall mean hours actually worked including overtime but excluding all leave (vacation, holidays, sick, etc.).

B.3 ESTIMATED COST AND AWARD FEE

A. The estimated cost of this contract is \$18,375,000. The maximum available award fee is \$1,280,100. Total cost and maximum award fee is \$19,655,100.

B. The award fee available for each evaluation period is as follows:

<u>Period</u>	<u>Available Award Fee</u>
5/1/92 - 10/31/92	\$320,025
11/1/92 - 4/30/93	\$320,025
5/1/93 - 10/31/93	\$320,025
11/1/93 - 4/30/94	\$320,025

B.4 CONTRACT FUNDING (NASA 18-52.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$3,518,606 and covers the following period of performance: May 1, 1992 through September 18, 1992.

(b) An additional amount of \$278,500 is obligated under this contract for payment of fee.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK - ATMOSPHERIC SCIENCES RESEARCH AND TECHNOLOGY SUPPORT SERVICES (LARC 52.215-90) (JUN 1988)

1.0 INTRODUCTION

The overall objective of the Langley Research Center's atmospheric sciences program is to use the vantage point of space to increase our understanding of the natural and man-induced changes in the Earth's atmosphere. This is done by developing an understanding of the fundamental processes of radiation, chemistry, and dynamics through the use of atmospheric simulation modeling and analysis of satellite-borne observations and complementary measurements from aircraft, balloon, and ground-based systems. The various data sets from the observational programs must be validated before analysis and then archived for use by the scientific community in assessing the state of the atmosphere.

2.0 SCOPE

The Contractor shall furnish all qualified personnel, facilities, administrative services, equipment, supplies, and materials, not provided by the Government, necessary to support the Center's atmospheric sciences program as directed by work orders issued under this contract. Many of these tasks will require the use of Government-furnished equipment and installation-provided Government property and facilities, such as ADP equipment and programs which will be specified by individual work orders.

A description of the Contractor tasks to be performed is as follows:

3.0 CONTRACTOR TASKS

3.1 Analytical Studies - The Contractor shall provide all scientific and analysis support necessary to develop, maintain, and update empirical and simulation models used in conducting atmospheric science research.

3.1.1 Scientific Support - The Contractor shall (1) adapt governing equations for use in appropriate coordinate system(s); (2) implement solution algorithms; (3) incorporate accurate and efficient parameterizations of meteorological data including chemical, radiation, and dynamic processes; (4) develop and implement diagnostic algorithms for validation and maintenance of analytical models; and (5) incorporate state-of-the-art parameterizations for describing the atmospheric processes.

3.1.2 Analysis and Interpretation - The Contractor shall analyze and interpret data from satellite, aircraft, balloon, and ground-based sensors for validation of atmospheric simulation models. This requires combining various data sets on standardized grids and calculating geophysical quantities or derived relationships from the basic data.

3.1.3 Modeling - The Contractor shall develop new models, incorporate changes in existing models, and incorporate changes required to maintain compatibility with Langley computer resources and operating systems. Diagnostic analysis and graphic displays shall be developed and/or modified. Graphical

displays such as line plots and contour charts, in either monochrome or in color, may be required. Color images may also be required to depict the time evolution of various processes.

3.2 Operational Data Processing and Archiving - The Contractor shall provide all services necessary for operational processing of data from satellite and other research platforms. This includes screening raw telemetry data, combining data with ancillary data sets, retrieving of atmospheric parameters from measured quantities, validating retrieved parameters, archiving final data products, and routinely updating and maintaining systems related to these tasks. Implementation of selected algorithms for producing synoptically mapped geophysical data for archival from retrieved asynoptic data will also be required. The Contractor shall implement processes for rapid and efficient transfer of data products to users outside of the Langley Research Center.

3.3 Instrumentation Development - The Contractor shall provide technical support required to translate research objectives, scientific requirements, and instrument concepts into viable instrumentation systems for ground, aircraft, and spaceflight atmospheric and environmental research applications. Based on Center and program needs, the Contractor shall be required to support the following areas of system development: laser systems; optical systems; sensors; electronics, including microprocessor systems; thermal design; mechanical and structural design; contamination control; and radiometric calibration. The Contractor shall also provide technical support in the development of instrument technologies, in the general areas specified above, to meet future atmospheric research needs and objectives.

3.3.1 System Development - The Contractor shall provide support for analytical studies, concept development, laboratory evaluation, design, assembly, modification, development, instrument integration, test, qualification, characterization, calibration, and operation of instrumentation systems. Analysis efforts will include the development of end-to-end performance models of instrument systems and the evaluation of platform environmental effects on instrument performance and science data quality.

3.3.2 Sustaining Operations - The Contractor shall provide technical support for sustained instrument ground or in-orbit operations, including monitoring of ground or in-orbit performance, as well as instrument and science data analysis.

3.4 Field Studies - The Contractor shall provide logistical support and ground facilities to personnel and equipment while conducting remote field experiments. Typical support may include transportation, communications (both voice and data), laboratory space, utilities, and housing. The Contractor shall also assist in maintenance and operation of an airborne data acquisition system for real-time recording and distribution of housekeeping data, including verification and monitoring of instrument performance, during field operations. Operation of a support chemistry laboratory at the Langley Research Center for analyzing samples will also be required under this contract.

3.5 Administrative and Logistical Support - The Contractor shall provide all necessary administrative and logistical support to organize and conduct science team meetings, workshops, and conferences covered by this Statement of Work.

Specifically, the Contractor will be responsible for making arrangements for facilities, audio, visual, graphics, documentation, and other support that may be required. The Contractor shall also provide for travel and lodging for non-NASA participants.

3.6 Documentation

3.6.1 Hardware Documentation - The Contractor shall develop and maintain documentation associated with flight hardware development. Types of documentation include, but are not restricted to, the following: instrument configuration and assembly history; hardware test data; command/control/sequencing procedures; data acquisition and display formats; data sampling; aircraft and spacecraft interfaces; instrument status and trend data; and component-level, subsystem-level, and system-level testing procedures.

3.6.2 Documentation of Procedures - The Contractor shall provide and maintain documentation for procedures developed under this contract. The level of documentation will vary with assignment and expected program use and shall include data reduction procedures, data formats, processing instructions and user data requirements. The documentation shall also include technical sources, source listings, internal maintenance information, user guides, and recommended operational procedures.

SECTION E - INSPECTION AND ACCEPTANCE

E.1 INSPECTION OF SERVICES - COST-REIMBURSEMENT (FAR 52.246-5) (APR 1984)

(a) Definition. "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If any of the services performed do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, for no additional fee. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce any fee payable under the contract to reflect the reduced value of the services performed.

(e) If the Contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and reduce any fee payable by an amount that is equitable under the circumstances or (2) terminate the contract for default.

SECTION F - DELIVERIES OR PERFORMANCEF.1 STOP-WORK ORDER (FAR 52.212-13) (AUG 1989) ALTERNATE I
(APR 1984)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work order is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if -

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

F.2 PERIOD OF PERFORMANCE (NASA 18-52.212-74) (DEC 1988)

The period of performance of this contract shall be twenty-four (24) months from the effective date of this contract.

F.3 PLACE OF DELIVERY--ALTERNATE II (LARC 52.212-92) (JUN 1988)

Delivery of all items hereunder shall be f.o.b. Langley Research Center, except as may be specified in work orders.

F.4 PLACES OF PERFORMANCE--ALTERNATE II (LARC 52.212-98) (JUN 1988)

The places of performance shall be the Contractor's facility; NASA, Langley Research Center, Hampton, Virginia; and other sites as may be designated by work order.

F.5 REPORTS AND DOCUMENTATION DELIVERY (LARC 52.212-99) (JUN 1988)

The Contractor shall provide to the Government all reports and items of documentation as required by Section I, Contract Clauses and Exhibit B, Contract Documentation Requirements.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 18-52.227-72) (APR 1984)

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights - Retention by the Contractor (Short Form)", whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:

<u>Title</u>	<u>Office Code</u>	<u>Address (including zip code)</u>
New Technology Representative	200	NASA, Langley Research Center Hampton, VA 23665-5225
Patent Representative	143	NASA, Langley Research Center Hampton, VA 23665-5225

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 18-27.375-3 of the NASA FAR Supplement.

G.2 WORK ORDERS

A. The work to be performed within the areas outlined in Section C, Description/Specifications/Work Statement, will be more specifically directed by means of written work orders issued by the Government, containing (as applicable) the following information:

1. Date; Work Order number
2. Requester; Monitor; Requesting organization

3. Title; Description of work
 4. Special requirements
 5. Deliverables/End products
 - (*) 6. Plan and schedule requirements
 - (*) 7. Manpower estimate
 - (*) 8. Material and Computer cost estimate
 - (*) 9. Government-furnished items
- (*) To be provided by the Government, or to be required of the Contractor, at the option of the Government.

B. The work order may be issued to the Contractor for planning. When the Contractor develops a plan, it will be submitted to the Government for review and approval. Upon approval by the Government, the work order will be submitted back to the Contractor, with changes as necessary, for acceptance and implementation. During the implementation phase, any required/requested modifications will be handled via work order modification request. If the modification varies significantly from the original work order, a new plan may be required for approval by the Government. After completion of the work, including required documentation, the Contractor shall prepare a closeout report for review and concurrence by the Government.

C. The Contractor shall furnish a control and reporting system capable of accurately obtaining on a monthly basis actual man-hours, labor costs, and material costs associated with each LARC work order.

D. If any work order is considered by the Contractor to be outside the scope of this contract, or if the Contractor has reason to believe that he will exceed the scope of his contractual obligation (e.g. contract level of effort, contract funding, contract estimated cost) in the performance thereof, the Contractor shall immediately notify the Contracting Officer in writing and shall not perform any work on the work order pending resolution by the Contracting Officer.

G.3 AWARD FEE EVALUATIONS (LARC 52.216-92) (JUN 1990)

A. The Contractor's performance hereunder shall be evaluated each period by an Evaluation Board in accordance with an established evaluation plan. A copy of this plan shall be furnished to the Contractor within sixty (60) days of the effective date of this contract. This plan may be modified by the Government and a copy of any modification will be provided to the Contractor. The Board shall review the Contractor's performance for each period in the following areas:

Performance of Work (Technical/Management)
 Cost
 Safety

B. The findings of the Board shall be reported to the Fee Determination Official (a cognizant individual at the program director level or higher of LARC management) who will determine to what extent the Contractor's performance for the preceding award fee evaluation period warrants payment of some portion of the available award fee specified in Section B. In no event will any unawarded portion of fee for any evaluation period become available for award in subsequent periods.

C. The Contractor will be notified of the Fee Determination Official's determination of award fee by the Contracting Officer in a Notice of Award Fee, and such decision shall be binding on both parties and not subject to the Section I clause entitled "Disputes - Alternate I."

D. In the event this contract is terminated prior to a regularly scheduled award fee determination, the fee to be paid to the Contractor shall be an appropriate portion of any available award fee, as may be determined by the Fee Determination Official.

E. The Contractor may submit evaluation plan recommendations pertinent to evaluation criteria, methods of measurement, definitions, ground rules, relative importance, etc., to the Contracting Officer. Such recommendations may be for the initial evaluation period or for subsequent periods. Recommendations for the initial period should be received by the Contracting Officer no later than the effective date of the contract and for subsequent periods no later than thirty (30) days prior to the beginning of the period.

G.4 INVOICES AND PAYMENTS (LARC 52.232-96) (JUN 1988)

A. General--Invoices shall be addressed as shown in Block 12. on page 1 of this contract and shall be identified by the contract number. Cost and fee invoices shall be submitted separately.

B. Cost--Payments of cost shall be made in bi-weekly installments. Cost invoices shall be submitted through the delegated Government Audit Agency.

C. Award Fee--Monthly provisional payments of award fee will be made in amounts not exceeding 60% of the monthly available award fee, i.e.: 60% of the value of the pertinent award fee period divided by the number of months therein. Subsequent to each award fee determination, per G.3, paragraph C, an adjustment will be made to pay such additional award fee as may not have been paid through monthly provisional payments or to make a downward adjustment in fee payments should the provisional payments have exceeded the determined award fee. Both provisional award fee invoices and adjustment award fee invoices shall be submitted through the NASA Contracting Officer with a copy to the delegated Audit Agency.

G.5 SUBMISSION OF INVOICES--ALTERNATE I (LARC 52.232-94) (NOV 1989)

Proper invoices, as determined under the Section I clause entitled "Prompt Payment," shall be addressed to the designated payment office shown in Block 12. on page 1 of this contract. Cost and fee invoices shall be submitted separately. Cost invoices, shall be submitted through the delegated Government Audit Agency, which shall be the designated billing office. Award fee invoices shall be

submitted through the NASA Contracting Officer with a copy to the delegated Audit Agency.

G.6 CONTRACT CLOSEOUT (LARC 52.242-90) (JUN 1988)

A. Reassignment--After receipt, inspection, and acceptance by the Government of all required articles and/or services, and resolution of any pending issues raised during the Period of Performance, this contract will be reassigned to the NASA Langley Research Center Contracting Officer for Contract Closeout. All transactions subsequent to the physical completion of the contract should, therefore, be addressed to the said Contracting Officer at NASA Langley Research Center, Mail Stop 126, who may be reached by telephone at (804) 864-2462.

B. "Quick Closeout"--Paragraph (f) of the Allowable Cost and Payment clause of this contract addresses the "Quick Closeout Procedure" delineated by Subpart 42.7 of the Federal Acquisition Regulation (FAR). It should be understood that the said procedure applies to the settlement of indirect costs for a specific contract in advance of the determination of final indirect cost rates when the amount of unsettled indirect cost to be allocated to the contract is relatively insignificant. Therefore, the "Quick Closeout" procedure does not preclude the provisions of paragraph (d) of the Allowable Cost and Payment clause nor does it constitute a waiver of final audit of the Contractor's Completion Voucher.

C. Completion Voucher Submittal--Notwithstanding the provisions of the Allowable Cost and Payment clause, as soon as practicable after settlement of the Contractor's indirect cost rates applicable to performance of the contract, the Contractor shall submit a Completion Voucher as required by the aforesaid clause. The Completion Voucher shall be supported by a cumulative claim and reconciliation statement and executed NASA Forms 778, Contractor's Release, and 780, Contractor's Assignment of Refunds, Rebates, Credits, and Other Amounts. Unless directed otherwise by the Contracting Officer for Contract Closeout, the Contractor shall forward the said Completion Voucher directly to the cognizant Government Agency to which audit functions under the contract have been delegated.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 RIGHTS TO PROPOSAL DATA (TECHNICAL) (FAR 52.227-23) (JUN 1987)

Except for data contained on pages ALL, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated July 18, 1991, upon which this contract is based.

H.2 KEY PERSONNEL AND FACILITIES (NASA 18-52.235-71) (MAR 1989)

(a) The personnel and/or facilities listed below (or specified in the Contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the Contractor shall (1) notify the Contracting Officer reasonably in advance and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract.

(b) The Contractor shall make no diversion without the Contracting Officer's written consent; provided, that the Contracting Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause.

(c) The list of personnel and/or facilities (shown below or as specified in the Contract Schedule) may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

H.3 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42) (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION

<u>Employee Class</u>	<u>Monetary Wage</u>
Engineering Support Technician	\$12.32
Data Technician	\$ 8.13
Project Assistant	\$10.07
Secretaries	\$ 6.48 - \$9.07

FRINGE BENEFITS

- Annual Leave - Receives 13 days paid leave for service up to 3 years; 20 days for 3 to 15 years service; and 26 days for 15 years service or over.
- Sick Leave - Receives 13 days paid leave per year.
- Holidays - Receives 10 paid holidays per year.
- Health Insurance - Government pays up to 60% of health insurance.
- Group Life Insurance - Government pays two-thirds of life insurance rate premiums.
- Retirement - The Government provides two retirement plans identified as the Civil Service Retirement System (CSRS) and the Federal Employees Retirement System (FERS). Under the CSRS the Government contributes 7% of the employees' base pay

towards retirement. Under the FERS the Government contributes 13% of the employees' base pay towards a basic benefit plan, and up to 5% to a thrift savings plan. Furthermore, under FERS employees are covered by FICA.

Part-time Federal employees receive pro rata annual leave, sick leave, holiday leave, health insurance, and group life insurance benefits based on the number of hours worked.

H.4 LIST OF INSTALLATION-PROVIDED GOVERNMENT PROPERTY AND SERVICES (NASA 18-52.245-77) (MAR 1989)

In accordance with the Installation Provided Government Property clause of this contract, the Contractor is authorized use of the types of property and services listed below, to the extent they are available and necessary for the performance of this contract, while on-site at the NASA installation.

(a) Office space, work area space, and on-site utilities including the network router and multiplexers for use with the Contractor-provided T-1 data line. The Contractor shall use Government telephones and network hardware for official contract-related purposes only.

(b) General- and special-purpose equipment, including office furniture.

(1) Equipment is to be made available to the Contractor for use in performance of this contract on-site and at such other locations as approved by the Contracting Officer is listed in Exhibit C. Computer terminals are available on a shared basis (i.e., used by both Government and Contractor employees). The Government retains accountability for this property under the Installation-Provided Government Property clause, regardless of its authorized location.

(2) If the Contractor acquires property as a direct cost under this contract, this property also shall become accountable to the Government upon its entry into the NASA Equipment Management System (NEMS) in accordance with the property-reporting requirements of this contract.

(3) The Contractor shall not bring on-site for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

(c) Central Scientific Computing Facilities, including Graphics Laboratory, Image Processing Laboratory, Numerical Geometry Laboratory (GEOLAB), and Software Engineering and Ada Laboratory (SEAL).

(d) Research library and Learning Center facilities.

(e) Publications, blank forms and other stores stock items stocked by the installation.

(f) Safety and fire protection for on-site Contractor personnel and facilities.

(g) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty, routine laser eye exams, and flight physicals as required by work order.

- (h) Cafeteria privileges for Contractor employees during normal operating hours.
- (i) Building maintenance for on-site facilities occupied by Contractor personnel.
- (j) On-Center mail delivery.
- (k) Repair and calibration services for Installation-Provided Government Property.
- (l) Photographic, graphics, and reproduction services as defined by work order.
- (m) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.
- (n) The responsibilities of the Contractor as contemplated by paragraph (a) of the Section I Installation-Provided Government Property clause are defined in the following property management directives and installation supplements to these Directives:

- (1) NHB 4200.1, NASA Equipment Management Manual.
- (2) NHB 4200.2, NASA Equipment Management System (NEMS) User's Guide for Property Custodians.
- (3) NHB 4300.1, NASA Personal Property Disposal Manual.
- (4) NHB 4100.1, NASA Materials Inventory Management Manual.

H.5 GOVERNMENT-FURNISHED COMPUTER ACCESS FOR CONTRACT PERFORMANCE (LARC 52.245-96) (MAY 1990)

The Government authorizes the use of Langley Research Center computer resources for Contractor performance of the effort required by the Statement of Work of this contract. The specific equipment will be identified prior to commencement of the work and its use will be directed and monitored by the appropriate Division Computer Manager and the Contracting Officer's Technical Representative for this contract in accordance with H.6, Automated Information Security (AIS) Program/Employee National Agency Check (NAC) and User Agreement Execution.

H.6 AUTOMATED INFORMATION SECURITY (AIS) PROGRAM/EMPLOYEE NATIONAL AGENCY CHECK (NAC) AND USER AGREEMENT EXECUTION

A. Work to be performed under this contract requires access to ADP equipment and processing areas. Therefore, the Contractor shall comply with the requirements of NASA's Automated Information Security Program. This program is separate and distinct from security programs for safeguarding classified information. Prior to performing any work in restricted-access computer rooms or accessing NASA ADPE (either remotely or on-site at LARC), all Contractor employees must have a favorable NAC completed. The Contractor shall submit a properly executed NASA Form 531, Name Check Request, to the LARC Security Officer, Mail Stop 182, for each Contractor employee who will work in restricted access computer rooms and/or access NASA ADPE. In addition, each such employee is required to be fingerprinted at the LARC Badge and Pass Office, Building 1228, or by any authorized agency or department utilizing Fingerprint Card FD-258. Approximately

75 days are required to complete the NAC after receipt of the NASA Form 531 and FD-258. The NAC is not required if an employee has a Secret or higher clearance. When it is necessary for an employee to perform any work in restricted access computer rooms prior to completion of the NAC, the employee may be escorted while at the site by an individual who has a favorable NAC or a higher level of investigation favorably adjudicated, or a Secret or higher clearance, or as otherwise approved by the Security Officer. Employees may access NASA ADP equipment prior to completion of the NAC only as approved by the LARC Security Officer on a case-by-case basis.

B. The Contractor shall insure that all Contractor personnel execute a user agreement, Form No. ACD N-865, Responsibilities of Users of the NASA/LARC Central Scientific Computer Complex, or other forms that may be required by the Government, prior to having access to NASA ADP resources. Unauthorized access to and/or use of LARC computing systems is a violation of law and punishable under the provisions of 18 USC 1029, 18 USC 1030, and other applicable statutes. For compliance with Center Computer security policy, the Contractor shall promptly notify the Contracting Officer's Technical Representative (COTR) when an authorized user employee no longer requires computer access.

H.7 SECURITY REQUIREMENTS FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 18-52.204-76) (JUN 1990)

(a) In addition to complying with any functional and technical security requirements set forth in the schedule and the clauses of this contract, the Contractor shall obtain special identification, as required by the computer security manager, for its personnel who need unescorted or unsupervised physical access or electronic access to the following limited or controlled areas, systems, programs and data:

NASA ADP resources

(b) The Contractor shall incorporate this clause in all subcontracts where the requirements identified in paragraph (a) are applicable to performance of the subcontract.

H.8 OPTIONS

A. PRICED OPTIONS/EXTENDED TERM

Pursuant to the Section I clause entitled "Option to Extend the Term of the Contract (MAR 1989)," the Contractor hereby grants to the Government options to extend the term of the contract for four (4) additional periods of twenty-four (24) months each. Such options are to be exercisable by issuance of a unilateral modification after the preliminary written notification, and must be exercised prior to the end of the period of performance. Upon exercise by the Government of each of the four options specified below, the appropriate articles referenced in column (1) below will be revised to reflect the impact of exercising the option. For example, upon exercise of the first option period, F.2 will be modified to reflect the addition of the twenty-four month period of performance for the first option period.

<u>Item</u>	<u>First Option Period</u>	<u>Second Option Period</u>	<u>Third Option Period</u>	<u>Fourth Option Period</u>
Period of Performance (Ref. F.2)	24 months	24 months	24 months	24 months
Level of Effort (Ref. B.2)	408,750 hours	408,750 hours	408,750 hours	408,750 hours
Estimated Cost (Ref. B.3)	\$18,500,000	\$18,900,000	\$19,050,000	\$19,600,000
Award Fee (Ref. B.3)	\$ 1,294,100	\$ 1,322,100	\$ 1,332,600	\$ 1,371,100
Award Fee Availability (Ref. B.3)	5/1/94-10/31/94	5/1/96-10/31/96	5/1/98-10/31/98	5/1/00-10/31/00
	\$ 323,525	\$ 330,525	\$ 333,150	\$ 342,775
	11/1/94-4/30/95	11/1/96-4/30/97	11/1/98-4/30/99	11/1/00-4/30/01
	\$ 323,525	\$ 330,525	\$ 333,150	\$ 342,775
	5/1/95-10/31/95	5/1/97-10/31/97	5/1/99-10/31/99	5/1/01-10/31/01
	\$ 323,525	\$ 330,525	\$ 333,150	\$ 342,775
	11/1/95-4/30/96	11/1/97-4/30/98	11/1/99-4/30/00	11/1/01-4/30/02
	\$ 323,525	\$ 330,525	\$ 333,150	\$ 342,775

B. PRICED OPTION - ADDITIONAL LEVEL OF EFFORT

1. The Contractor hereby grants to the Government options to increase the contract level of effort by the amounts specified below for each period. The Government's options may be exercised once or multiple times in minimum increments of 2,000 hours of effort. Such options are to be exercisable by issuance of a unilateral modification. The Government will give the Contractor preliminary written notice(s) for the exercise of any increment(s) of this option. Preliminary notice shall not commit the Government to exercise the option.

	<u>Level of Effort (Ref. B.2)</u>
Initial Contract Period	202,500 hours
First Option Period	316,875 hours
Second Option Period	337,500 hours
Third Option Period	352,500 hours
Fourth Option Period	352,500 hours

2. When any increment of the above option is exercised, the contract cost and fee set forth in B.3, Estimated Cost and Award Fee, will be increased using the appropriate rates set forth below for the period in which the option is exercised:

	<u>Rate Per Hour</u>	
	<u>Cost</u>	<u>Fee</u>
Initial Contract Period	\$27.45	\$2.06
First Option Period	\$28.21	\$2.12
Second Option Period	\$29.19	\$2.19
Third Option Period	\$30.27	\$2.27
Fourth Option Period	\$31.41	\$2.36

H.9 STATE AND LOCAL SALES TAXES - VIRGINIA (LARC 52.229-92) (MAR 1991)

To perform this contract, the Contractor must be knowledgeable of relevant state and local taxes when making purchases of tangible personal property. The Contractor shall refrain from paying nonapplicable taxes or taxes where an exemption exists, but shall pay applicable taxes that are reimbursable pursuant to FAR 31.205-41, Taxes. Even though title to property purchased under this contract may pass to the Government and the price is reimbursable under contract cost principles, such transactions do not in themselves provide tax immunity to the Contractor. Therefore, within 30 days after the effective date of this contract, the Contractor shall request from the Virginia State Tax Commission a ruling on any tax exemptions that may be applicable to purchases made under this contract. The Contractor shall provide all facts relevant to the situation and shall pursue an interpretation of the law that is most favorable to both the Contractor and the Government.

H.10 SECURITY PROGRAM/FOREIGN NATIONAL EMPLOYEE INVESTIGATIVE REQUIREMENTS (LaRC 52.204-91) (NOV 1991)

Prior to reporting to Langley Research Center (LaRC) to perform under a contract or grant, each Foreign National shall have approval for access to LaRC facilities from NASA Headquarters, International Relations Division (Code XID). A copy of the access authorization request shall be provided to the LaRC Chief of Security. Additionally, an investigation by the Government shall be completed on each Foreign National contractor prior to reporting to LaRC to perform under a contract or grant. A properly executed "Name Check Request" (NASA Form 531) and a completed "applicant" fingerprint card shall be submitted to the LaRC Security Office, Mail Stop 182, for each Foreign National contractor at least 75 days prior to the estimated entry on duty date. The NF 531 and fingerprint card may be obtained from the LaRC Security Office. If the access approval is obtained from NASA Headquarters prior to completion of the investigation, and the Contracting Officer requires a Foreign National to work on LaRC, an escort request may be considered by the LaRC Chief of Security.

H.11 OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LARC 52.212-104) (JUN 1988)

A. Observation of Regulations--In performance of that part of the contract work which may be performed at Langley Research Center or other Government installation, the Contractor shall require its employees to observe the rules and regulations as prescribed by the authorities at Langley Research Center or other installation.

B. Identification Badges--At all times while on LARC property, the Contractor shall require its employees, subcontractors and agents to wear badges which will be issued by the NASA Contract Badge and Pass Office, located in Building No. 1228. Badges shall be issued only between the hours of 6:30 a.m. and 4:30 p.m., Monday through Friday. Contractors will be held accountable for these badges, and may be required to validate outstanding badges on an annual basis with the NASA LARC Security Office. Immediately after employee termination or contract completion, badges shall be returned to the NASA Contract Badge and Pass Office.

H.12 INCORPORATION OF SECTION K OF THE PROPOSAL BY REFERENCE (LARC 52.215-107) (MAR 1989)

Pursuant to FAR 15.406-1(b), the completed Section K of the proposal dated July 18, 1991 is hereby incorporated herein by reference.

H.13 SUBCONTRACTING PLAN (LARC 52.219-91) (JUN 1988)

The approved Contractor plan for subcontracting with small business and small disadvantaged business concerns is attached hereto as Exhibit F and is hereby made a part of this contract.

H.14 EVIDENCE OF INSURANCE (LARC 52.228-93) (MAR 1989)

The Contractor shall submit evidence of the insurance coverage, required by the NASA Clause 18-52.228-75 in Section I entitled "Minimum Insurance Coverage" (i.e., a Certificate of Insurance or other confirmation), to the Contracting Officer prior to performing under this contract. In the event the Government exercises its options to extend the term of the contract, the Contractor shall also present such evidence to the Contracting Officer prior to commencement of performance under the extension.

H.15 ADMINISTRATION OF CONTRACT FUNDING (LARC 52.232-100) (MAR 1989)

A. The Contractor agrees that all future incremental funding shall be accomplished by Administrative Change Modification and that the funding procedure shall in no way change the Contractor's notification obligations as set forth in the "Limitation of Funds" clause.

B. In addition to the requirements of the "Limitation of Funds" clause, the Contractor shall notify the Contracting Officer in writing if at any time the Contractor has reason to believe that the total cost to the Government, exclusive of any fee, for the complete performance of this contract will be greater or substantially less than the then total estimated cost of the contract. Such

notification shall give a revised estimate of the total cost for the performance of this contract.

H.16 WAGE DETERMINATIONS AND FRINGE BENEFITS (LARC 52.237-90)
(NOV 1990)

The Register of Wage Determinations and Fringe Benefits, Number 78-1030, Rev. 21, dated September 18, 1991, (Exhibit A) lists the wage rate and fringe benefits for designated labor classifications which shall be the minimum paid under this contract. See Exhibit A for a copy of this wage determination. This determination constitutes the "attachment" as referred to in paragraph (a), Compensation, of the Section I clause entitled "Service Contract Act of 1965."

H.17 ADVANCE AGREEMENT ON CERTAIN COSTS

H.18 CONSENT TO SUBCONTRACT

The Contractor shall obtain the Contracting Officer's consent before award of a subcontract exceeding \$25,000.

H.19 PROCUREMENT AUTHORITY--ALTERNATE II (201-39.5202-3)
(OCT 90 FIRMR)

This acquisition is being conducted under a specific acquisition delegation of GSA's exclusive procurement authority for FIP resources. The specific GSA DPA case number is KMA-92-0317.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

I.2 The following contract clauses are incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
52.202-1	Definitions (APR 1984)
52.203-1	Officials Not to Benefit (APR 1984)
52.203-3	Gratuities (APR 1984)
52.203-5	Covenant Against Contingent Fees (APR 1984)
52.203-6	Restrictions on Subcontractor Sales to the Government (JUL 1985)
52.203-7	Anti-Kickback Procedures (OCT 1988)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (SEP 1990)
52.204-2	Security Requirements (APR 1984)
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JUN 1991)
52.212-8	Defense Priority and Allocation Requirements (MAY 1986)
52.215-1	Examination of Records by Comptroller General (APR 1984)
52.215-2	Audit - Negotiation (DEC 1989)
52.215-22	Price Reduction for Defective Cost or Pricing Data (JAN 1991)
52.215-27	Termination of Defined Benefit Pension Plans (SEP 1989)
52.215-31	Waiver of Facilities Capital Cost of Money (SEP 1987)
52.215-33	Order of Precedence (JAN 1986)
52.216-7	Allowable Cost and Payment (JUL 1991)
52.219-8	Utilization of Small Business Concerns and Small Disadvantaged Business Concerns (FEB 1990)
52.219-9	Small Business and Small Disadvantaged Business Subcontracting Plan (JAN 1991)
52.219-13	Utilization of Women-Owned Small Businesses (AUG 1986)
52.219-16	Liquidated Damages - Small Business Subcontracting Plan (AUG 1989)
52.220-3	Utilization of Labor Surplus Area Concerns (APR 1984)
52.220-4	Labor Surplus Area Subcontracting Program (APR 1984)
52.222-1	Notice to the Government of Labor Disputes (APR 1984)
52.222-3	Convict Labor (APR 1984)
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation (MAR 1986)
52.222-26	Equal Opportunity (APR 1984)
52.222-28	Equal Opportunity Preaward Clearance of Subcontracts (APR 1984)
52.222-35	Affirmative Action for Special Disabled and Vietnam Era Veterans (APR 1984)
52.222-36	Affirmative Action for Handicapped Workers (APR 1984)
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (JAN 1989)
52.223-2	Clean Air and Water (APR 1984)
52.225-3	Buy American Act - Supplies (JAN 1989)
52.225-11	Restrictions on Certain Foreign Purchases (APR 1991)
52.225-13	Restrictions on Contracting with Sanctioned Persons (APR 1991)
52.227-1	Authorization and Consent (APR 1984)
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (APR 1984)
52.227-14	Rights in Data - General (JUN 1987) -- as modified by NASA FAR Supplement 18-52.227-14

52.228-7 Insurance - Liability to Third Persons (APR 1984)
 52.230-3 Cost Accounting Standards (SEP 1987)
 52.230-4 Administration of Cost Accounting Standards (SEP 1987)
 52.232-9 Limitation on Withholding of Payments (APR 1984)
 52.232-17 Interest (JAN 1991)
 52.232-18 Availability of Funds (APR 1984)
 52.232-22 Limitation of Funds (APR 1984)--as modified by NASA FAR Supplement 18-32.705-2
 52.232-23 Assignment of Claims (JAN 1986)
 52.232-28 Electronic Funds Transfer Payment Methods (APR 1989)--as modified by NASA FAR Supplement 18-32.908
 52.233-1 Disputes (APR 1984) Alternate I (APR 1984)
 52.233-3 Protest After Award (AUG 1989)
 52.237-2 Protection of Government Buildings, Equipment and Vegetation (APR 1984)
 52.237-3 Continuity of Services (JAN 1991)
 52.242-1 Notice of Intent to Disallow Costs (APR 1984)
 52.243-2 Changes - Cost-Reimbursement (AUG 1987) Alternate II (APR 1984)
 52.244-2 Subcontracts (Cost-Reimbursement and Letter Contracts) (JUL 1985) Alternate I (APR 1985)
 52.244-5 Competition in Subcontracting (APR 1984)
 52.245-5 Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (JAN 1986)
 52.246-25 Limitation of Liability - Services (APR 1984)
 52.248-1 Value Engineering (MAR 1989)
 52.249-6 Termination (Cost-Reimbursement) (MAY 1986)
 52.249-14 Excusable Delays (APR 1984)
 52.251-1 Government Supply Sources (APR 1984)
 52.253-1 Computer Generated Forms (JAN 1991)

NASA/FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
18-52.204-70	Report on NASA Subcontracts (DEC 1988)
18-52.204-71	NASA Contractor Financial Management Reporting (DEC 1988)
18-52.208-81	Printing and Duplicating (JUN 1991)
18-52.216-76	Award Fee (DEC 1988)
18-52.219-74	Use of Rural Area Small Businesses (SEP 1990)
18-52.219-76	NASA Small Disadvantaged Business Goal (JUL 1991)
18-52.223-70	Safety and Health (DEC 1988)
18-52.227-70	New Technology (APR 1988)
18-52.228-72	Interparty Waiver of Liability During STS Operations (DEC 1988)
18-52.228-75	Minimum Insurance Coverage (OCT 1988)
18-52.237-70	Emergency Evacuation Procedures (DEC 1988)
18-52.242-72	Observance of Legal Holidays (SEP 1989) Alternate I (SEP 1989)
18-52.245-70	Acquisition of Centrally Reportable Equipment (MAR 1989)
18-52.245-71	Installation-Provided Government Property (MAR 1989)
18-52.252-70	Compliance with NASA FAR Supplement (MAR 1989)

I.3 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

52.203-9	Requirement for Certificate of Procurement Integrity - Modification (NOV 1990)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JAN 1990)
52.204-1	Approval of Contract (DEC 1989)
52.215-24	Subcontractor Cost or Pricing Data (APR 1985) (Deviation)
52.215-26	Integrity of Unit Prices (APR 1991)
52.217-9	Option to Extend the Term of the Contract (MAR 1989)
52.222-2	Payment for Overtime Premiums (JUL 1990)
52.222-41	Service Contract Act of 1965, as Amended (MAY 1989)
52.223-3	Hazardous Material Identification and Material Safety Data (NOV 1991) Alternate I (NOV 1991)
52.223-6	Drug-Free Workplace (JUL 1990)
52.232-25	Prompt Payment (APR 1989)
52.242-13	Bankruptcy (APR 1991)
52.252-6	Authorized Deviations in Clauses (APR 1984)
18-52.209-71	Limitation of Future Contracting (DEC 1988)
18-52.245-73	Financial Reporting of Government-Owned/Contractor-Held Property (MAR 1989)

I.4 REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION
(FAR 52.203-9) (NOV 1990)

- (a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.
- (b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the contracting officer in connection with the execution of any modification of this contract.
- (c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION (NOV 1990)

(1) I, _____,
[Name of certifier]

am the officer or employee responsible for the preparation of this modification proposal and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement

(contract and modification number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of _____

[Name of Offeror]

who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity--Modification (Continuation Sheet), ENTER NONE IF NONE EXIST) _____

 [Signature of the officer or employee responsible for the modification proposal and date]

 [Typed name of the officer or employee responsible for the modification proposal]

*Subsections 27(a), (b), and (d) are effective on December 1, 1990.
 Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(d) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to suspension of Section 27 (i.e., prior to December 1, 1989), the contractor shall ensure that an individual who has so certified is notified that Section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the Contractor.

(e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

I.5 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
(FAR 52.203-12) (JAN 1990)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.
- (3) A special Government employee, as defined in section 202, title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any

other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action -

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of -

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iii) Disclosure.

(A) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(B) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes -

(1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(C) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(D) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(iv) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(v) Penalties.

(A) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(B) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(vi) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions.

I.6 APPROVAL OF CONTRACT (FAR 52.204-1) (DEC 1989)

This contract is subject to the written approval of the Procurement Officer and shall not be binding until so approved.

I.7 SUBCONTRACTOR COST OR PRICING DATA (FAR 52.215-24) (APR 1985) (DEVIATION)

(a) Before awarding any subcontract expected to exceed \$500,000 when entered into, or before pricing any subcontract modification involving a pricing adjustment expected to exceed \$500,000, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless the price is -

(1) Based on adequate price competition;

(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(3) Set by law or regulation.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in Subsection 15.804-4 of the Federal Acquisition Regulation (FAR) that, to the best of its knowledge and belief, the data submitted under paragraph (a) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds \$500,000 when entered into, the Contractor shall insert either -

(1) The substance of this clause, including this paragraph (c), if paragraph (a) above requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-25, Subcontractor Cost or Pricing Data - Modifications.

I.8 INTEGRITY OF UNIT PRICES (FAR 52.215-26) (APR 1991)

(a) Any proposal submitted for the negotiation of prices for items of supplies shall distribute costs within contracts on a basis that ensures that unit prices are in proportion to the items' base cost (e.g., manufacturing or acquisition costs). Any method of distributing costs to line items that distorts unit prices shall not be used. For example, distributing costs equally among line items is not acceptable except when there is little or no variation in base cost. Nothing in this paragraph requires submission of cost or pricing data not otherwise required by law or regulation.

(b) The requirement in paragraph (a) of this clause does not apply to any contract or subcontract item of supply for which the unit price is, or is based on, an established catalog or market price for a commercial item sold in substantial quantities to the general public. A price is based on a catalog or market price only if the item being purchased is sufficiently similar to the catalog or market price commercial item to ensure that any difference in price can be identified and justified without resort to cost analysis.

(c) The Offeror/Contractor shall also identify those supplies which it will not manufacture or to which it will not contribute significant value when requested by the Contracting Officer. The information shall not be required for commercial items sold in substantial quantities to the general public when the price is, or is based on, established catalog or market prices.

(d) The Contractor shall insert the substance of this clause, less paragraph (c), in all subcontracts.

I.9 OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9) (MAR 1989)

- (a) The Government may extend the term of this contract by written notice to the Contractor within 60 days before the expiration date of the contract; provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option provision.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 10 years.

I.10 PAYMENT FOR OVERTIME PREMIUMS (FAR 52.222-2) (JUL 1990)

- (a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed (N/A) or the overtime premium is paid for work -
- (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
 - (2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
 - (3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
 - (4) That will result in lower overall costs to the Government.
- (b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall -
- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
 - (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
 - (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
 - (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

I.11 SERVICE CONTRACT ACT OF 1965, AS AMENDED (FAR 52.222-41) (MAY 1989)

(a) **Definitions.** "Act," as used in this clause, means the Service Contract Act of 1965, as amended (41 U.S.C. 351, et seq.).

"Contractor," as used in this clause or in any subcontract, shall be deemed to refer to the subcontractor, except in the term "Government Prime Contractor."

"Service employee," as used in this clause, means any person engaged in the performance of this contract other than any person employed in a bona fide executive, administrative, or professional capacity, as these terms are defined in Part 541 of Title 29, Code of Federal Regulations, as revised. It includes all

such persons regardless of any contractual relationship that may be alleged to exist between a Contractor or subcontractor and such persons.

(b) **Applicability.** This contract is subject to the following provisions and to all other applicable provisions of the Act and regulations of the Secretary of Labor (29 CFR Part 4). This clause does not apply to contracts or subcontracts administratively exempted by the Secretary of Labor or exempted by 41 U.S.C. 356, as interpreted in Subpart C of 29 CFR Part 4.

(c) **Compensation.**

(1) Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.

(2) (i) If a wage determination is attached to this contract, the Contractor shall classify any class of service employee which is not listed therein and which is to be employed under this contract (i.e., the work to be performed is not performed by any classification listed in the wage determination) so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed class of employees shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in this paragraph (c).

(ii) This conforming procedure shall be initiated by the Contractor prior to the performance of contract work by the unlisted class of employee. The Contractor shall submit Standard Form (SF) 1444, Request For Authorization of Additional Classification and Rate, to the Contracting Officer no later than 30 days after the unlisted class of employee performs any contract work. The Contracting Officer shall review the proposed classification and rate and promptly submit the completed SF 1444 (which must include information regarding the agreement or disagreement of the employees' authorized representatives or the employees themselves together with the agency recommendation), and all pertinent information to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor. The Wage and Hour Division will approve, modify, or disapprove the action or render a final determination in the event of disagreement within 30 days of receipt or will notify the Contracting Officer within 30 days of receipt that additional time is necessary.

(iii) The final determination of the conformance action by the Wage and Hour Division shall be transmitted to the Contracting Officer who shall promptly notify the Contractor of the action taken. Each affected employee shall be furnished by the Contractor with a written copy of such determination or it shall be posted as a part of the wage determination.

(iv) (A) The process of establishing wage and fringe benefit rates that bear a reasonable relationship to those listed in a wage determination cannot be reduced to any single formula. The approach used may vary from wage determination to wage determination depending on the circumstances. Standard wage and salary administration practices which rank various job classifications by pay grade pursuant to point schemes or other job factors may, for example, be relied upon. Guidance may also be obtained from the way different jobs are rated under Federal pay systems (Federal Wage Board Pay System and the General Schedule) or from other wage determinations issued in the same locality. Basic to the establishment of any conformable wage rate(s) is the concept that a pay

relationship should be maintained between job classifications based on the skill required and the duties performed.

(B) In the case of a contract modification, an exercise of an option, or extension of an existing contract, or in any other case where a Contractor succeeds a contract under which the classification in question was previously conformed pursuant to paragraph (c) of this clause, a new conformed wage rate and fringe benefits may be assigned to the conformed classification by indexing (i.e., adjusting) the previous conformed rate and fringe benefits by an amount equal to the average (mean) percentage increase (or decrease, where appropriate) between the wages and fringe benefits specified for all classifications to be used on the contract which are listed in the current wage determination, and those specified for the corresponding classifications in the previously applicable wage determination. Where conforming actions are accomplished in accordance with this paragraph prior to the performance of contract work by the unlisted class of employees, the Contractor shall advise the Contracting Officer of the action taken but the other procedures in subdivision (c)(ii) of this clause need not be followed.

(C) No employee engaged in performing work on this contract shall in any event be paid less than the currently applicable minimum wage specified under section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

(v) The wage rate and fringe benefits finally determined under this subparagraph (c)(2) of this clause shall be paid to all employees performing in the classification from the first day on which contract work is performed by them in the classification. Failure to pay the unlisted employees the compensation agreed upon by the interested parties and/or finally determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract.

(vi) Upon discovery of failure to comply with subparagraph (c)(2) of this clause, the Wage and Hour Division shall make a final determination of conformed classification, wage rate, and/or fringe benefits which shall be retroactive to the date such class or classes of employees commenced contract work.

(3) **Adjustment of Compensation.** If the term of this contract is more than 1 year, the minimum monetary wages and fringe benefits required to be paid or furnished thereunder to service employees under this contract shall be subject to adjustment after 1 year and not less often than once every 2 years, under wage determinations issued by the Wage and Hour Division.

(d) **Obligation to Furnish Fringe Benefits.** The Contractor or subcontractor may discharge the obligation to furnish fringe benefits specified in the attachment or determined under subparagraph (c)(2) of this clause by furnishing equivalent combinations of bona fide fringe benefits, or by making equivalent or differential cash payments, only in accordance with Subpart D of 29 CFR Part 4.

(e) **Minimum Wage.** In the absence of a minimum wage attachment for this contract, neither the Contractor nor any subcontractor under this contract shall pay any person performing work under this contract (regardless of whether the person is a service employee) less than the minimum wage specified by section 6(a)(1) of the Fair Labor Standards Act of 1938. Nothing in this clause shall relieve the Contractor or any subcontractor of any other obligation under law or contract for the payment of a higher wage to any employee.

(f) **Successor Contracts.** If this contract succeeds a contract subject to the Act under which substantially the same services were furnished in the same locality and service employees were paid wages and fringe benefits provided for in

a collective bargaining agreement, in the absence of the minimum wage attachment for this contract setting forth such collectively bargained wage rates and fringe benefits, neither the Contractor nor any subcontractor under this contract shall pay any service employee performing any of the contract work (regardless of whether or not such employee was employed under the predecessor contract), less than the wages and fringe benefits provided for in such collective bargaining agreement, to which such employee would have been entitled if employed under the predecessor contract, including accrued wages and fringe benefits and any prospective increases in wages and fringe benefits provided for under such agreement. No Contractor or subcontractor under this contract may be relieved of the foregoing obligation unless the limitations of 29 CFR 4.1b(b) apply or unless the Secretary of Labor or the Secretary's authorized representative finds, after a hearing as provided in 29 CFR 4.10 that the wages and/or fringe benefits provided for in such agreement are substantially at variance with those which prevail for services of a character similar in the locality, or determines, as provided in 29 CFR 4.11, that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations. Where it is found in accordance with the review procedures provided in 29 CFR 4.10 and/or 4.11 and Parts 6 and 8 that some or all of the wages and/or fringe benefits contained in a predecessor Contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a character similar in the locality, and/or that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations, the Department will issue a new or revised wage determination setting forth the applicable wage rates and fringe benefits. Such determination shall be made part of the contract or subcontract, in accordance with the decision of the Administrator, the Administrative Law Judge, or the Board of Service Contract Appeals, as the case may be, irrespective of whether such issuance occurs prior to or after the award of a contract or subcontract (53 Comp. Gen. 401 (1973)). In the case of a wage determination issued solely as a result of a finding of substantial variance, such determination shall be effective as of the date of the final administrative decision.

(g) **Notification to Employees.** The Contractor and any subcontractor under this contract shall notify each service employee commencing work on this contract of the minimum monetary wage and any fringe benefits required to be paid pursuant to this contract, or shall post the wage determination attached to this contract. The poster provided by the Department of Labor (Publication WH 1313) shall be posted in a prominent and accessible place at the worksite. Failure to comply with this requirement is a violation of Section 2(a)(4) of the Act and of this contract.

(h) **Safe and Sanitary Working Conditions.** The Contractor or subcontractor shall not permit any part of the services called for by this contract to be performed in buildings or surroundings or under working conditions provided by or under the control or supervision of the Contractor or subcontractor which are unsanitary, hazardous, or dangerous to the health or safety of the service employees. The Contractor or subcontractor shall comply with the safety and health standards applied under 29 CFR Part 1925.

(i) **Records.** (1) The Contractor and each subcontractor performing work subject to the Act shall make and maintain for 3 years from the completion of the work, and make them available for inspection and transcription by authorized representatives of the Wage and Hour Division, Employment Standards Administration, a record of the following:

(i) For each employee subject to the Act -

- (A) Name and address and social security number;
- (B) Correct work classification or classifications, rate or rates of monetary wages paid and fringe benefits provided, rate or rates of payments in lieu of fringe benefits, and total daily and weekly compensation;
- (C) Daily and weekly hours worked by each employee; and
- (D) Any deductions, rebates, or refunds from the total daily or weekly compensation of each employee.

(ii) For those classes of service employees not included in any wage determination attached to this contract, wage rates or fringe benefits determined by the interested parties or by the Administrator or authorized representative, under the terms of paragraph (c) of this clause. A copy of the report required by subdivision (c)(2)(ii) of this clause will fulfill this requirement.

(iii) Any list of the predecessor Contractor's employees which had been furnished to the Contractor as prescribed by paragraph (n) of this clause.

(2) The Contractor shall also make available a copy of this contract for inspection or transcription by authorized representatives of the Wage and Hour Division.

(3) Failure to make and maintain or to make available these records for inspection and transcription shall be a violation of the regulations and this contract, and in the case of failure to produce these records, the Contracting Officer, upon direction of the Department of Labor and notification to the Contractor, shall take action to cause suspension of any further payment or advance of funds until such violation ceases.

(4) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.

(j) **Pay Periods.** The Contractor shall unconditionally pay to each employee subject to the Act all wages due free and clear and without subsequent deduction (except as otherwise provided by law or Regulations, 29 CFR Part 4), rebate, or kickback on any account. These payments shall be made no later than one pay period following the end of the regular pay period in which the wages were earned or accrued. A pay period under this Act may not be of any duration longer than semi-monthly.

(k) **Withholding of Payment and Termination of Contract.** The Contracting Officer shall withhold or cause to be withheld from the Government Prime Contractor under this or any other Government contract with the Prime Contractor such sums as an appropriate official of the Department of Labor requests or such sums as the Contracting Officer decides may be necessary to pay underpaid employees employed by the Contractor or subcontractor. In the event of failure to pay any employees subject to the Act all or part of the wages or fringe benefits due under the Act, the Contracting Officer may, after authorization or by direction of the Department of Labor and written notification to the Contractor, take action to cause suspension of any further payment or advance of funds until such violations have ceased. Additionally, any failure to comply with the requirements of this clause may be grounds for termination of the right to proceed with the contract work. In such event, the Government may enter into other contracts or arrangements for completion of the work, charging the Contractor in default with any additional cost.

(l) **Subcontracts.** The Contractor agrees to insert this clause in all subcontracts subject to the Act.

(m) **Collective Bargaining Agreements Applicable to Service Employees.** If wages to be paid or fringe benefits to be furnished any service employees employed by the Government Prime Contractor or any subcontractor under the contract are provided for in a collective bargaining agreement which is or will be effective during any period in which the contract is being performed, the Government Prime Contractor shall report this fact to the Contracting Officer, together with full information as to the application and accrual of such wages and fringe benefits, including any prospective increases, to service employees engaged in work on the contract, and a copy of the collective bargaining agreement. Such report shall be made upon commencing performance of the contract, in the case of collective bargaining agreements effective at such time, and in the case of such agreements or provisions or amendments thereof effective at a later time during the period of contract performance such agreements shall be reported promptly after negotiation thereof.

(n) **Seniority List.** Not less than 10 days prior to completion of any contract being performed at a Federal facility where service employees may be retained in the performance of the succeeding contract and subject to a wage determination which contains vacation or other benefit provisions based upon length of service with a Contractor (predecessor) or successor (29 CFR Part 4.173), the incumbent Prime Contractor shall furnish the Contracting Officer a certified list of the names of all service employees on the Contractor's or subcontractor's payroll during the last month of contract performance. Such list shall also contain anniversary dates of employment on the contract either with the current or predecessor Contractors of each such service employee. The Contracting Officer shall turn over such list to the successor Contractor at the commencement of the succeeding contract.

(o) **Rulings and Interpretations.** Rulings and interpretations of the Act are contained in Regulations, 29 CFR Part 4.

(p) **Contractor's Certification.**

(1) By entering into this contract, the Contractor (and officials thereof) certifies that neither it (nor he or she) nor any person or firm who has substantial interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of the sanctions imposed under section 5 of the Act.

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract under section 5 of the Act.

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(q) **Variations, Tolerances, and Exemptions Involving Employment.** Notwithstanding any of the provisions in paragraphs (b) through (o) of this clause, the following employees may be employed in accordance with the following variations, tolerances, and exemptions, which the Secretary of Labor, pursuant to section 4(b) of the Act prior to its amendment by Public L. 92-473, found to be necessary and proper in the public interest or to avoid serious impairment of the conduct of Government business.

(1) Apprentices, student-learners, and workers whose earning capacity is impaired by age, physical or mental deficiency, or injury may be employed at wages lower than the minimum wages otherwise required by section 2(a)(1) or 2(b)(1) of the Act without diminishing any fringe benefits or cash payments in lieu thereof required under section 2(a)(2) of the Act, in accordance with the conditions and procedures prescribed for the employment of apprentices, student-learners, handicapped persons, and handicapped clients of sheltered workshops

under Section 14 of the Fair Labor Standards Act of 1938, in the regulations issued by the Administrator (29 CFR Parts 520, 521, 524, and 525).

(2) The Administrator will issue certificates under the Act for the employment of apprentices, student-learners, handicapped persons, or handicapped clients of sheltered workshops not subject to the Fair Labor Standards Act of 1938, or subject to different minimum rates of pay under the two acts, authorizing appropriate rates of minimum wages (but without changing requirements concerning fringe benefits or supplementary cash payments in lieu thereof), applying procedures prescribed by the applicable regulations issued under the Fair Labor Standards Act of 1938 (29 CFR Parts 520, 521, 524, and 525).

(3) The Administrator will also withdraw, annul, or cancel such certificates in accordance with the regulations in 29 CFR Parts 525 and 528.

(r) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with a State Apprenticeship Agency which is recognized by the U.S. Department of Labor, or if no such recognized agency exists in a State, under a program registered with the Bureau of Apprenticeship and Training, Employment and Training Administration, U.S. Department of Labor. Any employee who is not registered as an apprentice in an approved program shall be paid the wage rate and fringe benefits contained in the applicable wage determination for the journeyman classification of work actually performed. The wage rates paid apprentices shall not be less than the wage rate for their level of progress set forth in the registered program, expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination. The allowable ratio of apprentices to journeymen employed on the contract work in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program.

(s) **Tips.** An employee engaged in an occupation in which the employee customarily and regularly receives more than \$30 a month in tips may have the amount of tips credited by the employer against the minimum wage required by section 2(a)(1) or section 2(b)(1) of the Act, in accordance with section 3(m) of the Fair Labor Standards Act and Regulations 29 CFR Part 531. However, that the amount of credit shall not exceed \$1.34 per hour beginning January 1, 1981. To use this provision -

(1) The employer must inform tipped employees about this tip credit allowance before the credit is utilized;

(2) The employees must be allowed to retain all tips (individually or through a pooling arrangement and regardless of whether the employer elects to take a credit for tips received);

(3) The employer must be able to show by records that the employee receives at least the applicable Service Contract Act minimum wage through the combination of direct wages and tip credit; and

(4) The use of such tip credit must have been permitted under any predecessor collective bargaining agreement applicable by virtue of section 4(c) of the Act.

(t) **Disputes Concerning Labor Standards.** The U.S. Department of Labor has set forth in 29 CFR Parts 4, 6, and 8 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

I.12 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (FAR 52.223-3)
(NOV 1991)--ALTERNATE I (NOV 1991)

(a) "Hazardous material," as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract.

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material [If none, insert *None*]
TO BE DETERMINED BASED ON FUTURE WORK ORDERS

Identification No.
TO BE DETERMINED

(c) The apparently successful offeror, by acceptance of the contract, certifies that the list in paragraph (b) of this clause is complete. This list must be updated during the performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required, prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the action manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause of the certification submitted under paragraph (c) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, state, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate, and disclose any data to which this clause is applicable. The purposes of this right are to (i) apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials; (ii) obtain medical treatment for those affected by the material; and (iii) have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) That the Government is not precluded from using similar or identical data acquired from other sources.

(i) Except as provided in paragraph (i)(2) the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSD's), meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in paragraph (b) of this clause.

(1) For items shipped to consignees, the Contractor shall include a copy of the MSDS with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to mail MSD's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.

(2) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSD's in or on each shipping container. If affixed to the outside of each container, the MSDS must be placed in a weather resistant envelope.

I.13 DRUG-FREE WORKPLACE (FAR 52.223-6) (JUL 1990)

(a) Definitions. As used in this clause,

"Controlled substance" means a controlled substance in Schedules I through V of Section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/Contractor that has no more than one employee including the offeror/Contractor.

(b) The Contractor, if other than an individual, shall - within 30 calendar days after award (unless a longer period is agreed to in writing for contracts of 30 calendar days or more performance duration); or as soon as possible for contracts of less than 30 calendar days performance duration -

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about -

- (i) The dangers of drug abuse in the workplace;
 - (ii) The Contractor's policy of maintaining a drug-free workplace;
 - (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
- (3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;
- (4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will -
- (i) Abide by the terms of the statement; and
 - (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
- (5) Notify the Contracting Officer in writing within 10 calendar days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
- (6) Within 30 calendar days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
- (i) Taking appropriate personnel action against such employee, up to and including termination; or
 - (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.
- (7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.
- (c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of this contract.
- (d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

I.14 PROMPT PAYMENT (FAR 52.232-25) (APR 1989)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. Definitions of pertinent terms are set forth in 32.902. All days referred to in this clause are calendar days, unless otherwise specified. The term "foreign vendor" means an incorporated concern not incorporated in the United States, or an unincorporated concern having its principal place of business outside the United States.

(a) Invoice Payments.

(1) For purposes of this clause, "invoice payment" means a Government disbursement of monies to a Contractor under a contract or other authorization for

supplies or services accepted by the Government. This includes payments for partial deliveries that have been accepted by the Government and final cost or fee payments where amounts owed have been settled between the Government and the Contractor.

(2) Except as indicated in subparagraph (a)(3) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(i) The 30th day after the designated billing office has received a proper invoice from the Contractor.

(ii) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement. However, if the designated billing office fails to annotate the invoice with the actual date of receipt, the invoice payment due date shall be deemed to be the 30th day after the date the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(3) The due date on contracts for meat and meat food products, contracts for perishable agricultural commodities, contracts for dairy products, edible fats or oils, and food products prepared from edible fats or oils, and contracts not requiring submission of an invoice shall be as follows:

(i) The due date for meat and meat food products, as defined in Section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)) and further defined in Pub. L. 98-181 to include any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, will be as close as possible to, but not later than, the 7th day after product delivery.

(ii) The due date for perishable agricultural commodities, as defined in Section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), will be as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(iii) The due date for dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, will be as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received.

(4) An invoice is the Contractor's bill or written request for payment under the contract for supplies delivered or services performed. An invoice shall be prepared and submitted to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(4)(i) through (a)(4)(viii) of this clause.

If the invoice does not comply with these requirements, then the Contractor will be notified of the defect within 7 days after receipt of the invoice at the designated billing office (3 days for meat and meat food products and 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils).

Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor in the manner described in subparagraph (a)(6) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date.

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number and mailing address of person to be notified in event of a defective invoice.

(viii) Any other information or documentation required by other requirements of the contract (such as evidence of shipment).

(5) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(5)(i) through (a)(5)(iii) of this clause are met, if applicable. An interest penalty shall not be paid on contracts awarded to foreign vendors outside the United States for work performed outside the United States.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(6) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority.

This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice payment amount and be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in paragraph (a)(4) of this clause, then the due date on the corrected invoice will be adjusted by subtracting the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties, if requested by the Contractor.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the

determination of an interest penalty shall be based on the actual date of acceptance.

The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat and meat food products and 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils).

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1.00 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(7) An interest penalty shall also be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(6) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(8) If this contract was awarded on or after October 1, 1989, a penalty amount, calculated in accordance with regulations issued by the Office of Management and Budget, shall be paid in addition to the interest penalty amount if the Contractor -

- (i) Is owed an interest penalty;
- (ii) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and
- (iii) Makes a written demand, not later than 40 days after the date the invoice amount is paid, that the agency pay such a penalty.

(b) Contract Financing Payments.

(1) For purposes of this clause, "contract financing payment" means a Government disbursement of monies to a Contractor under a contract clause or other authorization prior to acceptance of supplies or services by the Government. Contract financing payments include advance payments, progress payments based on cost under the clause at 52.232-16, Progress Payments, progress payments based on a percentage or stage of completion (32.102(e)(1)) other than those made under the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, or the clause at 52.232-10, Payments Under Fixed-Price Architect-Engineer Contracts, and interim payments on cost type contracts.

(2) For contracts that provide for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the 30th day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a

specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(3) For advance payments, loans, or other arrangements that do not involve recurrent submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(4) Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

I.15 BANKRUPTCY (FAR 52.242-13) (APR 1991)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

I.16 AUTHORIZED DEVIATIONS IN CLAUSES (FAR 52.252-6) (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any NASA/FAR Supplement (48 CFR Chapter 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

I.17 LIMITATION OF FUTURE CONTRACTING (NASA 18-52.209-71) (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of all prospective offerors is invited to FAR Subpart 9.5--Organizational Conflicts of Interest.

(b) The nature of this conflict is the potential requirement for the Contractor to provide substantial input into the design and/or development of experiments, instrumentation, or experiment platforms for use in atmospheric sciences research efforts, leading to the Government's procurement of these experiments, instrumentation, or experiment platforms. The Contractor shall advise the Contracting Officer of any perceived potential organizational conflict of interest in any Work Order prior to execution of that effort. Upon being so informed, or if the Contracting Officer independently identifies a potential organizational conflict of interest, the Contracting Officer shall determine which of the following is in the best interest of the Government and so advise the Contractor:

- (1) the Contractor shall perform as directed by the Work Order; or

(2) the Contractor shall not perform the Work Order, the Work Order shall be cancelled, and work identified in the Work Order shall be obtained by the Government from another source.

(c) The restrictions upon future contracting are as follows:

(1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to provide substantial input into the design and/or development of experiments, instrumentation, or experiment platforms, which are in turn used in specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract).

(2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

I.18 FINANCIAL REPORTING OF GOVERNMENT-OWNED/CONTRACTOR-HELD PROPERTY (NASA 18-52.245-73) (MAR 1989)

(a) The Contractor shall prepare and submit annually a NASA Form 1018, Report of Government-Owned/Contractor-Held Property, in accordance with 18-45.505-14 and the instructions on the form and in Section 18-45.7101 of the NASA FAR Supplement, except that the reporting of space hardware shall be required only as directed in clause 18-52.245-78, Space Hardware Reporting, if applicable.

(b) If administration of this contract has been delegated to the Department of Defense, the original and three copies of NASA Form 1018 shall be submitted through the DOD Property Administrator to the NASA office identified below. If the contract is administered by NASA, the forms shall be submitted directly to the following NASA office:

NASA, Langley Research Center
Attn: Industrial Property Office, M/S 377
Hampton, VA 23665-5225

(c) The annual reporting period shall be from July 1 of each year to June 30 of the following year.

(d) The Contractor agrees to insert the reporting requirement in all first-tier subcontracts, except that the requirement shall provide for the submission of the subcontractors' reports to the Contractor, not to the Government. The Contractor shall require the subcontractors' reports to be submitted in sufficient time to meet the reporting date in paragraph (c) above.

(e) The Contractor's report shall consist of a consolidation of the subcontractors' reports and the Contractor's own report.

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

SECTION J - LIST OF ATTACHMENTS

- Exhibit A Register of Wage Determination and Fringe Benefits, 78-1030,
 Rev. 21, September 18, 1991, 24 pages
- Exhibit B Contract Documentation Requirements, 7 pages
- Exhibit C List of Installation-Provided Government Property, 16 pages
- Exhibit D List of Government-Furnished Property, 3 pages
- Exhibit E Procedures for the Preparation and Approval of Contractor
 Reports for Langley Research Center, Form PROC./P-72,
 October 1991, 4 pages
- Exhibit F Subcontracting Plan, 18 pages

EXHIBIT A
REGISTER OF WAGE DETERMINATION
AND FRINGE BENEFITS

U.S. DEPARTMENT OF LABOR
 EMPLOYMENT STANDARDS ADMINISTRATION
 WAGE AND HOUR DIVISION
 WASHINGTON, D.C. 20210

REGISTER OF WAGE DETERMINATIONS UNDER
 THE SERVICE CONTRACT ACT
 By direction of the Secretary of Labor



Alan L. Moss Division of
 Director Wage Determinations

LOCALITY	State: Virginia
	Area: VA COUNTIES: HAMPTON

Wage Determination No.: 78-1030 (Rev. 21) Date: 09/18/1991

Minimum Hourly Wage	Fringe Benefit Payments		
	Health & Welfare	Vacation	Holiday

Class of Service Employees

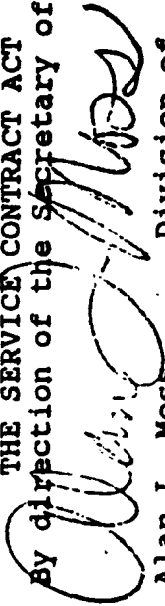
Employed on contracts for Administrative, Clerical, and Technical services at NASA Langley Research Center in the above locality:

1. Accounting Clerk I	\$	6.31			
2. Accounting Clerk II	\$	7.91			
3. Accounting Clerk III	\$	8.24			
4. Accounting Clerk IV	\$	9.99			
5. File Clerk I	\$	5.00			
6. File Clerk II	\$	5.54			
7. File Clerk III	\$	6.76			
8. Inventory Clerk	\$	5.23			
9. Messenger	\$	5.40			
10. Order Clerk I	\$	6.15			
11. Order Clerk II	\$	8.06			
12. Payroll Clerk	\$	7.28			
13. Receptionist	\$	5.91			
14. Secretary I	\$	7.25			
15. Secretary II	\$	8.38			
16. Secretary III	\$	8.92			
17. Secretary IV	\$	9.79			
18. Secretary V	\$	10.23			
19. Stenographer I	\$	7.34			
20. Stenographer II	\$	8.20			

U. S. DEPARTMENT OF LABOR
 EMPLOYMENT STANDARDS ADMINISTRATION
 WAGE AND HOUR DIVISION
 WASHINGTON, D.C. 20210

REGISTER OF WAGE DETERMINATIONS UNDER
 THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor



Alan L. Moss
 Director
 Division of
 Wage Determinations

LOCALITY	State: Virginia
	Area: VA COUNTIES: HAMPTON

Wage Determination No.: 78-1030 (Rev. 21) Date: 09/18/1991

Minimum Hourly Wage	Fringe Benefit Payments		
	Health & Welfare	Vacation	Holiday

Class of Service Employees

- 21. Switchboard Operator \$ 6.11
- 22. Switchboard Operator- Receptionist \$ 6.41
- 23. Typist I 6.20
- 24. Typist II 7.41
- 25. Word Processor I 6.21
- 26. Word Processor II 7.70
- 27. Computer Data Librarian 7.18
- 28. Computer Operator I 7.45
- 29. Computer Operator II 8.74
- 30. Computer Operator III 10.45
- 31. Computer Operator IV 12.01
- 32. Computer Programmer I 4/ 10.53
- 33. Computer Programmer II 4/ 13.02
- 34. Computer Programmer III 4/ 15.46
- 35. Computer Systems Analyst I 4/ 14.13
- 36. Computer Systems Analyst II 4/ 15.98
- 37. Computer Systems Analyst III 4/ 18.65
- 38. Key Entry Operator I 6.13
- 39. Key Entry Operator II 7.59
- 40. Peripheral Equipment Operator 6.96
- 41. Aircraft Mechanic 12.61
- 42. Aircraft Worker 11.52
- 43. Drafter I 6.82

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 Director Wage Determinations

LOCALITY
 State: Virginia
 Area: VA COUNTIES: HAMPTON

Wage Determination No.: 78-1030 (Rev. 21) Date: 09/18/1991

Class of Service Employees	Minimum Hourly Wage	Fringe Benefit Payments			
		Health & Welfare	Vacation	Holiday	Other
44. Drafter II	\$ 8.50				
45. Drafter III	\$ 10.36				
46. Drafter IV	\$ 12.99				
47. Drafter V	\$ 15.80				
48. Technician I	\$ 8.00				
49. Technician II	\$ 9.91				
50. Technician III	\$ 11.93				
51. Photo Lab Technician	\$ 7.75				
52. Emergency Medical Technician 4/	\$ 9.71				
53. Registered Industrial Nurse 4/	\$ 13.00				
54. A/C Sheetmetal Mechanic	\$ 12.61				

Fringe benefits applicable to all classes of service employees engaged in contract performance:

1/ 2/ 3/

- 1/ HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans: Employer contributions costing an average of \$2.07 per hour computed on the basis of all hours worked by service employees employed on the contract.
- 2/ VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years of service. Length of service includes the whole span of continuous service with the present (successor) contractor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 4.173)
- 3/ HOLIDAYS: 10 paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.)
- 4/ The term "Service employee" does not include any employee who qualifies as an executive, administrative, or professional employee as those terms are identified in Regulations, Part 541, issued under the Fair Labor Standards Act. (See CFR, Part 541).

NOTE: The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. A written report of the proposed conforming action, including information regarding the agreement or disagreement of the authorized representative of the employees involved or, where there is no authorized representative, the employees themselves, shall be submitted by the contractor to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work. The contracting officer shall review the proposed action and promptly submit a report of the action, together with the agencies' recommendation and all pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6 (b)(2) of Regulations 29 CFR 4)

UNIFORM ALLOWANCE: If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.80 a week (or 76 cents a day); and effective April 1, 1991, the note shall be \$4.25 per week (or \$.85 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

NOTE: The duties of employees under job titles listed are those described in the Service Contract Act Directory of Occupations, Second Edition, July 1986, unless otherwise indicated. See also 29 CFR Part 4 Section 4.152.

***** OCCUPATIONS NOT INCLUDED IN THE SCA DIRECTORY OF OCCUPATIONS *****

PHOTO LAB TECHNICIAN

The photo lab technician must be able to process and evaluate the quality of the exposed rolls of aerial film, annotate the film with required identifying numbers and letters, make and process contact prints from aerial film, and make to scale project photoindexes of the mosaicked strips of aerial photography by use of a copy camera.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupational workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping of occupational wage rates representing comparable job content. Because of this emphasis on comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

The titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual (SOC)*, issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. The BLS occupation, "Registered Industrial Nurse," for example, is limited to workers providing medical assistance and other related services (e.g., health education) to persons who are ill or become ill or suffer an injury in a factory or other establishment. The SOC occupation (code 29) includes a variety of registered nurses (e.g., school nurse, head nurse, general duty nurse, private duty nurse) that are excluded from the BLS description.

Thus, in comparing the results of this survey with other sources, factors such as differences in occupational definitions and survey scope should be taken into consideration.

Office

SECRETARY

Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

- a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;
- b. Stenographers not fully performing secretarial duties;
- c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank.
- d. Assistants or secretaries performing any kind of technical work, e.g., personnel, accounting, or legal

work;

- e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1 through LR-4.
- f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;
- g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;
- h. Trainees

Classification by level. Secretary jobs which meet the required characteristics are matched at one of five levels according to two factors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) level of the secretary's responsibility. The table following the explanations of these factors indicates the level of the secretary for each combination of factors.

Level of Secretary's Supervisor (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

- LS-1 Organizational structure is not complex and internal procedures and administrative controls are simple and informal; supervisor directs staff through face-to-face meetings.
- LS-2 Organizational structures is complex and is divided into subordinate groups that usually differ from each other as to subject matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are

formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definition. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor. The presence of subordinate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work, is placed in LS-1. In smaller organizations or industries such as retail trades, with relatively few organizational levels, the supervisor may have an impact on the policies and major programs of the entire organization, and may deal with important outside contacts as described in LS-3.

LS-3

Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments requiring constant attention to extensive formal coordination, clearances and procedural controls. Executive typically has: Financial decision making authority for assigned program(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Executive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship

between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at the level best describing their level of responsibility. When a position's duties span more than one I.R. level, the introductory paragraph at the beginning of each I.R. level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

I.R.-1

Carries out recurring office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and checks completed work for accuracy. Performs varied duties including or comparable to the following:

- a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters.
- b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms.
- c. Reviews materials prepared for supervisor's approvals for typographical accuracy and proper format.
- d. Maintains recurring internal reports, such as time and leave records, office equipment listings, correspondence controls, training plans, etc.
- e. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

I.R.-2

Handles differing situations, problems, and deviations in the work of the office according to the supervisor's general instructions, priorities, duties,

policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

- a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, and appropriate staff member, or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name.
- b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record and report on the proceedings.
- c. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed.
- d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff.
- e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

I.R.-3

Uses greater judgment and initiative to determine the approach or action to take in nonroutine situations. Interprets and adapts guidelines, including unwritten policies, precedents, and practices, which are not always completely applicable to changing situations. Duties include or are comparable to the following:

- a. Based on a knowledge of the supervisor's views,

composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval.

b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc., and informs supervisor on matters to be considered.

c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff.

d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general directions.

e. Advises secretaries in subordinate offices on new procedures, requests information needed from the subordinate offices for periodic or special conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.

I.R-4 Handles a wide variety of situations and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:

a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been

authorized.

b. Notes commitments made by executive during meetings and arranges for staff implementation. Own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschedules or refuses appointments or invitations.

c. Reads outgoing correspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems.

d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background office sources, draws attention to important parts or conflicts.

e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in a timely manner; decides whether executive should be notified of important or emergency matters.

Exclude secretaries performing any of the following duties: Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of

work in transactions with parties outside the organization. Prepares agenda for conferences; explains discussion topics to participants; drafts introduction and develops background information and prepares outlines for executive or staff members to use in writing speeches. Advises individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, members of Congress, presidents of national unions or large national or international firms, etc.) in unique situations. These officials may be relatively inaccessible, and each contact typically must be handled differently, using judgment and discretion.

Criteria for Matching Secretaries by Level

Level of Secretary's Supervisor	LR-1	LR-2	LR-3	LR-4
IS-1	1*	II	III	IV
IS-2	1*	III	IV	V
IS-3	1*	IV	V	V

* Regardless of IS Level

STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings. (If primary duty is transcribing from recordings, see Transcribing-machine typist.)

Excluded from this definition are:

- a. Trainee positions not requiring a fully qualified stenographer.
- b. Secretaries providing the principal secretarial support in an office and performing more responsible and discretionary tasks, as described in LR-1 through LR-4 in the secretary definition above.
- c. Stenographers who take dictation involving the frequent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary cannot be learned in a relatively short period of time, e.g., a month or two.
- d. Stenographers, such as shorthand reporters, who record material verbatim at hearings, conferences, or similar proceedings.

Stenographer I

Takes and transcribes dictation, receiving specific assignments along with detailed instructions on such requirements as form and presentation. The transcribed material is typically reviewed in rough draft, and the final transcription is reviewed for conformance with the rough draft. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedures and of the specific

business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions, reading and routing incoming mail, answering routine questions, etc.

TRANSCRIBING MACHINE TYPIST

Primary duty is to type copy of voice recorded dictation which does not involve varied technical or specialized vocabulary such as that used in legal briefs or reports on scientific research. May also type from written copy. May maintain files, keep simple records, or perform other relatively routine clerical tasks. (See Stenographer definition for workers involved with shorthand dictation.)

TYPIST

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously type items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Excluded from this definition is work that involves:

- a. Typing directly from spoken material that has been recorded on disks, cylinders, belts, tapes, or other similar media.
- b. The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing, and
- c. Familiarity with specialized terminology in various keyboard commands to manipulate or edit the recorded text to accomplish revisions, or to perform tasks such as

extracting and listing items from the text, or transmitting text to other terminals, or using "soft" commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or preformed paragraphs which can then be coded and stored for future use in letters or documents.

Typist I

Performs one or more of the following: Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs one or more of the following: Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

WORD PROCESSOR

Primary duty is to operate word processing equipment to enter, store, retrieve, change, and present text or tabulations. Produces a variety of printed copy such as letters, documents, or reports. May enter regularly used formats or stored paragraphs that are organized and coded for future use. Recorded texts can be changed by rearranging paragraphs, replacing words, shifting lines, etc.

(Word processing equipment typically has a full- or partial-page video display screen (CRT) and a separate printer. The equipment may be integrated with a digital computer, have

telecommunications capabilities, and also have capabilities for adding to or upgrading features. Automatic or electronic typewriters with limited text editing capabilities and often with single line electronic display "windows" are not considered word processing equipment.)

Excluded from this definition are:

- a. Workers whose primary function is to enter a data base for purposes other than composition (see key entry operator);
- b. Workers who use equipment and data base for purposes such as accounting, inventory control, sales, or original writing and editing;
- c. Workers responsible for preparation of published reports, including page layout or selection of different type sizes.

Positions are classified into levels on the basis of the following definitions:

Word Processor I

Performs tasks requiring a knowledge of the word processing equipment and familiarity with the formats and forms used in the establishment. Proficiency in grammar, spelling, and punctuation is also required to produce printed materials accurately. May refer problems to supervisor or higher level processor, or refer to operating manual.

Word Processor II

Work at this level requires considerable classroom or on-the-job training and may involve working directly with task originator rather than through supervisor. In addition to work assignments described for level I, duties include one or more of the following:

- a. Uses the more sophisticated features of the equipment to carry out complex assignments, such as sorting, merging, and organizing text, or maintaining files;

- b. Applies knowledge of specialized terminology or foreign language;
- c. Tests new applications and procedures; or
- d. Trains lower level processors.

FILE CLERK

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

MESSENGER

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

Excluded are positions which include any of the following as significant duties:

- a. Operating motor vehicles.
- b. Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items.
- c. Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room.
- d. Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or
- e. Directing other workers.

RECEPTIONIST

Greets visitors, determines nature of visits, and directs visitors to appropriate persons. Receptionist duties may also include providing formation, making appointments, answering a telephone (other than switchboard or console), keeping a log of visitors, and issuing visitor passes. May also perform typing or other routine clerical duties which may occupy a major portion of time, and are usually performed at the reception desk.

This classification excludes workers operating a telephone switchboard or console, performing guard duties, or performing more difficult clerical duties.

SWITCHBOARD OPERATOR

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming,

outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, may also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

At a single position telephone switchboard or console, acts both as an operator--see Switchboard operator--and as a receptionist. Receptionist's work involves such duties as greeting visitors, determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

INVENTORY CLERK

A person who keep periodic or perpetual records of the amount, kind, and value of merchandise, material, or stock on hand; makes an actual physical count of the stock items; compares inventories taken by other workers with office records, or check sales, equipment, shipping, production, purchases and stock records; checks clerical computations with physical count of stock, adjusting errors in computations or count; makes up inventory reports. May operate an adding machine.

ORDER CLERK

Receives written or verbal customer's purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and

customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgment of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. Exclude workers paid on a commission basis or whose duties include any of the following: Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Order Clerk I

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

Order Clerk II

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

ACCOUNTING CLERK

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and

verifying the clerical accuracy of various types of reports, lists, calculations, posting, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV require a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a

chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and research causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms

built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

PAYROLL CLERK

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves most of the following: Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions, editing payroll listings against source records; tracing and correcting errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

KEY ENTRY OPERATOR

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

Professional and Technical

COMPUTER SYSTEMS ANALYST, BUSINESS

Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifications needed to enable programmers to prepare required digital computer programs. Work involves most of the following: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (**NOTE:** Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

For wage study purposes, systems analysts are classified as follows:

Computer Systems Analyst I

Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programmers from information developed by the higher level analyst.

Computer Systems Analyst II

Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example, develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. OR

Works on a segment of a complex data processing scheme or system, as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

Computer Systems Analyst III

Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records and appropriate follow-up actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

May provide functional direction to lower level systems analysts who are assigned to assist.

COMPUTER PROGRAMMER, BUSINESS

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves most of the following. Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter involved to analyze charts and diagrams of the problem to be programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of

program development and revisions. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

Computer Programmer I

Makes practical applications of programming practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

Computer Programmer II

Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. OR

Works on complex programs (as described for level III) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks

under fairly close direction. May guide or instruct lower level programmers.

Computer Programmer III

Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and diverse data elements. A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

May provide functional direction to lower level programmers who are assigned to assist.

COMPUTER OPERATOR

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing (processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

- a. Studies operating instructions to determine equipment setup needed;
- b. Loads equipment with required items (tapes, cards, disks, paper, etc.)

- c. Switches necessary auxiliary equipment into system;
- d. Starts and operates computer.
- e. Responds to operating and computer output instructions;
- f. Reviews error messages and makes corrections during operation or refers problems;
- g. Maintains operating record.

May test run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operator, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operator remote terminals.

For wage study purposes, computer operators are classified as follows:

Computer Operator I

Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

Computer Operator II

In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select

from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

Computer Operator III

In addition to work assignments described for Computer Operator II (see above) the work of Computer Operator III involves at least one of the following:

- a. Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans;
- b. Tests new programs, applications, and procedures;
- c. Advises programmers and subject-matter experts on setup techniques;
- d. Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

PERIPHERAL EQUIPMENT OPERATOR

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk

units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

- a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy;
- b. Labeling tape reels, disks or card decks;
- c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives;
- d. Setting controls which regulate operation of the equipment;
- e. Observing panel lights for warnings and error indications and taking appropriate action;
- f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer Operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and return; inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

- a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
 - b. Illustrating work requiring artistic ability;
 - c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
 - d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
 - e. Supervisory work involving the management of a drafting program or the supervision of drafters.
- Positions are classified into levels on the basis of the following definitions.

Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spotchecked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts of equipment from sketches or marked-up prints. Selects

appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for

a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drafter and interpreted. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

TECHNICIAN

This classification includes various positions described as Electronics Technician, Instrument Technician, Mechanical Technician, Instrumentation Technician, Photo Lab Maintenance Technician, and Photo Optical Technician among others. Works on various types of electronic, optical, mechanical, instrumentation, motion picture and film processing, photo optical, and calibration equipment and related devices by performing on or a combination of the following: Installing, fabricating, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, testing, and operating work requires practical application of technical knowledge of related principles, ability to determine malfunctions and to resolve problems, and skills to maintain equipment in required operating condition.

Positions are classified into levels on the basis of the

following definitions.

Class I

Applies working technical knowledge to perform simple or routine tasks in working on various equipment following detailed instructions which cover virtually all procedures. This knowledge may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required from supervisor or higher level technician. Work is typically spot checked, but is given detailed review when new or advanced assignments are involved. (Assignments may include operational duties.)

Class II

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically can be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on various equipment.

Receives technical guidance, as required, from supervisor or higher level technician and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians. (Assignments may include operational duties.)

Class III

Applies advanced knowledge to solve unusually complex problems (i.e., those that typically cannot be solved solely by reference to manufacturers' manuals or similar documents) in working on various equipment.

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians. (Assignments may include operational duties.)

REGISTERED INDUSTRIAL NURSE

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve a combination of the following: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

EMERGENCY MEDICAL TECHNICIAN

Administers first aid treatment to sick or injured persons and transports them to a medical facility, working as member of emergency medical team. Responds to instructions from emergency medical dispatcher and drives specially equipped emergency vehicle to specified location. Monitors communication equipment to maintain contact with dispatcher. Removes or assists in removal of victims from scene of accident or catastrophe. Determines nature and extent of illness or injury, or magnitude of catastrophe, to establish first aid procedures to be followed or need for additional assistance, basing decisions on statements of persons involved, examination of victim or victims, and knowledge of emergency medical practice. Administers prescribed first aid treatment at site of emergency, or in specially-equipped vehicle, performing such activities as applications of splints, administration of oxygen or intravenous injections, treatment of minor wounds or abrasions, or administration of artificial resuscitation. Communicates with professional medical personnel at emergency treatment facility to obtain instructions regarding further treatment and to arrange

for reception of victims at treatment facility. Assists in removal of victims from vehicle and transfer of victims to treatment center. Assists treatment center admitting personnel to obtain and record information related to victim's vital statistics and circumstances of emergency. Maintains vehicles and medical and communication equipment and replenishes first aid equipment and supplies. May assist in controlling crowds, protecting valuables, or performing other duties at scene of catastrophe. May assist professional medical personnel in emergency treatment administered at medical facility.

PHOTO LABORATORY TECHNICIAN

Applies fundamental processes, methods and techniques in the processing and printing of black and white photographs and/or slides, or transparencies. Applies specific criteria and standard procedures in contact or projection printing, processing negatives and/or producing slides and transparencies by projection, contact, or other copying processes. Operates film processing machines and equipment according to established procedures. Work does not involve any special knowledge about the subject matter; does not involve producing of special effects, dodging and burning or other involving processes; and does not include color work. Carries out routine tasks without close supervision; however, may receive assignments, assistance and review of work designed to train and develop in film processing techniques. Performs routine set up and maintenance of equipment and prepares routine reports as required. High school graduate plus technical photographic processing training and 1 year experience in photographic laboratory work.

AIRCRAFT MECHANIC

Services, repairs, and overhauls aircraft and aircraft engines to insure airworthiness: Repairs, replaces, and assembles parts, such as wings, fuselage, tail assembly, landing gear, control cables, propeller assembly, and fuel and oil tanks, using tools, such as power shears, sheet metal breaker, arc and

acetylene welding equipment, rivet gun, and air or electric drills to rebuild or replace airframe or its components. Consults manufacturers' manuals and airline's maintenance manual for specifications and to determine feasibility of repair or replacement according to malfunction. Examines engines for cracked cylinders and oil leaks and listens to detect sounds of malfunctioning, such as sticking or burnt valves. Inspects turbine blades to detect cracks or breaks. Tests engine operation, using testing equipment, such as ignition analyzer, compression checker, distributor timer, and ammeter to locate source of malfunction. Replaces or repairs worn or damaged components, such as carburetors, superchargers, and magnetos using handtools, gauges and testing equipment. Removes engine from aircraft, using hoist or forklift truck. Disassembles and inspects parts for wear, warping, or other defects. Repairs or replaces defective engine parts and reassembles and installs engine in aircraft. Adjusts and repairs electrical wiring system and aircraft accessories and instruments. Inspects, services, and repairs pneumatic and hydraulic systems. Performs miscellaneous duties to service aircraft, including flushing crankcase, cleaning screens, greasing moving parts, and checking brakes. May be required to be licensed by Federal Aviation Administration. May service engines and airframe components at line station making repairs, short of overhaul, required to keep aircraft in safe operating condition.

AIRCRAFT WORKER

Makes repairs to aircraft following orders of higher grade worker. Removes, cleans, reinstalls, or replaces defective parts, accessories, and components such as worn gaskets, couplings, and fittings; bad actuators, accumulators, gauges, sections of corroded fuel and oil lines, worn cable pulleys, frayed spark plug cables, and burned-out landing lights, using handtools. Makes adjustments and settings such as cable tension and seat movement settings and adjustments. Obtains standard parts such as fuel and oil line connections and fittings, cable linkage,

and spark plug cables and harnesses by referring to parts manuals and by making comparisons with samples.

AIRCRAFT MECHANIC HELPER

Assists in assembling and installing parts and units by getting tools and supplies, carrying materials, and lifting and holding materials in place during operation. Cleans work areas, and keeps work benches clean and orderly, and tools and machines clean and lubricated.

EXHIBIT B
CONTRACT DOCUMENTATION REQUIREMENTS

EXHIBIT B - CONTRACT DOCUMENTATION REQUIREMENTS

I. DOCUMENTATION PREPARATION/SUBMISSION INSTRUCTIONS

A. Financial Management Reports--The Contractor shall comply with the Section I clause of this contract entitled "NASA Financial Management Reporting" by monthly submission of NASA Form 533M. The form shall be prepared and submitted in accordance with the instructions set forth on the reverse side of the form and NASA Handbook "Procedures for Contractor Reporting of Correlated Cost and Performance Data" (NHB 9501.2) as further definitized below.

1. Due not later than the tenth (10th) operating day following the close of the Contractor's accounting month being reported.

2. Columns 8.a. and b. shall be completed using estimates (forecasts) for the succeeding two (2) months.

3. Minimum reporting categories:

Hours

Direct Labor Hours
 Direct Overtime Hours
 Direct LOE Subcontract Hours
 Total Direct Hours
 Indirect Hours
 Total Hours

Costs

Total Level-of-Effort Subcontractor Costs (This cost line shall be supported by a separate 533 page for the Level-of-Effort Subcontractor using the hour and cost categories listed herein)

Costs

Direct Labor
 Direct Overtime Premium
 Indirect Labor
 Overhead
 ODCs:
 Non-Level-of-Effort Subcontracts
 Travel
 Training
 Material and Equipment
 Recruiting and Relocation
 Miscellaneous ODCs

G&A

Total
 Award Fee
 Cost-Plus-Award-Fee

A NASA Form 533M formatted as specified above shall be submitted for the total contract and for each work order. For distribution, only the Contract Specialist and COTR receive the work order breakouts; all others listed on distribution receive only the summary report.

4. Each summary 533M shall include a narrative explanation for variances exceeding 10 percent between planned hours and dollars and actual hours and dollars for each reporting category.

5. One (1) copy of each 533M report shall be put on a computer diskette compatible with a MacIntosh/Apple personal computer, and submitted concurrent with the regular 533M distribution.

B. Quarterly Financial Management Report--The Contractor shall submit a quarterly financial report detailed by categories specified in A.3. above on NASA Form 533Q at times and in accordance with the instructions contained on the reverse side of the form.

C. Award Fee Period Analysis--Within ten (10) working days after the conclusion of each award fee evaluation period, the Contractor shall submit an analysis of actual versus planned costs and hours for each of the categories described in the above Financial Management Reports section. This analysis shall be for the award fee evaluation period only, and shall consist of only total contract values (not for each work order). A narrative explanation for each significant variance shall also be included. The Contractor may also include a self-assessment of overall contract performance. Employee turnover figures should be included as well.

D. Management and Operations Plan--Within thirty (30) calendar days after contract award, the Contractor shall submit for the Contracting Officer's approval a comprehensive Management and Operations Plan containing, as a minimum, the following, which shall include plans for both the Prime and Level-of-Effort Subcontractor for each of these areas:

1. Continuing Staffing Plan--Detailed plans for maintaining competent staffing at each organizational level. These plans shall include the methods to be employed in accommodating fluctuating workloads, for backup arrangements to accommodate personnel absences, for personnel training, and for recruiting and staffing replacements and additional personnel. Include management policies which contribute to employee retention, morale and productivity, such as career development, fringe benefits, leave, salary, employee recognition, and recognizing and correcting morale problems.

2. Operations Plan--Plans for organizing, assigning resources, and performing each task area outlined in the Statement of Work; tracking and controlling the work; recognizing and reporting technical problems and schedule slippages and follow-up on reported problems. In addition, include a brief description of: the proposed method of controlling actual versus planned costs; procedures and policies for timekeeping including inclement weather situations, overtime, and any special leave; your purchasing practices and procedures; plans for selecting, monitoring and administering any proposed subcontract effort; and plans for maintaining operational status of Contractor-furnished Items and Government-furnished Equipment. The Contractor shall also detail his plans for complying with the Center's security requirements for unclassified automated information resources (see Section H), including the approach for insuring that files are purged or transferred and user codes are cancelled when personnel cease to be employed under this contract.

3. Contractor's Facility--Location, general description, and interior layout of the facility, including lease and/or purchase agreements, the method planned for maintaining full operational capability of the facility and its equipment.

4. Organization--An organization chart and narrative describing the proposed organization, Contractor/Level-of-Efforts Subcontractor/Government interfaces, lines of authority within the organization, and responsibilities and authority of the Key Personnel including a discussion of the proposed managerial authority, autonomy and relationship with the "home office", if applicable.

5. Financial Baseline Plan--A time-phased baseline plan, detailing by month how you plan to incur hours and costs for the period, shall be submitted for the total two (2) year contract initial period. A similar financial baseline plan for the total two (2) year period for each option period, detailed by month, shall be submitted within ten (10) days after the exercise of the option period. These plans shall include at least the categories described in paragraph A. above. The total estimated costs and levels of effort included in the baseline plans shall equal the contract values for each total contract period (base period, first option period, second option period, and third option period). The plan shall be updated as contract values change.

The Management and Operations Plan shall be updated as required during the contract performance by submission of revised pages for approval of the Contracting Officer.

E. Safety and Health Plan--Within thirty (30) calendar days after the effective date of the contract, the Contractor shall submit a detailed safety and health plan showing how the Contractor intends to protect the life, health, and well being of NASA and Contractor employees as well as property and equipment. This plan, as approved by the Contracting Officer, shall be in accordance with NASA FAR Supplement Clause 18-52.223-73 and should contain, as a minimum, the following:

1. Points of Contact and Responsibility - Organizational flow chart and description of responsibilities of each employee in your organization for safety.

2. Employee Safety Training, Certification and Programs - Detailed information on type of training required, parties responsible for certification, and outline of applicable regulations. Detail company programs which emphasize personal safety and motivate employees to be safety conscious.

3. LARC Safety Policies/Procedures - Recognition of applicable LARC safety policies and procedures such as Langley Handbook 1710.10, LARC Red Tag System.

4. Accident Investigation and Reporting - Procedures for investigating and reporting accidents/incidents including immediate notification to the NASA LARC Safety Manager of all injuries and damage to equipment or facilities, including off-site incidents occurring during the performance of this contract.

5. Hazardous Operations -

(a) Description of hazardous operations involved in contract performance.

(b) Plans for apprising employees of all hazards to which they may be exposed.

(c) Proper conditions and precautions for safe use and exposure to hazardous operations. Include recognition of LHB 1710.12, Potentially Hazardous Materials.

6. Equipment Inspection/Repair - Procedures for equipment safety inspection and repair.

7. Other Safety Considerations - Any other safety considerations unique to your operation.

F. Quarterly Accident/Injury Report--The Contractor shall submit a Quarterly Accident/Injury Report within ten (10) days after the end of each quarter.

G. Conformable Wage Rate Agreement--Within thirty (30) days after the effective date of the contract, the Contractor shall submit a report confirming conformable wage rate agreement as this subject is addressed in the Section I clause entitled "Service Contract Act of 1965," for those individuals employed by the Contractor who are covered by the Service Contract Act, but are not listed in Exhibit A.

H. Collective Bargaining Agreements--The Contractor shall provide the Contracting Officer with copies of any collective bargaining agreements, and amendments thereto, which arise during the course of the contract and which apply to Contractor employees assigned to the contract.

I. Report of Government-Owned/Contractor Held Property (NASA FORM 1018)--The Contractor shall submit the NASA Form 1018 no later than July 31 of each year in accordance with the Section I clause entitled "Financial Reporting of Government-owned/Contractor-held Property."

J. Documentation for Transferring Property to the Government

In accordance with the Installation-Provided Government Property clause of this contract, accountability for that property which is acquired for the Government under this contract shall be passed to the Government as using the following procedure:

1. Property Utilized in the Performance of this Contract at Langley Research Center. The transfer of accountability shall be initiated by the Contractor submitting a Requisition and Invoice/Shipping Document, DD Form 1149, accompanied by a copy of the Contractor's applicable purchasing document for the property. The Contractor shall insert both the Contractor's Subcontract/ Purchase Order number and the Government contract number of the DD Form 1149 under the

"Federal Stock Number, Description, and Coding of Material and/or Services" block. If the property is delivered to Langley Research Center, the DD 1149 and the supporting documentation must be submitted within 5 workdays after acceptance of the item by the Contractor. If the property is to be transferred from another location to Langley Research Center, the DD 1149 and other documents must be submitted prior to delivery of the property to the Government. Receipt by the Contractor of a copy of the DD 1149 signed by the Government relieves the Contractor of accountability for the property specified on that form.

2. Other Deliverable Property. For all other property specified as a deliverable under this contract, including property delivered under any work orders or task assignments issued under the contract, the Contractor shall submit a completed Material and Inspection and Receiving Report, DD Form 250, upon delivery.

K. Quarterly List of Contractor-Acquired Government Property (PROC. Form P-300) - Within 30 days after the end of each calendar-year quarter (that is, not later than January 30, April 30, July 30, and October 30), the Contractor shall submit on a P-300 (or in a format containing equivalent data) a list of equipment and materials (in lots as applicable) acquired during that quarter by the Contractor for the Government's account, including all property previously reported on DD Forms 1149, Requisition and Invoice/Shipping Document. Each item or lot shall be assigned a consecutive item number which shall remain assigned to the same item or lot throughout the life of the contract. If no equipment or materials were acquired during a quarter, the Contractor shall submit a negative report.

L. Subcontracting Reports--The Contractor shall submit Standard Form 294, Subcontracting Report for Individual Contracts, and Standard Form 295, Summary Subcontractor Report, in accordance with the instructions on the reverse of the form.

M. Report on NASA Subcontracts (NASA Form 667)--The Contractor shall submit this report in accordance with the instructions on the form.

N. Final Reports--Each work order may require the Contractor to submit a final report, either formal or informal, which documents and summarizes the results. When a formal final Contractor report is required, it shall be submitted in accordance with the instructions contained in Exhibit E, Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Form PROC./P-72. The specified number of approval copies shall be submitted within the time specified in the work order.

O. Annual Skill Mix and Wage Report--Within thirty (30) calendar days after the effective date of the contract and annually thereafter, the Contractor shall submit a skill mix and wage report to include the following: (1) employee name listed alphabetically; (2) current hourly labor rate; and company job title. Follow-up reports shall be submitted within thirty (30) calendar days following the end of each contract year to include the above information as well as the hourly labor rate and percentage of labor escalation (if any) from the previous report, and the amount of any bonuses received.

Company job titles different from the Government job titles specified in RFP 1-62-6200.0577 shall be cross referenced (unless new or additional) to the Government titles. Each report shall include an explanation for any labor escalation.

II. DOCUMENT DISTRIBUTION REQUIREMENTS--ALTERNATE I (LARC 52.210-96)
(JUN 1988)

A. Unless otherwise specified elsewhere in this contract, reports and other documentation shall be submitted F.O.B. destination as specified below, addressed as follows:

National Aeronautics and Space Administration
Langley Research Center
Attn: Robert P. Rhinehart, Mail Stop 401
Contract NAS1-19570
Hampton, VA 23665-5225

B. The following letter codes designate the recipients of reports and other documentation which are required to be delivered prepaid to Langley Research Center by the Contractor:

A--Contract Specialist, Mail Stop 126

B--Contracting Officer Technical Representative, Mail Stop 401

C--New Technology Representative, Mail Stop 200

D--Cost Accounting, Mail Stop 135

E--Safety Manager, Mail Stop 429

F--Industry Relations Office, Mail Stop 105

G--Programs and Resources Division, Mail Stop 104

H--Patent Counsel, Mail Stop 279

I--Industrial Property Office, Mail Stop 377

J--According to instructions on form

C. The following are the distribution requirements for reports and other documentation required with the numeral following the letter code specifying the number of copies to be provided:

<u>DOCUMENT</u>	<u>LETTER CODE AND DISTRIBUTION</u>
Financial Management Report (NASA Forms 533M and 533Q)	A-1, B-2, D-2, F-1, G-1

533M Diskette	B-1
Award Fee Period Analysis	A-1, B-1
Management and Operations Plan and Revisions	A-2, B-2
Safety and Health Plan	A-1, B-1, E-1
Quarterly Accident/Injury Report	A-1, B-1, E-1
Conformable Wage Rate Agreement	A-1, B-1, F-1
New Technology Report	A-1, B-1, C-1, H-1
Patent Rights Report	A-1, B-1, C-1, H-1
Collective Bargaining Agreement	A-1, B-1, F-1
Report of Government-Owned/Contractor Held Property (NASA Form 1018)	A-1, B-1, I-4
Documentation for Transferring Property to the Government	I-1
Subcontracting Report for Individual Contracts (Standard Form 294)	A-1, J
Summary Subcontractor Report (Standard Form 295)	J
Quarterly Listing of Contractor-Acquired Property (NASA Langley Form PROC./P-300)	A-1, I-1
Annual Skill Mix and Wage Report	A-1

D. When the Contract Administrator (A) is not designated above to receive a copy of a report or document, the Contractor shall furnish a copy of the report/document transmittal letter to the Contract Administrator. The Contractor shall also furnish a copy of the transmittal letter and a copy of each Financial Management Report to the delegated Administrative Contracting Officer of the cognizant DoD (or other agency) contract administrative services component.

EXHIBIT C

LIST OF INSTALLATION-PROVIDED GOVERNMENT PROPERTY

P C	ECH	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT ACQ DATE	BLOG ROOM	COST
1	6076381	DISPLAY UNIT COMPUADD	00608063 51086	L 80906C 90/08/06	1299T 605	379
1	6076384	COMPUTER, MICRO COMPUADD	0197536 A002(329S)	L 80906C 90/08/06	1299T 605	2,010
1	1089814	PRINTER, ADP QMS-INC	H0007999 PS410	NAS-1-18460 91/11/27	1299T 605	2,033
1	6076386	PRINTER, ADP PAMASONICS	61285 KX-PL124	L 80906C 90/08/06	1299 136	506
1	6078852	COMPUTER, MICRO MICROSERVE	8606265 386SX	L 84378C 90/10/18	1299 134	1,200
1	6078856	DISPLAY UNIT SAMSUNG ELECTRONICS	9009093665 SC431VII	L 84378C 90/10/30	1299 134	400
1	0021934	STAGE, ROTATION KLINGER EDUCATIONAL PRODUCTS	11684 354634	L 37450 91/11/22	1299 136	5,337
1	0139048	COMPUTER, MICRO COMPUTER DIRECT	E2K50YAT286 286	L 15092C 87/03/27	1202 108	1,593
1	0219734	COMPUTER, MICRO INTERNATIONAL-BUSINESS-MACHINE SYSTEM9000	5445795	L 922398 85/10/27	1299 130	3,300
1	0219737	DISPLAY UNIT AMDEK CORP	5096004 VIDE0300A	L 922398 85/10/27	1299 130	155
1	0281840	PRINTER, ADP INTERNATIONAL BUSINESS MACHINE	534678 FX80	L 83780B 85/04/15	1299 130	405
1	0281890	PRINTER, ADP COMPAQ COMPUTER CORP	066027 FX80	L 83787B 85/04/15	1299 134	405
1	0282907	EXPANSION UNIT MFP UNIDENTIFIED (VERIFIED)	NONE NONE	L 87935B 85/07/08	1299 134	605
1	0283530	MONITOR, TELEVISION, COLOR SEARS ROEBUCK AND CO	V4380900084 195-21353452	L 90454B 85/09/04	1299 134	347
1	0284034	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	072375 3154-001	L 91048B 85/09/12	1202 108	577
1	0284520	COMPUTER, MICRO MAY COMPUTERS CORP	NONE MEGA XT	L 92067B 85/10/08	1299 134	1,041
1	0848999	COMPUTER, MICRO NORTHGATE COMPUTER SYSTEMS INC-386	NONE	L 68774C 90/02/01	1299 136	4,424
1	0849002	DISPLAY UNIT NEC INFORMATION SYSTEMS INC	01K4693MJ JG1403HMA	L 68774C 90/02/01	1299 136	532
1	1086638	STAGE, ROTATION KLINGER SCIENTIFIC CORP	11004 UR80PP	L 96797C 91/06/21	1299 136	2,506
1	1089826	PROGRAMMER, PROM LOGICAL DEVICES INC	3522 ALLPRO88	L 6071D 91/11/21	1299 136	3,925
1	1091044	COMPUTER, MICRO APPLE COMPUTER INC	F120521Z724 5780	L 9131D 92/02/13	12500	3,000
1	1091075	COMPUTER, MICRO APPLE COMPUTER INC	F120444P724 5780	L 9131D 92/02/13	12500	3,000
1	1091076	COMPUTER, MICRO APPLE COMPUTER INC	F12051XK724 5780	L 9131D 92/02/13	12500	3,000
1	1091192	DISPLAY UNIT SUPER-MAC TECHNOLOGY	Y91110009 9T09792	L 9131D 92/02/13	12500	2,042

P C	ECN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT ACQ DATE	BLDG ROOM	COST
	0142260	PLOTTER, GRAPHICS HEWLETT-PACKARD CO	2631A56092 7550A	L 226240 1250T 87/07/31 120		2,313
L	0142483	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	4327335 XC14300	L 239150 1250T 87/08/14 0605		419
L	0142484	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	4318182 XC14300	L 239150 1250T 87/07/15 0605		419
L	0142485	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	4327378 XC14300	L 239150 1250T 87/08/14 0605		419
	0142486	PRINTER, ADP EPSON AMERICA INC	P0005135 P82PB(FX86E)	L 223100 1250T 87/08/14 605		305
	0142488	PRINTER, ADP EPSON AMERICA INC	P0025069 P13AA(FX286E)	L 223100 1250T 87/08/14 605		422
L	0142489	PRINTER, ADP EPSON AMERICA INC	P0025452 P12AA(FX286E)	NAS 5 28666 1250T 91/06/10 0605		422
L	0142490	DISK DRIVE UNIT, CARTRIDGE SYSGEN INC	28-10604 0URAPAK15/15	L 223100 1250T 87/08/14 0605		1,350
L	0142491	DISK DRIVE UNIT, CARTRIDGE SYSGEN INC	28-10663 0URAPAK15/15	L 223100 1250T 87/08/14 0605		1,350
L	0281158	PRINTER, ADP EPSON AMERICA INC	039304 FX190	L 829128 1250T 85/03/15 0605		231
	0284634	DISPLAY UNIT BASIC TIME INC	1251233A HR31 350	L 86080 1250T 86/09/26 605		742
	0533143	COMPUTER, MICRO PC'S LIMITED-SEE-DEL COMPUTERS 296	884356010298	L 92980 1250T 86/10/02 605		1,295
	0846963	MONITOR MITSUBISHI ELECTRIC CORP	904005268 X6-1429C	NAB92503R 1250T 89/09/07 605		380
	0846964	COMPUTER, MICRO AUSTIN SCIENCE ASSOCIATES INC	8949 886/20	NAB92503R 1250T 89/09/07 605		3,005
L	0846965	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	9040060521 XC1429C	NAS 5 28666 1250T 91/06/10 0605		422
L	0846966	COMPUTER, MICRO AUSTIN SCIENCE ASSOCIATES INC	8925 886/20	NAB92503R 1250T 89/09/07 0605		3,005
L	0849480	DISK DRIVE UNIT SHUGART ASSOCIATES	83519242 NONE	L 660760 1250T 90/01/16 0605		3,395
L	0848818	PRINTER, ADP EPSON AMERICA INC	0DN0024598 P82PB(FX850)	L 678610 1250 90/01/09 313		380
L	0848828	COMPUTER, MICRO COMPAQ COMPUTER CORP	4001HZEH0615 3520	L 678730 1250 90/01/10 313		2,311
L	0848829	DISPLAY UNIT COMPAQ COMPUTER CORP	944EF0308T0Y 419	L 678730 1250 90/01/10 313		181
L	1089774	DISPLAY UNIT CTX INTERNATIONAL INC	CE12800330 GV65432	L 59020 1250T 91/11/19 304		335
L	0076374	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	004003416 HL6905	L 741700 1250 90/08/06 142		3,307
L	0020681	CONTROLLER, CRATE, AUX KINETIC SYSTEMS CORP	0766 392221A	L 438730 1250 89/10/30 127		2,310
L	0020682	CONTROLLER, CRATE, AUX KINETIC SYSTEMS CORP	0771 392221A	L 438730 1250 89/10/30 127		2,310

P C	ECN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT ACQ DATE	BLOG ROOM	COST
	1-0258900	AMPLIFIER, DC, DIFFERENTIAL DSP TECHNOLOGY INC	351 1020	L 2680C 1250 86/05/28 127		1,250
	1-0353208	PRINTER, ADP ADVANCED COLOR TECHNOLOGY	3745 ACT-II	L 7423C 1250 86/10/14 127		514
	1-0398794	DIGITIZER, WAVEFORM TRANSIAC CORP	0139 2012	L 518998 1250 83/05/09 127		4,250
	1-0398795	DIGITIZER, WAVEFORM TRANSIAC CORP	145 2012	L 46462B 1250 84/03/23 127		5,900
	1-0398796	DIGITIZER, WAVEFORM TRANSIAC CORP	143 2012	L 442958 1250 84/02/21 127		5,900
	1-0398797	DIGITIZER, WAVEFORM TRANSIAC CORP	0140 2012	L 518998 1250 83/05/09 127		4,260
	1-0398798	DIGITIZER, WAVEFORM TRANSIAC CORP	0141 2012	L 552588 1250 83/09/30 127		4,260
	1-0403748	COMPUTER, MINI HOB SYSTEMS INC	014981 ML91 11/3951	L 576628 1250 83/10/13 124		7,644
	1-0404868	MONITOR, TELEVISION PANASONICS	41202291 WV5362	L 643448 1250 84/03/02 127		306
	1-0404869	MONITOR, TELEVISION PANASONICS	41202292 WV5362	L 643448 1250 84/03/02 127		306
	1-0465834	CONTROLLER, DATA ACQUISITION KINETIC SYSTEMS CORP	0292/12 3920	L 541098 1250 82/06/09 CAB		1,425
	1-0465838	DISK DRIVE UNIT GENERAL ELECTRIC-DATTEL DIV OF	48-649 480	L 417078 1250 82/09/29 124		3,731
	1-0533561	PRINTER, ADP ADVANCED COLOR TECHNOLOGY	2672 ACT II	L 759118 1250 84/11/13 127		5,440
	1-0549624	TERMINAL, DATA PROCESSING HATROX ELECTRONIC SYSTEMS LTD	396 ETH300AS	L 685988 1250 84/05/18 127		1,730
	1-0778416	SIGNAL AVERAGER, DIGITIZER DSP TECHNOLOGY INC	204 4100	L 6453C 1250 86/11/04 127		2,400
	1-0778417	SIGNAL AVERAGER, DIGITIZER DSP TECHNOLOGY INC	196 4100	L 6453C 1250 86/11/04 127		2,400
	1-0778418	SIGNAL AVERAGER, DIGITIZER DSP TECHNOLOGY INC	197 4100	L 6453C 1250 86/11/04 127		2,400
	1-0778419	SIGNAL AVERAGER, DIGITIZER DSP TECHNOLOGY INC	195 4100	L 6453C 1250 86/11/04 127		2,400
	1-0778420	SIGNAL AVERAGER, DIGITIZER DSP TECHNOLOGY INC	199 4100	L 6453C 1250 86/11/04 127		2,400
	1-0847941	PRINTER, ADP ADVANCED COLOR TECHNOLOGY	1116R ACT II	L 46230C 1250 88/11/01 127		750
	1-0848580	DISK DRIVE UNIT DYNA FIVE CORP	26603 EE100	L 65514C 1250 89/12/01 127		1,445
	1-0848581	DISK DRIVE UNIT DYNA FIVE CORP	26604 EE100	L 65514C 1250 89/12/01 127		1,445
	1-1009568	TAPE DRIVE UNIT CONTEMPORARY CYBERNETICS GROUP	91010756 CY8290P1F	L 87474C 1250 91/01/18 1240		5,395
	1-1086937	TAPE DRIVE UNIT CONTEMPORARY CYBERNETICS GROUP	91073068 CY8200	L 98173C 1250 91/07/12 1240		5,395
	1-1091924	CHASSIS, EXPANSION SIGMA INFORMATION SYSTEMS INC	2415 SA-H160	L 91010 1250 82/03/11 127		2,714
	1-1091471	CHASSIS, EXPANSION SIGMA INFORMATION SYSTEMS INC	2416 SA-H160	L 91010 1250 82/03/10 127		2,714

P	EQN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLOG	COST
G		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	1089010	COMPUTER, MICRO MICROSERVE	003762 386/20	NAS 1-18460 91/09/13	1250T 402	1,304
1	1089011	DISPLAY UNIT RELISYS (SUB TEGO ELEC & MACH)	01343207 REPE13	NAS 1-18460 91/09/13	1250T 402	305
1	1084455	DISK DRIVE UNIT ARTECON INC	5706 89V2971P1	L 90708C 91/03/11	1250A 101	5,795
1	1088028	COMPUTER, MINI SUN MICROSYSTEMS INC	124F4576 1478	L 90977C 91/09/05	1250A 101	14,846
1	1089030	DISPLAY UNIT SONY CORP	91250Y8907 90M19628	L 90977C 91/09/05	1250A 101	600
1	0846978	DISK DRIVE UNIT APPLE COMPUTER INC	F92100A K2680	L 54382C 89/07/13	1299 110	1,187
1	0847141	OPTICAL READER, DATA ENTRY HEWLETT-PACKARD CO	2812J17061 9195A	L 60570C 89/09/06	1299 110	1,140
1	0848545	COMPUTER, MICRO APPLE COMPUTER INC	F926408H M5650	L 66139C 89/11/28	1299 110	4,266
1	0848547	DISPLAY UNIT APPLE COMPUTER INC	5283064 M0401	L 66139C 89/11/28	1299 110	642
1	1089013	PRINTER, A8P QMS INC	H0007991 P6410	NAS 1 18460 91/11/27	1299 110	2,033

1	0021435	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91070-2	302 2012S 91/03/14			9,432. 1273 102
1	0021436	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91070-2	303 2012S 91/03/14			9,432. 1273 102
1	0021437	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91070-2	304 2012S 91/03/14			9,432. 1273 102
1	0021438	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91070-2	305 2012S 91/03/14			9,432. 1273 102
	0021508	CONTROLLER, CRATE DSP TECHNOLOGY INC NA91282-6S	8218 MAXIMA885 92/04/09			3,865. 1273 102
	0021509	CONTROLLER, CRATE DSP TECHNOLOGY INC NA91282-6S	8241 MAXIMA885 92/04/09			3,865. 1273 102
	0021510	CONTROLLER, CRATE DSP TECHNOLOGY INC NA91282-6S	1090 6002 92/04/09			1,584. 1273 102
	0021511	CONTROLLER, CRATE DSP TECHNOLOGY INC NA91282-6S	1144 6002 92/04/09			1,584. 1273 102
	0021512	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91282-6S	316 2012S 92/04/09			9,619. 1273 102
	0021513	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91282-7S	321 2012S 92/04/09			9,619. 1273 102
	0021514	RECORDER, TRANSIENT DSP TECHNOLOGY INC NA91282-6S	315 2012S 92/04/09			9,619. 1273 102

P	E C N		DESCRIPTION	COST	
C	NEW	OLD	MANUFACTURER	BLDG	ROOM
			ACQ DOCUMENT		

1	1084746	COMPUTER, MICRO	91021312	5,683.	
		INDUSTRIAL COMPUTER	7515-33H	1273	
		NA91070-2S	91/03/14	102	
1	1084747	PRINTER, ADP	2930A97329	952.	
		HEWLETT-PACKARD CO	3630A	1273	
		NA91070-2S	91/03/14	102	
1	1084748	DISPLAY UNIT	OYM12415	825.	
		NEC INFORMATION SYST	JC1404HMA1	1273	
		NA91070-2S	91/03/14	102	
1	1087024	DISK DRIVE UNIT	803441	4,550.	
		SONY CORP	SMD-5501-1	1273	
		L 98930C	91/07/26	102	
1	1088111	PRINTER, ADP	1120710981	2,784.	
		TEXAS INSTRUMENTS IN	XLPS17	1273	
		L 2230D	91/09/12	102	
1	1088894	CHASSIS, EXPANSION	617	2,823.	
		TEKTRONIX INC	638	1273	
		L 36490	91/10/16	102	
1	1089760	DISK DRIVE UNIT	139G0801	556.	
		SUN MICROSYSTEMS INC	411	1273	
		L 4898D	91/11/13	102	
1	1089761	COMPUTER, MINI	144F0107	12,086.	
		SUN MICROSYSTEMS INC	4/756X	1273	
		L 49120	91/11/13	102	
1	1089762	DISPLAY UNIT	3651112-01	3,900.	
		SUN MICROSYSTEMS INC	G0M1962B	1273	
		L 4898D	91/11/13	102	
1	1089850	DISPLAY UNIT	11200132	1,646.	
		AMAZING TECHNOLOGIES	KDM2066N	1273	
		L 49100	91/11/29	102	
1	1089983	CONTROLLER, ENCODER	617	3,490.	
		ORIEL CORP F-ORIEL	18011	1273	
		L 72560	91/12/04	102	

1	0140579	COMPUTER, MICRO	137051	L 19637C	1389	388
		COMPUARB	TUR8000	87/05/04	142	
	0142261	PLOTTER, GRAPHIC	2631A56096	L 32634C	1389T	2,413
		HEWLETT PACKARD CO	7550A	87/07/31	601	
1	0221799	DISPLAY UNIT	131100	L 87883B	1389	577
		INTERNATIONAL BUSINESS MACHINE	5154 001	86/03/18	142	
1	1009901	COMPUTER, MICRO	00814456	NA90332-3	1389T	2,885
		TRISTAR TECHNOLOGY INC	386/25	91/03/20	601	
1	1009902	DISPLAY UNIT	1309706411	NA90332-3	1389T	400
		MATSUSHITA ELEC INDUS CO	TX14H10PTK	91/03/20	T600	
1	1005862	PRINTER, ADP	0Y70006476	L 94665C	T600	649
		EPSON AMERICA INC	L9860	91/05/01	601	
1	1005993	COMPUTER, MICRO	227101	L 95625C	T600	5,830
		NORTHGATE COMPUTER SYSTEMS INC	386/33	91/06/19	601	
1	1005994	DISPLAY UNIT	140036236	L 95625C	T600	1,300
		NEC INFORMATION SYSTEMS INC	JG1601UMA	91/06/19	601	
1	0057572	DISPLAY UNIT	H800700470	L 43383C	1351	458
		STANDARD BRAND PRODUCTS	H8H4095N	88/08/30	102	
1	0060719	COMPUTER, MINI	A99000700P	L 50307C	1350A	8,373
		DIGITAL EQUIPMENT CORP	UG31V A2	88/03/22	102	

P C	EEN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT ACQ DATE	BLDG ROOM	COST
1	0055746	COMPUTER, MICRO APPLE COMPUTER INC	F0207UY M5000	L 38192C 88/06/02	1299 107	3,874
1	0056945	DISPLAY UNIT GOLDBSTAR ELECTRONICS INTL INC	90501883 MCH4175	L 41278C 88/07/25	1299 118	459
1	0100200	DISPLAY UNIT HITSUBISHI ELECTRIC CORP	3402452 XG14300	L 13046C 86/12/15	1299 118	449
1	0140577	COMPUTER, MICRO QUANTUM SCIENTIFIC	206377 AT	L 24673C 87/12/21	1299 118	1,930
1	0144013	CONTROLLER, DISK, OPTICAL JAMESB ELECTRONICS	NONE NONE	L 27700C 87/10/02	1299 118	2,304
1	0471309	CALCULATOR, ELEX, PRINT, PRGG HEWLETT PACKARD CO	1706A04795 HP97	L 49104A 77/11/07	1299 109	600
1	0647452	DISPLAY UNIT APPLE COMPUTER INC	PH930003A15 M1925	L 43194C 89/10/03	1299 109	1,418
1	0840773	MODEM, COMMUNICATIONS APPLE COMPUTER INC	NE093026G24 2400	L 66811C 70/01/02	1299 109	318
1	0200912	DISPLAY UNIT DIGITAL EQUIPMENT CORP	A844201WFC L6111/2	L 79177B 85/04/02	1250 NOC	1,934
1	0200917	DISPLAY UNIT DIGITAL EQUIPMENT CORP	Y4E047665 UR211A	L 79177B 85/02/22	1250T NOC	241
1	1006729	MODEM, COMMUNICATIONS PRACTICAL PERIPHERALS INC	101100510 PM2400SA	L 97076C 91/06/28	1250 NOC	182
1	0073674	DISPLAY UNIT RADIUS INC	0680005690 TP019	L 71123C 90/02/27	1250A 104	829
1	0073675	DISPLAY UNIT RADIUS INC	2013360 G0M1250	L 71123C 90/02/27	1250A 125	2,859
1	0074691	COMPUTER, MICRO APPLE COMPUTER INC	F94803FM5065 M5040	L 74556C 90/05/21	1250A 101	6,961
1	0074692	DISK DRIVE UNIT APPLE COMPUTER INC	F0140HZ M2950	L 74556C 90/05/21	1250A 101	593
1	0059267	PRINTER, ABP APPLE COMPUTER INC	F7520AA LASERWRITER M0190	L 39811C 88/01/19	1250A 101	3,799
1	0062022	COMPUTER, MICRO APPLE COMPUTER INC	F7126NW M5010	L 55919C 88/03/16	1250A 104	2,104
1	0062165	DISK DRIVE UNIT ROBINE INC	20009120 545+	L 55919C 89/05/20	1250A 104	794
	0049439	COMPOSING MACHINE MERLIN MACHINE CORP	JL910-15383 MERLIN EXPRESS ELITE	L 70576C 90/02/22	1250A 101	1,036
1	1006940	DISK DRIVE UNIT STORAGE DIMENSIONS INC	1501077-911 MAG1-1020S18	L 99042C 91/07/12	1250A 104	2,273
1	1090253	SCANNER UMAX-AMERICA	A1302430 UG630	L 72240 92/01/09	1250A 101	1,995
1	0075720	EMULATOR, MICROPROCESSOR B & G MICROSYSTEMS	NONE ROMEN/C	L 72214C 90/06/20	1299 142	495
1	0075721	EMULATOR, MICROPROCESSOR B & G MICROSYSTEMS	NONE ROMEN/C	L 72214C 90/06/20	1299 142	495
1	0075722	EMULATOR, MICROPROCESSOR B & G MICROSYSTEMS	NONE ROMEN/C	L 72214C 90/06/20	1299 142	495
1	0075723	EMULATOR, MICROPROCESSOR B & G MICROSYSTEMS	NONE ROMEN/C	L 72214C 90/06/20	1299 142	495

P	CON	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
6		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	6074400	SERVER, NETWORK EMULEX CORP	BAT6235 P3000	L 74970C 90/04/30	1250 141	1,930
1	6074555	RECORDER, HARD COPY TEKTRONIX INC	8041779 46930X	L 74949C 90/05/02	1250 141	9,885
1	6074600	DISK DRIVE UNIT SIGMA DESIGN	2894 SA H116	L 74951C 90/06/12	1250 141	4,550
1	6074679	TERMINAL, DATA PROCES, GRAPHIC GRAPH ON INC	031967 G0250	L 75149C 90/05/18	1250 141	1,800
1	6075244	DISK DRIVE UNIT TRIMARCHI INC	007127 BT2000FR	L 74952C 90/05/24	1250 141	6,745
1	6075513	RECORDER, HARD COPY TEKTRONIX INC	8041816 46930X	L 74949C 90/05/31	1250 141	9,885
1	6075529	COMPUTER, MICRO DIGITAL EQUIPMENT CORP	A801905F60 W542A 8W	L 75551C 90/04/04	1250 141	11,725
1	6075530	DISPLAY UNIT DIGITAL EQUIPMENT CORP	FF01429192 UR2990A	L 75551C 90/06/04	1250 141	5,000
1	6075531	DISK DRIVE UNIT, COMPACT DIGITAL EQUIPMENT CORP	SH93600201 RR8400A	L 75551C 90/06/04	1250 141	1,600
1	6077609	TERMINAL, DATA PROCESSING GRAPHON CORP	33294 G0407HR	L 75141C 90/05/11	1250 141	3,799
1	0053575	TERMINAL, DATA PROCESSING TEKTRONIX INC	8010174 4225	L 30322C 88/02/23	1250 140	7,236
1	0053576	DISPLAY, COMPUTER TEKTRONIX INC	2000374 119 2451 00(4225)	L 30322C 88/02/23	1250 140	6,000
1	0054316	TERMINAL, DATA PROCESSING GRAPH ON INC	020214 G0407	L 30529C 88/03/11	1250 141	4,892
1	0054329	TERMINAL, DATA PROCESSING GRAPH ON INC	020045 G0250	L 30300C 88/03/15	1250 141	1,795
1	0054393	PRINTER, ABP DIGITAL EQUIPMENT CORP	R167273 LN036 A2	L 32287C 88/03/17	1250 141	2,786
1	0055741	DISPLAY, COMPUTER XYTRON INC	3EN06413 MF147	L 37523C 88/04/02	1250 141	120
1	0055743	COMPUTER, MICRO NORTHGATE COMPUTER SYSTEMS INC	61203601 MINI20612	L 37523C 88/04/28	1250 141	1,899
1	0143288	TAPE DRIVE UNIT, MAGNETIC KENNEDY CO F KENNEDY C J	200 260 9610	L 23479C 87/09/09	1250 141	6,815
1	0143489	TERMINAL, DATA PROCESSING PERICOM	56628 HG600 000	L 21910C 87/09/17	1250 140	1,894
1	0143541	COMPUTER, MINI DIGITAL EQUIPMENT CORP	WF79614573 MISROVAX II600Q3F2	L 24186C 87/09/28	1250 141	26,920
1	0848267	DIGITIZER, VIDEO SAMMABATA	A5402 A1	L 57981C 89/07/03	1250 141	6,645
1	1084333	DISPLAY UNIT DIGITAL EQUIPMENT CORP	FF27109 VR2900A	L 91863C 91/03/14	1250 141	2,295
1	1089373	COMPUTER, MINI DIGITAL EQUIPMENT CORP	A802007HM4 V991V A2	L 59250 91/12/20	1250 140	24,510
1	1089374	EXPANDER, COMPUTER DIGITAL EQUIPMENT CORP	WF69209279 8A230A	L 59250 91/12/20	1250 140	750
1	1089739	DISK STORAGE UNIT HITACHI MFG CO	004644B 8K515678	L 58500 91/11/27	1250 104	3,050
1	1090177	TERMINAL, DATA PROCESSING DIGITAL EQUIPMENT CORP	TA92148640 VFS40A2	L 58590 91/12/30	1250 140	1,395

P E	EEN C	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT		BLOG ROOM	COST
				ACQ DATE			
1	0260160	TERMINAL, DATA PROCESSING PERIGOM	M25004 M0200 031	L	4238C	1250 223	1,895
1	0260162	PRINTER, ADP PERIGOM	K6000945 UP95	L	4238C	1250 223	2,995
1	0260163	MULTIPLEXER PERIGOM	NONE MPX1000	L	4238C	1250 223	895
1	0060664	MODEM HAYES INTERNATIONAL CORP	3316E3783 316EUS360V1	L	50200C	1250A NOC	409
1	0280906	BOX, POWER SUPPLY/CONTROLLER DIGITAL EQUIPMENT CORP	AD45000H51 V52100	L	79177B	1250A NOC	1,004
1	0281979	DISPLAY UNIT DIGITAL EQUIPMENT CORP	HK52660 VR201A	L	82296B	1250A NOC	241
1	1084292	DISK DRIVE UNIT/OPTICAL TRIMARCHI INC	600009 NONE	L	87959C	1250A 202	7,582
1	1084644	COMPUTER, MINI DIGITAL EQUIPMENT CORP	AB1100048Q PM068 8Y	L	90702C	1250A 202	16,274
1	1084645	DISPLAY UNIT DIGITAL EQUIPMENT CORP	I910213609 VRT19A	L	90702C	1250A 202	3,002
1	1086432	DISK DRIVE UNIT DIGITAL EQUIPMENT CORP	002611 RR0428A	L	1333D	1250A 202	786
1	0540692	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	53299905160 5160 87	L	48408B	1202 242	3,189
1	0058095	COMPUTER, MICRO APPLE COMPUTER INC	F03740T M5000	L	44633C	1250A 205	4,734
	0049617	WORK STATION, OFFICE CENTER CORE INC	NONE NONE	L	48928C	1250A 205	2,207
1	1070215	DISPLAY UNIT SONY CORP	5003753 68M1602	L	7264D	1250A 205	1,725
1	0055901	DISPLAY, COMPUTER GOLDBSTAR ELECTRONICS INTL INC	00402602 MCH4175	L	38195C	1299 139	349
1	0143570	COMPUTER, MICRO QUANTUS SCIENTIFIC	206365 AT	L	24673C	1299 139	1,930
1	0149727	PRINTER, ADP EPSON AMERICA INC	2019066 P02AA(FX06E)	L	37894C	1299 139	307
1	0054446	PRINTER, ADP EPSON AMERICA INC	03014567 FX286E	L	34662C	1250E 501	466
1	0054765	COMPUTER, MICRO PG'S LIMITED SEE DEL COMPUTERS 200	5011097	L	34661C	1250E 501	2,329
1	0054767	DISPLAY UNIT NEG INFORMATION SYSTEMS INC	83K10744 JG1402HMA	L	34661C	1250E 501	750
1	0077462	PRINTER, ADP APPLE COMPUTER INC	CA018K1Q M6000	L	81729C	12500 605	5,056
1	0079534	INTERFACE, PRINTER XYPLEX	39304 MX-MAX1400E	L	87289C	12500 605	1,895
1	1089496	DISPLAY UNIT NETWORKING COMPUTING DEVICES	15212599 17C	L	3642D	12500 129	1,005
1	1089497	TERMINAL, DATA PROCESSING NETWORKING COMPUTING DEVICES	1291C007560 NC017C	L	3642D	12500 129	2,170
1	1091034	DISPLAY UNIT SAMSUNG ELECTRONICS	11100762 CSA7571	L	10034D	12500	400

P	ECN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
C		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	0070527	DISK SUBSYSTEM TRIMARCHI INC	007644 0T2000FA	L 84239C 20/10/02	1250A 302	8,586
1	0070991	COMPUTER, MICRO SUN MICROSYSTEMS INC	034F1517 14704/45FGX0P3	L 84239C 20/10/24	1250A 302	10,866
1	0070995	DISPLAY UNIT SONY CORP	0060044 00M1604015	L 84239C 20/10/24	1250A 302	2,000
1	0079253	DISPLAY UNIT NEG ELECTRONICS USA INC	00N04023M JC1404HMA	L 85391C 20/11/08	1250 109	652
1	0079577	TRANSPORT TAPE, MAGNETIC OMEGA	0260450120 0144T	L 87140C 20/12/24	1250T 408	962
1	0079578	TRANSPORT TAPE, MAGNETIC OMEGA	0260450243 0144T	L 87140C 20/12/24	1250T 400	962
1	0079797	DISK DRIVE UNIT OMEGA	7751020100 0244X UNI	L 86787C 21/01/08	1250T 408	1,499
1	0052067	TAPE DRIVE, CARTRIDGE TECHAR INC	00710270010 0T60E	L 29140C 87/11/24	1250T 408	1,090
1	0059310	DISK DRIVE UNIT OMEGA	0117530132 02204	L 21240C 88/01/25	1250T 408	1,015
1	0055255	MODEM PRACTICAL PERIPHERALS INC	R006617 24008A	L 26789C 88/05/06	1250T 412	189
1	0060677	PLOTTER, GRAPHICS HEWLETT PACKARD CO	2539A90573 7440A	L 52058C 82/03/20	1250T 408	267
1	0060762	PRINTER, ABP HEWLETT PACKARD CO	2943A61934 33440A	L 52610C 82/03/27	1250 109	1,664
1	0137017	COMPUTER, MICRO COMPAQ COMPUTER CORP	1703A0200072 101710(286-2)	L 15272C 37/02/19	1250T 408	4,375
1	0141709	TAPE DRIVE, CARTRIDGE TECHAR INC	00706260013 0T60E	L 23816C 87/07/22	1250T 408	1,240
1	0143341	EXTENDER, OPTION HOLDER TECHAR INC	0704290020 011535	L 26619C 27/09/14	1250T 408	724
1	0046104	COMPUTER, MICRO SYSTEMS MFG TECHNOLOGY INC	NONE RM5100	L 52582C 82/07/17	1250 109	6,395
1	0046272	COMPUTER, MICRO SYSTEMS MFG TECHNOLOGY INC	01197 RM5100	L 54416C 82/07/07	1250 1248	6,395
1	1004903	COMPUTER, MICRO SUN MICROSYSTEMS INC	111F1960 47	L 89448C 21/04/03	1250T 408	7,396
1	1004904	DISPLAY UNIT SUN MICROSYSTEMS INC	2104CZ1105 00M16620	L 89448C 21/04/03	1250T 408	400
1	1005420	COMPUTER, MICRO BELL COMPUTER CORP F PG'S LTD	08PLU 0Y6220LT	L 95216C 21/05/14	1250T 408	3,940
1	1005421	DISK DRIVE UNIT BELL COMPUTER CORP F PG'S LTD	011300 PF01	L 95216C 21/05/14	1250T 408	327
1	1007000	PRINTER, ABP HEWLETT PACKARD CO	3112A51017 33449A(III)	L 007530 21/09/14	1250T 408	1,580
1	1004454	DISK DRIVE UNIT ARTECON INC	5905 09V2071P1	L 20708C 21/03/11	1250A 302	5,725
1	1000027	COMPUTER, MINI SUN MICROSYSTEMS INC	120F5572 1470	L 90977C 21/09/05	1250A 302	14,046
1	1000027	DISPLAY UNIT SONY CORP	21226Y0959 00M19620	L 90977C 21/09/05	1250A 302	600
1	1000032	DISK DRIVE UNIT SUN MICROSYSTEMS INC	13000040 411	L 90977C 21/09/05	1250A 302	796

P	EGN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLOG	COST
G		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	0070526	DISK SUBSYSTEM TRIMARCHI INC	007787 0T2000FA	L 84238C 90/10/02	1250A 201	8,586
1	0040400	DISPLAY UNIT SONY CORP	9284009 68M1404A15	L 42853C 99/11/08	1250A 201	2,960
1	1004409	PRINTER, ADP DATA PRODUCTS CO INC	602810 1260 1260 001	L 90459C 91/03/12	1250A 201	4,261
1	1008031	COMPUTER, MINI SUN MICROSYSTEMS INC	133F2116 1478	L 98977C 91/02/05	1250A 201	5,454
1	1091793	DISK DRIVE UNIT PINNACLE MICRO INC	6522 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091794	DISK DRIVE UNIT PINNACLE MICRO INC	6523 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091810	DISK DRIVE UNIT PINNACLE MICRO INC	6524 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091811	DISK DRIVE UNIT PINNACLE MICRO INC	6526 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091812	DISK DRIVE UNIT PINNACLE MICRO INC	6527 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091813	DISK DRIVE UNIT PINNACLE MICRO INC	6528 RE0 650	NAS 1 19448 92/03/25	1250A 201	2,867
1	1091814	DISK DRIVE UNIT SONY CORP	20061167 41160 ROM	NAS 1 19448 92/03/25	1250A 201	776
1	0060843	TRANSPORT, MAGNETIC TAPE APPLE COMPUTER INC	F84204P H2640	L 52595C 99/04/02	1250A 101	1,095
1	1086753	DISK DRIVE UNIT IMPRINIS TECHNOLOGY, INC.	30849 F300	L 92383C 91/07/01	1250A 101	1,599
1	1088941	COMPUTER, MICRO APPLE COMPUTER INC	F3125M39C41 H5525	L 98042C 91/07/12	1250A 101	5,648
1	1088942	DISPLAY UNIT SUPER MAC TECHNOLOGY	2001583 9T99750	L 98042C 91/07/12	1250A 101	2,730
1	1087376	TAPE DRIVE UNIT CONTEMPORARY CYBERNETICS GROUP	91001504 CY8500SUN	L 3270 91/08/13	1250A 104	7,390
1	1087377	TAPE DRIVE UNIT CONTEMPORARY CYBERNETICS GROUP	91001505 CY8500SUN	L 3270 91/08/13	1250A 104	5,390
1	1089034	CARTRIDGE, TAPE DRIVE PERIPHERAL LANG	29872 INFINITY40TUR80	NAS 1 19460 91/06/04	1250A 101	797
1	1090088	DISK DRIVE UNIT STORAGE DIMENSIONS INC	1501907 311 MAC1325518	L 65330 91/12/23	1250A 101	1,743
	0202825	RADIOMETER, SOLAR/FILTER WHEEL UNIVERSITY OF ARIZONA	8504000 NONE	L 821218 85/06/10	1202 102	490
1	1009012	DISPLAY, NETWORK STATION NETWORKING COMPUTING DEVICES	10201706 NG8158	NAS 1 19460 91/11/27	1250T	1,081
1	0076440	CONTROLLER, LASER ILX LIGHTWAVE CORP	904914 L809742	L 79588C 90/08/10	1202 143	2,980
1	0077403	RADIOMETER, PYROELECTRIC MOLECTRON CORP	1196 JP2900	L 81853C 90/08/30	1202 145	2,950
	0077989	CHILLER, WATER NEGLAB INSTRUMENTS INC	90HMS95500 1 HX75	L 79129C 90/08/27	1202 145	2,249
	0078122	BREADBOARD, OPTICAL TECHNICAL MFG CORP	98826 77 155 02	L 80600C 90/09/17	1202 145	2,290

P E	ECN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO	ACQ DOCUMENT ACQ DATE	BLOG ROOM	COST
1	0777986	CAMERA, STILL PICTURE KONICA CORP	240615 AUTO REFLEX35MM	0L79053 72/05/01	1250TA 401	155
1	1089455	ANALYZER, GAS LI COR INC F LAMBDA INSTR	1R02 152 LI6252	L 85000 92/01/16	1250TA 401	7,300
1	0141714	RADIOMETER, DATA RECORDING EXOTECH INC	1551 516	L 21329C 87/07/02	1275 116	4,785
1	0258475	RADIOMETER EXOTECH INC	3436 100A	NGG1-81-GR1 86/06/11	1275 116	2,602
1	0281439	DISPLAY UNIT AMOEK CORP	5045670 VIDE0310A	L 839908 95/04/12	NQC	143
1	0282257	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE SYSTEM9000	5544063	L 839928 95/05/14	NQC	2,799
1	0282399	PRINTER, ABP SIEMENS CORP	22741 PT80	L 839908 95/05/22	1250T 408	868
1	0282530	PLOTTER, GRAPHICS HEWLETT PACKARD CO	3300A90226 7470A	L 859978 95/06/07	1250TA 401	722
1	0283022	RADIOMETER LI COR INC F LAMBDA INSTR	QPP81906 0506 LI1058	L 869258 95/07/05	1275 116	1,970
1	0284880	BINGULARS NAVY ELECTR SUPPLY OFFICE	293031 MARK30	L777720 60/09/01	1250TA 401	112
1	0417013	TRANSMISSOMETER SYSTEM HYDR0 PRODUCTS INC	656412 9126	L 66934A 77/09/24	1276	2,415
1	0473796	SPECTRORADIOMETER UNITED DETECTOR TECHNOLOGY	14029 1100A	L 74778 80/05/02	1276	2,000
1	0473797	PHOTOMETER, SUBMARINE KAHL SCIENTIFIC INSTRUMENT CP	0075 368WA390	L 25058A 75/10/10	1276	5,560
1	0473801	RADIOMETER, PYROELECTRIC EXOTECH INC	3533 100AXHT	L 266528 81/07/02	1275 116	4,840
1	0473804	RADIOMETER, GROUND TRUTH EXOTECH INC	3420 100	MISC UFC 53 92/01/11	1275 116	2,385
1	0520066	OPTICAL VIEWING SYSTEM BAUSCH AND LOMB INC	NONE ZT4 53-05-04-03	L 94596 74/01/01	1250T 308	7,458
1	0520067	MICROSCOPE BAUSCH AND LOMB INC	15608F 07X3X	F05 92/11/23	1275 116	500
1	0520058	SPECTRORADIOMETER UNITED DETECTOR TECHNOLOGY	14507 1100A	NSTL 64 90/04/04	1203 TRL	1,495
1	0061685	PRINTER, ABP HEWLETT PACKARD CO	2914A01536 33440A	L 55548C 89/04/25	1250 201	1,664
1	1004492	PRINTER, ABP DATA PRODUCTS CO INC	832817 1260 1260-001	L 80452C 91/02/12	1250 201	4,261
1	1005176	COMPUTER, MINI TOTAL TEG SYSTEMS INC	004407 9105 MAGNUM3000M20	L 82652C 91/04/17	1250 201	13,431
1	1005177	DISPLAY UNIT TOTAL TEG SYSTEMS INC	0491790A178 16-00101	L 82652C 91/04/17	1250 201	400
1	1005178	DISK DRIVE UNIT TOTAL TEG SYSTEMS INC	4677 H2120	L 82652C 91/04/17	1250 201	3,000
1	1006209	DISK DRIVE UNIT TOTAL TEG SYSTEMS INC	5000 H2120	L 88044C 91/07/02	1250 201	4,915
1	1089008	CHROMATOGRAPH, GAS SRI INSTRUMENTS	936 8610-20	NAS-1 18460 91/11/26	1284C 102	5,995

P	ECN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
G		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	0059003	DISPLAY UNIT	5113554	L 48621C	1202	714
		APPLE COMPUTER INC	M0401	89/01/04	143	
1	0059004	DISK DRIVE UNIT	1652217	L 48621C	1202	285
		APPLE COMPUTER INC	A9M0110	89/01/04	143	
1	0059005	PRINTER, A8P	1652217	L 48621C	1202	424
		APPLE COMPUTER INC	A9M0320	89/01/04	143	
1	0060621	THERMOMETER, DIGITAL	429347	L 50164C	1202	1,819
		KEITHLEY INSTRUMENTS INC	740	89/02/17	145	
1	0061172	DISPLAY UNIT	104750	L 55219C	1202	120
		SONY CORP	55M910	89/05/09	108	
1	0062104	OSCILLOSCOPE	1531	L 52201C	1202	20,490
		LECROY CORP	2450	89/05/23	145	
1	0062105	PRINTER/PLOTTER	2509A91727	L 52201C	1202	1,392
		HEWLETT PACKARD CO	7440A	89/05/23	145	
1	0209206	PRINTER/PLOTTER	5232	L 71602B	1202	2,011
		ALLEN DATAGRAPH INC	2115MRU	85/01/24	145	
1	0420579	COUNTER, FREQUENCY	1012A01961	01P4219	1202	1,238
		HEWLETT PACKARD CO	5326A	73/06/01	145	
	0470900	SURFACE PLATE, GRANITE	6086	NS16397	1202	1,526
		OTTAWING A-CORP	49X96X14IN	66/02/01	145	
1	0472900	RADIOMETER, PYROELECTRIC	9521	L 92611A	1202	5,750
		LASER PRECISION CORP	RS9940	72/02/03	145	
1	0479046	MULTIMETER, DIGITAL	420	L 68374	1202	1,402
		FLUKE JOHN MFB CO INC	0290A	71/10/01	145	
1	0479994	GENERATOR, PULSE	1104572	L 84637	1202	1,262
		SYSTRON-DONNER F DATAPULSE DIV	110	66/05/01	145	
1	0053145	TABLE, OPTICAL	NONE	L 39345C	1202	5,075
		NEWPORT CORP	70557	82/08/16	145	
1	0057882	COMPUTER, MINI	F851576	L 48621C	1202	5,150
		APPLE COMPUTER INC	M5000	89/01/04	143	
1	0520451	COUNTER, FREQUENCY	3054	NS142	1202	4,187
		TSI INC F THERMO SYSTEMS INC	500LR	64/11/01	145	
1	0520756	AMPLIFIER, LOCK IN	094	REACT	1202	1,352
		PRINCETON APPLIED RESEARCH	J85	74/04/01	145	
1	0533416	SPECTROMETER	2965	L 71602B	1202	11,289
		SPEX INDUSTRIES INC	1702	84/12/19	145	
1	0533417	CONTROLLER, SPECTROMETER	0304	L 71602B	1202	2,116
		SPEX INDUSTRIES INC	082A	84/12/19	145	
1	1003572	COMPUTER, MICRO	F10510Q4740	L 89379C	1202	4,574
		APPLE COMPUTER INC	M578011G1	91/01/18	237	
1	1003579	DISPLAY UNIT	5401997	L 89379C	1202	654
		APPLE COMPUTER INC	M0401	91/01/18	237	
1	1003907	LASER BEAM PROFILER	00010	L 89366C	1202	9,495
		PHOTON INC	2100XY	91/02/20	237	
1	1003996	COMPUTER, MICRO	F1020363801	NA90332-45	1202	2,504
		APPLE COMPUTER INC	M5011	21/02/28	237	
1	1005009	CONTROLLER, TEMPERATURE	59101145	L 92040C	1202	2,755
		ILX LIGHTWAVE CORP	LOT59108	21/04/05	143	
1	1005010	CONTROLLER, TEMPERATURE	59101146	L 92040C	1202	2,755
		ILX LIGHTWAVE CORP	LOT59108	21/04/05	143	
1	1005600	POWER SUPPLY, HIGH VOLTAGE	01416	L 76118C	1202	1,654
		STANFORD RESEARCH SYSTEMS INC	RG350	91/05/20	145	

P	ECN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
C		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	0070706	INVERTER, POWER, STATIC MARATHON FLITE TRONICS CO	492 PC16U	L 84832C 90/10/10	1284C 100	1,355
1	0070707	INVERTER, POWER, STATIC MARATHON FLITE TRONICS CO	1011 PC16U	L 84832C 90/10/10	1284C 100	1,355
1	0021992	MULTIMETER, DIGITAL FLUKE JOHN HFG CO INC	52001263 89	L 95192C 91/04/30	1284C 100	173
1	0141011	TEST CHAMBER, ENVIRONMENTAL LAB LINE INSTRUMENTS INC	207 002 3550	L 20766C 97/06/05	1284C 101	1,349
	0141012	AUTOCLAVE MARKET FORGE CO	151221 STM E	L 20721C 87/05/29	1284C 101	1,250
1	0259055	DETECTOR, GAS SCINTREX INC	0603122 LMA3	L 974408 86/06/06	1284C 101	6,950
1	0404298	ANALYZER, GAS COLUMBIA SCIENTIFIC INDUSTRIES	11641 1600	L 603898 83/11/28	1284C 101	6,815
1	0416334	RECORDER, CHART, STRIP HONEYWELL INC AEROSPACE DIV	8804384041 193112	L 27074 68/12/01	1284C 101	2,127
	0464490	MICROSCOPE ZEISS CARL INC	4650386 47 15 89	L 52624 70/07/01	1284C 101	1,089
1	0048895	CHROMATOGRAPH, GAS SHIMADZU SCIENTIFIC INST., INC	270422YS 668A1T	L 60132C 90/01/19	1284C 100	8,601
1	0048897	PROCESSOR, DATA SHIMADZU SCIENTIFIC INST., INC	004306 CR601	L 60132C 90/01/19	1284C 100	1,692
1	1089092	ELECTROMETER SHIMADZU SCIENTIFIC INST., INC	NONE FID	L 60132C 90/01/19	1284C 100	1,381
1	1089676	ANALYZER, OZONE SCINTREX INC	9106010 871010	U 17728 91/11/04	1284C 100	14,870
	1091193	DISPLAY UNIT SUPER-MAC TECHNOLOGY	-Y911110222 ST09782	L 91310 92/02/13	12500	2,042
	1091470	DISPLAY UNIT RADIUS INC	UTA203A10071 0950	L 91310 92/03/06	12500	2,815
	0056366	DISK DRIVE UNIT OPTOTECH INC	21383-5 5984	L 34223C 88/07/14	1250T 0	2,355
	0062385	MODEM RACAL-MILGO INFO SYS-F-MILGO	ABZ6001 RM3276	L 57319C 89/06/08	1250T 0605	1,122
1	0141868	COMPUTER, MICRO QIC RESEARCH INC	508795 XT-TUR80	L 22296C 87/07/10	1250T 0605	410
1	0141869	COMPUTER, MICRO QIC RESEARCH INC	508832 XT-TUR80	L 22296C 87/07/10	1250T 0605	410
1	0141870	COMPUTER, MICRO QIC RESEARCH INC	508839 XT-TUR80	L 22296C 87/07/10	1250T 0605	410
1	1000337	COMPUTER, MINI SUN MICROSYSTEMS INC	125F0082 14784/75GX16P40	L 22060 91/09/20	1250A 201	11,694
1	1000338	DISPLAY UNIT SONY CORP	91316Y3362 98M19628	L 22060 91/09/20	1250A 201	3,900
1	1087807	RECORDER, CHART, STRIP COLE PARMER INSTRUMENT CO	P2710 LM29	NAB 1 18460 91/11/26	1284C 100	1,060

Q	EEN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
C		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	0021387	RECORDER, TRANSIENT	317	L 90089C	1250	2,419
		DSP-TECHNOLOGY INC	20125	21/04/25	1240	
1	0021388	RECORDER, TRANSIENT	318	L 90089C	1250	2,419
		DSP-TECHNOLOGY INC	20125	21/04/25	1240	
1	0021391	RECORDER, TRANSIENT	163	L 90117C	1250	4,134
		DSP-TECHNOLOGY INC	20205	21/04/25	127	
1	0060204	PRINTER, ADP	020045069	L 47548C	1250	555
		EPSON-AMERICA INC	P88MA(LR850)	89/02/10	127	
1	0143812	COMPUTER, MINT	WF73111687	L 25903C	1250	3,238
		DIGITAL EQUIPMENT CORP	VS21U-L2	87/10/13	142	
1	0143815	DISPLAY UNIT	A871305056	L 25903C	1250	5,000
		DIGITAL EQUIPMENT CORP	VR260AA	87/10/13	142	
1	0257487	PRINTER, ADP	0725	L 4259C	1250	5,140
		ADVANCED-COLOR-TECHNOLOGY	ACT-II	86/08/29	127	
1	1085099	PRINTER, ADP	0Y70006447	L 91132C	1250T	569
		EPSON-AMERICA INC	P74FB(LR860)	91/04/12	301	
1	0139767	BOX, POWER SUPPLY/CONTROLLER	A862300CN7	L 16463C	1250A	1,152
		DIGITAL EQUIPMENT CORP	V92408	87/03/30	101	
1	0258692	TERMINAL, DATA PROCESSING	8029991	L 2135C	1250A	5,286
		TEKTRONIX INC	4107A	86/05/07	101	
1	0280909	DISPLAY UNIT	HK51687	L 79177B	1250A	241
		DIGITAL EQUIPMENT CORP	VR201A	85/02/22	101	
1	0282728	DISPLAY UNIT	HK17643	L 87840B	1250A	300
		DIGITAL EQUIPMENT CORP	VR201B	85/06/26	NOC	
1	0283203	BOX, POWER SUPPLY/CONTROLLER	A85090210	L 88937B	1250A	457
		DIGITAL EQUIPMENT CORP	V92408	85/07/25	NOC	
1	0060714	DISPLAY UNIT	A899501VH0	L 50307C	1250A	7,000
		DIGITAL EQUIPMENT CORP	VR260AA	89/03/23	102	
1	0143476	COMPUTER, MICRO	26652	L 26642C	1251	1,844
		PE'S LIMITED SEE DEL COMPUTERS	20600L	87/09/23	107	
1	1004424	DISK DRIVE UNIT	5744	L 81553C	1250T	2,755
		ARTECON INC	85U1-371	91/03/06	305	
1	1004506	PRINTER, ADP	3048A66094	L 91551C	1250T	1,514
		HEWLETT-PACKARD CO	33449A	91/03/12	305	
1	1004995	COMPUTER, MICRO	111F1516	L 92262C	1250T	15,396
		SUN MICROSYSTEMS INC	14714758X16P48	91/04/03	305	
1	1004986	DISPLAY UNIT	9109CY2291	L 92262C	1250T	400
		SUN MICROSYSTEMS INC	60M19428	91/04/03	305	
1	1008818	DISK DRIVE UNIT	33282	L 50290	1250T	2,799
		TOTAL TECH SYSTEMS INC	05PE113	91/10/18	305	
1	0077495	ANALYZER, LOGIC	3002A05774	L 81581C	1299	16,821
		HEWLETT-PACKARD CO	16500A	90/09/06	142	
1	0077705	PROGRAMMER, PROM	3004	L 82173C	1299	3,854
		LOGICAL DEVICES INC	ALLPROM	90/09/18	142	
1	0204002	COMPUTER, MICRO	216197	L 91048B	1299	4,950
		INTERNATIONAL BUSINESS MACHINE	5170-099	85/09/12	142	
1	1000798	TERMINAL, DATA PROCESSING	TA4953139	L 88954C	1299	332
		DIGITAL EQUIPMENT CORP	UT420C2	91/02/07	142	

P	CON	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLDG	COST
C		MANUFACTURER	MODEL NO	ACQ DATE	ROOM	
1	1090385	PRINTER, ADP OKIBATA CORP	103A1004441 9L840EN2560A	L 92/02/05	1250 140	1,784
1	1090814	PRINTER, ADP LEXMARK INTERNATIONAL INC	111154685 4028-030	L 92/02/28	1250 140	2,574
1	1091211	DISK SYSTEM U S DESIGN CORP	0200753 061000(07-1405-02)	L 92/03/05	1250 140	6,125
1	1091213	DISK SYSTEM	0200752 061000(07-1405-01)	L 92/03/05	1250 140	9,925
1	1091035	COMPUTER, MICRO MICROSERVE	NONE 486	L 92/03/05	100340 12500	4,548.
1	1009564	MULTIMETER, DIGITAL FLUKE JOHN MFG CO INC	51750647 75	L 91/01/17	88479C 1299 137	125
1	0144003	PRINTER/PLOTTER MITSUBISHI ELECTRIC CORP	M61245 6650-10	L 87/10/27	26959C 1250 141	5,900
1	1004227	DISK DRIVE UNIT SIGMA INFORMATION SYSTEMS INC	9102003 6AH116/2	L 91/04/02	89450C 1250T 141	5,575
1	1005297	DISK DRIVE UNIT UNIBATA CORPORATION	NONE H2972	L 91/04/26	94137C 1250 141	4,575
1	1000571	ENCLOSURE, DISK DRIVE UNIT AVIV CORP	9109029 0T10	L 91/09/18	32470 1250 141	6,355
1	0021023	CONTROLLER, LASER ILX LIGHTWAVE CORP	37221337 L063722	L 92/01/14	84530 1250 143	5,150
1	0054586	PRINTER, ADP EPSON AMERICA INC	8013407 P99MA (LQ950)	L 88/03/30	35349C 1250 127	519
1	0139205	PLOTTER, GRAPHICS HEWLETT-PACKARD CO	2539A04431 7440A	L 87/03/06	14386C 1275 112	971
1	0259461	MULTIMETER, DIGITAL FLUKE JOHN MFG CO INC	NONE 9013A	L 86/07/24	5914C 1275 112	359
1	0465963	MONITOR, TELEVISION TELEX COMPUTER PRODUCTS INC	PMM911-053 PMM911	L 78/03/21	74191A 1275 112	539
1	0479192	SYNTHESIZER, FREQUENCY REAL TIME SYSTEMS INC	118 NONE	L 76/09/23	43164A 1250 127	5,519
1	0020400	CAMERA, TELEVISION SANYO ELECTRIC CO LTD	84750787 V809024F	L 89/05/08	55219C 1202 145	620
1	0021267	ISOLATOR, OPTICAL OPTICS FOR RESEARCH	NONE I04-1R-Z	L 91/01/17	02885C 1202 237	3,490
1	0021268	ISOLATOR, OPTICAL OPTICS FOR RESEARCH	NONE I04-1R-Z	L 91/01/17	02885C 1202 237	3,490
1	0021270	ISOLATOR, OPTICAL OPTICS FOR RESEARCH	NONE I04-1R-Z	L 91/01/17	02885C 1202 237	2,130
1	0054387	LASER, HELIUM-NEON PHS INSTRUMENT CO	1288-05 L3RR0200	L 88/03/30	34472C 1202 145	500
1	0054390	LASER, HELIUM-NEON PHS INSTRUMENT CO	1288-06 L3RR0200	L 88/04/25	34472C 1202 145	500
1	0056333	MONOCHROMATOR PHOTON TECHNOLOGY	86-170 01002X	L 88/07/13	40861C 1202 145	2,260

P	ECN	DESCRIPTION	SERIAL NO	ACQ DOCUMENT	BLOG	COST
				ACQ DATE	ROOM	
1	1085956	GENERATOR, PULSE	1021	L 96319C	1202	7,750
		ELECTRO-OPTICAL INDUSTRIES INC	9025	91/06/21	145	
	1086418	SOURCE, CURRENT	903804	NASL-18460	1202	2,543
		ILX LIGHTWAVE CORP	L9X3620	91/08/20	128	
	0021576	CONTROLLER, CRATE	1017			1,426.
		DSP TECHNOLOGY INC	6002			1273
		NA90332-2S	91/05/17			102
1	0021859	ENCOOER	NONE			1,052.
		Oriel Corp F-Oriel	13048			1273
		L 135160	92/03/23			102
	0801294	RECORDER, TRANSIENT	322			9,619.
		DSP TECHNOLOGY INC	2012S			1273
		NA91282-7S	92/04/09			102
1	0847578	COMPUTER, MICRO	310031755			5,889.
		PC'S LIMITED SEE DEL	310			1273
		L 62451C	89/10/10			102
1	0847579	DISPLAY UNIT	90816095			400.
		PC'S LIMITED SEE DEL	VC2			1273
		L 62451C	89/10/10			102
	1084096	CONTROLLER, CRATE	8129			3,347.
		DSP TECHNOLOGY INC	MAXIMAB85			1273
		NA90332-2S	91/05/17			102

EXHIBIT D
LIST OF GOVERNMENT FURNISHED PROPERTY

ITEM	MFG	MODEL	COST	RECDATE	SERIAL NO.	ECH
386/SX COMPUTER W/101 KEYBOARD	EVEREX	386/SX	\$1,410.00	04-10-90	68105769	
14" VGA MONITOR	SAMTRON	SC-431V11	\$365.00	04-10-90	9002073532	
PROJECTOR	ARTOGRAPH	AG 100	\$167.95	08-11-89	89-3	
3 BUTTON MOUSE	MOUSE SYSTEMS	NONE	\$59.86	11-12-91	91220661	
STATUS ACTIVITY MONITOR	BLACK BOX	T5010B	\$229.00	06-07-89	8903	
EXTERNAL 2400 BAUD MODEM W/CAB	HAYES	07-00056	\$442.00	04-05-88	H283001731	
19" NEC MULTISYNC MONITOR	NEC	JC-2001VMA	\$2,099.00	09-21-89	92C002534	
NEC MULTISYNC II MONITOR	NEC	JC-1403HMA	\$483.00	06-30-89	92L06709M	
386/20 COMPUTER W/KEYBOARD	EVEREX	386/20	\$3,270.00	06-30-89	25G0392423188	
HP LASERJET SERIES II PRINTER	HEWLETT-PACKARD	SERIES II	\$1,895.00	09-30-88	FLA14266	
LAPTOP COMPUTER	ZENITH	20	\$1,984.00	07-09-90	1351013432	
XEROX MEMORYWRITER	XEROX	6016	\$618.64	09-29-88	88512	
VGA COLOR MONITOR	AMAZING	CM-8484EX	\$305.00	04-15-91	A2008518	
PORTABLE INJET PRINTER	KODAK	DICOMIX 150+	\$355.00	05-18-90	PK801Z1234	
CALCULATOR	CANON	MP12D	\$47.00	03-22-91	2A37081	
386/SX/20 COMPUTER W/101 KEYBOARD	MICROSERVE	386/SX/20	\$1,304.00	04-15-91	681161170	
LATERAL FILE	ANDERSON	ANDL-536-1	\$678.00	04-13-89	NONE	
PORTABLE PRINTER W/CASE	CANON	BJ-10E	\$325.00	08-19-91	PBB39270	
PORTABLE PRINTER W/CASE	CANON	BJ-10E	\$325.00	07-16-91	P8B37889	
14" COLOR MONITOR	SAMTRON	SC-452C	\$213.00	05-18-90	8911070425	
NAMETAG HOLDER CASE	PC/NAMETAG	NONE	\$39.00	05-28-91	NONE	
DOT MATRIX PRINTER	NEC	P7	\$850.00	02-23-88	581236288	
386/SX/20 COMPUTER W/101 KEYBOARD	MICROSERVE	386/SX/20	\$1,304.00	04-15-91	68116162	
INKJET FAX MACHINE	PANASONIC	UF300	\$1,399.00	09-27-91	351080161	
AUTO SWITCH BOX	BELKIN	C-3978	\$147.00	08-08-91	C3978	
VGA COLOR MONITOR	QUME	QM835	\$305.00	04-15-91	MA6109705	
CALCULATOR	TEXAS INSTRU.	T1-5033	\$42.00	06-09-88	0028690	
CALCULATOR	CANON	MP12D	\$47.00	03-22-91	2A28977	
SHIPPING CONTAINER-LASERWRITER PNTR	LINEBACKER	F0202	\$235.00	01-08-90	NONE	
MICROCASSETTE RECORDER	PANASONIC	RH-125	\$73.14	09-27-88	8FBNA10209	
SHIPPING CONTAINER (MACII)	LINEBACKER	F1133	\$299.00	01-08-90	NONE	
FILE CABINET	HASKELL	HLF3652	\$648.00	11-03-88	NONE	
HP SCANNER	HEWLETT PACKARD	SCANJET PLUS	\$999.00	10-15-90	2812J58548	
MAC II PERSONAL COMPUTER/KEYBOARD	APPLE	M5333	\$3,365.00	10-24-89	F847E78	
386/20 COMPUTER W/KEYBOARD	EVEREX	EX02802A00	\$3,170.00	11-17-89	25G03-942-22081	
386/20 COMPUTER W/NEC MON/KEY	EVEREX	EX02802A00+	\$6,135.00	12-29-88	25E0683913103	
NEC MULTISYNC 2A MONITOR	NEC	JC-1403HMA	\$483.00	10-13-89	98K126522	
HP LASERJET SERIES II PRINTER	HEWLETT-PACKARD	SERIES II	\$1,895.00	11-01-88	F6069773	
386/20 COMPUTER W/KEYBOARD	EVEREX	EX02802A00	\$3,270.00	10-13-89	25G03-931-12469	
386/20 COMPUTER W/REC MON/KEY	EVEREX	EX02802A00+	\$6,135.00	11-30-88	25E0684521440	

APPLE	M6000	10-24-89	CAB-63XL
LASER WRITER II PRINTER	JC-1403HMA	11-17-89	9XL20074H
NEC MULTISYNC ZA MONITOR	JC-1403HMA	10-13-89	99M4693BZ
NEC MULTISYNC ZA MONITOR	EX02802A00+	11-30-88	25E0684521427
386/20 COMPUTER W/NEC MON/KEY	EX02802A00	10-13-89	25G0393011107
386/20 COMPUTER W/KEYBOARD	MA2565	11-16-88	821004633
SAMSUNG MONITOR	VERS. 1.0	10-29-91	108574
PV-WAVE MAG SOFTWARE DOCUMENT.	EX0-2802A	11-30-88	25E0684521418
386/20 COMPUTER W/NEC MON/KEY	JC-1403HMA	10-13-89	98M118082
NEC MULTISYNC ZA MONITOR	STANDARD MICRO CORP 720.033	11-16-88	8824312959
ARCNET 8 PORT ACTIVE HUB	EX02802A00	10-13-89	25G0393010704
386/20 COMPUTER W/NEC MON/KEY	EX02802A00+	11-30-88	25E0683913100
NETWORK HARD DRIVE, INST. IN #20289	XT-4380S	11-02-90	0105893661
EVEREX 286/12 W/KEYBOARD	286/12	11-16-88	1900384264823
386/20 COMPUTER W/NEC MON/KEY	EX02802A00+	11-30-88	25E0684521432
386/20 COMPUTER W/NEC MON/KEY	EX02802A00+	11-30-88	25E0683913113
AMERICAN POWER 500 WATT UPS	520ES	11-16-88	P8890396
386/20 COMPUTER W/NEC MON/KEY	EX02802A00+	11-30-88	25E0684521433
PV-WAVE PAC SOFTWARE DOCUMENT.	VERS. 1.0	10-29-91	106789
386/25 COMPUTER W/NEC MON/KEY	386/25	11-30-88	68118040
PV-WAVE COMMAND LINE S/M DOCUMENT.	VERS. 3.1	10-26-90	109745
296 HARD DISK, INST. IN #51003134	296	10-26-90	29075031
HP LASERJET SERIES II PRINTER	HEWLETT-PACKARD SERIES II	11-01-88	FL866224
GOV'T 2400 EXTERNAL MODEM	2400	10-24-89	G006316E3252
SONY 19" COLOR MONITOR	PCPC II	10-24-89	S01-2015410
OKIDATA 391 PRINTER	391	11-01-88	802A0018542
20" COLOR GRAPHICS MONITOR	NEC	06-06-90	9Z001000H
OMNILASER POSTSCRIPT PRINTER	T1 2108	06-13-90	2539152-0001
4861s STEP COMPUTER W/KEYBOARD	4861s	06-06-90	25G03-018-51012
FILE CABINET		11-06-87	NONE
DISPLAY, COMPUTER	JC-1401P3A	04-11-88	73001080C
PERSONAL COMPUTER	286	09-10-87	007318
PRINTER, DIGITAL*	2608A	04-11-88	2020A03452
PRINTER, DIGITAL	FX286E	04-11-88	P0038106
KEYBOARD	K151L	09-10-87	194092
COMPUTER, PERSONAL	286	04-11-88	07334
PRINTER, DIGITAL*	2608A	04-11-88	1952A03292
PLOTTER, GRAPHICS	7475A	04-11-88	2641V33420
DISPLAY, COMPUTER	310A	09-19-87	7252802
KEYBOARD	K151L	04-11-88	194159
OPTICAL DISK DRIVE	5984	11-30-88	83053206
DESK GREEN		09-30-87	NONE
CAMERA	E05650	10-01-87	1101416
6 DRAWER LATERAL FILE		09-30-87	NONE
PC, KEYBOARD, MONITOR	286	02-23-88	FKC468AMAX3000
DESK LAMP		09-30-87	NONE
DESK BLACK		09-30-87	NONE
WORK STATION*		09-30-87	NONE
DESK LAMP		09-30-87	NONE
SPEEDLITE	420EZ	10-01-87	S80400
CAMERA LENS	EF35-105MM	10-01-87	1101852
CAMERA LENS	EF70-210MM	10-01-87	1040230
COAT RACK		09-30-87	NONE
COLOR MONITOR, 19" Standard	H0641	05-05-89	5162545
SECRETARY CHAIR		09-19-87	NONE

DESCRIPTION	BRAND	MODEL	PRICE	DATE	ACCOUNT	STOCK
DESK CHAIR	APPLE	A9M0110	\$69.00	09-30-87	NONE	
5.25" APPLE PC DRIVE			\$285.00	05-05-89	HB32420	0061665
FILE CABINET			\$315.00	09-30-87	NONE	
LASER WRITER II PRINTER	APPLE	M6000	\$3,219.00	05-05-89	CA9022AT	0061673
PERSONAL COMPUTER/KEY/MACII SD	APPLE	M5000	\$6,068.00	05-05-89	F9039CD	0061664
IBM COMPUTER W/KEYBOARD	IBM	51050164	\$4,067.00	03-07-91	09515675150	0549038
MICROFICHE READER/PRINTER	CANON	PC-70	\$2,375.00	11-30-88	33217994	0139238
EPSON PRINTER	EPSON	FX100	\$721.00	01-04-90	039127	0533574
MONITOR DISPLAY	IBM	5150001	\$279.00	03-07-91	0115475	0549047
MICROFICHE CABINET	MAT. MICROGRAPH	SC-1	\$152.00	11-30-88	NONE	
MICROFICHE CABINET	MAT. MICROGRAPH	SC-1	\$152.00	11-30-88	NONE	
DISPLAY UNIT	MAT. MICROGRAPH	MM41195-DA0L	\$2,500.00	08-21-91	011CN0264	G078749
MICROFICHE READER	MAT. MICROGRAPH	514	\$278.00	11-30-88	J054D677	
MICRO COMPUTER	SUM MICROSYSTEMS	1478465GX8P3	\$11,726.00	08-21-91	031F1456	G076482
DISK SUBSYSTEM	SIGMA INFO. SYSTEMS	SA-H212D	\$1,986.00	08-21-91	2184	G078353

ITEM	MFG	MODEL	COST	REC DATE	SERIAL NO	ECN
Mini Computer	Sun Microsystems	547	\$11613.00	3/6/92	202K0313	1090764
Display Unit	Sun Microsystems	GDM-1662	\$930.00	3/6/92	9120DN5640	1091061
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0134	1090790
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0139	1090791
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0143	1090792
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0137	1090793
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0135	1090794
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0141	1090795
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0069	1090796
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0011	1091045
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0071	1091046
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0072	1091047
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0067	1091048
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0024	1091049
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0145	1091050
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0068	1091051
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0136	1091052
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0144	1091953
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	303L0074	1091054
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0016	1091055
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0146	1091056
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009630	1091065
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009962	1091066
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009631	1091067
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009629	1091068
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009628	1091071
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	134F3150	1088927
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	127F1356	1088929
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	117F1246	1088053
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	118F3351	1088054

ITEM	MFG	MODEL	COST	REC DATE	SERIAL NO	ECN
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	127F1435	1088949
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9125CY4255	1088952
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9122CY1987	1088955
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9128CY2008	1088928
Display Drive Unit, Optical	Sun Microsystems	411	\$796.00	3/6/92	138G3484	1088956
Printer	Sun Microsystems	SPRN400	\$1400.00	3/6/92	9128810950	1088900
Printer	Sun Microsystems	SPRN400	\$1400.00	3/6/92	9124807339	1088902
Mini Computer	Sun Microsystems	4/75	\$12086.00	3/6/92	205F0292	1091223
Mini Computer	Sun Microsystems	4/75	\$12086.00	3/6/92	205F0341	1091224
Display Unit	Sun Microsystems	CDM1962E	\$3990.00	3/6/92	9132DX2571	1091239
Display Unit	Sun Microsystems	CDM1962E	\$3990.00	3/6/92	9133DX0762	1091240
Facsimile Machine	National Panasonic	KX-F50BH	\$572.00	9/16/91	1HANCO38567	None
Facsimile Machine	Panasonic	MF160-M	\$2016.00	1/27/92	Unknown	None

ITEM	MFG	MODEL	COST	RECDATE	SERIAL NO.	ECN
386/SX COMPUTER W/101 KEYBOARD	EVEREX	386/SX	\$1,410.00	04-10-90	68105769	
14" VGA MONITOR	SANTRON	SC-431V11	\$365.00	04-10-90	9002073532	
PROJECTOR	ARTOGRAPH	AG 100	\$167.95	08-11-89	89-3	
3 BUTTON MOUSE	HOUSE SYSTEMS	NONE	\$59.86	11-12-91	912200661	
STATUS ACTIVITY MONITOR	BLACK BOX	TS0108	\$229.00	06-07-89	8903	
EXTERNAL 2400 BAUD MODEM W/CAB	HAYES	07-00056	\$442.00	04-05-88	H283001731	
19" NEC MULTISYNC MONITOR	NEC	JC-2001VMA	\$2,099.00	09-21-89	92C00253M	
NEC MULTISYNC II MONITOR	NEC	JC-1403HMA	\$483.00	06-30-89	92L06709M	
386/20 COMPUTER W/KEYBOARD	EVEREX	386/20	\$3,270.00	06-30-89	25G0392423188	
HP LASERJET SERIES II PRINTER	HEWLETT-PACKARD	SERIES II	\$1,895.00	09-30-88	FLA14266	
LAPTOP COMPUTER	ZENITH	20	\$1,984.00	07-09-90	1351013432	
XEROX MEMORYWRITER	XEROX	6016	\$618.64	09-29-88	88512	
VGA COLOR MONITOR	AMAZING	CM-8484EX	\$305.00	04-15-91	A2008518	
PORTABLE INJET PRINTER	KODAK	DICONIX 150+	\$355.00	05-18-90	PK801Z1234	
CALCULATOR	CANON	MP12D	\$47.00	03-22-91	2A37081	
386/SX/20 COMPUTER W/101 KEYBOARD	MICROSERVE	386/SX/20	\$1,304.00	04-15-91	68116170	
LATERAL FILE	ANDERSON	ANDL-536-1	\$678.00	04-13-89	NONE	
PORTABLE PRINTER W/CASE	CANON	BJ-10E	\$325.00	08-19-91	PBB39270	
PORTABLE PRINTER W/CASE	CANON	BJ-10E	\$325.00	07-16-91	PBB37889	
14" COLOR MONITOR	SANTRON	SC-452C	\$213.00	05-18-90	8911070425	
NAMETAG HOLDER CASE	PC/NAMETAG	NONE	\$39.00	05-28-91	NONE	
DOT MATRIX PRINTER	NEC	P7	\$850.00	02-23-88	581236288	
386/SX/20 COMPUTER W/101 KEYBOARD	MICROSERVE	386/SX/20	\$1,304.00	04-15-91	68116162	
AUTO SWITCH BOX	PAMASONIC	UF300	\$1,399.00	09-27-91	351080161	
VGA COLOR MONITOR	BELKIN	C-3978	\$147.00	08-08-91	C3978	
CALCULATOR	OLIVE	OM835	\$305.00	04-15-91	MA6109705	
SHIPPING CONTAINER-LASERWRITER PNTR	TEXAS INSTRU.	T1-5033	\$42.00	06-09-88	0028690	
MICROCASSETTE RECORDER	CANON	MP12D	\$47.00	03-22-91	2A28977	
SHIPPING CONTAINER (MACII)	LINEBACKER	F0202	\$235.00	01-08-90	NONE	
FILE CABINET	PAMASONIC	RM-125	\$73.14	09-27-88	8FBMA10209	
HP SCANNER	LINEBACKER	F1133	\$299.00	01-08-90	NONE	
MAC II PERSONAL COMPUTER/KEYBOARD	HASKELL	HLF3652	\$648.00	11-03-88	NONE	
386/20 COMPUTER W/KEYBOARD	HEWLETT PACKARD	SCANJET PLUS	\$999.00	10-15-90	2812J58548	
386/20 COMPUTER W/NEC MON/KEY	APPLE	M5333	\$3,365.00	10-24-89	F847E78	
NEC MULTISYNC 2A MONITOR	EVEREX	EX02802A00	\$3,170.00	11-17-89	25G03-942-22081	
HP LASERJET SERIES II PRINTER	EVEREX	EX02802A00+	\$6,135.00	12-29-88	25E0683913103	
386/20 COMPUTER W/KEYBOARD	NEC	JC-1403HMA	\$483.00	10-13-89	98K12652Z	
386/20 COMPUTER W/NEC MON/KEY	HEWLETT-PACKARD	SERIES II	\$1,895.00	11-01-88	FG089773	
	EVEREX	EX02802A00	\$3,270.00	10-13-89	25G03-931-12469	
	EVEREX	EX02802A00+	\$6,135.00	11-30-88	25E0683913103	

APPLE	M6000	10-24-89	CAB463XL
LASER WRITER II PRINTER	JC-1403HMA	11-17-89	9XL20074N
NEC MULTISYNC 2A MONITOR	JC-1403HMA	10-13-89	99M46938Z
NEC MULTISYNC 2A MONITOR	EX02802A00+	11-30-88	25E0684521427
386/20 COMPUTER W/NEC MON/KEY	EX02802A00	10-13-89	25G0393011107
386/20 COMPUTER W/KEYBOARD	MA2565	11-16-88	82100463
SAMSUNG MONITOR	VERS. 1.0	10-29-91	T08574
PV-WAVE MAG SOFTWARE DOCUMENT.	EX0-2802A	11-30-88	25E0684521418
386/20 COMPUTER W/NEC MON/KEY	JC-1403HMA	10-13-89	98N118082
NEC MULTISYNC 2A MONITOR	720.033	11-16-88	8824312959
ARCHET 8 PORT ACTIVE HUB	EX02802A00	10-13-89	25G0393010704
386/20 COMPUTER W/KEYBOARD	EX02802A00+	11-30-88	25E0683913100
386/20 COMPUTER W/NEC MON/KEY	XT-4380S	11-02-90	0105893861
NETWORK HARD DRIVE, INST. IN #20289	286/12	11-16-88	19D0384264823
EVEREX 286/12 W/KEYBOARD	EX02802A00+	11-30-88	25E0684521432
EVEREX 286/12 W/NEC MON/KEY	EX02802A00+	11-30-88	25E0683913113
386/20 COMPUTER W/NEC MON/KEY	520ES	11-16-88	P8890396
AMERICAN POWER 500 WATT UPS	EX02802A00+	11-30-88	25E0684521433
386/20 COMPUTER W/NEC MON/KEY	VERS. 1.0	10-29-91	T06789
PV-WAVE P&C SOFTWARE DOCUMENT.	386/25	11-30-88	68118040
386/25 COMPUTER W/NEC MON/KEY	VERS. 3.1	10-29-91	T09745
PV-WAVE COMMAND LINE S/W DOCUMENT.	296	10-26-90	29075031
296 HARD DISK, INST. IN #51003134	SERIES II	11-01-88	FLB66224
HP LASERJET SERIES II PRINTER	2400	10-24-89	G00631GE3252
GOV'T 2400 EXTERNAL MODEN	PCPC II	10-24-89	S01-2015410
SONY 19" COLOR MONITOR	391	11-01-88	802A0018542
OKIDATA 391 PRINTER	50	06-06-90	9ZD01000H
20" COLOR GRAPHICS MONITOR	T1 2108	06-13-90	2539152-0001
OWILASER POSTSCRIPT PRINTER	486is	06-06-90	25G03-018-51012
486is STEP COMPUTER W/KEYBOARD	JC-1401P3A	11-06-87	NONE
FILE CABINET	286	04-11-88	73001080C
DISPLAY, COMPUTER	2608A	09-10-87	007318
PERSONAL COMPUTER	FX286E	04-11-88	2020A03452
PRINTER, DIGITAL*	K151L	09-11-87	P0038106
PRINTER, DIGITAL	286	04-11-88	194092
KEYBOARD	INTECOLOR F	04-11-88	07534
COMPUTER, PERSONAL	2608A	04-11-88	1952A03292
PRINTER, DIGITAL*	7475A	04-11-88	2641V33420
PLOTTER, GRAPHICS	310A	09-19-87	7252802
DISPLAY, COMPUTER	K151L	04-11-88	194159
KEYBOARD	5984	11-30-88	83053206
OPTICAL DISK DRIVE	E05650	09-30-87	NONE
DESK GREEN	286	02-23-88	FKC468AMAX3000
CAMERA	IMS	09-30-87	NONE
6 DRAWER LATERAL FILE	420EZ	09-30-87	NONE
PC, KEYBOARD, MONITOR	EE35-105MH	10-01-87	880400
DESK LAMP	EF70-210MH	10-01-87	1101852
DESK BLACK	HO401	09-30-87	1040230
WORK STATION*	CANON	09-30-87	NONE
DESK LAMP	CANON	09-30-87	NONE
SPEEDLITE	CANON	10-01-87	NONE
CAMERA LENS	CANON	10-01-87	NONE
CAMERA LENS	CANON	10-01-87	NONE
COAT RACK	APPLE	09-30-87	NONE
COLOR MONITOR/LV STAND	APPLE	05-05-89	5162345
SECRETARY CHAIR	APPLE	09-19-87	NONE

DESCRIPTION	MANUFACTURER	MODEL	UNIT PRICE	DATE	QUANTITY	TOTAL PRICE	ACCOUNT NO.	ITEM NO.
DESK CHAIR			\$69.00	09-30-87				
5.25" APPLE PC DRIVE	APPLE	A9M0110	\$285.00	05-05-89			H832420	0061665
FILE CABINET			\$315.00	09-30-87			NONE	
LASER WRITER II PRINTER	APPLE	M6000	\$3,219.00	05-05-89			CA90ZZAT	0061673
PERSONAL COMPUTER/KEY/MACII SD	APPLE	M5000	\$6,048.00	05-05-89			F9039CD	0061664
IBM COMPUTER W/KEYBOARD	IBM	51050164	\$4,067.00	03-07-91			09515675150	0549038
MICROFICHE READER/PRINTER	CANON	PC-70	\$2,375.00	11-30-88			33217994	0139238
EPSON PRINTER	EPSON	FX100	\$721.00	01-04-90			039127	0533574
MONITOR DISPLAY	IBM	5150001	\$279.00	03-07-91			0115475	0549047
MICROFICHE CABINET	MAT. MICROGRAPH	SC-1	\$152.00	11-30-88			NONE	
MICROFICHE CABINET	MAT. MICROGRAPH	SC-1	\$152.00	11-30-88			NONE	
DISPLAY UNIT	HITACHI MFG. CO.	HM41195-DA0L	\$2,500.00	08-21-91			011CM0264	G078749
MICROFICHE READER	MAT. MICROGRAPH	514	\$278.00	11-30-88			J0540677	
MICRO COMPUTER	SUN MICROSYSTEMS	147B465GX8P3	\$11,726.00	08-21-91			031F1456	G076482
DISK SUBSYSTEM	SIGMA INFO. SYSTEMS	SA-H212D	\$1,986.00	08-21-91			2184	G078353

ITEM	MEG	MODEL	COST	REC DATE	SERIAL NO	ECN
Mini Computer	Sun Microsystems	547	\$11613.00	3/6/92	202K0313	1090764
Display Unit	Sun Microsystems	GDM-1662	\$930.00	3/6/92	9120DN5640	1091061
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0134	1090790
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0139	1090791
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0143	1090792
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0137	1090793
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0135	1090794
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0141	1090795
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0069	1090796
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0011	1091045
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0071	1091046
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0072	1091047
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0067	1091048
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0024	1091049
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0145	1091050
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	203L0068	1091051
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0136	1091052
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0144	1091953
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	303L0074	1091054
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	151L0016	1091055
Disk Drive Unit	Sun Microsystems	571	\$2546.00	3/6/92	204L0146	1091056
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009630	1091065
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009962	1091066
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009631	1091067
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009629	1091068
Laser Printer	Okidata	EN2560A	\$1485.00	3/6/92	107A1009628	1091071
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	134F3150	1088927
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	127F1356	1088929
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	117F1245	1088953
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	110F9551	1088954

ITEM	MFG	MODEL	COST	REC DATE	SERIAL NO	ECN
Micro Computer	Sun Microsystems	147B	\$14731.00	3/6/92	127F1435	1088949
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9125CY4255	1088952
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9122CY1987	1088955
Display Drive Unit	Sun Microsystems	GDM1962E	\$600.00	3/6/92	9128CY2008	1088928
Display Drive Unit, Optical	Sun Microsystems	411	\$796.00	3/6/92	138G3484	1088956
Printer	Sun Microsystems	SPRN400	\$1400.00	3/6/92	9128810950	1088900
Printer	Sun Microsystems	SPRN400	\$1400.00	3/6/92	9124807339	1088902
Mini Computer	Sun Microsystems	4/75	\$12086.00	3/6/92	205F0292	1091223
Mini Computer	Sun Microsystems	4/75	\$12086.00	3/6/92	205F0341	1091224
Display Unit	Sun Microsystems	CDM1962E	\$3990.00	3/6/92	9132DX2571	1091239
Display Unit	Sun Microsystems	CDM1962E	\$3990.00	3/6/92	9133DX0762	1091240
Facsimile Machine	National Panasonic	KX-F50BH	\$572.00	9/16/91	1HANCO38567	None
Facsimile Machine	Panasonic	MF160-M	\$2016.00	1/27/92	Unknown	None

EXHIBIT E

PROCEDURES FOR THE PREPARATION AND APPROVAL OF
CONTRACTOR REPORTS FOR LANGLEY RESEARCH CENTER

EXHIBIT E

PROCEDURES FOR THE PREPARATION AND APPROVAL OF CONTRACTOR
REPORTS FOR LANGLEY RESEARCH CENTER

GUIDELINES. - The following documents or subsequent editions in effect on date of contract shall serve as the basis for preparation of Contractor Reports:

NASA SP-7047 NASA Publications Guide
DoD 5220.22-M Industrial Security Manual for Safeguarding Classified
Information, January 1991

NOTE: Copies of NASA SP-7047 will be furnished by the Contracting Officer upon request.

FORMAT AND ORGANIZATION. - The format and organization of a Contractor Report should be consistent and follow the practices recommended in the NASA Publications Guide (NASA SP-7047). For questions concerning format, contact Langley Technical Editing Branch at (804) 864-2518. **An original Report Documentation Page (Standard Form 298) shall be included as the last page in the report.** (The instructions on the back of the form shall not appear in the printed report.) A reproducible copy of this form will be furnished to you with your copy of the executed contract.

TRADEMARKS. - U.S. Government policy prohibits endorsing or criticizing commercial products in its publications. Use of trademarks is discouraged. If a trademark must be used, its owner must be credited and the trademark must be used as an adjective modifying the generic name.

REFERENCES. - Material that is not obtainable or available must not be listed in the references. Documents of NASA contracts published as in-house documents must be referenced as NASA CR's, not as NASA Contract Numbers.

SECURITY. - Security markings, when necessary, shall be consistent with DD Form 254, the directive issued by the Security Classification Officer, and shall conform to requirements established in the DoD Industrial Security Manual. For questions concerning security classification, contact LaRC Security Classification Officer at (804) 864-3415.

APPROVAL COPIES.

1. Upon completion of a report, the Contractor shall submit five (5) approval copies to the Contracting Officer for review and approval by NASA. These copies may be reproduced and assembled by an economical means by the Contractor.

2. The Contractor will be notified of acceptance of the approval copy of the report by the Contracting Officer within sixty (60) days. Approval will be contingent upon changes required by NASA. An original master copy in agreement with the approval copy shall be prepared and submitted by the Contractor.

ORIGINAL MANUSCRIPT. - The original manuscript of a Contractor Report shall consist of the master copy of the text, cleanly typed on opaque white paper, from which negatives and printing plates can be made, unscreened glossy prints of photographs, and original artwork of a quality suitable for reproduction by

offset printing. Suggestions for preparing acceptable copy are given in NASA SP-7047. The original manuscript should not be bound and should have consecutive page numbers added in proper sequence. Odd numbered pages are numbered at the bottom of the page on the right; even, on the left. To avoid damage in handling and shipping, the original manuscript should be carefully packaged.

DISTRIBUTION AND DUPLICATION. - From the review made at the Langley Research Center, the Contracting Officer will make a determination concerning publication and distribution, which the Contractor shall complete within thirty (30) days after receipt of approval copies.

1. If NASA Langley Research Center considers that the report should be distributed only in limited quantities, the Contractor shall be requested to prepare duplicates of the original manuscript and distribute the original manuscript and copies (not to exceed 100¹) in accordance with a distribution list supplied by the Contracting Officer. In this case, the report will be assigned a number in the NASA CR high-numbered series (CR number above 50,000) by the Contracting Officer. When necessary, the Contractor will be provided with any notices to be added to the cover concerning distribution limitations.

2. If the NASA Langley Research Center considers the report of such quality or interest that it warrants wide distribution, it will be recommended to NASA Headquarters for publication in the NASA CR low-numbered series, and the Contractor will be requested to forward the original manuscript, together with up to 25¹ duplicate copies to Langley Research Center addresses furnished by the Contracting Officer. At the direction of the Contracting Officer, advance distribution by the Center may be made to those having a need to know. Printing from the original manuscript for final distribution will be provided by NASA. NASA will include the CR number on the cover and provide the author(s) with 10 copies each of the final printed report. (Author(s) will not receive 10 copies each of restricted distribution reports.)

PRINTING STANDARDS. - To comply with NASA printing requirements and cost considerations, reports submitted should conform to the following standards. Any questions regarding implementation of these standards should be directed to the Langley Printing Management Officer (LPMO) at (804) 864-3284.

1. Multiple-copy production shall be by the offset duplicating method, except as described in subparagraphs 1a and 1b below.

a. Production may be on office copying machines or on diazo equipment when the number of copies is so small that such production is more economical than offset duplicating. However, the images will be clearly legible and permanent.

¹See Clause 18-52.208-81, Printing and Duplicating, for more detailed guidance.

b. Any image that cannot be accommodated by a foldout (as described in paragraph 2 herein) will be produced by the diazo or electrostatic method in a size dictated by legibility requirements.

2. The page image size of cover and text pages including headings will not exceed 7 1/8 x 9 1/8 inches. Page image including page number will not exceed 7 1/8 x 10 inches. Diagrams, charts, drawings, etc., shall be reduced and, if necessary, run broadside to eliminate oversized pages. If such reduction is too great for legibility, the subject will be split and run on two facing pages or run as a foldout with an image not larger than 14 x 9 1/2 inches.

3. Text and foldout pages will be on either of two paper stocks:

a. Offset book paper, white, substance 50 lbs. (basis 25 x 38/1000 sheets, Joint Committee on Printing (JCP) A60).

b. Chemical wood writing paper, white or colored, substance 20 lbs. (basis 17 x 22/1000 sheets, JCP G30).

4. Covers, if necessary, will be on either of two paper stocks:

a. Vellum finish (or antique finish) cover paper, white or colored, substance 50 lbs. (basis 20 x 26/1000 sheets, JCP L20).

b. Chemical wood index paper, white or colored, substance 110 lbs. (basis 25 1/2 x 30 1/2/1000 sheets, JCP K20).

5. Use of tabs is expensive and rarely necessary. First consideration should be given to the use of a contents page. Second choice should be bleed-edge index markers. If tabs must be used, they will be duplicated on one side only, on chemical wood index paper, white or colored, substance 110 lbs. (basis 25 1/2 x 30 1/2/1000 sheets); they will be angle cut and not die cut.

6. All duplicating will be in black ink. If other or additional color is required for a functional purpose, approval in writing must be obtained from the Langley Printing Management Officer (LPMO) through the Contracting Officer before preparation of final reproduction copy.

7. Text pages of all documents produced will be reproduced on both sides of sheet where feasible.

8. Binding will be by fastening with wire staples or stitches, either one in a corner or two in the binding margin. Documents too thick to staple or stitch will be produced in two or more volumes. Prong fasteners, binding screws, plastic combs, and spiral and similar wire fasteners add to production time and costs, and generally their use should be avoided.

9. Plastic protective sheets will not be used.

10. When hard-cover protection of a document is needed, the document will be drilled with three round 1/4 inch or 3/8 inch holes, 4 1/4 inches center-to-center, for insertion into standard 3-ring binders. Special stamped, printed or silk-screened binders shall not be used. A single corner staple or stitch or a and will be used to hold the document together until it is put into a binder.

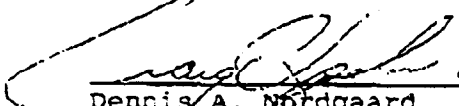
REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE May 1991	3. REPORT TYPE AND DATES COVERED Contractor Report		
4. TITLE AND SUBTITLE Science Needs for Real-Time Adaptable Data Products From the Earth Observing System			5. FUNDING NUMBERS C NAS1-18676	
6. AUTHOR(S) Paul D. Try, Paul F. Twitchell, and Christopher R. Redder				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Science and Technology Corporation 101 Research Drive Hampton, VA 23666-1340			8. PERFORMING ORGANIZATION REPORT NUMBER STC-42518	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) National Aeronautics and Space Administration Langley Research Center Hampton, VA 23665-5225			10. SPONSORING/MONITORING AGENCY REPORT NUMBER NASA CR-0000	
11. SUPPLEMENTARY NOTES Langley Technical Monitor: David E. Bowker Final Report				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Unclassified Unlimited Subject Category 43			12b. DISTRIBUTION CODE	
			<i>(If contract specifies restricted distribution, state restriction instead of Unclassified-Unlimited.)</i>	
13. ABSTRACT (Maximum 200 words) Advancing the understanding of the Earth system requires improved knowledge of the time-variant governing processes, and the knowledge of these processes often comes only from real-time observations of the changing variables as seen from space. The unpredictability of what is to be measured and at what rate requires flexibility in the observational capability. The Earth Observing System (EOS) will be a major source of observational data during the next 10- to 25-year timeframe. Consequently, to ensure the needed advances in the understanding of the Earth system, real-time onboard processing is concluded to be a critical need for EOS. <i>(Provide an unclassified abstract not to exceed 200 words)</i>				
14. SUBJECT TERMS Real-time data needs: Onboard data processing; Real-time processing for EOS; EOS communication needs			15. NUMBER OF PAGES 76	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	

EXHIBIT F
SUBCONTRACTING PLAN

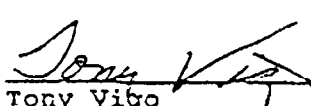
SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

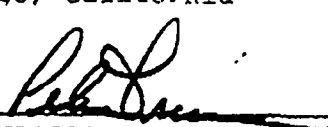
SMALL/SMALL DISADVANTAGED
SUBCONTRACTING PLAN INCLUDINGAPPROVED MASTER SUBCONTRACTING PLAN EFFECTIVE
FROM 1 MAY 1992 TO 30 APRIL 2002SUBCONTRACTING GOALS FOR
SOLICITATION NO.: 1-62-6200-0577
PROPOSAL NO.: 1-242-71-920-01

PREPARED BY:

 (FOR) 13 April 1992
 _____ Date
 Dennis A. Nordgaard
 Subcontract Administrator
 Science Applications International Corporation

APPROVED BY:

 13 April 1992
 _____ Date
 Tony Vigo
 Small Business Liaison Officer
 Science Applications International Corporation
 San Diego, California

 13 April 1992
 _____ Date
 Peter Dreesen
 Corporate Vice President,
 Director of Purchasing
 Science Applications International Corporation
 San Diego, California

<u>SECTION -</u>	<u>TITLE</u>	<u>PAGE</u>
<u>[*REFERENCE]</u>	<u>SPECIFIC SUBCONTRACTING PLAN</u>	
I. [(d) (1), (d) (2) & (d) (7)]	SUBCONTRACTING GOALS	1
II. [(d) (3)]	DISTRIBUTION OF SUBCONTRACT AWARDS	2
III. [(d) (4)]	METHOD USED TO DEVELOP GOALS	2
IV. [(d) (6)]	INDIRECT AND OVERHEAD COSTS	3
V. [(d) (5)]	METHOD OF IDENTIFICATION/SOLICITATION	4

*REFERENCE SPECIFICALLY IDENTIFIES FAR 52.219-9 REQUIREMENTS

I. SUBCONTRACTING GOALS

- A. SOLICITATION NUMBER: 1-62-6200.0577
SAIC PROPOSAL NUMBER: 1-242-71-920-01
- B. PROGRAM SUMMARY: Atmospheric sciences research and technology support services for the National Aeronautics and Space Administration (NASA).
- C. SUBCONTRACTING PLAN ADMINISTRATOR:
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- E. CORPORATE S/SD BUSINESS COORDINATOR:
Name: Tony Vigo
Title: Small Business Liaison Officer
Address: 10260 Campus Point Drive, M/S #41
San Diego, CA 92121
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F. SUBCONTRACTING GOAL SUMMARY

	<u>AMOUNT</u>	<u>PERCENTAGE</u>
1. TOTAL CONTRACT PRICE	\$101,025,000 *	
2. TOTAL TO BE SUBCONTRACTED	\$ 20,060,688	100%
a. TO LARGE BUSINESS	\$ 6,000,000	30%
b. TO SMALL BUSINESS	\$ 14,060,688	70%
(1) TO NON-DISADVANTAGED	\$ 13,060,688	65%
(2) TO DISADVANTAGED	\$ 1,000,000	5%
(3) HBCU/MI's	\$ 0,000,000	0%

* Refer to page 2A for breakdown of dollars and percentages by base and each option period.

II. PROPOSED DISTRIBUTION AND DESCRIPTION OF SUBCONTRACT AWARDS

Estimated Award Value	SB	SDB	HBCU/MI	LB
A. Single Source Items Description	\$6,060,688	-0-	-0-	-0-

(G&A Technical Software, Inc., \$6,060,688): Data processing software and hardware development support services for NASA's atmospheric sciences research and technology center.

B. Limited Competition Description	\$7,000K	\$1,000K	\$0,000K	\$6,000K
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(Multiple sources, \$14,000,000): SAIC assumes that at least \$1,400,000 of the \$3,000,000 of Other Direct Costs (ODCs) estimated per year for material, equipment, and other direct costs will be subcontracted. The above indicates the distribution of those and other related purchasing/subcontracting activities by socio-economic category. In accordance with the Master Subcontracting Plan and Corporate Purchasing Policy, SAIC's Purchasing Department constantly performs extensive research to identify, cultivate, and utilize small and small disadvantaged businesses during the course of all purchasing activities.

SUBCONTRACT GOALS FOR THE ATMOSPHERIC SCIENCES RESEARCH AND TECHNOLOGY SUPPORT SERVICES RFP NO. 1-62-6200.0977

	BASE PERIOD	OPTION PERIOD 1	OPTION PERIOD 2	OPTION PERIOD 3	OPTION PERIOD 4	TOTAL
SAIC CONTRACT PRICE:	19,655,142	19,794,121	20,222,093	20,382,585	20,971,059	101,025,000
TOTAL TO BE CONTRACTED	3,832,181	3,915,313	4,004,883	4,101,763	4,206,548	20,060,688
TO LARGE BUSINESS	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	6,000,000
TO SMALL BUSINESS	2,632,181	2,715,313	2,804,883	2,901,763	3,006,548	14,060,688
Small Non-Disadvantaged	2,432,181	2,515,313	2,604,883	2,701,763	2,806,548	13,060,688
Small Disadvantaged	200,000	200,000	200,000	200,000	200,000	1,000,000
HBCU/MIs	0	0	0	0	0	0
TOTAL	3,832,181	3,915,313	4,004,883	4,101,763	4,206,548	20,060,688

FA

Estimated Award Value	SB	SDB	HBCU/MI	LB
C. Open Competition Description	-0-	-0-	-0-	-0-

The nature of the ODC purchases anticipated are such that no advantage to the Government would be realized through advertisement of ODC requirements in publications such as the Commerce Business Daily or trade publications and journals. As such, no "open competition" purchases are anticipated.

III. METHOD USED TO DEVELOP GOALS

- A. Proposed subcontracting goals as identified in Section I, were developed by a joint pre-proposal review of the solicitation statement of work and performance requirements. The joint review involved program, technical and purchasing personnel including the Corporate Small Business Liaison Officer and the proposed Subcontracting Plan Administrator.
- B. Criteria considered in the review process included:
1. Review of the solicitation statement of work.
 2. Identification of the requirement for goods and services.
 3. Identification of the potential to subcontract for goods and services.
 4. Make - Buy Analysis.
 5. Identification of potential suppliers.
 6. Categorization of source requirements based on single source, limited competition and open competition as provided by the marketplace or as potentially could be developed.

IV. INDIRECT AND OVERHEAD CHARGES

- A. Inclusion in Subcontracting Plan

Indirect and overhead charges are not included in this subcontracting plan.

B. Allocation Formula

If indirect and overhead charges are included in this subcontracting plan, the allocation is accomplished on a pro-rata basis as determined by an evaluation of the following criteria:

1. Determination of the ratio of indirect to direct (R) awards within the previous six (6) month period for programs or activities of a similar nature.

$R = \text{Indirect Awards} / \text{Direct Awards}$

2. Determination of the percentage of indirect awards made in the same period.

$S = \text{Small Business Awards} / \text{Total Indirect Awards}$

$D = \text{Disadvantaged Awards} / \text{Total Indirect Awards}$

$L = \text{Large Business Awards} / \text{Total Indirect Award}$

3. The proportionate value of indirect awards resulting from the direct subcontracting plan goal can then be calculated.

$S = \text{Subcontracting Plan Direct Goal}$

$I = \text{Indirect Awards Resulting from S}$

$R = \text{Indirect} / \text{Direct Awards}$

$I = RS$

Indirect awards, if included in the subcontracting plan are then calculated as follows:

Small Business = SI

Disadvantaged = DI

Large = LI

The amounts used in the calculation are available from the purchasing data base and represent actual activity in the appropriate period.

V. METHOD OF IDENTIFICATION /SOLICITATION

The development of goals as described in Section III resulted in the identification of potential/proposed subcontracting opportunities. The review process identified provided a categorization of items available from single sources, limited competition and open competition. Some single source items are available from "only qualified sources" as determined from previous programs of a similar nature.

Items available for limited or open competition provide the opportunity to subcontract to S/SDB. These prospective sources were identified through the mechanisms identified in Section II(c) of the Master Subcontracting Plan.

cc: T. Vigo