

# CONTRACT NAS1-98100

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

- Estimated Cost and Award Fee
- Award Fee for each evaluation period
- Estimated Cost and Award Fee for Priced options
- G&A Ceiling Rates
- Subcontracting Plan

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).

If NASA should release the negotiated financial information, which is considered to be company "confidential," the result could be that contractors would refuse to negotiate such agreements on the basis that the firm's pricing structure and sub-elements of cost would be made available to its competitors. Furthermore, disclosure would discourage other companies from participating in the negotiation of similar advance agreements regarding the limitation of certain cost items and billing rates.

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.

**SOLICITATION, OFFER AND AWARD**

THIS CONTRACT IS A RATED CONTRACT UNDER RATING PAGE OF PAGE(S) 139  
OPAS (15 CFR 700)

1. CONTRACT NO. **NAS1-98100**      2. SOLICITATION NO. **1-137-GH.2959**      4. TYPE OF SOLICITATION  
 SEALED BID (IFB)      5. DATE ISSUED **11-5-97**      6. REQUISITION/PURCHASE NO. **GH.2959**  
 NEGOTIATED (RFP)

7. ISSUED BY CODE \_\_\_\_\_      8. ADDRESS OFFER TO (if other than item 7)  
 National Aeronautics and Space Administration      NASA, Langley Research Center  
 Langley Research Center      9A Langley Boulevard, Building 1195B, Room 125  
 Hampton, VA 23681-0001      Hampton, VA 23681-0001

**NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder."**

**SOLICITATION**

9. Sealed offers in original and 10 copies for furnishing the supplies or services in the Schedule will be received at the place specified in item 8, or if hand carried, in the depository located in Building 1195B (9A Langley Blvd.), Rm. 125 until 4:00 PM local time 12-5-97 CAUTION-LATE Submissions, Modifications, and Withdrawals:  
(Hour) (Date)

See Section L, Provisions No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:      A. NAME **David H. Jones**      B. TELEPHONE (include area code) (NO COLLECT CALLS): **(757) 864-2421**

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**OFFER (Must be fully completed by offeror)**


**NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.**

12. In compliance with the above, the undersigned agrees, if this offer is accepted within 150 calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT <small>(See Section I, Clause No. 52.232-8)</small>	10 CALENDAR DAYS	20 CALENDAR DAYS	30 CALENDAR DAYS	CALENDAR DAYS
None	%	%	%	%

14. ACKNOWLEDGMENT OF AMENDMENTS <small>(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated)</small>	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
	1	11-14-97	4	12-9-97
	2	11-21-97	5	12-11-97
	3	12-05-97	6	12-17-97

15A. NAME AND ADDRESS OF OFFEROR      CODE 6L561      FACILITY \_\_\_\_\_      16. NAME AND TITLE OF PERSON AUTH. TO SIGN OFFER (Type or Print)  
**Wyle Laboratories**      **C. D. Yiakas**  
**3200 Magruder Blvd.**      **Executive Vice President**  
**Hampton, VA 23666**

15B. TELEPHONE NO. (include area code) **(757) 865-0000**      15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE       17. SIGNATURE       18. OFFER DATE **January 5, 1998**

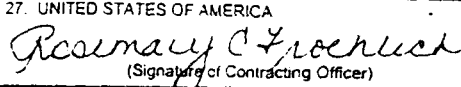
**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS NUMBERED **CLIN 1, 2, 3, and 4**      20. AMOUNT **\$10,468,706**      21. ACCOUNTING AND APPROPRIATION  
**PR: GH.3034, PY: 98, FSMA, 2350, JD: H15192;**  
**RTR: 537-06-35-20; Amount: \$2,454 (Complete)**

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION  
 10 U.S.C. 2304(c) ( )       41 U.S.C. 253(c) ( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM **G.2**  
(4 copies unless otherwise specified)

24. ADMINISTERED BY (if other than item 7) CODE \_\_\_\_\_      25. PAYMENT WILL BE MADE BY  
**Financial Management Office**  
**Langley Research Center, MS 175**  
**Hampton, VA 23681-0001**

26. NAME OF CONTRACTING OFFICER (Type or Print) **Rosemary C. Froehlich**      27. UNITED STATES OF AMERICA  
      28. AWARD DATE **3-12-98**  
(Signature of Contracting Officer)

**IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.**

**PART I - THE SCHEDULE**

**SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS**

**B.1 ITEMS TO BE FURNISHED**

**Research Instrumentation and Measurement Services**

**Contract Line Item Number (CLIN) 1 - On-Going Services:** Work includes the operation of an equipment loan pool on site at Langley Research Center (LaRC), Receipt and Inspection, maintenance of LaRC's Metrology and Information (INFOG) System, configuration and quality control management, metrology engineering support, instrument pi&-up and delivery, and maintenance and repair of the Government Furnished Equipment (GFE) provided under this contract. The specific requirements for CLIN 1 are contained in Section C, Statement of Work. The work covered by this CLIN requires no written work request (e.g., task orders) for the Contractor to proceed with performance. All of the work described in Section C for CLIN 1 shall begin on the effective date of the contract.

**CLIN 2 - Instrument Support Services:** Work includes instrument maintenance, calibration and repair, and new instrument acceptance testing at the Contractor's facility(s). Work under CLIN 2 will be performed on an as needed basis. Individual Instrument Work Orders (IWOs) will begin when a piece of equipment is picked up by the Contractor for service at a regularly scheduled pick-up point, when a pick-up request call is placed with the Contractor, or when a new instrument arrives at the Contractor's facility. The specific requirements for CLIN 2 are contained in Section C, Statement of Work.

**CLIN 3 - Data Systems Development and Instrumentation Engineering:** Work consists of instrumentation systems engineering, data acquisition and analysis, and training. Work under this CLIN with a loaded labor cost estimate of \$10,000 or less AND an estimate for parts and materials of \$20,000 or less shall be issued via an Engineering Service Request (ESR) originated by the Contracting Officer's Technical Representative (COTR) or one of the Task Area Monitors (TAMs). All other work under CLIN 3 shall be issued via Task Orders signed by the Contracting Officer. The specific requirements for CLIN 3 are contained in Section C, Statement of Work.

**CLIN 4 - On-Site Instrument Services and Digital Systems Support Services:** Work includes on-site emergency repairs and services that require immediate attention on equipment that cannot be transported due to physical or research impact constraints. Work shall be performed on an as needed basis, and shall be initiated when a service call is received. All such calls shall be documented on an IWO. Multiple shift and off-hours support (see 4.1) shall be provided by the Contractor. The specific requirements for on-site instrument services and emergency repair, maintenance and repair of digital systems, and computer systems services under CLIN 4 are contained in Section C, Statement of Work.

**8.2 ESTIMATED COST AND AWARD FEE (NASA 1852.216-85) (SEP 1993)**

The estimated cost of this contract is \$ [REDACTED]. The maximum available award fee is \$ [REDACTED]. Total estimated cost and maximum award fee are \$ 10,468,706.

	<u>Est. cost</u>	<u>Max. Available Award Fee</u>	<u>Total Est. Cost and Max. Award Fee</u>
CLIN 1	\$ [REDACTED]	\$ [REDACTED]	\$ 673,274
CLIN 2	\$ [REDACTED]	\$ [REDACTED]	\$ 1,411,500
CLIN 3	\$ [REDACTED]	\$ [REDACTED]	\$ 6,645,802
CLIN 4	\$ [REDACTED]	\$ [REDACTED]	\$ 1,738,130
Total	\$ [REDACTED]	\$ [REDACTED]	\$10,468,706

NASI-98100

**8.3 AWARD FEE AVAILABILITY SCHEDULE (LaRC 52.216-96) (MAR 1989)**

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

AF Period	CLIN 1	CLIN 2	CLIN 3	CLIN 4
1. (4/1/98 - 9/30/98)	\$ [REDACTED]	\$ [REDACTED]	TBD*	\$ [REDACTED]
2. (10/1/98 - 3/31/99)	\$ [REDACTED]	\$ [REDACTED]	TBD*	\$ [REDACTED]

- The Available Award Fee under CLIN 3 for each period will be the sum of the available award fee amounts for each of the Task Orders and Engineering Service Requests (ESRs) **COMPLETED** during that period. The available award fee at the Task Order/ESR level will be computed as a percentage of the estimated (NOT actual) cost of the Task Order or ESR agreed upon by both parties at the time of issuance. The percentage of cost used to estimate fee will be equal to the overall fee:cost ratio for CLIN 3 in the contract. (For example, if the estimated cost for CLIN 3 for the base contract year is \$1,000,000 and the award fee value for CLIN 3 is \$50,000, then the available award fee for each Task Order and ESR during the base contract year will be 5% of the estimated cost of the Task Order or ESR.) The available award fee at the Task Order or ESR level will NOT be changed to reflect cost overruns or underruns. The Task Order or ESR available fee will be adjusted when an increase or decrease in the scope of a Task Order or ESR is negotiated with the Contractor.

**8.4 CONTRACT FUNDING (NASA 1852.232-81) (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 \$ 2,315. This allotment covers the following estimated period of performance: April 1, 1998 through April 2, 1998.
- (b) An additional amount of \$ [REDACTED] is obligated under this contract for payment of fee.

**SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT**

**C.1 STATEMENT OF WORK – RESEARCH INSTRUMENTATION AND MEASUREMENT SERVICES**

**Introduction:** The objective of this effort is to provide research instrument and measurement support that economically and reliably satisfies the requirements of Langley Research Center (LaRC). The majority of the work will be performed at the Contractor's facility; a lesser amount will be performed on-site at LaRC and a small portion will be performed at remote test sites (e.g. Wallops Flight Center, 40488 Flight Research Center, Commercial test site [REDACTED]).

Scope

The Contractor shall provide personnel, equipment (except as described in Exhibit C, Government Furnished Property), materials and facilities to perform the services described in CLIN 1 (On-Going Services), CLIN 2 (Instrument Support Services at the Contractor's facility), CLIN 3 (Data Systems Development and Instrumentation Engineering) and CLIN 4 (Site Instrument Services and Digital Systems Support Services) as required. Approximately thirty five percent (35%) of the work effort under the contract is on-site services (hardware and software support, which a maximum response time of 30 minutes during the Government's first shift (7:30 a.m. - 4:00 p.m.) and second shift (3:30 p.m. - 12:00 midnight) and 60 minutes during third shift (12:00 midnight - 7:30 a.m.), weekends (anytime Saturday or Sunday) and Government holidays, is required to permit research to proceed and to

minimize costly delays. For this Statement of Work, "Aesponse" is defined as having personnel *on site* at the NASA facility.

1. **CLIN 1 - On-Going Services:** Work includes generation of Receipt and Inspection Reports, instrument pick-up and delivery, the operation of an equipment loan pool on-site at LaRC, maintenance and repair of GFE, maintenance of LaRC's INFOPC system, Configuration and Quality Control Management, and Metrology Engineering Support. The work described below for CLIN 1 is on-going and shall begin on the effective date of the contract and continue without interruption through the period of performance of the contract. The specific requirements for each of the work areas under CLIN 1 are **as follows:**

**1.1. Receipt and Inspection Report:** The Contractor shall perform receipt and inspection of selected incoming electronic instruments, equipment, and related materials purchased by the Government in accordance with NASA Handbook (NHB) 4200. Items to be inspected by the Contractor will be shipped directly to the Contractor's facility, where such inspections shall be performed. There were approximately 100 receipt and inspection reports processed in 1996. Services to be performed in this area shall include the following:

1.1.1 The Contractor shall inspect incoming items, and accept items that meet NASA contract or purchase order schedule; Prepare and distribute Receipt and Inspection Report (R&I LaRC Form 131), or changes thereto, and Receipt and Inspection Report Cancellation or Correction, LaRC Form (LF) 32 if required and complete applicable portion of **Work Order and Shipping Memorandum**, LF 165, or its electronic equivalent, which identifies the incoming shipment and all contents.

1.1.2 The Contractor shall attach appropriate Equipment Control Number (ECN) or Metrology Control Number (MCN) tags to accepted equipment.

1.1.3 The Contractor shall deliver all accepted instruments to **user** on site at LaRC after acceptance.

1.1.4 The Contractor shall pick-up contract/purchase order folders from the Acquisition Division (AD) file room when an item arrives for acceptance testing (see paragraph 2.1). The Contractor shall securely store all purchase order folders in its possession, and shall return the folders to the AD file room when acceptance testing is complete.

1.1.5 When items purchased by the Government do not pass acceptance testing and must be returned for repairs or replacement, the Contractor shall be responsible for:

- Contacting the supplier to determine method of shipment
- Preparation of the shipping request (Instrument Research Division (**IRD**) Form N-620]
- Obtaining approval from the Authorized Government Representative (AGR) and forward copies to Financial Management Division (**FMD**), Logistics Management Office (**LMO**), and **AD**
- Enclosing approved form with the **contract/purchase** order file

**1.2 Pickup and Delivery:** The Contractor shall establish a pickup and delivery **service** for all standards and instruments requiring repair or calibration under **this** contract. Equipment **transported** shall **be** physically handled in a manner commensurate with its size, weight, **and sensitivity** to shipping damage. This pick-up and delivery service shall **be** to and from **NASA** facilities, other **local** support **service Contractor** facilities, and occasionally remote facilities such as National Institute of Standards and Technology (NIST). A receipt method will be used **to** identify instruments submitted **for**

service and as subsequent evidence that the item(s) have been returned after service and return delivery ~~is~~ complete. The Contractor may use the existing receipt method or may implement their own with Government approval. All LaRC buildings are subject to periodic pickup **and** delivery, and daily service is required at Buildings 1236 and 1244. The Contractor shall establish a dispatch service at the Contractor facility to implement the pick-up and delivery service. The Contractor shall initiate task tracking and documentation, and perform the following tasks:

1.2.1 The Contractor shall receive and visually inspect each instrument, and shall initiate an IWO NASA Form 165, or an electronic equivalent, for each instrument submitted for service. All IWO's will be documented by the Contractor in the INFOPC System for TAM or **COTR** review.

1.2.2 The Contractor shall affix ECN/MCN as required by LHB 5330.9 to all instruments received for service and update INFOPC records.

1.2.3 The Contractor shall generate a return shipping tag (**NASA** Form 162) and **attach** same to the equipment to ~~be~~ dispatched to the work area for service ~~area~~.

**1.3** Operating an On-site Instrument Control Unit/**Loan Pool**: The Contractor shall operate LaRC's Instrument Loan Pool located on-site in Building 1230, Rooms 139/140, during the Government's first shift. The Loan Pool consists of Government-owned equipment; the Contractor **will not** be required to provide any instruments for use as part of the Loan Pool. Work to be performed includes the following:

1.3.1 The Contractor shall maintain accountability of instruments in loan pool inventory (approximately 5000 instruments). This effort includes the issuance and recall of instruments, deletion and addition of records to **MET/TRACK®** and loan pool dBase programs (maintained by the Government), and generation of recall notices on overdue inventory.

1.3.2 The Contractor shall advise users on instrument capabilities, applications, and proper usage.

1.3.3 The Contractor shall assure that the loan pool inventory is scheduled for calibration, and shall perform annual inventory of Instrument Loan **Pool** property as required by **NHB 4200**.

1.3.4 The Contractor shall process approximately **2500** LaRC Purchase Requests annually: this **shall** include the following: annotate for correct federal stock code, determine destination delivery (LaRC or Contractor facility), and code for inventory control.

1.3.5 The Contractor shall perform data entry into **NASA** Equipment Management System (**NEMS**) consisting of approximately 1000 monthly transaction updates (e.g. custodian/user changes, location, **etc.**)

1.3.6 The Contractor shall operate, update records, and provide reports to **TAMs as required by the Instrument Service Tracking Program (ISTP). The ISTP is a dBaseIV application** residing on a networked **PC** in **ETTD**. It downloads a monthly file from **INFOPC**, containing **data on work** completed that month. The downloaded file **is** then **used** by the **ISTP** to calculate quality and timeliness for all Instrument Work Orders and to generate monthly and semi-annual reports for the Task Area Monitors. **The** reports generated by this application are used by the Task Area Monitors to assist in **evaluating** the Contractor performance.

**1.4 Government Furnished Equipment (GFE) Maintenance and Repair:** The Contractor shall develop and follow a program plan which maintains **GFE** in accordance with Section I clause 52.245-5, Government Property. Within 30 days after the award of this contract, the Contractor shall submit to the Contracting Officer a written maintenance program in sufficient detail to show the adequacy of the proposed program. If the Contracting Officer agrees to the proposed program, it shall become the normal maintenance obligation of the Contractor. The Contractor shall notify the TAM when maintenance in excess of the normal maintenance program is required. The Contractor shall keep records of all work done on the equipment and shall give the Government reasonable opportunity to inspect such records.

**1.5 Operation and Maintenance of an Information Management System:** The Contractor shall provide all necessary support for the operation and maintenance of the LaRC Metrology and Information System (INFOPC). INFOPC is an automated data processing system that is used to track, report, and store service history and metrology-related data for work performed under the contract (**See Exhibit F for a description of the INFOPC System**). This support shall consist of programming and system administration in an Advanced Revelation and Novell Network environment on a Local Area Network (LAN) located at the Contractor facility(s), Experimental Testing Technology Division (ETTD), and other ETTD support Contractor's sites. Services shall include the following:

**1.5.1** The Contractor shall perform updates from NASA Equipment Management System (NEMS) and downloads to the WE6 database to insure systems congruency with the INFOPC.

**1.5.2** The Contractor shall maintain Instrument Service History Records on the repair and calibration history for approximately 80,000 instruments. Every instrument serviced that has a unique bar-coded number assigned, either an ECN or an MCN, shall have a record maintained that documents all repairs and calibrations.

**1.5.3** The Contractor shall perform functions as outlined in Langley Handbook (LHB) 5330.9 to insure effectiveness of and compliance with the LaRC instrument recall program. The Government will determine which instruments will be included in the recall system; approximately 1000 instruments are presently in the recall system. The Contractor shall notify LaRC staff that their equipment is due for calibration (the INFOPC System will track the due dates and generate the customer notices). The Contractor shall input data into the calibration recall data system, and provide a monthly report to the Metrology Manager listing all instruments due and their status.

**1.5.4** At the conclusion of each month the INFOPC system creates a file containing the records for all IWO's completed during that month. The Contractor shall provide file transfer from INFOPC to the Instrument Scoring and Tracking Program (ISTP). This file is used by the ISTP to calculate timeliness and quality scores and to generate monthly reports for review by the TAMs.

**1.6 Configuration and Quality Control Management:** The Contractor shall establish and maintain documented procedures for identifying, collecting, indexing, accessing, filing, storing, preserving, maintaining, and recording the disposition of records. The Contractor may use the existing configuration control process or may implement their own with Government approval. The Contractor's configuration management process shall insure that all modification/changes of shared modules at like Data Acquisition Systems (DAS) facilities are universally correct and run the same revision levels. Pertinent records from any subcontractor shall be an element of these data. All records shall be legible and shall be stored and retained in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent their loss, damage or deterioration. The master configuration controlled media shall be maintained in a secure area (protected against fire, water, physical hazards, etc.) with data records of all hardware and software revisions/modifications and traceable histories back to Government official work requests. The configuration and quality control process shall insure protection/backup for catastrophic failure with no more than 4 hours down time after

all hardware has been successfully restored. Records shall be made available for evaluation by the Government representative for the length of the contract. The Contractor shall be responsible for the configuration management of approximately 35 research facility data acquisition and support systems.

**1.7 Metrology Engineering Support:** Metrology Engineering Services consists of ongoing services in support of the maintenance, calibration, and repair function. These services contribute to the integrity of measurements, invokes the design of tests and methods by which the measurement and comparisons are made, and analysis of the results of the tests. The Contractor shall provide Metrology Engineering Support which shall include the following:

1.7.1 Consultation regarding measurement practices, instrument application and providing specialized calibration capabilities as required.

1.7.2 Oversight and management of the development, modification, and documentation of required calibration procedures including software programs.

1.7.3 Oversight and management of the Contractor's participation in the NASA Measurement Assurance Programs (MAP)' as outlined in the NASA Metrology and Calibration Program Plan.

1.7.4 Participation in Metrology and Calibration Working Group (MCWG) - This group is composed of representatives of all calibration Contractors at NASA centers. The Contractor shall travel to participate in the annual meetings at NASA's direction.

[MAP is a technique in which the user measures, using well defined procedures, an artifact sent by the Map's 'pivot' lab. After comparing the artifact to local laboratory standards, the participant assigns it a characteristic value. The pivot laboratory then compares the participants' results to the pivot laboratory's own measurement results for that artifact. The participating laboratory receives a report stating the systematic and random error components of its measurement process.]

**2. CLIN 2 - Instrument Support Services:** Work includes new instrument acceptance testing, instrument maintenance, calibration, and repair. Work under this CLIN will be performed (normally at Contractor facility) as equipment is tendered for maintenance, calibration, and/or repair by the various end-users at LaRC. The specific requirements for each of these work areas are as follows:

**2.1 Acceptance Testing of New Instruments Purchased by LaRC:** Selected new instruments purchased by NASA, Langley Research Center, will be delivered to the Contractor's facility. A list of the representative types of equipment and the total number acceptance tested in 1996 is listed in Attachment 6. The Contractor shall inspect these instruments within 10 calendar days of receipt to insure compliance with the NASA procurement specifications for that specific procurement (contract or purchase order). The Contractor shall use standard techniques for instrument testing; devise new test techniques when no existing test standards apply; and analyze and document test results. If so directed by the COTR or TAM, the Contractor shall return instruments failing to comply with the NASA procurement specifications to the vendor.

**2.2 Repair, Calibration, and Maintenance:** LaRC will require approximately 14,000 instruments to be serviced yearly under this contract. The Contractor shall maintain adequate calibration procedures to ensure instruments are properly certified according to the design specifications and stated manufacturer's accuracy. As a minimum, each instrument serviced or calibrated will be in accordance with standard calibration policies, procedures and practices described in ANSI/NCSL Z540-1-1994 and LHB 5330.9 (1996). The Contractor shall repair, modify, assemble, and maintain Government research instrumentation to meet manufacturer's or Government's specifications. The Contractor shall acquire repair parts and maintain an inventory of common usage items (spares) for performance of the



above services. The Contractor shall contact the instrument manufacturer or authorized representative to provide repair of defective instrumentation that is under warranty. The Contractor shall provide services which consist of the following actions:

2.2.1 The Contractor shall prepare and affix the appropriate NASA/LaRC calibration label to each instrument serviced. Calibration labels shall be furnished by the Contractor in accordance with LHB 5330.9 (1996).

2.2.2 The Contractor shall affix seals where needed on calibrated instruments to inhibit or detect unauthorized entry into an instrument.

2.2.3 The Contractor shall maintain calibration procedures and maintenance manuals at the Contractor's facility, and shall provide LaRC with an electronic index of this information. These procedures and manuals shall be the property of the Government, and shall be turned over to the Government at the conclusion of contract.

2.2.4 The Contractor shall evaluate IWO's to determine economy of repairs: those exceeding forty percent (**40%**) of the replacement costs of an instrument shall constitute the point at which the decision shall be made as to whether the unit is "beyond economical repair" (BER). At this point the COTR or the TAM shall be notified to determine the disposition of the instrument.

2.2.5 The Contractor shall obtain prior written approval from the COTR for all repairs where costs are estimated to exceed \$800. The Contractor shall be responsible for informing the customer, and providing the necessary information to the COTR for repairs above \$800.

2.2.6 The Contractor shall design and fabricate unique test devices, setups, accessories, or equipment, including software development for automated test stands.

3. **CLIN 3 - Data Systems Development and Instrumentation Engineering: Work** shall be performed in the following areas: Application of Sensors, Transducers, and Instruments; Evaluation of Measurement Requirements for Sensors, Transducers, Instruments and Data Acquisition Systems; Design, Furnish, and Install Data Acquisition Systems; Modify and Upgrade Data Acquisition Systems; Test Techniques Development; Analysis of Measurement Data; Off-Site Data Acquisition and Analysis; On-Site Data Acquisition and Instrumentation Systems Operations; System Administration; Documentation of Hardware and Software Configurations, System Operational Procedures, Test Procedures and Results; and Training. Work under this CLIN may take place at ANY on-site facility at LaRC (including the National Transonic Facility), and at off-site locations. Work under this CLIN with an estimated labor cost of \$10,000 or less and an estimated parts/materials cost of \$20,000 or less shall be issued via an ESR approved by the COTR or one of the TAMs. Work under this CLIN that exceeds these limits shall be issued under a Task Order signed by the Contracting Officer. The specific requirements for each of these work areas are as follows:

3.1 Application of Sensors, Transducers, and Instruments: The Contractor shall design, fabricate, select, assemble, install, test, calibrate and verify correct operation of Sensors, Transducers, and Instruments (STI) required to meet research instrumentation requirements, in accordance with manufacturer and Langley approved procedures. Specific requirements under this work element will be delineated in performance-based ESR/Task Orders.

3.2 Evaluation of Measurement Requirements for Sensors, Transducers, Instruments and Data Acquisition Systems: The Contractor shall evaluate measurement and test requirements obtained from LaRC documentation, meetings, user-specifications, and work requests that define the research test objectives for STI and data acquisition systems (DAS). The Contractor shall synthesize these requirements and develop recommendations for best STI and DAS solutions. Recommendations may require data on purchase, delivery, installation, application, maintenance, and test techniques required to meet the specified measurement objectives. Recommendations may require tradeoff analysis and cost/benefits comparisons. Recommendations may require analysis of

measurement error and measurement uncertainty. Recommendations shall be written and in accordance with specified **NASA** documentation standards. The Contractor shall provide the *most cost effective*, reliable and accurate recommendations to accomplish this work element. Specific requirements under this work element will be delineated in performance-based ESR/Task Orders.

**3.3 Design, Furnish, and Install Data Acquisition Systems:** The Contractor shall design, furnish, and install DAS and associated interfaces to facility control systems instrumentation to meet the schedule, cost, and performance requirements delineated in performance-based ESR's/Task Orders. The design shall include the delivery of design documentation to all specified levels (e.g. detail design level) and standards (e.g. **NASA** Software Documentation Standard), inclusive of acceptance and integration/test plans. The design shall include the delivery of a detailed work breakdown structure itemizing the resources, schedule, and dependencies of all work elements. The design shall conform to all initial conditions, constraints, and/or design approaches. The Contractor may be required to furnish operational prototypes and/or final products. The Contractor may be required to procure any/all hardware and/or software for Government-accepted designs. The Contractor may be required to remove any existing systems and install any new systems and/or components, in accordance with manufacturer and **NASA** procedures. The Contractor shall verify the correct operation and performance level of the delivered systems and all other affected systems, in accordance with applicable test/integration plans and schedule. The Contractor shall also attend regularly scheduled design/status review meetings to report work accomplished under this element.

**3.4 Modify and Upgrade Data Acquisition Systems:** The Contractor shall modify and upgrade **DAS**, including the INFOPC System, and associated DAS interfaces to facility control systems instrumentation to meet the schedule, cost, and performance requirements delineated in performance-based ESR's/Task Orders. The system upgraded modifications shall include the delivery of design documentation to all specified levels (e.g. detail design level), standards (e.g. **NASA** Software Documentation Standard) and integration/test plans. The upgraded modifications shall include the delivery of a detailed work breakdown structure itemizing the resources, schedule, and dependencies of all work elements. The upgraded modifications shall conform to all initial conditions, constraints, and/or design approaches. The Contractor may be required to furnish operational prototypes and/or final products. The Contractor may be required to procure any/all hardware and/or software for Government-accepted designs. The Contractor may be required to remove any existing systems and install any upgraded/modified systems and/or components, in accordance with manufacturer and **NASA** procedures. The Contractor shall verify the correct operation and performance level of the delivered systems and all other affected systems, in accordance with applicable test/integration plans and schedules. The Contractor shall also attend regularly scheduled design/status review meetings to report work accomplished under this element.

**3.5 Test Techniques Development:** The Contractor shall provide advanced engineering and experimental systems development expertise for the design and implementation of specialized instrumentation system prototypes for special test techniques. Such work will require feasibility studies, conceptual through detailed design, prototype development, integration and adaptation of prototypes to existing systems, development of test and calibration procedures, operation/application of prototypes and procedures, and analysis of results. Data collection and analysis may be to the level required for publication of formal papers. This work element applies to areas such as advanced data systems architecture development, optical systems development, sensor/system calibration techniques development, acoustic measurement techniques, temperature and pressure sensitive paint technologies, and general sensor development in support of new testing capabilities. Specific requirements under this work element will be delineated in performance-based ESR's/Task Orders.

**3.6 Analysis of Measurement Data:** The Contractor shall perform data analysis of aeronautical, acoustics, and structural test data (and related disciplines) as delineated in performance-based ESR's/Task Orders. The Contractor shall analyze research data according to stated or derived research specifications and shall optimize all data analysis processes for cost effectiveness and accuracy. The Contractor shall provide complete documentation of the analysis of data to include: data records, processes, calculation/equations, calibrations, results, and methods used for verifying data

accuracy and for determining measurement uncertainty. The Contractor shall establish and maintain documented procedures to control, calibrate, and maintain equipment and systems required to perform the data analysis function.

**3.7 Off-site Data Acquisition and Analysis:** The Contractor shall perform data acquisition systems development, operation, calibration, data analysis, hardware/software maintenance, configuration control, and upgrades for off-site research measurement systems and instrumentation in a cost effective, efficient, and responsive manner as delineated in performance-based ESR's/Task Orders. This work will primarily be in support of acoustics field tests, Light, Distance and Ranging (LIDAR) operations, and other related field tests where portable data acquisition systems, instrumentation systems, and special analysis software will be developed, operated, and maintained. The Contractor shall develop, maintain, and execute documented procedures for setup, calibration, operation, data analysis, testing and maintenance of field test hardware and software systems, including software applications (operating systems, acquisition and computational software), to insure optimum productivity, security and system readiness.

**3.8 On-Site Data Acquisition and Instrumentation Systems Operations:** The Contractor shall perform on-site operation of data acquisition and measurement systems. Some systems will be of a prototype or unique nature where initial performance analysis is required to perform desired system enhancements. Other situations will require single or multiple shift operation of data acquisition and measurement systems. Specific requirements under this work element will be delineated in performance-based ESR/Task Orders.

**3.9 System Administration:** The Contractor shall provide operating system software maintenance, technical support and consulting, performance measurements and tuning, and access control associated with all supported and developed system(s) software. The Contractor shall provide system administration for approximately 35 research data acquisition and support systems.

**3.9.1 Operating System Software Maintenance:** The Contractor shall perform all required planning, associated training, and testing of operating system software releases prior to implementation. All operational software release/software upgrade shall be accomplished by the Contractor through planning, scheduling, and implementation activities.

The Contractor shall diagnose operating system software failures; formulate and execute bypass procedures; communicate diagnostic findings to the appropriate vendor; receive, test, and apply fixes; and record the changes in the configuration management system. The Contractor shall formulate, test, and apply fixes for all in-house developed and maintained software. Operating system software failures and impacts shall be appropriately documented and tracked in a problem reporting system.

The Contractor shall notify the Government of the availability of updates and successor products to the installed system software. The Contractor shall provide updates of the current licensed and installed system software for all applicable systems. This update shall also include corrective action and enhancements to system software.

The Contractor shall provide a convenient method of accessing readable source code, if available, for all software products for which the Government has obtained source code licenses. The source code shall be readily available to Government and other Contractor personnel.

The Contractor shall acquire and maintain reference documentation and/or arrange for reference services appropriate to accomplishing the operating system software maintenance function.

The Contractor shall implement all configuration management and security controls associated with or affected by operating system software maintenance functions.

**3.9.2 Technical Support and Consulting:** The Contractor shall provide technical support, consulting, and coordination to ensure orderly system implementation, integration, and operation of operating system software

The Contractor shall conduct performance analysis and tuning on each of the operating system software components, and shall implement changes to meet performance requirements.

The Contractor shall administer user accounts and provide password services as required. The Contractor shall collect, analyze, and report information relevant to the management of system access. The Contractor shall implement access security control processes that **shall** be **periodically** reviewed and validated.

**3.10 Documentation of Hardware and Software Configurations, System Operational Procedures, Test Procedures and Results:** The Contractor shall provide complete and formal documentation, in a timely manner, for all facets of work performed under this contract. **All** documentation shall be **concise**, complete and easy to use in the maintenance and operation of research data systems and test procedures. **All** documentation shall be provided in **conformance** with **specified NASA** documentation standards (Contract Exhibit G). The Contractor shall **maintain** documentation records (i.e., database or equivalent) associated with past or current work requests and shall provide to **the** Government ESR/Task Order related documentation upon request as specified in performance-based ESR/Task Orders.

The Contractor shall establish and maintain documented procedures to document, control and verify that the Contractor's products and deliverables meet the specified work requirements. The Contractor shall establish and maintain documented procedures to control all documents and data that relate to the requirements of the NASA standards including to the extent applicable, documents of external origin such as standards and NASA drawings. Documents and data shall be in the type of media specified in performance-based ESR's/Task Orders.

The documents and data shall be reviewed and approved for adequacy by authorized Government personnel prior to issue. A master list or equivalent document control procedure identifying the current revision status of documents shall be established and be readily available to preclude the use of invalid **and/or** obsolete documentation. The control shall ensure that:

(a) The pertinent issues of appropriate documents are available at all locations where operations essential to the effective functioning of the **quality** system are performed.

(b) Invalid **and/or** obsolete documents are promptly removed from all points of **issue** or use, or otherwise assured against unintended use.

(c) Any obsolete documents retained for legal **and/or** knowledge-preservation purposes are suitably identified.

Changes to documents and data shall be reviewed and approved by the same **functions/organizations** that performed the original review and approval, unless **specifically** designated otherwise. The designated **functions/organizations** shall have pertinent background information upon which to base their review and approval. Where practicable, the nature of the change shall be identified in the **document** or **the appropriate** attachments.

The Contractor shall establish, maintain, and apply acceptable procedures **for** the identification, **verification**, configuration management, storage, and quick access to hardware and software documentation required for the operation and maintenance of designated facility data **acquisition** and facility instrumentation systems. Where appropriate the Contractor **shall** establish and

maintain documented procedures for identifying the product by suitable means from receipts and during all stages of production, delivery, and installation.

**3.11 Training:** The Contractor shall provide, as requested in performance-based ESR's/Task Orders, user training in support of all systems and services for all applications, products, and services delivered under this contract. This training shall include user and operational training on data acquisition and instrumentation systems.

**4. CLIN 4 - On-site Instrument Services and Digital Svstems Support Services:** The Contractor shall provide on site service for emergencies, short duration tasks, or services that require immediate attention on equipment that is not readily transportable or that must be serviced on-site. Specific tasks shall be initiated when a service call is received and documented on an IWO. When the work is complete, an evaluation form shall be left with the user requesting the service. Multiple shift and off-hours support shall be provided. The Contractor shall provide 30 minute on-site priority response during first and second shifts (7:30 a.m. - 12:00 midnight Mon. - Fri.), and 60 minute on-site priority response during third shift (12:00 midnight to 7:30 a.m.), weekends (12:00 midnight Friday to 12:00 midnight Sunday) and Government holidays. A list of priority facilities will be provided quarterly. **The Contractor shall provide on-site maintenance service and emergency repair, for digital systems, computer systems, and instruments as described below:**

**4.1 Digital Systems Maintenance and Repair:** The Contractor shall provide hardware and software maintenance and repair of approximately 1000 computer systems used for scientific and research applications. The systems include approximately 5000 peripherals. The current inventory includes 35 MODCOMP-based data acquisition systems, 70 graphics/high end workstations from various manufactures (DEC, HP, SUN, and others), 125 Mini/Micro computer-based systems from various manufactures (HP, DEC, Concurrent, and others), 750 personal computer systems from various manufacturer's (PC/MAC) used for data acquisition, controls and other scientific applications. The required maintenance includes hardware/software diagnosis and repairs, and hardware/software upgrades to current revision levels, when required. The Contractor shall repair the hardware onsite, when practical, to minimize system downtime. The Contractor shall respond to routine (non-priority) service requests within 24 hours of service request initiation.

**4.2 Computer Systems Services:** The Contractor shall provide computer system services including receipt and inspection, installation, configuration control, maintenance of diagnostics, systems integration, performance testing, and system documentation (hardware and software).

**4.3 On-Site Instrument Service and Emergency Repair:** On-site service and emergency repair includes, but is not limited to, magnetic tape and chart recorders, Electronically Scanned Pressure (ESP) systems, Neff DAS and DAS sub-systems, and the effective usage of two Government-provided mobile calibration carts to perform on-site calibrations of facility test equipment. This will involve between 3000-4000 instruments per year, which are included in the total estimated number of 14,000 instruments serviced annually. The Contractor shall schedule and utilize mobile calibration carts to maximize service to major facilities and minimize interruptions of normal tunnel operations.

## SECTION D - PACKAGING AND MARKING

### D.1 PACKAGING AND MARKING

The Contractor shall package, handle, and transport all items under this contract in an appropriate manner based on the fragility and/or sensitivity of each individual item. Particular care shall be taken to ensure that shipping or handling does not compromise the accuracy of instruments being transported under the contract.

**SECTION E - INSPECTION AND ACCEPTANCE****E.1 FINAL INSPECTION AND ACCEPTANCE (LARC 52.246-94) (OCT 1992)**

Final inspection and acceptance of all **items** specified for delivery under this contract shall **be** accomplished **by** the Contracting Officer or his duly authorized representative at destination.

**SECTION F - DELIVERIES OR PERFORMANCE****F.1 PERIOD OF PERFORMANCE**

The period of performance of this contract shall **be** 12 months from the effective date of the contract.

**F.2 PLACE OF DELIVERY (LARC 52.21 1-92) (OCT 1992)**

Delivery shall **be** ~~at~~ destination:

~~As~~ specified in Task Orders and ESR's.

**F.3 PLACE(S) OF PERFORMANCE (LARC 52.21 1-98) (OCT 1992)**

The place(s) of performance shall **be**:

**NASA**, Langley Research Center, Hampton, Virginia; ~~the~~ Contractor's facilities; and other **sites** as may **be** designated **by** Task Order ~~or~~ **ESR**.

**SECTION G - CONTRACT ADMINISTRATION DATA****G.1 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 1852.227-72) (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	212	<b>NASA</b> , Langley Research Center Hampton, VA 23681-0001
Patent Representative	212	<b>NASA</b> , Langley Research Center Hampton, VA 23681-0001

(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 SUBMISSION OF VOUCHERS FOR PAYMENT (NASA 18-52.216-87) (DEC 1988)

(a) Public vouchers for payment of costs shall include a reference to this contract NAS1-\_\_\_\_, your Taxpayer Identification Number and be forwarded through:

**NASA** Langley Research Center  
Attn: Financial Management Division, **MS 175**  
Hampton, VA **23681-0001**

This is the designated billing office for cost vouchers for purposes of the Prompt Payment **clause** of **this** contract.

(b) The Contractor shall prepare vouchers as follows:

(1) One original Standard Form (SF) **1034**, **SF 1035**, or equivalent Contractor's attachment.

(2) Seven copies of **SF 1034A**, **SF 1035A**, or equivalent Contractor's attachment.

(3) **The Contractor shall mark SF 1034A copies 1, 2, 3, 4**, and such other copies as may be directed by the Contracting Officer by insertion in **the** memorandum block the names and addresses as follows:

- (i) Copy 1 **NASA** Contracting Officer;
- (ii) Copy 2 Auditor;
- (iii) Copy 3 Contractor
- (iv) Copy 4 Contract administration **office**; and
- (v) Copy 5 Project management **office** (when required by the NASA

Contracting Officer).

(c) Public vouchers for payment of fee **shall** be prepared **similarly** and be forwarded through:

NASA Langley Research Center  
 Attn: Financial Management Division, MS 175  
 Hampton, VA 23681-0001

This is the designated billing of fee for fee vouchers for purposes of the prompt payment clause of this contract.

### G.3 LIST OF GOVERNMENT-FURNISHED PROPERTY (NASA 18-52.245-76) (OCT 1988)

For the performance of work under this contract, the Government will make available Government property identified in Exhibit C of this contract on a no-charge-for-use basis. The Contractor shall use this property in the performance of this contract at the Contractor's facilities and at other location(s) as may be approved by the Contracting Officer. Under the FAR 52.245-2 Government Property clause of this contract, the Contractor is accountable for the identified property.

### G.4 LIST OF INSTALLATION-PROVIDED 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, while on-site at the NASA installation.

(a) Office space, work area space, utilities and existing furniture. The Contractor shall use Government telephones for official purposes only.

(b) Existing general- and special-purpose equipment.

(1) Existing equipment 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 B. The Government retains accountability for this property under the Installation-Provided Government Property clause, regardless of its authorized location.

(2) The Contractor shall not acquire property as a direct cost under this contract unless expressly authorized by the Contracting Officer. When authorized, 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) If the Contractor brings property owned or leased by the Contractor on-site for use under this contract, such property shall be tagged or otherwise marked to identify the owner.

(c) Institutional fire and security protection on-site at LaRC.

(d) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

(e) Cafeteria privileges for Contractor employees during normal operating hours.

(f) Building maintenance for on-site facilities occupied by Contractor personnel.

(g) Moving and hauling of Government Furnished Equipment

(h) Liquid Nitrogen (LN2) as required for the performance of work under the contract.

(i) The responsibilities of the Contractor as contemplated by paragraph (a) of the Installation-Provided Government Property clause are defined in the following property management directives and installation supplements to these Directives:



- (1) NHE 4200 1 NASA Equipment Management Manual
- (2) NHE 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.

## G.5 PROVIDING FACILITIES TO CONTRACTORS

**A.** In accordance with FAR 45.302-1, it is policy of the Government that Contractors shall furnish all facilities required for performing Government contracts. "Facilities" include real property and plant equipment including personal property such as general purpose off-the-shelf equipment, machine tools, test equipment, furniture and vehicles. "Facilities" do not include material, special test equipment, special tooling or agency-peculiar property.

**B.** In keeping with the policy set forth in FAR 45.302-1, the Government will not provide NEW "facilities," except as provided for in the Statement of Work.

**C.** However, the Government will provide EXISTING facilities as listed in G.3 and Exhibit C, as well as **G.4** and Exhibit **B**. (Please note that Exhibit C also lists ~~Special Test Equipment, which is not~~ included in the definition of "facilities".) Any of these existing facilities that reach the end of their useful life during the contract period, or which are beyond economical repair, shall be replaced by the Contractor, if the facilities are still needed for contract performance.

**D.** The equipment which comprises the Equipment Loan Pool (CLIN 1) will be provided by the Government, including any new or replacement items. The Government will determine if and when new or replacement items are needed for the Equipment Loan Pool. The Contractor may make suggestions concerning new or replacement items based on their working knowledge of user demand, and shall keep the Government informed as to the condition of the Loan Pool items.

## G.6 ORDERING PROCEDURES

### A. Instrument Work Orders

All work under CLIN 2 is initiated, tracked, and documented on an IWO **NASA Form 165** or an electronic equivalent. All **IWO's** will be initiated by user request, either written or verbal, and then documented by the Contractor in the INFOPC system for COTR or TAM review. Most work under CLIN 2 will consist of the **placement** of an instrument at a designated pick-up point with a **NASA FORM 145** filled out by the end user and attached. In facilities with daily scheduled visits, pick-up is automatic; in others, pick-up **is** initiated by calling the Contractor's dispatcher service. IWO initiation occurs when the item arrives at the Contractor's facility. Under CLIN 4, IWO initiation occurs when a service call **is** received. The Contractor is responsible for obtaining and entering the proper information into the **INFOPC** system for all IWO'S generated. The information for all IWO's shall include, but not be limited to: equipment identification, customer name, initiation date, **priority**, service requested, required completion date, and **job** order number.

### B. Engineering Service Requests

All work under CLIN 3 with a loaded labor cost estimate of \$10,000 or **less** AND an estimate for parts and materials of \$20,000 or less is initiated, tracked, and documented on an **Engineering Service Request (ESR)**. The Contractor will **identify the customer, document the** requirements, initiation date, priority, delivery schedule and estimated resources required to accomplish the work. The Contractor will enter information for quick turn around work under CLIN 3 into the **INFOPC** system for review and approval by the COTR or TAM prior to commencing work. **Work** in this category that **is** deemed **urgent/emergency** (e.g., work stoppage in the facility) may begin without a formal **ESR**, provided the COTR or TAM is informed within one working day.

### C. Task Orders

All work under CLIN 3 that exceeds the limits of an ESR will be issued by the Contracting Officer via a written Task Order. Task Orders will be accomplished in two phases. The first phase will involve a planning Task Order or ESR, depending upon the size of the planning and estimating effort, to determine preliminary requirements, staffing requirements, preliminary top level design, schedule, proposed costs, and other factors. The output of the planning Task Order will be a project proposal. The second phase will be the actual implementation Task Order for the designing, furnishing, installing, and maintaining of the product or services.

Work of this type will be initiated on a Task Order Request Information Form, which will be prepared jointly by the customer and TAM. The form will then be submitted to the Contractor for preparation of a project proposal. During development of the Task Order Request (**TOR**) the Government and the Contractor shall discuss the following: task requirements, top level design, Contractor's proposal to accomplish the task, and required schedule. The Contractor's project proposal will address these factors and **shall** be completed by the Contractor within a schedule agreed to by the customer, TAM, and Contractor and submitted to the TAM for review.

After the customer and TAM review and approve the project proposal, a **TOR approval** page with appropriate signatures for the project will be submitted along with the Task Order proposal for Contracting Officer approval. The TOR will include the Task Order Fee Arrangement (TOFA) and designation of Task Criticality. Each Task Order will identify the work to be performed, performance metrics, the location of the work, a delivery schedule, a cost limitation, and an appropriate amount of award fee **based** on the ESTIMATED (not actual) cost of the Task Order ( See 8.3, Award Fee Availability Schedule), and will include the Contracting Officer's signature. The Contractor shall acknowledge receipt and acceptance of each Task Order within three working days after receipt. If the Contractor cannot comply with a Task Order requirement, the Contractor shall so **indicate** in the receipt acknowledgment, and shall note the changes required for acceptance. Any differences must **be** resolved between the parties and the order modified to reflect the agreement. Any required modifications to the Task Order during the performance period will be approved through the same process described above, except that a separate planning Task Order or ESR will not be required.

Two copies of each Task Order will be furnished to the Contractor, one shall be retained by the Contractor and one shall be returned to the Contracting Officer Technical Representative upon completion of the work specified therein, containing, as applicable, actual completion dates **and/or** delivery dates, actual man-hours expended, actual material and labor costs incurred, and any remarks which the Contractor may wish to make with respect to his performance thereunder.

### D. Contract Scope

If any work issued 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 funding, contract estimated cost) in the performance thereof, the Contractor **shall** immediately **notify** the Contracting Officer in writing, and shall not perform any work pending resolution by the Contracting Officer.

## G.7 INVOICES AND PAYMENTS (LARC 52.232-96) (OCT 1992)

**A. General--Invoices** shall be addressed as shown in Block **25** on page **1** of this contract and **shall be identified by the** contract number. **Cost and fee** invoices shall **be submitted separately**.

**6.** Cost—Payments of cost shall be made in monthly installments.

**C.** Cost **invoices shall** be submitted through the delegated Government Audit Agency.

D. Payments of award fee shall be made in response to and in the amount of the Fee Determination Official's written Notice of Award Fee as set forth in paragraph 1.16. Payments of award fee (and base fee, as applicable) are subject to the withholding provisions of the Section I clause entitled 'Award Fee.'

#### G.8 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 (757)864-7765.

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 N/A 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 January 5, 1998, upon which this contract is based.

## H.2 LIMITATION OF FUTURE CONTRACTING (NASA 1852.209-71) (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 in the performance of work under the contract involves the participation by the Contractor in the development of requirements and specifications for both software and hardware systems.

(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 develop 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). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this 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.

## H.3 COMMERCIAL COMPUTER SOFTWARE AND SYSTEMS

The Contractor warrants that the items delivered under this contract/order are merchantable and fit for the particular purpose described in the contract/order, to include accurate performance in the processing of date and date related data (including but not limited to calculating, comparing and sequencing) by all hardware and software products delivered, individually and in combination, upon installation. This performance includes the manipulation of this data with dates prior to, through, and beyond January 1, 2000, and shall be transparent to the user.

Hardware and software products, individually and in combination, shall successfully transition into the Year 2000 with the correct system date without human intervention, including leap year calculations. Hardware and software products, individually and in combination, shall also provide correct results when moving forward or backward in time across the Year 2000.

## H.4 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 Waage</u>
Contract Manager	\$30.27/hr.
Metrology Engineer	\$25.61/hr.
Engineer	\$25.61/hr.
Acoustical Engineer	\$25.61/hr.
Laser Optical Engineer	\$25.61/hr.
Digital Systems Engineer	\$21.59/hr.
Systems Analyst/Programmer	\$21.59/hr.

	\$17.97/hr.
	\$14.85/hr.
Senior Engineering Technician	\$17.97/hr.
Engineering Technician	\$12.14/hr.
Calibration Technician	\$10.93/hr.
Electronics Technician	\$16.36/hr.
Machinist	\$14.52/hr.
Production Control Specialist	\$14.85/hr.
Clerk	\$11.46/hr.
Technical Editor	\$14.85/hr.

**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 three retirement plans identified as the Civil Service Retirement System (CSRS), the Federal Employees Retirement System (FERS), and the CSRS Offset. Under the CSRS, the Government contributes 7% of the employees' base pay towards the retirement benefit and 1.45% towards Medicare. Under the FERS, the Government contributes 11.4% of the employees' base pay towards a basic benefit plan, 6.2% to Social Security, 1.45% towards Medicare, and 1% (plus matching contributions of up to 4% of basic pay, depending on employees' contributions) to a thrift savings plan. Under the CSRS Offset, the Government contributes 6.2% of the employees' base pay towards the retirement benefit, 6.2% to Social Security, and 1.45% towards Medicare.

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.5 OPTION TO EXTEND THE TERM OF THE CONTRACT ( FAR52.217-9) ( MAR1989)**

(4) The Government may extend the term of this contract by unilateral written notice to the Contractor within the current contract period of performance.

(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 60 months.

H.6 OPTIONS

A. Priced Options/Extended Term

Pursuant to H.5, '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 **4 additional periods of 12 months each**. Such options *are to be exercisable by issuance of a unilateral modification*. Upon exercise of such option(s) by the Government, the following items will be increased by the amount specified below for each 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>
<b>Period of Performance (Ref. F.1)</b>	12 Months	12 Months	12 Months	12 Months
<b>Estimated Cost (Ref. 6.2)</b>				
CLIN 1	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CUN 2	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CUN 3	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CUN 4	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
<b>Award Fee (Ref. 8.2)</b>				
CUN 1	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CUN 2	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CUN 3	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
CLIN 4	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
<b>Award Fee Availability (Ref. B.3)</b>				
<b>Period 3 (4/1/99 - 9/30/99)</b>				
CUN 1	\$ [REDACTED]			
CUN 2	\$ [REDACTED]			
CLIN 3	TBD			
CUN 4	\$ [REDACTED]			

<u>Item</u>	<u>First Option Period</u>	<u>Second Option Period</u>	<u>Third Option Period</u>	<u>Fourth Option Period</u>
Period 4 (10/1/99 - 3/31/00)				
CLIN 1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 3	TBD	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Period 5 (4/1/00 - 9/30/00)				
CLIN 1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 3	[REDACTED]	TBD	[REDACTED]	[REDACTED]
CLIN 4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Period 6 (10/1/00 - 3/31/01)				
CLIN 1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 3	[REDACTED]	TBD	[REDACTED]	[REDACTED]
CLIN 4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Period 7 (4/1/01 - 9/30/01)				
CLIN 1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CLIN 3	[REDACTED]	[REDACTED]	TBD	[REDACTED]
CLIN 4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

<u>Item</u>	<u>First Option Period</u>	<u>Second Option Period</u>	<u>Third Option Period</u>	<u>Fourth Option Period</u>
<b>Period 8 (10/1/01 - 3/31/02)</b>				
CLIN 1			\$ [REDACTED]	
CLIN 2			\$ [REDACTED]	
CLIN 3			TBD	
CUN 4			\$ [REDACTED]	
<b>Period 9 (4/1/02 - 9/30/02)</b>				
CUN 1	[REDACTED]			\$ [REDACTED]
CLIN 2	[REDACTED]			\$ [REDACTED]
CLIN 3				TBD
CUN 4	[REDACTED]			\$ [REDACTED]
<b>Period 10 (10/1/02 - 3/31/03)</b>				
CUN 1	[REDACTED]			\$ [REDACTED]
CLIN 2	[REDACTED]			\$ [REDACTED]
CLIN 3				TBD
CUN 4	[REDACTED]			\$ [REDACTED]

**H.7 CONTRACTOR EMPLOYEES SECURITY CLEARANCE (LARC 52.204-90)  
(OCT 1992)**

By virtue of their particular work assignment, certain Contractor employees, may be required to have a security clearance granted in accordance with the National Industry Security Program Operating Manual (NISPOM) dated March 14, 1996. Clearances will be issued by the Department of Defense (DOD). Within 10 working days after an employee is identified by the Government and/or the Contractor as requiring a **SECRET or higher** clearance, the Contractor shall submit to the Contracting Officer evidence of the submittal of a request for clearance to DOD for such employee. If the clearance for an employee has not been issued by DOD within 120 calendar days of the submittal of the request for clearance to DOD, the Contractor may be required to remove the employee from the contract.



## H.8 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.9 OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LARC 52.211-24) (MAR 1992)

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 at 1 Langley Boulevard (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.10 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 January 5, 1998 is hereby incorporated herein by reference.

## H.11 VIRGINIA AND LOCAL SALES TAXES (LARC 52.229-92) (APR 1992)

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 inapplicable 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.12 ADVANCE AGREEMENT ON INDIRECT RATE(S) (LARC 52.231-90)(JUN 1988)**

**A.** Notwithstanding the provisions of the Section I clause entitled 'Allowable **Cost** and Payment,' the Contractor will be reimbursed ~~at~~ the indirect ceiling rates specified below or the actual rates, whichever are less, for each of the Contractor's fiscal years applicable to this contract. The Contractor's fiscal year is January 1 through December 31. Any costs that are not reimbursed due to the ceilings shall ~~be~~ deemed unallowable costs. These unallowable costs shall not be recovered under this or any other Government contract.

<u>year</u>	<u>Indirect Cost Pool</u>	<u>Ceiling Percentage *</u>	<u>Allocation Base</u>
1998	General	<del>100%</del>	Total Direct and Indirect <b>Costs</b> (Excluding G & A)
1999		<del>100%</del>	
2000	and Administrative (G & A)	<del>100%</del>	
2001		<del>100%</del>	
2002		<del>100%</del>	
2003		<del>100%</del>	

~~in the event~~ of a significant reduction of ~~the~~ contract effort due to Government actions or Agency budget constraints; or termination under the general provisions, the Contractor shall submit a proposal for adjustment of the ceiling. In the event that the parties cannot agree on new ceilings, the Contracting Officer may equitably adjust the ceilings.

**B.** The above rate ceilings are predicated upon the bases listed above and the accounting practices and accounting system in effect on January 5, 1998. If the Contractor changes its accounting practices or accounting system in any way, the Contractor will immediately **notify** the Government. Within 30 days of such change the Contractor shall present to the Contracting Officer information that demonstrates that the change will not impact the allowable cost computed using the above rates or shall submit a proposal for adjustment of the ceilings so that the total costs allowable will not exceed the **total costs** that would have been allowable had the Contractor not changed its accounting practices or accounting system. In the event that the parties cannot agree on new ceilings using the Contractor's new accounting practices or system and the Contractor does not agree to return to the previous accounting practices and system, the Contracting Officer may equitably adjust the ceilings.

**H.13 QUALITY MANAGEMENT SYSTEM (ISO-9000) REQUIREMENTS**

**A. ISO Certification**

No later than 12 months after award of the contract, the Contractor and **all** major subcontractors, ~~as~~ applicable, shall be certified by a third-party registrar ~~as~~ compliant with the appropriate standard contained in the current version of the ISO 9000 Standard Series or ~~the American National Standards Institute/American Society for Quality Control's "Q9000 Series"~~ and associated documentation. The Contractor and all Major Subcontractors, as applicable, shall maintain their registration during the contract term, including any extensions. Failure to maintain the appropriate ISO registration ~~will be~~ considered grounds for a default termination under the Termination (**Cost-Reimbursement**) clause in Section I. Any Subcontractor performing 5 percent or more of ~~the~~ estimated contract ~~dollar~~ value will be considered a Major Subcontractor for the purpose of this clause. The requirements of this clause apply to Major Subcontractors performing in the **areas** of design, development, production, installation and servicing performed under this contract.

The prime Contractor and major subcontractor(s), ~~as applicable~~, shall ~~be certified as~~ compliant with ISO 9001 for design, development, production, installation and servicing performed ~~under this contract~~; or, ~~as applicable~~, shall ~~be certified as~~ compliant with ISO 9002 for production, installation ~~and~~ servicing performed under this contract ~~if the prime Contractor or subcontractor in question does not perform design and development work under the contract.~~

**PART II - CONTRACT CLAUSES****SECTION I - CONTRACT CLAUSES****I.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE:**

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section ~~are~~ hereby incorporated by reference.

**FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES**

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
52.202-1	Definitions (OCT 1995)
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 1995)
52.203-7	Anti-Kickback Procedures (JUL 1995)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
52.204-2	Security Requirements (AUG 1996)
52.204-4	Printing/Copying Double-Sided on Recycled Paper (JUN 1996)
52.207-3	Right of First Refusal of Employment (NOV 1991)
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JUL 1995)
52.211-15	Defense Priority and Allocation Requirements (SEP 1990)
52.215-2	Audit and Records--Negotiation (AUG 1996)
52.215-23	Price Reduction for Defective Cost or Pricing Data--Modifications (OCT 1995)
52.215-25	Subcontractor Cost or Pricing Data--Modifications (OCT 1995)
52.215-26	Integrity of Unit Prices (JAN 1997)
52.215 3 3	Order of Precedence (JAN 1986)
52.216 7	Allowable Cost and Payment (MAR 1997)
52.219-8	Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns (JUN 1997)
52.219-9	Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan (AUG 1996) Alternate II (MAR 1996)
52.222-1	Notice to the Government of Labor Disputes (FEB 1997)
52.222-3	Convict Labor (AUG 1996)
52.2224	Contract Work Hours and Safety Standards Act--Overseas Compensation (JUL 1995)
52.222-26	Equal Opportunity (APR 1984)
52.222-28	Equal Opportunity Preaward Clearance of Subcontracts (APR 1984)
52.22235	Affirmative Action for Special Disabled and Vietnam Era Veterans (APR 1984)
52.22236	Affirmative Action for Handicapped Workers (APR 1984)
52.22237	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (JAN 1988)
52.223-2	Clean Air and Water (APR 1984)
52.223-3	Hazardous Material Identification and Material Safety Data (JAN 1997)-- Alternate I (JUL 1995)
52.223-2	Clean Air and Water (APR 1984)
52.223-5	Pollution Prevention and Right-To-Know Information (MAR 1997)
52.223-6	Drug-Free Workplace (JAN 1997)
52.223-12	Refrigeration Equipment and Air Conditioners (MAY 1995)
52.223-14	Toxic Chemical Release Reporting (OCT 1996)
52.225-1 1	Restrictions on Certain Foreign Purchases (OCT 1996)
52.227-1	Authorization and Consent (JUL 1995)
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)

52.227-3 Patent Indemnity (APR 1984)  
 52.227-14 Rights in Data--General (JUN 1987)--as modified by NASA FAR Supplement 1852.227-14  
 52.227-19 Commercial Computer Software – Restricted Rights (JUN 1987) – as modified by NASA FAR Supplement 1852.227-19  
 52.228-7 Insurance--Liability to Third Persons (MAR 1996)  
 52.230-2 Cost Accounting Standards (APR 1996)  
 52.232-9 Limitation on Withholding of Payments (APR 1984)  
 52.232-17 Interest (JUN 1996)  
 52.232-22 Limitation of Funds (APR 1984)  
 52.232-23 Assignment of Claims (JAN 1986)  
 52.232-33 Mandatory Information for Electronic Funds Transfer Payment (AUG 1 96)  
 52.233-1 Disputes (OCT 1995)--Alternate I (DEC 1991)  
 52.233-3 Protest After Award (AUG 1996)--Alternate I (JUN 1985)  
 52.237-2 Protection of Government Buildings, Equipment and Vegetation (APR 1984)  
 52.237-3 Continuity of Services (JAN 1991)  
 52.237-8 Restrictions on Severance Payments to Foreign Nationals (OCT 1995)  
 52.239-1 Privacy or Security Safeguards (AUG 1996)  
 52.242-1 Notice of Intent to Disallow Costs (APR 1984)  
 52.242-3 Penalties for Unallowable Costs (OCT 1995)  
 52.242-15 Stop-Work Order (AUG 1989)--Alternate I (APR 1984)  
 52.243-2 **Changes--Cost-Reimbursement** (AUG 1987)--Alternate II (APR 1984)  
 52.244-2 Subcontracts (Cost-Reimbursement and Letter Contracts) (FEB 1997)--Alternate I (AUG 1996)  
 52.244-5 Competition in Subcontracting (DEC 1996)  
 52.245-5 Government Property (Cost-Reimbursement, Time and Material, or Labor-Hour Contracts) (JAN 1986)(DEVIATION) (JUL 1995)  
 52.246-3 Inspection of ~~Supplies--Cost-Reimbursement~~ (APR 1984)  
 52.246-5 Inspection of Sewices--Cost-Reimbursement (APR 1984)  
 52.246-25 Limitation of Liability--Services (FEB 1997)  
 52.247-35 F.O.B. Destination, Within Consignee's Premises (APR 1984)  
 52.248-1 Value Engineering (MAR 1989)  
 52.249-6 Termination (Cost-Reimbursement) (SEP 1996)  
 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>
1852.219-74	Use of Rural Area Small Businesses (SEP 1990)
1852.219-75	Small Business and Small Disadvantaged Business <b>Subcontracting</b> Reporting (JUL 1997)
1852.219-76	NASA 8 Percent Goal (JUL 1997)
1852.219-77	NASA Mentor-Protege Program (JUL 1997)
1852.219-79	Mentor Requirements and Evaluations (JUL 1997)
1852.223-70	Safety and Health (MAR 1997)
1852.223-73	Safety and Health Plan (DEC 1988)
<b>1852.223-74</b>	Drug and Alcohol-Free Workforce (MAR 1996)
<b>1852.227-70</b>	New Technology (JUL 1995)
<b>1852.228-75</b>	Minimum Insurance Coverage ( <del>OCT</del> 1988)
1852.237-70	Emergency Evacuation Procedures (DEC 1988)
<b>1852.242-71</b>	Travel Outside of the United States (DEC 1988)
1852.242-72	Observance of Legal Holidays (AUG 1992)-- <b>Alternate II</b> (SEP 1989)
1852.242-73	NASA Contractor Financial Management Reporting ( <b>JUL 1997</b> )
<b>1852.245-70</b>	Acquisition of Centrally Reportable Equipment ( <b>JUL 1997</b> )

1852.245-71 Installation-Provided Government Property (MAR 1989)—Alternate I  
(MAR 1989)

## 12 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
52.252-2	Clauses Incorporated by Reference (JUN 1988)
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JUN 1997)
52.222-2	Payment for Overtime Premiums (JUL 1990)
52.222-41	Service Contract Act of 1965, As Amended (MAY 1989)
52.223-7	Notice of Radioactive Materials (JAN 1997)
52.232-25	Prompt Payment (JUN 1997)
52.242-13	Bankruptcy (JUL 1995)
52.244-6	Subcontracts for Commercial Items and Commercial Components (OCT 1995)
52.252-6	Authorized Deviations in Clauses (APR 1984)
1852.204-75	Security Classification Requirements (SEP 1989)
1852.204-76	Security Requirements for Unclassified Automated Information Resources (SEP 1993)
1852.215-84	Ombudsman (OCT 1996)
1852.216-76	Award Fee for Service Contracts (OCT 1996)
1852.245-73	Financial Reporting of NASA Property in the Custody of Contractors (SEP 1996)

## 13 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.

## 1.4 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (52.203-8) (JAN 1997)

(a) If the Government receives information that a Contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract: or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Ad.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

## 15 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (FAR 52.203-12)(JUN 1997)

(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 1 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 1 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.

(8) 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 of 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.

(c) Disclosure. (1) 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.

(2) 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--

(i) 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

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

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

(3) 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.

(4) 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.

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



(e) **Penalties.** (1) 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.

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

(f) **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 other provision.

#### 1.6 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 \$0 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.

#### 1.7 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 (53Comp. 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) Tip. 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.

#### 1.8 NOTICE OF RADIOACTIVE MATERIALS (FAR 52.223-7) (JAN 1997)

(a) The Contractor shall notify the Contracting Officer or designee, in writing, 5 days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in title 10 of the Code of Federal Regulations, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items ~~which~~ contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior contracts, the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall --

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted,

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and ~~all~~ containers in which such items, parts or subassemblies are delivered to the Government shall be ~~clearly~~ marked and labeled as required by the latest revision of MIL-STD 129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

#### 1.9 PROMPT PAYMENT (FAR 52.232-25)(JUN 1997)

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 the date of an electronic funds transfer.

Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Due date. (i) Except as indicated in subparagraph (a)(2) 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:

(A) The 30th day after the designated billing office has received a proper invoice from the Contractor (except as provided in subdivision (a)(1)(ii) of this clause).

(B) 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.

(ii) If the designated billing office fails to annotate the invoice with the **actual** date of receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice; provided a proper invoice is received and there is no disagreement over quantity, quality, or contractor compliance with contract requirements.

(2) Certain food products and other payments, (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats **or** oils, and food products prepared from edible fats **or** oils are--

(A) For meat or meat food products, as defined in section 27(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable *egg* product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

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

(D) 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, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

(3) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(3)(i) through (a)(3)(viii) of this clause. If the invoice does not comply with these requirements, it **shall be** returned within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats **or** oils), with a statement of the reasons why it is not a **proper** invoice. Untimely notification will be taken into account in computing any interest penalty **owed** the Contractor in the manner described in subparagraph (a)(5) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of the mailing **or** transmission.)

(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 the event of a defective invoice.

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

(ix) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(4) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(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.

(5) Computing penalty amount. 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 (e.g., tariffs). 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 principal payment amount approved by the Government until the payment date of such approved principal amount; and will 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 principal payment amount and will 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 subparagraph (a)(3) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date 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.

(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, meat food products, or fish; 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.



(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(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 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the 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.

(6) Prompt payment discounts, An interest penalty also shall 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) (5) 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.

(7) Additional interest penalty. (i) A penalty amount, calculated in accordance with subdivision (a) (7) (iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more: ■

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a) (7) (ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.

(ii) (A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii) (A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a) (5) (iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a) (7) (ii) (A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the

invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--(1) Due dates for recurring financing payments. If this contract provides 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 [insert day as prescribed by Agency head: if not prescribed, insert 30th day] 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.

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

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

(c) Fast payment procedure due dates. 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.

#### 1.10 BANKRUPTCY (FAR 52.242-13) (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, 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.

#### 1.11 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (FAR 52.244-6) (OCT 1995)

(a) Definition.

'Commercial item,' as used in this clause, has the meaning contained in the clause at **52.202-1**, Definitions.

'Subcontract,' as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under **Part 15**, in a subcontract at any tier for commercial items or commercial components:

(1) **52.222-26**, Equal Opportunity (**E.O. 11246**);

(2) **52.222-35**, Affirmative Action for Special Disabled and Vietnam Era Veterans (**38 U.S.C. 4212(a)**);

(3) **52.222-36**, Affirmative Action for Handicapped Workers (**29 U.S.C. 793**); and

(4) **52.247-64**, Preference for Privately-Owned U.S.-Flagged Commercial Vessels (**46 U.S.C. 1241**) (flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

### 1.12 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.

### 1.13 SECURITY CLASSIFICATION REQUIREMENTS (NASA 1852.204-75) (SEP 1989)

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of TOP SECRET. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Exhibit A.

### 1.14 SECURITY REQUIREMENTS FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 1852.204-76) (SEP 1993)

(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 initiate personnel screening checks and obtain user responsibility agreements, as required by this clause, for each Contractor employee requiring unescorted or unsupervised physical access or electronic access to the following limited or controlled areas, systems, programs and data:

Central Scientific Computing Complex (Bldg. 12681

(1) The Contractor shall submit a personnel security questionnaire (NASA Form 531, Name Check Request, for National Agency Check (NAC) investigations and Standard Form 85P, Questionnaire for Public Trust Positions, for specified sensitive positions) and a Fingerprint Card (FD-258 with NASA overprint in Origin Block) to the installation Security Officer for each Contractor employee who requires access. The required forms may be obtained from the installation security office. Employees may have finger-prints taken at the NASA Contract Badge and Pass Office, located at 1 Langley Boulevard (Building No. 1228), only between the hours of 6:30 a.m. and 4:30 p.m., Monday through Friday, or at any police department.

(i) Several months may be required for completion of complex personnel screening investigations. Background screening may not be required for employees with recent or current Federal Government investigations.

(ii) When employee access is necessary prior to completion of personnel screening, each Contractor employee requiring access may be considered for escorted access. The installation Security Officer will establish the eligibility of proposed escorts.

(2) The Contractor shall ensure that each Contractor employee requiring access executes any user responsibility agreements required by the Government prior to access. The Contractor shall provide signed copies of the agreements to the installation Security Officer for inclusion in the employee's security file. Unauthorized access is a violation of law and punishable under the provisions of 18 U.S.C. 1029, 18 U.S.C. 1030 and other applicable statutes.

(3) The Contractor shall notify the installation AIS Manager no later than the end of the day of the termination for cause of an authorized employee's access. The Contractor shall notify the COTR no later than 10 days after an authorized employee no longer requires access for any other type of termination. Verbal notifications shall be confirmed in writing within 30 days.

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

### 1.15 OMBUDSMAN (NASA 1852.215-84) (OCT1996)

An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and Contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the Contracting Officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the Contracting Officer for resolution. If resolution cannot be made by the Contracting Officer, interested parties may contact the installation ombudsman, Sandra S. Ray at (757) 864-2428. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Deputy Administrator for Procurement, at 202-358-2090. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

### 1.16 AWARD FEE FOR SERVICE CONTRACTS (NASA 1852.216-76) (OCT 1996)

- (a) The Contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement Clause 1852.216-85, 'Estimated Cost and Award Fee' in this contract.
- (b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the Contractor's performance every 6 months to determine the amount of award fee earned by the Contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with the Award Fee Plan dated October 31, 1997. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.
- (c) The Government will advise the Contractor in writing of the evaluation results. The Financial Management Division will make payment based on issuance of unilateral modification by Contracting Officer.
- (d) After 85% of the potential award fee has been paid, the Contracting Officer may direct the withholding of further payment of award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total potential award fee.
- (e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth in 8.3, Award Fee Availability Schedule. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.
- (f) Award fee determinations made by the Government under this contract are not subject to the Disputes clause.

### 1.17 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (NASA 1852.245-73) (SEP 1996)

- (a) The Contractor shall submit annually a NASA Form 1018, NASA Property in the Custody of Contractors, in accordance with 18-45.505-14, the instructions on the form, and subpart 1845-71. Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.
- (b) If administration of this contract has been delegated to the Department of Defense, the original of NASA Form 1018 shall be submitted to the NASA, LaRC Financial Management Officer, Mail Stop 175 and three copies shall be sent concurrently through the DOD Property Administrator to the address below. If the contract is administered by NASA, the original of NF 1018 shall be submitted to the LaRC

Financial Management Office and three copies **shall** be sent concurrently and directly to the following office:

ATTN: INDUSTRIAL PROPERTY OFFICE  
NASA LANGLEY RESEARCH CENTER  
MAIL STOP 377  
HAMPTON VA 23681-0001

(c) The annual reporting period shall ~~be~~ from October 1 of each year to September 30 of the following year. The report shall be submitted by October 31. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it ~~is~~ essential *that* required reports be received no ~~later than~~ October 31. The Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$25,000 or 5 percent of the amount of the contract, whichever is ~~less~~, has been set-aside. If the Contractor ~~fails~~ to submit annual NF 1018 reports when due, ~~such reserve shall be~~ withheld until the Contracting Officer has determined that the required reports have been received by the Government. The withholding ~~of~~ any amount or the subsequent payment thereof shall not be construed ~~as~~ a waiver of any Government right.

(d) A final report ~~is~~ required within 30 days after disposition of all property ~~subject to reporting when~~ the contract performance period is complete.

## **PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS**

### **SECTION J - LIST OF ATTACHMENTS**

Exhibit A	Contract Security Classification Specification, DD Form 254, 2 pages
Exhibit B	Installation-Provided Government Property, 4 pages
Exhibit C	List of Government-Furnished Property, 87 pages
Exhibit D	Register of Wage Determination and Fringe Benefits #94-2544, Rev. 14, July 2, 1997, 10 pages
Exhibit E	Contract Documentation Requirements, 5 pages
Exhibit F	Information Management System for ETTD Support Services. 1 page
Exhibit G	List of NASA Software Documentation Standards, 1 page
Exhibit H	List of Acronyms, 1 page
Exhibit I	Subcontracting Plan dated January 5, 1998, 6 pages

The following are located after the last section of this solicitation:

Attachment 1	Relevant <b>Experience and</b> Past Performance Evaluation Instructions/Questionnaire, 4 pages
Attachment 2	Monthly Progress Report for Socioeconomic Goals (Sample), 1 page
Attachment 3	Standard Form 1448, Contract Pricing Proposal Cover Sheet, 1 page
Attachment 4	Award Fee Plan, 17 pages
Attachment 5	Instruments Calibrated/Repaired 1996, 1 page
Attachment 6	Equipment to be Delivered for Receipt, Inspection, and Acceptance at Contractor's Facility, 1 page
Attachment 7	Sample Engineering Service Request, 1 page
Attachment 8	Sample Statement of Requirements, 1 page
Attachment 9	Task Order Request Information Format (Sample), 2 pages
Attachment 10	Bidders Library Contents, 1 page
Attachment 11	Cost Forms and Instructions, 10 pages (one spreadsheet)
Attachment 12	Draft RFP Questions and Answers, 7 pages
Attachment 13	<b>RIMS</b> Presolicitation Conference - Attendees List, 1 page
Attachment 14	RIMS Presolicitation Conference Charts, 38 pages



**EXHIBIT A**

**12. PUBLIC RELEASE** Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release.

Direct  Through (Specify)

"NASA LANGLEY RESEARCH CENTER, M/S 235, HAMPTON, VA 23681-001" ATTN: ROBERT HEDGEPEETH

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review. \*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete evidence.)

**ALL APPLICABLE CLASSIFICATION GUIDANCE WILL BE PROVIDED TO THE CONTRACTOR UNDER SEPARATE COVER:**

**THE CONTRACTOR WILL BE INVOLVED WITH ONGOING RESEARCH AND DEVELOPMENT PROGRAMS THAT WILL REQUIRE INDIVIDUALS DESIGNATED BY GOVERNMENT, TO HAVE A TOP SECRET CLEARANCE.**

**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. (If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.)

Yes  No

**15. INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. (If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.)

Yes  No

<b>a. TYPED NAME OF CERTIFYING OFFICIAL</b> Sam A. Harvey	<b>b. TITLE</b> Program Security Team Leader	<b>c. TELEPHONE (Include Area Code)</b> 757-864-6507
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<p><b>d. ADDRESS (Include Zip Code)</b> NASA LANGLEY RESEARCH CENTER M/S 182 HAMPTON, VA 23681-0001</p> <p><b>e. SIGNATURE</b></p>	<p><b>17. REQUIRED DISTRIBUTION</b></p> <table style="width: 100%;"> <tr><td><input checked="" type="checkbox"/></td><td>A. Contractor</td></tr> <tr><td><input type="checkbox"/></td><td>B. Subcontractor</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>C. Cognizant Security Office For Prime And Subcontractor</td></tr> <tr><td><input type="checkbox"/></td><td>D. U.S. Activity Responsible For Overseas Security Administration</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>E. Administrative Contracting Officer</td></tr> <tr><td><input type="checkbox"/></td><td>F. Others As Necessary</td></tr> </table>	<input checked="" type="checkbox"/>	A. Contractor	<input type="checkbox"/>	B. Subcontractor	<input checked="" type="checkbox"/>	C. Cognizant Security Office For Prime And Subcontractor	<input type="checkbox"/>	D. U.S. Activity Responsible For Overseas Security Administration	<input checked="" type="checkbox"/>	E. Administrative Contracting Officer	<input type="checkbox"/>	F. Others As Necessary
<input checked="" type="checkbox"/>	A. Contractor												
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<input checked="" type="checkbox"/>	E. Administrative Contracting Officer												
<input type="checkbox"/>	F. Others As Necessary												



**EXHIBIT B**

**INSTALLATION-PROVIDED GOVERNMENT PROPERTY**

ECN	DESCRIPTION MANUFACTURER	SERIAL NO. MODEL NO.	ACQ. DATE	BLDG. ROOM	COST
1084258	COMPUTER, MICRO NORTHGATE COMPUTER SYSTEMS INC	NONE 386/25	91/02/26	648 325	3,891
1084260	DISPLAY UNIT MATSUSHITA ELECTRIC CO	KB06J1750 C1381	91/02/26	648 325	400
1085542	TERMINAL, DATA PROCESSING HUMAN DESIGN SYSTEMS INC	WA0510032 HDS2000	91/05/10	648 325	754
1262152	COMPUTER, MINI SILICON GRAPHICS INC	08006907ADDB CMNB006	94/05/25	648 325	5,895
1262156	DISPLAY UNIT SONY CORP	7000160 GDM17E11	94/05/25	648 325	400
0221802	PRINTER, ADP INTERNATIONAL BUSINESS MACHINE	2605897 4M1-001	86/03/18	1221C 123	373
0281462	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	5016112 5170-068	85/04/02	1221C 123D	3,598
0281821	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	0893624 5151-001	85/04/18	1221D 123D	192
0281922	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	0359172 5151-001	85/04/24	1221C 123	192
1422736	COMPOSING MACHINE KROY INC F-GRAPHIC SYS DIV	206159 290S	86/09/04	1221C SHOP	2,305
0143143	DISK DRIVE UNIT RODIME INC	8002 SM+	87/02/02	648 325	925
1085345	COMPUTER, MICRO APPLE COMPUTER INC	F211HS4 M0350	91/04/25	548 325	2,453
1085348	DISPLAY UNIT APPLE COMPUTER INC	7010281 M0401	91/04/25	648 325	628
1085540	TERMINAL, DATA PROCESSING HUMAN DESIGN SYSTEMS INC	WA0510026 HDS2000	91/05/10	648 325	754
1262155	COMPUTER, MINI SILICON GRAPHICS INC	08006907ADC1 CMNB006	94/05/25	648 325	5,895
1262158	DISPLAY UNIT SONY CORP	7000932 GDM17E11	94/05/25	648 325	400

ECN	DESCRIPTION MANUFACTURER	SERIAL NO. MODEL NO.	ACQ. DATE	BLDG ROOM	COST
GO73592	DISPLAY UNIT COMPAQ COMPUTER CORP	93914544A5 18 420	90/02/14	1230 124	487
GO73594	COMPUTER, MICRO COMPAQ COMPUTER CORP	495OHZ3H0976 286E2570	90/02/14	1230 124	2,145
GO73766	COMPUTER. MICRO COMPAQ COMPUTER CORP	4942HZ3H0837 2520 (286E)	90/03/07	1230 123	2,240
GO73793	DISK DRIVE UNIT MATSUSHITA ELECINDUS CO	JA9520013 LF5010	90/03/12	1230 140	2,112
GO74000	PRINTER, ADP HEWLETT-PACKARD CO	3003JGDEL C 33471A	90/03/28	1230 140	1,486
GO78574	DISPLAY UNIT COMPAQ COMPUTER CORP	03133646A059 420T	90/10/04	1230 123	496
GO78920	COMPUTER, MICRO MICROSERVE	61212177 386SX	90/11/05	1230 140	1,114
GO78921	DISPLAY UNIT QUME CORP	MA6105526 GM835	90/10/22	1230 140	535
0054920	PRINTER, ADP HEWLETT-PACKARD CO	2803J22532 33440A	88/04/14	1230 124	1,671
0059905	PRIMER, ADP EPSONAMERICA INC	45416 FX850	89/01/10	1230 124	339
0061679	COMPUTER, MICRO TRI-STAR COMPUTER CORPORATION	823066 286/12	89/04/24	1230 123	1,436
0259555	COMPOSING MACHINE MERLIN MACHINE CORP	512107 35-00	86/09/03	1230 140	1,456
0547811	READER/PRINTER, MICROFICHE CANNON INSTRUMENT CO	32102123 PC70	85/01/08	1230 015	2,836
0549218	MONITOR, TELEVISION, COLOR SONY CORP	501757 PVM8000	84/06/29	1230 140	628
0801367	CAMERA, DIGITIZING CANNON USA INC	101118 RC470	92/04/14	1230 140	1,122
0801368	DISK DRIVE UNIT CANNON USA INC	910950124 FV540N	92/04/14	1230 140	2,300
0801834	DISK DRIVE UNIT SONY CORP	801608 7211	92/08/25	1230 140	599

ECN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO.	ACQ DATE	BLDG ROOM	COST
1084335	DISPLAY UNIT MAGNA-PLANDIV L D BLEHART CO	NONE PC9600	91/03/04	1230 140	1,388
1085223	PRINTER, <b>ADP</b> HEWLETT-PACKARD CO	3112A23171 33449A	91/04/23	1230 140	1,418
1085703	COMPUTER, MICRO GATEWAY 2000	199543 386/25C	91/06/04	1230 140	2,299
1085704	DISPLAY UNIT GATEWAY 2000	T9731322 PMV1448	91/06/04	1230 140	640
1085910	SCANNER, COMPUTER FUJITSU LTD	1499 M3093E	91/06/13	1230 123	4,380
1087773	COMPUTER, MICRO GATEWAY 2000	262610 386-25	91/08/26	1230 140	1,545
1087774	DISPLAY UNIT GATEWAY 2000	T975873 1 PMV1448	91/08/26	1230 140	400
10088645	COMPUTER, MICRO GATEWAY 2000	281934 386125	91/09/24	1230 140	1,395
1088646	COMPUTER, MICRO GATEWAY 2000	281932 386125	91/09/24	1230 140	1,395
1090495	TRANSPORT, MAGNETIC TAPE VALITEK INC	221933 PST250F	92/03/05	1230 140	2,095
1159688	DISPLAY UNIT COMPAQ COMPUTER CORP	249145440696 420K	93/01/22	1230 123	380
1159728	PRINTER, <b>ADP</b> HEWLETT-PACKARD CO	USBC036369 C2001A	93/02/02	1230 140	1,582
1159749	DISPLAY UNIT NEC INFORMATION SYSTEMS INC	2ZD00254D JC1741UMA	93/02/09	1230 140	1,249
1160114	SCANNER, COMPUTER HEWLETT-PACKARD CO	3265A14647 C1750A	93/02/26	1230 140	1,385
1254987	COMPUTER, MICRO GATEWAY 2000	1325336 DESKTOP	93/04/27	1230 124	2,095
1254988	DISPLAY UNIT GATEWAY Moo	MMHL162896 CS1572FS	93/04/27	1230 124	400

ECN	DESCRIPTION MANUFACTURER	SERIAL NO. MODEL NO.	ACQ. DATE	BLDG. ROOM	COST
1260696	DISPLAY UNIT NEC AMERICA INC BROADCASTING	3X21039DA JC1741UMA3	94/03/01	1230 140	1,228
1261275	JUKEBOX, OPTICAL DISK PIONEER ELECTRONIC CORP	OA8503056 DRM1804X	94/03/28	1230 140	2,195
1262533	SCANNER, OPTICAL MICROSEAL CORP	1295 VS1000	94/007/06	1230 124	3,995
1262730	PRIMER, ADP HEWLETT-PACKARO CO	JPFL005708 C2039A	94/08/11	1230 140	2,253
0848127	COMPUTER, MICRO BLUE CIRCLE GROUP, INC	3551 386	89/10/11	648 317B	2.831
1085541	TERMINAL, DATA PROCESSING HUMAN DESIGN SYSTEMS INC	WA0510031 HDS2000	91/05/10	648 3178	754
1262153	COMPUTER, MINI SILICON GRAPHICS INC	08006907ADBB CMNB006	94/05/25	648 3178	5,895
1262159	DISPLAY UNIT SONY CORP	7000931 GDM17E11	94/05/25	648 3178	400
0061825	COMPUTER. MICRO APPLE COMPUTER INC	F912AXU M5650	89/05/01	1293B 106A	6,933
0061826	DISPLAY UNIT APPLE COMPUTER INC	5191556 M0401	89/05/01	1293B 106A	714
1258103	COMPUTER, MICRO ZENON COMPUTER SYSTEMS	93-4346-03 486DX	93/11/03	1268A 1156	2,685
1258144	DISPLAY UNIT HITACHI MFG CO	Y3G001044 2997	93/11/04	1268A 1156	1,749

**EXHIBIT C**

**LIST OF GOVERNMENT-FURNISHED PROPERTY**

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## EXHIBIT C - LIST OF GOVERNMENT FURNISHED PROPERTY

### SPECIAL TEST EQUIPMENT

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
A G DAVIS	HPRC-2000	POWER SUPPLY	2,500.00	9/1/93
A G DAVIS	PRC-2000	CENTRIFUGE	114,230.00	9/1/93
ADI	SM-5514B	DISPLAY	450.00	1/1P 2
ADS	486/50	COMPUTER W/KEYBOARD	3,180.00	3/1/94
ADS	NS1183	COMPUTER	1,876.00	3/1/94
ADVANCED LOGIC	100	COMPUTER W/KEYBOARD	8,338.00	11/1/88
AEROTECH	U11R-2-A	POSITION-CONTROLLER	3,095.00	5/1/91
AHE	2525	MAG TAPE, CASSETTE	525.00	10/1P 3
AHE	4350XT	MAG TAPE, CASSETTE	2,147.00	10/1/93
ALCATEL	325	VACUUM PUMP	1,500.00	1/1/92
ALCATEL	2004A	VACUUM PUMP	1,500.00	1/1/92
ALCATEL	CFF450	PUMP CONTROLLER	1,500.00	1/1/92
ALLIED TELESYN INTERNATIONAL	AT-MR820TR	NETWORK INTERFACE	135.00	9/3/96
ALUMA TOWER	TM51- 207T1100	TRAILER, TOWER	8,270.00	11/9/89
ALUMA TOWER	TM51- 20T1100	TRAILER, TOWER	8,270.00	11/9/89
ALUMA TOWER	TM51- 20T1100	TRAILER, TOWER	8,270.00	11/9/89
AMERICAN POWER CONVERSION	BP420C	POWER SUPPLY	224.00	9/12/96
ANDATACO	X81CH31- A3282X	TAPE DRIVE	1,143.00	4/1/96
APC	800RT	POWER SUPPLY	602.10	
APM	HD205C	DISK-WINCHESTER	1,075.00	12/1/86
APM	M3021	DISK-OPTICAL	549.00	3/1/92
APM	MAC2CI	COMPUTER, PERSONAL	3,820.00	4/1/92
APM	MAC2FX	COMPUTER, PERSONAL	6,546.00	10/1/88
APM	MC2RGB	CRT DISPLAY	500.00	4/1/92
APM	MC2RGB	CRT DISPLAY	679.00	8/1/89
APM	MC2RGB	CRT DISPLAY	648.00	3/1/94
APPLE	M5000	COMPUTER W/KEYBOARD	3,853.00	10/1/87
APPLIED TECH	SWS- 211/3CKNY	ANEMOMETER/THERMOMETER	11,147.00	11/1/92
ARGO	AS210-01A	CONTROLLER	5,147.00	11/1/90
ARGO	AS210-02	FREQUENCY COMPARATOR	3,125.00	11/1/90
ARGO	AS210-03	FREQUENCY GENERATOR	5,845.00	11/1/90

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
ARGO	AS210-04	DIGITAL DELAY GENERATOR	5,390.00	11/1/90
ARGO	AS210-05	STANDBY BATTERY	1,678.00	11/1/90
ARGO	AS210-RM	POWER MODULE	14,295.00	11/1/90
ARGO SYSTEMS	AS210-01A	MOOULE CONTROLLER	5,090.00	2/6/86
ARGO SYSTEMS	AS210-02	FREQUENCY COMPARATOR	2,640.00	2/6/86
ARGO SYSTEMS	As210-03	FREQUENCY GENERATOR	5,295.00	2/6/06
ARGO SYSTEMS	AS210-04	DIGITAL DELAY GENERATOR	4,775.00	2/6/86
ARGO SYSTEMS	AS210-RM	MAINFRAME	13,525.00	5/1/85
ARH	AST286	COMPUTER, PERSONAL	2,970.00	4/1/88
ARTECON	DSU2-301J3-32H	MASS STORAGE DISK DRIVE	14,153.00	4/1/96
ATHENA	91Z-126	POWER PACKAGE	235.00	
AUTOCLAVE ENG	DLA5	COMPRESSOR, AIR/GAS	15,000.00	5/1/93
B & K	2426	AUTORANGING ELECTRONIC VOLTMETER	1,600.00	9/1/77
B & K	2426	VOLTMETER	1,600.00	5/1/79
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMP	593.00	
B & K	2639	PREAMPLIFIER	600.00	
B & K	2639	PREAMPLIFIER	600.00	
B & K	2639	PREAMPLIFIER	600.00	
B & K	2639	PREAMPLIFIER	600.00	
B & K	2804	POWER SUPPLY	1,309.00	7/2/92
B & K	2804	POWER SUPPLY	1,309.00	7/2/92
B & K	2804	POWER SUPPLY	1,309.00	7/2/92
B & K	2804	POWER SUPPLY	1,309.00	7/2/92
B & K	2804	POWER SUPPLY	1,309.00	7/17/92
B & K	2804	POWER SUPPLY	1,309.00	7/17/92
B & K	4133	MICROPHONE	900.00	
B & K	4133	MICROPHONE	900.00	
B & K	4133	MICROPHONE	900.00	





MANUFACTURER	MOOEL	DESCRIPTION	ACQ. COST	ACO. DATE
B & K	4145	MICROPHONE	900.00	
B & K	4145	MICROPHONE	900.00	
B & K	4228	SOUND LEVEL CALIBRATOR	5,174.00	10/1/91
B & K	4228	SOUND LEVEL CALIBRATOR	5,174.00	10/1/91
B & K	4228	PISTON PHONE	2,046.00	5/1/92
B & K	4228	PISTON PHONE	2,046.00	5/1/92
B & K	4228	PISTON PHONE	2,1046.00	5/1/92
B & K	4228	PISTON FHCNE	<del>2,046.00</del>	5/1/92
B & K	4228	PISTON PHONE	2,046.00	5/1/92
B & K	4228	PISTON PHONE	2,046.00	5/1/92
B & K	4231	SOUND LEVEL CALIBRATOR	558.00	
B & K	4231	SOUND LEVEL CALIBRATOR	558.00	
B & K	4231	SOUND LEVEL CALIBRATOR	558.00	
B & K	4231	SOUND LEVEL CALIBRATOR	558.00	
B & K	5908	METER,EXPANDED	16,074.00	7/1/90
B & K	9545	TRANSDUCER ASSEMBLY	3,753.00	
B & K	WB-0981	JUNCTION BOX	714.00	
B & K	2425	ELECTRONIC VOLTMETER	724.80	
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	AUTORANGING ELECTRONIC VOLTMETER	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	AUTORANGING ELECTRONIC VOLTMETER	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	AUTORANGING ELECTRONIC VOLTMETER	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	VOLTMETER AC	1,600.00	9/1/77
INSTRUMENTS INC				
B & K	2426	AUTORANGING ELECTRONIC VOLTMETER	1,600.00	10/1/77



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	<del>442.00</del>	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIERS	442.00	
INSTRUMENTS INC B & K	2619	PREAMPLIFIER	442.00	
INSTRUMENTS INC B & K	2636	MEAS.AMPLIFIER	11,149.20	6/1/85
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2639	PREAMPLIFIERS	887.00	
INSTRUMENTS INC B & K	2706	SHAKER AMP.	891.10	
INSTRUMENTS INC B & K	2801	POWER SUPPLY	321.75	







MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
INSTRUMENTS INC B & K	4133/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4133/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4133/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134/S	MICROPHONE	447.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	4134S	MICROPHONE	300.00	
INSTRUMENTS INC B & K	SQ630	POWER SUPPLY	1,003.00	8/1/82





MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2619	PRE-AMP	<del>600.00</del>	
BRUEL & KJAER	2619	PRE-AMP	600.00	
BRUEL & KJAER	2807	POWER SUPPLY	1,328.00	
BRUEL & KJAER	2807	POWER SUPPLY	1,328.00	
C M FURNACE	1725HT	FURNACE	5,295.00	10/1/91
C M FURNACE	1725HT	CONTROLLER	4,995.00	10/1/91
CAL	1025	PLOTTER	5,673.00	3/1P 2
CALI. INST.	751T	POWER SOURCEAC	2,056.40	10/1/73
CALZONE CASE	NONE	RUGGEDIZED CRT	2,494.00	6/20/86
CALZONE CASE	NONE	RUGGEDIZED CRT	2,494.00	6/20/86
CDC	BK7A1V	DISK-REMOVABLE	42,000.00	2/1/81
CDC	PA3A1A	DISK-REMOVABLE	7,159.00	10/1/87
CDC	PA3A1A	DISK-REMOVABLE	7,159.00	10/1/87
CDC	PA3A1A	DISK-REMOVABLE	7,159.00	10/1/87
CDC	PA5A1A	DISK-WINCHESTER	6,480.00	4/1/87
CEI	M990	MAG TAPE 9 TRACK	19,505.00	1/1/87
CEI	M990	MAG TAPE 9 TRACK	23,500.00	12/1/85
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CEL INSTRUMENTS	213	NOISE GENERATOR	611.13	
CLAROSTAT	240C	DECADERESISTOR	350.00	
CLIMATRONICS	101484	WEATHER RECORDING SYSTEM	13,675.00	11/21/89
CLON	386	COMPUTER, PERSONAL	800.00	1/1/92
CLON	486	COMPUTER, PERSONAL	2,327.00	7/1/94
COLLINS	390A/UR	RECEIVER	100.00	
COMPUADD	51118	DISPLAY	500.00	9/1/93
COMPUA00	A002	COMPUTER W/KEYBOARD	4,000.00	9/1/93
CONSOLIDATED CONTROL CORP	124A	OSCILLOGRAPH	2,390.00	10/1/85
CONSOLIDATED	5-124	OSCILLOGRAPH	5,967.30	8/1/82

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
CONTROL CORP				
CTX INTNL	CVP5468A	DISPLAY	625.00	10/1/91
CWV	H212/D	DISK-FIXED	6,068.00	9/1/93
CYBERNETIC	D210E-51	EMULATOR	1,900.00	
CZD	286	COMPUTER, PERSONAL	1,583.00	3/1/89
CZD	386	COMPUTER, PERSONAL	2,400.00	8/1/90
CZD	5 1070	CRT DISPLAY	328.00	1/1/93
CZD	5 1070	CRT DISPLAY	328.00	1/1/93
CZD	ST286	COMPUTER, PERSONAL	1,128.00	9/1/88
CZD	ST286	COMPUTER, PERSONAL	1,128.00	9/1/88
CZD	ST286	COMPUTER, PERSONAL	1,663.00	10/1/88
CZD	ST286	COMPUTER, PERSONAL	1,128.00	9/1/88
D & H INST	PG-102	GENERATOR, PRESSURE	3,365.00	
D & H INSTRUMENT	5306	DEAD WEIGHT TESTER	29,046.00	4/1/87
DATA PROOF	160A	SCANNER	3,650.00	11/13/86
DATAMETRICS	700	POWER SUPPLY	2,220.00	10/1/90
DATUM	9390-2000M	TIME CODE GENERATOR	3,789.00	8/1/96
DATUM	9390-2000M	TIME CODE GENERATOR	3,789.00	8/1/96
DATUM	9390-2000M	TIME CODE GENERATOR	3,789.00	8/1/96
DATUM	9390-2000M	TIME CODE GENERATOR	3,789.00	8/1/96
DATUM	9390-2000M	TIME CODE GENERATOR	3,789.00	8/1/96
DCA	120	MULTIPLEXOR	2,804.00	10/1/84
DEC	PE40A-CC	COMPUTER W/KEYBOARD	14,678.00	4/29/93
DEC	PE40A-CC	COMPUTER W/KEYBOARD	9,472.00	8/10/93
DEC	VRT19-HA	DISPLAY	5,000.00	4/29/93
DEC	VRT19-HA	DISPLAY	5,000.00	8/10/93
DELL	286	COMPUTER, PERSONAL	1,200.00	10/1/87
DELL	2136	COMPUTER, PERSONAL	1,200.00	10/1/87
DELL	2136	COMPUTER, PERSONAL	1,200.00	10/1/87
DELL	316LT	COMPUTER, PERSONAL	1,973.00	8/1/91
DELL	316LT	COMPUTER, PERSONAL	1,973.00	8/1/91
DELL	316LT	COMPUTER, PERSONAL	1,973.00	8/1/91
DELL	PC100	COMPUTER, PERSONAL	830.00	9/1/87
DELL	VC-3	CRT DISPLAY	1,700.00	9/1/89
DELTA DESIGN	9023	TEMPERATURE TEST CHAMBER	4,170.00	6/1/94
DELTA DESIGN	9059	TEST CHAMBER	4,890.00	7/1/87
DELTA DESIGN	9023/9010	TEST CHAMBER, TEMP	4,035.00	7/1/87
DEQ	3100	GRAPHICS/HIGH END WORKSTATIONS	12,407.00	9/1/91
DEQ	RA60	DISK-REMOVABLE	18,700.00	11/1/83

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
DEQ	RA60	DISK-REMOVABLE	12,750.00	11/1/83
DEQ	RA81	DISK-WINCHESTER	13,140.00	6/1/86
DEQ	VR299	CRT DISPLAY	400.00	9/1/91
DNX	150	PRINTER, CHARACTER	357.00	10/1/91
DODGE	KARYVAN	TRUCK	8,040.00	1/2/79
DODGE	KARYVAN	TRUCK	8,040.00	1/2/79
DODGE	KARYVAN	TRUCK	8,040.00	1/2/79
DOLCH COMPUTER SYSTEMS	PAC 586	COMPUTER	9,160.00	11/1/96
DOLCH COMPUTER SYSTEMS	PAC 586	COMPUTER	9,160.00	11/1/96
DOLCH COMPUTER SYSTEMS	PAC 586	COMPUTER	9,160.00	11/1/96
DOMINION	AT	COMPUTER W/KEYBOARD	948.00	7/1/90
DPR	CT1210	PRINTER, LINE	17,323.00	6/1/82
DYNA TECH	116SRL	WELDER T/C	795.00	
E.F. JOHNSON CO.	9600	MODEM	100.00	9/30/96
E.F. JOHNSON CO.	9600	MODEM	100.00	9/30/96
E.F. JOHNSON CO.	9600	MODEM	100.00	10/2/96
E.F. JOHNSON CO.	9600	MODEM	100.00	10/2/96
E.F. JOHNSON CO.	9600	MODEM	100.00	10/2/96
E.F. JOHNSON CO.	DL3420	TELEMETRY MODULE	1,270.00	9/1/96
E.F. JOHNSON CO.	DL3420	TELEMETRY MODULE	1,270.00	9/1/96
E.F. JOHNSON CO.	DL3420	TELEMETRY MODULE	1,270.00	9/1/96
E.F. JOHNSON CO.	DL3420	TELEMETRY MODULE	1,270.00	9/1/96
E.F. JOHNSON CO.	DL3420	TELEMETRY MODULE	1,270.00	9/1/96
E.F. JOHNSON CO.	PA3-1AC-SSR	AMPLIFIER	795.00	12/24/96
E.F. JOHNSON CO.	PA3-1AC-SSR	AMPLIFIER	795.00	12/24/96
E.F. JOHNSON CO.	PA3-1AC-SSR	AMPLIFIER	795.00	12/24/96
E.F. JOHNSON CO.	PA3-1AC-SSR	AMPLIFIER	795.00	12/24/96
E.F. JOHNSON CO.	PA3-1AC-SSR	AMPLIFIER	795.00	12/24/96
EATON	1011A	RATIO STANDARD	5,891.00	9/1/90
ELECTRON	1120	THERMOCOUPLE CALIBRATOR	4,560.00	5/1/88
ELECTRON	1120	T/C SIMULATOR/CALIBRATOR	4,958.00	9/1/90
EG & G FLOW TECH	FTBP-20-T-1-C	FLOW CALIBRATOR	55,830.00	4/1/95
ELECTRIC NAVIGATION	550L	RF POWER AMPLIFIER	6,050.00	6/1/85

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
ELECTRONIC DEVELOPMENT CORP	501J	VOLTAGE STANDARD	3,720.00	10/1/86
ELGENCO INC.	610A	GENERATOR	1,969.08	1/1/79
ENDNCO	2718A	AMPLIFIER	800.00	
ENDNCO	2718A	AMPLIFIER	800.00	
ENGLEHARD	TYPE B	THERMOCOUPLE WIRE	200.00	6/10/96
ENGLEHARD	TYPE R	THERMOCOUPLE WIRE	200.00	6/10/96
EPA	FX105C	PRINTER, CHARACTER	<del>659.00</del>	5/1/89
EPA	FX85	PRINTER, CHARACTER	349.00	8/1/88
EPA	FX86E	PRINTER, CHARACTER	309.00	6/1/87
EPA	LQ950	PRINTER, CHARACTER	512.00	2/1/90
EPA	LX800	PRINTER, CHARACTER	300.00	9/1/88
EPA	LX800	PRINTER, CHARACTER	300.00	
EPSON	EX800	PRINTER	425.00	10/1/87
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	PRINTER	200.00	7/1/91
EPSON	P88MA	PRINTER	569.00	12/1/94
ESI	RV722	VOLT DIVIDER	900.00	
ESI	SR104	STD. RESISTOR	3,235.00	4/1/84
EVX	FAD2400	MODEM	187.00	1/1/90
EVX	MD2400	MODEM	198.00	8/1/86
F & P	10C1516	FLOWMETER	2,400.00	4/1/86
F B P	10C1516DCA	FLOWMETER, TURBINE	1,600.00	
FISHER & PORTER	10C1516D	FLOWMETER	1,559.90	
FISHER SCIENTIFIC	109611	VAC PUMP	148.00	
FLUKE	23	MULTIMETER	140.00	
FLUKE	77	MULTIMETER	135.00	
FLUKE	77	MULTIMETER	135.00	
FLUKE	77	MULTIMETER	135.00	
FLUKE	77	MULTIMETER	135.00	
FLUKE	79	MULTIMETER	160.00	3/1/94
FLUKE	97	SCOPEMETER	1,561.65	5/1/92
FLUKE	97	SCOPEMETER	1,561.65	5/1/92
FLUKE	97	SCOPEMETER	1,562.00	12/1/92
FLUKE	931	TRUE RMS VOLT	1,256.15	1/1/76
FLUKE	19528	FREQ COUNTER	769.16	
FLUKE	332-A	VOLT. STANDARD	2,307.77	4/1/79
FLUKE	45/05	DIGITAL MULTIMETER	628.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
FLUKE	5101A	CALIBRATOR	10,758.81	4/1/79
FLUKE	51018	VOLTAGE CALIB	11,746.00	4/1/04
FLUKE	52 K/J	DIGITAL THERMOMETER	169.00	
FLUKE	5205A	POWER AMPLIF	3,390.15	9/1/76
FLUKE	5450A	RESISTANCE CAL	3,755.30	5/1/85
FLUKE	5450A	RESISTANCE CALIBRATOR	4,465.00	10/1/90
FLUKE	5700A	CALIBRATOR	24,623.00	10/1/90
FLUKE	5725A	AMPLIFIER	<del>7,849.00</del>	10/1/90
FLUKE	6061A	RF SIGNAL GENERATOR	5,541.00	9/1/90
FLUKE	732A	DC REFERENCE STANDARD	2,845.00	911P 2
FLUKE	732A	STANDARD, E	3,055.00	7/16/87
FLUKE	732B	DC REFERENCE STANDARD	3,619.00	10/1/94
FLUKE	752A	VOLT. DIVIDER	3,795.25	5/1/83
FLUKE	8000A	DIG MULTIMETER	290.03	
FLUKE	8000A	DIG MULTIMETER	290.03	
FLUKE	8000A	DIG MULTIMETER	290.03	
FLUKE	8000A	DIG MULTIMETER	290.03	
FLUKE	80E	VOLT DIVIDER	225.00	
FLUKE	8506A	MULTIMETER RMS	5,920.42	10/1/84
FLUKE	8800A	MULTIMETER	1,066.03	4/24/75
FLUKE	8800A	DIG MULTIMETER	955.45	
FLUKE	8840A	DIG MULTIMETER	930.00	
FLUKE	8842A	DIGITAL MULTIMETER	1,070.57	5/1/87
FLUKE	8842A	DIGITAL MULTIMETER	1,395.00	1/1/90
FLUKE	8842A	VOLTMETER	909.15	
FLUKE	8842A/05	DIGITAL MULTIMETER	1,145.00	5/24/88
FLUKE	8842A/05	DIGITAL MULTIMETER	1,096.00	1/1/93
FLUKE	931B	VOLTMETER	965.15	
FLUKE	931B	TRUE RMS VOLT	1,256.15	1/1/76
FLUKE	Y5000	CAL. INTERFACE	555.00	
FORD MOTOR CO.	F250	82 PICKUP TRUCK	9,644.00	6/7/96
FTS	4060	FREQUENCY STANDARD	31,948.00	3/1/88
FUJ	FKB293	KEYBOARD	99.00	2/1/86
FUJ	FKB293	KEYBOARD	99.00	2/1/86
FUJ	FKB293	KEYBOARD	99.00	2/1/86
FUJ	M2361A	DISK-WINCHESTER	8,375.00	8/1/88
GANDALF	3429A5	DISK DRIVE	4,000.00	10/1/87
GDD	2000	MULTIPLEXOR	14,020.00	10/1/87
GENERAL EASTERN	1311XR	SENSOR, HYGROMETER	8,495.00	5/1/91
GENERAL	1311XR	POWER SUPPLY	1,034.00	5/1/91

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
EASTERN GENERAL EASTERN	<b>M3</b>	HYGROMETER	5,994.00	5/1/91
GENRAD	1382	GENERATOR	608.85	
GENRAD	1925	MULTIFILER	3,849.60	4/1/79
GENRAD	1986	CALIBRATOR, SOUND LEVEL	945.25	
GENRAD	1304B	BEAT FREQ OSC	960.00	
GENRAD	1304B	OSCILLATOR	960.00	
GENRAD	13048	OSCILLATOR	<del>960.00</del>	
GENRAD	1304B	BEAT-FREQUENCY AUDIO	960.00	
GENRAD	1403-G	STD CAPACITOR	85.00	
GENRAD	1403-K	STD CAPACITOR	85.00	
GENRAD	1403-N	STD CAPACITOR	115.00	
GENRAD	1404-A	STD. CAPACITOR	500.00	
GENRAD	1409F	STD CAPACITOR	55.00	
GENRAD	1409-F	STD. CAPACITOR	85.00	
G E N W	1409-G	STD. CAPACITOR	85.00	
GENRAD	1409-K	STD. CAPACITOR	85.00	
GENRAD	1409-L	STD. CAPACITOR	85.00	
GENRAD	1409-M	STD. CAPACITOR	85.00	
GENRAD	1409T	STD CAP	70.00	
GENRAD	1409-T	STD. CAPACITOR	85.00	
GENRAD	1409-u	STD. CAPACITOR	500.00	
GENRAD	1409-x	STD. CAPACITOR	500.00	
GENRAD	1409Y	STD CAP	200.00	
GENRAD	1409-Y	STD. CAPACITOR	500.00	
GENRAD	1450TB	DECADE ATTENUATOR	375.00	
GENRAD	1450TBR	DECADE ATTENUATOR	395.00	
GENRAD	1482A	STD INDUCTOR	150.00	
GENRAD	1482-c	STD. INDUCTOR	110.00	
GENRAD	1482E	STD INDUCTOR	150.00	
GENRAD	1482G	STD INDUCTOR	150.00	
GENRAD	1482-J	STD. INDUCTOR	110.00	
GENRAD	1482L	STD INDUCTOR	150.00	
GENRAD	1482P	STD INDUCTOR	150.00	
GENRAD	1482-R	STD. INDUCTOR	170.00	
GENRAD	15218	LEVEL RECORDER	1,155.00	9/1/73
GENRAD	1521B	GRAPH LEV REC	1,155.00	9/1/73
GENRAD	1521B	RECORDER	1,155.00	9/1/73
GENRAD	1562A	SOUND-LEV CAL ...	195.00	
GENRAD	1562A	SOUND LEV CAL	195.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
GERTSCH	1011	DECADE VOLT DI	562.00	
GLOBAL	C5556	COMPUTER CART	213.00	3/4/94
GMO	486	COMPUTER, PERSONAL	2,626.00	3/1/93
GMO	486	COMPUTER, PERSONAL	2,056.00	3/1/93
GMR	486/33	COMPUTER	2,677.00	2/1/93
GOS	1460VG	CRT DISPLAY	395.00	2/1/93
GPH	GO250	TERMINAL, CRT, SMART	2,246.00	10/1/86
GPH	GO250	TERMINAL, CRT, SMART	<del>2,246.00</del>	10/1/86
GRISWOLD		DIVIDING HEAD	3,520.00	10/16/73
GTW	386	COMPUTER, PERSONAL	3,290.00	10/1/90
GTW	386	COMPUTER, PERSONAL	1,465.00	4/1/91
GTW	386	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	386	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	386	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	486	COMPUTER, PERSONAL	1,980.00	6/1/92
		W/KEYBOARD		
GTW	486	COMPUTER, PERSONAL	1,385.00	5/1/93
GTW	386/25	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	400.00	6/1/92
GTW	PMV14	CRT DISPLAY	400.00	5/1/93
GTW	PMV1448	CRT DISPLAY	300.00	8/1/91
GUILDUNE	4410	VOLTAGE STANDARD	7,860.00	12/1/88
GUILDUNE	9923	POWER SUPPLY	6,384.00	10/24/81
GUILDLINE	9975	RESIS.BRIDGE	15,355.20	10/1/81
GUILDLINE	65206	STANDARD RESISTOR	720.00	1/1/93
GUILDUNE	95206	STD RESISTOR	325.00	
GUILDUNE	9734120	TEMP. BATH	6,432.00	9/1/82
HART SCIENTIFIC	1575	THERMOMETER SYSTEM	9,995.00	3/1/94
HART SCIENTIFIC	9101	ICE POINT DRYWEU	1,495.00	3/1/92
HART SCIENTIFIC	9113	FURNACE	4,950.00	5/1/92
HASTINGS	W - 6	VACUUM GAUGE	275.00	
HASTINGS	W 6 8	VACUUM GAUGE	255.00	
HASTINGS	VT-6B	VACUUM GAGE	215.00	
HEIDENHAIN	ROD 800	ENCODER	5,825.00	5/3/94
HEIDENHAIN	ROD800	ENCODER	4,992.00	6/1/91
HEIDENHAIN	VRZ460	READOUT	1,656.00	6/1/91
HEIDENHAIN	VRZ460	ENCODER READOUT	1,758.00	5/3/94



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLOT PACKARD	201OE	CABINET	300.00	
HEWLOT PACKARD	3050B	DATA ACQ SYST	10,091.42	9/1/76
HEWLETT PACKARD	3325A	FREQ SYNTHESIZ	2,970.00	9/1 off9
HEWLETT PACKARD	33440A	LASER PRINTER	1,545.00	9/1/90
HEWLRT PACKARD	334A	ANALYZER	945.50	
HEWLETT PACKARD	339A	DISTORTION ANA	1,877.00	4/1/84
HEWLETT PACKARD	3455A	DIG VOLTMETER	3,168.00	6/1/77
HEWLRT PACKARD	3455A	DIG. VOLTMETER	2,968.00	1/1/79
HEWLETT PACKARD	3455A	VOLTMETER	3,666.00	9/1/79
HEWLETT PACKARD	3457A	MULTIMETER	2,646.00	4/30/86
HEWLRT PACKARD	3457A	MULTIMETER, DIGITAL	2,674.35	5/22/87
HEWLETT PACKARD	3457A	MULTIMETER, DIGITAL	2,731.00	6/3/88
HEWLETT PACKARD	3457A	DIGITAL MULTIMETER	2,779.00	10/1/88
HEWLETT PACKARD	3478A	DIG MULTIMETER	1,248.00	5/1/83
HEWLETT PACKARD	3478A	MULTIMETER, DIGITAL	940.27	
HEWLETT PACKARD	3495A	SCANNER	2,821.50	2/1/77
HEWLETT PACKARD	3495A	SCANNER	3,415.50	8/1/78
HEWLETT PACKARD	3497A	DATA ACQUISITION SYSTEM	6,579.87	11/1/88
HEWLETT PACKARD	3590A	ANALYZER, WAVE	3,280.00	9/1/86
HEWLETT PACKARD	3594A	OSCILLATOR, SWEEP	1,640.00	9/1/86
HEWLETT PACKARD	5245L	COUNTER	2,950.00	4/18/04
HEWLETT PACKARD	5254A	CONVERTER FREQ	1,550.00	4/18/84
HEWLETT PACKARD	5300A	FREQ COUNTER	391.05	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT PACKARD	5300A	COUNTER	1,183.05	3/4/83
HEWLETT PACKARD	53008	FREQ. COUNTER	777.15	
HEWLETT PACKARD	5302A	COUMER	900.00	
HEWLETT PACKARD	5321B	FREQ COUNTER	775.00	
HEWLETT PACKARD	5321B	ELECT COUNTER	<del>775.00</del>	
HEWLETT PACKARD	5321B	FREQ COUNTER	775.00	
HEWLETT PACKARD	5489A	PASS FILTER	425.00	
HEWLETT PACKARD	5489A	FILTER	426.95	
H E W W PACKARD	59303A	CONVERTER	1,625.00	6/1/77
HEWLETT PACKARD	6002A	POWER SUPPLY	1,138.50	8/1/78
HEWLETT PACKARD	6102A	DC POWER SUPPLY	362.15	
HEWLETT PACKARD	6102A	POWER SUPPLY	311.85	
HEWLETT PACKARD	6102A	POWER SUPPLY	351.45	
HEWLETT PACKARD	651A	TESTOSCILLATOR	609.00	
HEWLETT PACKARD	6518	OSCILLATOR	654.00	
H E W W PACKARD	7550A	PLOTTER GRAPH.	2,613.00	1/1/86
H E W W PACKARD	98034B	INTERFACE	465.85	
HEWLETT PACKARD	C2520B	SCANNER	899.00	9/1/96
HEWLETT PACKARD	C3142A	PRINTER	2,679.00	4/1/96
HEWLETT PACKARD	C4576A	PRINTER	490.00	9/1/96
HEWLETT- PACKARD	16500A	LOGIC STATE ANALYZER	17,191.50	3/1/90
H E W W - PACKARD	33258	SYNTHESIZER, FREQUENCY	4,563.00	4/1/91
HEWLETT- PACKARD	33258	FUNCTION GENERATOR	4,677.00	2/1/93

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT-PACKARD	34401A	DIGITAL MULTIMETER	995.00	1/1/93
HEWLETT-PACKARD	34401A	MULTIMETER	975.00	3/1/93
HEWLETT-PACKARD	34401A	MULTIMETER	975.00	3/1/93
HEWLETT-PACKARD	34401A	MULTIMETER	975.00	3/1/93
HEWLETT-PACKARD	34401A	MULTIMETER	<del>975.00</del>	3/1/93
HEWLETT-PACKARD	3457A	MULTIMETER	2,890.50	5/1/91
HEWLETT-PACKARD	3458A	MULTIMETER	5,687.00	11/1/90
HEWLETT-PACKARD	3458A	MULTIMETER	5,687.00	11/1/90
HEWLETT-PACKARD	3458A	MULTIMETER	5,687.00	5/1/91
HEWLETT-PACKARD	3458A	MULTIMETER, DIGITAL	6,199.00	1/1/93
HEWLETT-PACKARD	3458A	DIGITAL MULTIMETER	6,199.00	1/1/93
HEWLETT-PACKARD	355F	VHF ATTENUATOR	992.00	1/1/93
HEWLETT-PACKARD	3852A	DATA ACQUISITION SYSTEM	3,581.00	5/1/93
HEWLETT-PACKARD	5316B	FREQUENCY COUNTER	1,389.45	2/19/90
HEWLETT-PACKARD	5334B	FREQUENCY COUNTER	3,009.00	1/1/93
HEWLETT-PACKARD	54600A	OSCILLOSCOPE	2,643.00	2/1/93
HEWLETT-PACKARD	54600A	OSCILLOSCOPE	2,643.00	2/1/93
HEWLETT-PACKARD	6205C	POWER SUPPLY	1,360.00	5/1/91
HEWLETT-PACKARD	7440A	PRINTER/PLOTTER	854.70	10/1/90
HEWLETT-PACKARD	7440A	COLORPRO GRAPHICS PLOTTER	854.70	10/1/90
HEWLETT-PACKARD	7440A	GRAPHICS PLOTTER	1,046.00	1/1/93
HEWLETT-PACKARD	8902A	RECEIVER, MEASURING	28,217.00	6/1/91
HEWLETT-PACKARD	8904A	MULTIFUNCTION SYNTHESIZER	2,759.00	11/6/90

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT- PACKARD	8904A	MULTIFUNCTIONSYNTHESIZER	2,759.00	11/6/90
HEWLETT- PACKARD	9153C	DISK DRIVE	1,672.00	3/1/90
HEWLETT- PACKARD	98561X	COMPUTER	3,971.00	4/1A3
HITACHI	VC6165	DIGITAL STORAGE OSCILLOSCOPE	5,567.50	4/1/90
HITACHI	VC6165	DIGITAL STORAGE OSCILLOSCOPE	<del>5,567.50</del>	4/1/90
HI-TEK	RT-101	KEYBOARD	90.00	
HONDA	EX5500	GASOLINE GENERATOR	2,293.00	5/13/88
HONDA	EX5500	GASOLINE GENERATOR	2,293.00	5/1/88
HONDA	EX5500	GASOLINE GENERATOR	2,293.00	5/1/88
HONDA	EX5500	GASOLINE GENERATOR	2,293.00	5/1/88
HONDA	EZ 2500	GENERATOR	790.00	2/18/97
HONEYWELL	101	TAPE RECORDER	21,061.00	1/1/79
HONEYWELL	101	TAPE RECORDER	21,061.00	1/1/79
HONEYWELL	101	TAPE RECORDER	21,061.00	1/1/79
HONEYWELL	101	TAPE RECORDER	21,061.00	1/1/79
HONEYWELL	1858	OSCILLOGRAPH	16,000.00	4/1/84
HONEYWELL	1858	CHART RECORDER, FIBER OPT	19,575.00	10/1/87
HONEYWELL	1858	CHART RECORDER, FIBER OPT	19,575.00	10/1/87
HONEYWELL	1858	VISICORDER	6,905.00	7/1/83
HONEYWELL	300AMP	SHUNT	200.00	
HP	11722A	SENSOR MODULE	2,368.00	6/1/94
HP	3325B	FUNCTION GENERATOR	5,296.00	10/1/91
HP	3458A	DIGITAL MULTIMETER	5,687.00	10/1/90
HP	3488A	SWITCH/CONTROL UNIT	3,750.00	10/1/85
HP	5334B	FREQUENCY COUNTER	2,074.00	9/1/90
HP	6060A	DC ELECTRONIC LOAD	1,795.00	9/1/90
HP	70001A	MAINFRAME	8,675.00	6/1/94
HP	70004A	DISPLAY	9,210.00	6/1/94
HP	70310A	PRECISION FREQ. REF.	4,725.00	6/1/94
HP	70900B	LOCAL OSCILATOR.	15,945.00	6/1/94
HP	70902A	IF SECTION	4,500.00	6/1/94
HP	70903A	IF SECTION.	4,275.00	6/1/94
HP	70909A	RF SECTION.	21,000.00	6/1/94
HP	8902A	MEASURING RECEIVER	28,524.00	6/1/94
HP	8903E	DISTORTION ANALYZER	4,082.00	9/1/90
HP	C2001A	PRIMER	2,086.00	3/1/94
HPC	300	COMPUTER, DESKTOP	2,856.00	7/1/86

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HPC	300	COMPUTER, DESKTOP	10,000.00	5/1/93
HPC	9866	PRINTER, THERMAL	3,216.00	2/1/77
HPC	33449	PRINTER, LASER	1,677.00	11/1/90
HPC	33449	PRINTER, LASER	1,629.00	4/1/91
HPC	33449	PRINTER, LASER	1,514.00	5/1/91
HPC	35731	CAT DISPLAY	796.00	9/1/92
HPC	35741	CAT DISPLAY	800.00	5/1/93
HPC	7570A	PLOTTER	2,924.00	10/1/88
HPC	9122c	DISK-DUAL FLOPPY	<del>981.00</del>	5/1/93
HPC	9122D	DISK-DUAL FLOPPY	1,217.00	4/1/85
HPC	9835A	COMPUTER, DESKTOP	12,013.00	10/1/81
HPC	9876A	PRINTER, THERMAL	3,578.33	9/1/79
HPC	C2106A	PRINTER, CHARACTER	331.00	5/1/93
HPC	LASER4	PRINTER, LASER	1,450.00	3/1/94
IBM	5151	CRT DISPLAY	220.00	5/1/85
IBM	5151	CRT DISPLAY	242.00	5/1/84
IBM	5160	COMPUTER, PERSONAL	16,588.00	12/1/87
IBM	5170	COMPUTER, PERSONAL	4,155.00	6/1/86
IBM	5170	COMPUTER, PERSONAL	4,336.00	12/1/85
IBM	5170	COMPUTER, PERSONAL	4,973.00	4/1/85
IBM	5170	COMPUTER, PERSONAL	3,603.00	8/1/86
IBM	5170	COMPUTER, PERSONAL	5,364.00	6/1/86
IBUS	4875	COMPUTER, PERSONAL	6,558.00	12/1/90
ICK	TPR206	SIGNAL CONDITIONER	250.00	9/1/93
ICK	TPR206	SIGNAL CONDITIONER	250.00	9/1/93
ICK	TPR206	SIGNAL CONDITIONER	250.00	9/1/93
IDR	8531	COMPUTER, PERSONAL	9,311.00	7/1/92
INDUSTRIAL COMPUTER SOURCE	8531-RV	COMPUTER WITH KEYBOARD	6,736.00	6/1/91
INGERSOLL-RAND	HRM61-6	REGENERATIVE DRYER	2,600.00	7/1/94
INGERSOLL-RAND	SSR-EP30SE	AIR COMPRESSOR	9,284.00	8/1/94
INLAND	403	CONTROL CHASIS	12,000.00	3/13/75
INLAND	823	RATE TABLE	22,396.00	2/1/75
INLAND	1500CP	POWER SUPPLY	7,000.00	3/1/75
INSTRULAB	4202	THERMOMETER, DIGITAL	2,845.25	8/1/87
INTELLICOM	TPAIR 206	HUB INTERFACE	239.00	3/1/94
INTERLAN	MPR110V	MULTPORT REPEATER, LAN	1,798.00	8/1/91
ISO	7408	COMPUTER, PERSONAL	2,051.00	2/1/93
ISOTHERMAL	ITL-M-17701	FURNACE	17,765.00	11/1/90
J.A.KING	DS1-30K	DIGITAL SCALES	1,670.00	1/1/82

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
JARRETT INST.	NONE	WATER TRIPLE POINT	950.00	
JCWS	286	COMPUTER, PERSONAL	4,323.00	5/1/84
JDR	AT	COMPUTER, PERSONAL	1,121.00	1/1/90
JDR	XT	COMPUTER, PERSONAL	688.00	7/1/86
KAYE INSTRUMENTS	K140-4	ICE POINT REF	594.00	
KEAL	NONE	TRANSPORT CASE	2,995.00	5/17/91
KEAL	NONE	TRANSPORT CASE	<del>2,995.00</del>	5/17/91
KEKHLN	181	DIG.MULTIMETER	3,463.00	5/20/83
KEITHLEY	181	DIGITAL VOLTMETER	3,067.20	7/1/88
KEITHLEY	199	MULTIMETER	2,500.00	3/1/92
KEITHLEY	5155	MEGOHM STD	525.00	
KEITHLEY	5155	MEGOHM STD	525.00	
KEKHLEY	5155	MEGOHM STD	525.00	
KEITHLEY	5155	MEGOHM STD	525.00	
KEYTRONIC	E03435	KEYBOARD	85.00	
KEYTRONIC	E03435	KEYBOARD	85.00	
KEYTRONIC	E03435	KEYBOARD	85.00	
KEYTRONIC	E03435	KEYBOARD	85.00	
KINETIC SYSTEMS	V195-DA2 1	VXI MAINFRAME	6,206.00	5/1/96
KISTLER	3038	ACCELEROMETER	585.00	
KISTLER	561T	AMPLIFIER	840.00	
KISTLER	808K1	ACCELEROMETER	921.50	
KISTLER	808K1/5	CAL. VIB STD	921.50	
KOEP	VTS6001-1-01	VOLTAGE STANDARD	1,990.00	9/1/91
KROHN HITE	3343	BAND PASS FILTER	1,761.12	8/11/75
KROHN HITE	6400	PHASE METER	1,403.00	5/1/85
KROHN HITE	6620	PHASEMETER, DIGITAL	3,945.00	4/1/94
KROHN HITE	310CR	B P FILTER	975.00	
L & N	4210	STD RESISTOR	500.00	
L & N	4214	STD RESISTOR	650.00	
L & N	4361	SHUNT	250.00	
L & N	8163	SPRT	4,000.00	
L & N	8163	SPRT	4,000.00	
L & N	4030B	STD. RESISTOR	150.00	
L & N	4030B	STD. RESISTOR	150.00	
L & N	4210-B	STD RESISTOR	1,100.00	10/1/82
L & N	4210-B	STD RESISTOR	1,100.00	10/1/82
L & N	42148	RESISTOR	2,327.00	
L & N	42148	RESISTOR	2,327.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
L & N	4221B	STD RESISTOR	250.00	
L & N	4222B	STD RESISTOR	250.00	
L & N	42238	STD RESISTOR	550.00	
L & N	4321B	RESIST. STND.	3,903.00	1/21/02
L & N	43238	RESISTANCE	3,205.00	9/1/82
L & N	6011-3	TEMP. CONTROL.	862.60	8/1/05
L & W	<b>4050B</b>	STD RESISTOR	150.00	
LEEDS & NORTHROP	4214	RESISTANCE STANDARD	5,015.00	7/1P 0
LING	DSC4	SERVO CONTROLLER	6,171.00	8/1/94
LING	DSC4	SERVO CONTROLLER	6,171.00	8/2/94
LITHONIA HI-TEK	TV1000MN5 TBHSG	FLOOD LIGHT	260.00	4/23/96
LITHONIA HI-TEK	TV1000MN5 TBHSG	FLOOD LIGHT	260.00	4/23/96
LITHONIA HI-TEK	TV1000MN5 TBHSG	FLOOD LIGHT	260.00	4/23/96
MAX TECH	MS-401	AUTO DATA SWITCH	239.00	
MAX TECH	PB64	BUFFER PRINTER	99.00	
MAX TECH	PB64	BUFFER PRINTER	99.00	
MAYC	286	COMPUTER, PERSONAL	730.00	6/1/88
MDB	DS2000	DISK-WINCHESTER	20,068.00	12/1/90
MENSOR	11900	PRESSINDICATOR	2,780.00	10/1/85
MENSOR	15000	PRESSURE INDICATOR	2,825.00	5/1/94
MENSOR	14000B	PRESSURE INDICATOR, DIGITAL	3,260.00	8/1/90
MFT	9914R	MAG TAPE 9 TRACK	7,400.00	3/1P 2
MFT	9914R	MAG TAPE 9 TRACK	12,650.00	12/1/90
MGX	7BM623	CRT DISPLAY	500.00	11/1/87
MICRO EXPRESS	REGAL386S X	LAPTOP COMPUTER	2,035.00	8/1/91
MICRON ELECTRONICS	LM-1764	DISPLAY	310.00	9/1/96
MICRON ELECTRONICS	M55HIPLUS- P166-T	COMPUTER W/ KEYBOARD	7,434.00	9/1/96
MINOLTA/LAND	152A	THERMOMETER	2,789.00	6/1/91
mitsubishi	AUM1381A	CRT DISPLAY	400.00	12/1/90
mitsubishi	HC3925L9ET K	DISPLAY	1,798.00	3/1/94
MKS	288	INTERFACE UNIT	1,100.00	1/1/92
MKS	244C	PRESSURE CONTROLLER	1,145.00	1/1/92
MKS	245-1 1179	CONTROL VALVE	1,695.00	
MKS	270C-5	SIGNAL CONDITIONER	2,600.00	1/1/92

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
MKS	270C-5	SIGNAL CONDITIONER	2,600.00	1/1/92
MKS	270C-5	SIGNAL CONDITIONER	2,600.00	1/1/92
MKS	270C-5	SIGNAL CONDITIONER	2,525.00	2/1/93
MKS	290-04	ION GAUGE CONTROLLER	1,600.00	1/1/92
MKS	390HA	CAPACITANCE GAUGE	2,500.00	1/1/92
<b>MKS</b>	390HA	CAPACITANCE GAUGE	2,500.00	1/1/92
<b>MKS</b>	390HA	CAPACITANCE GAUGE	2,500.00	1/1/92
<b>MKS</b>	PDR-C-1C	POWER SUPPLY	1,280.00	1/1/92
MKS	PDR-C-2C	POWER SUPPLY	1,280.00	1/1/92
MKS	SRG-2-488-SPSH	SR GAUGE CONTROLLER	13,000.00	1/21/92
MKS	VGCS2	VACUUM CONTROLLER	8,200.00	1/1/92
MKS	VGCS-200	VACUUM CAL STATION	33,200.00	1/21/92
MKS	245-S0037-86	CONTROL VALVE	1,695.00	6/8/94
INSTRUMENTS <b>MOD</b>	9230	COMPUTER, SUPERMINI	46,200.00	12/1/90
<b>MOD</b>	9088-4	COMPUTER, SUPERMINI	92,218.00	10/1/91
MONTEREY RESEARCH	516F	ACCEL PROGRAM	20,000.00	10/1/73
MONTEREY RESEARCH	9MP1336	SHOCK MACHINE	7,613.50	10/16/73
MONTGOMERY WARD	8013	FREEZER	229.00	
MOTOROLA	D43LRA77A5 CK	RADIO TRANSCEIVER	921.00	10/5/90
MOTOROLA	D43LRA77A5 CK	RADIO TRANSCEIVER	921.00	10/5/90
MOTOROLA	H99SA+03H	2-WAY FM RADIO	1,262.00	1/5/89
MOTOROLA	H99SA+053H	2-WAY FM RADIO	1,262.00	1/5/89
MOTOROLA	H99SA+053H	2-WAY FM RADIO	1,262.00	1/5/89
MOTOROLA	H99SA+053H	2-WAY FM RADIO	1,126.70	1/5/89
MOTOROLA	H99SS+008H	TRANSCEIVER, RADIO	1,974.71	12/10/87
MOTOROLA	H99SS+008H	TRANSCEIVER, RADIO	1,974.71	12/10/87
MOTOROLA	H99SS+008H	TRANSCEIVER, RADIO	1,974.41	12/10/87
MOTOROLA	H99SS+008H	TRANSCEIVER, RADIO	1,974.71	12/10/87
MOTOROLA	HCN1036E90 00	CONTROLLER	512.00	
MOTOROLA	HCN1036E90 00	CONTROLLER	512.00	
MOTOROLA	HCN1036E90 00	CONTROLLER	512.00	
MOTOROLA	HCN1036E90 00	CONTROLLER	512.00	



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
MOTOROLA	MVME187	COMPUTER MODULE	7,995.00	2/1/94
MOTOROLA	T99KE-036W	TRANSCEIVER, <b>RADIO</b>	1,755.40	5/25/90
MOTOROLA	T99KE-036W	TRANSCEIVER, RADIO	1,755.40	5/25/90
MOTOROLA	T99VB-004W	RADIO, FM	2,332.78	1/14/88
MOTOROLA	T99VB-004W	RADIO, FM	2,332.78	1/8/88
MOTOROLA	T99VB-004W	RADIO, FM	2,332.78	1/14/88
MOTOROLA	T99VB-004W	RADIO, FM	2,332.78	1/14/88
MVE CRYOGENICS	HL-190	LIQUID NITROGEN TANK	9,247.00	12/1/94
NASA	1	VARIAC/DM UNIT	<del>760.00</del>	
NASA	4 X 8**	<b>SCREEN ROOM</b>	2,000.00	10/16/73
NASA	NONE	VALVE ASSEMBLY	2,000.00	8/3/95
NASA		VIB. CONSOLE	100.00	
NATIONAL INSTRUMENTS	VXI-MXI-2	COMPUTER INTERFACE	4,500.00	5/1/96
NCZ	386	COMPUTER, PERSONAL	3,226.00	8/1/90
NCZ	486	COMPUTER, PERSONAL	6,027.00	7/1/93
NCZ	<b>486</b>	COMPUTER, PERSONAL	1,103.00	6/1/94
NEF	6205 16	SCANNER	800.00	1/1/94
NEFF	122	AMPLIFIER	565.00	
NEFF	01ai7	AMP. RACK	3,695.70	2/8/82
NEFF	122-223	AMPLIFIER	916.65	
NEFF	122-223	AMPLIFIER	916.65	
NEFF	620100AB	DATA ACQUISITION SYSTEM	30,605.00	5/1/83
NEFF	620600AE	DATA ACQUISITION SYSTEM	20,488.00	1/1/90
NEFF	NONE	POWER RACK	271.00	
NEK	17C	CRT DISPLAY	2,625.00	10/1/91
NEMS CLARK	1302A	SPECIAL PURPOSE RECEIVER	400.00	
NEY	CZ805A	CRT DISPLAY	300.00	8/1/90
NEY	JC1403	CRT DISPLAY	440.00	10/1/91
NEY	JC1403	CRT DISPLAY	559.00	4/1/91
NEY	LC890	PRINTER, LASER	3,117.00	11/1/88
NOVATEL	501	GPS ANTENNA	595.00	2/11/97
NOVATEL	511	GPS ANTENNA	365.00	2/11/97
NOVATEL	511	GPS ANTENNA	365.00	
NOVATEL	A031	ANTENNA CHOKE RING	675.00	2/11/97
NOVATEL	PROPAK- <b>RT20</b>	GPS RECEIVER	6,965.00	2/11/97
NOVATEL	PROPAK- <b>RT20</b>	GPS RECEIVER	6,965.00	2/11/97
<b>OMEGA</b>	CN76133-PV	TEMPERATURE CONTROLLER	235.00	2/1/95
<b>ONO SOKKI</b>	CF 920	SPEC. ANALYZER	20,805.00	10/1/84

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
ONO SOKKI	CF350B	ANALYZER, SPECTRUM	16,530.00	9/1/89
ONO SOKKI	CF360	PORTABLE DUAL CHANNEL	16,055.00	12/1/90
ONO SOKKI	CF360	PORTABLE DUAL CHANNEL	16,055.00	12/1/90
ONO SOKKI	CF940	SPECTRUM ANALYZER	23,560.00	10/1/88
PACIFIC MEASUREMENTS	1038	OSCILLOSCOPE	6,242.00	7/29/86
PACIFIC MEASUREMENTS	1044	X Y RECORDER	2,070.00	7/1/86
PACIFIC MEASUREMENTS	1038-H13	AMPLIFIER	1,375.00	7/29/86
PACIFIC MEASUREMENTS	1038-V12	AMPLIFIER	1,750.00	7/29/86
PACIFIC MEASUREMENTS	1038-V12	AMPLIFIER	1,750.00	7/29/86
PACKARD BELL	1200	MODEM	89.00	
PAN	506	SCANNER	983.00	4/1/91
PAN	P1124	PRINTER, CHARACTER	294.00	1/1/92
PAN	P1124	PRINTER, CHARACTER	293.55	2/1/92
PAN	P1124	PRINTER, CHARACTER	279.00	6/1/91
PAN	P2123	PRINTER, CHARACTER	251.00	2/1/93
PANASONIC	KXP1124	PRINTER	340.00	5/1/91
PANASONIC	KXP2123	PRINTER	255.00	3/1/94
PANASONIC	LF5010	DISK DRIVE	2,339.00	6/1/91
PAROSCIENTIFIC	2100A	QUARTZ GAUGE	2,350.00	6/1/84
PAROSCIENTIFIC	215AS	PRESSURE TRANSDUCER	2,605.00	
PAROSCIENTIFIC	2200A	DIGIQUARTZ GAUGE	2,460.00	
PAROSCIENTIFIC	2200-AS-002	PRESSURE TRANSDUCER	2,460.00	
PAROSCIENTIFIC	230A	DIGI QUARTZ GAUGE	2,800.00	
PAROSCIENTIFIC	5206-D-002	PRESSURE TRANSDUCER	4,000.00	
PAROSCIENTIFIC	5220D-101	PRESSURE TRANSDUCER	3,800.00	
PCB	483A02	POWER UNIT	450.00	
PIEZONTRONICS	483A02	POWER UNIT	432.00	
PHILIPS	21	INTERFACE	690.00	9/1/90
PHOTOCON	PC120	MICROPHONE CAL	235.00	
PWRONICS	HSB552-1	HEAD PHONES	113.33	
PLANTRONICS	HSB552-1	HEAD PHONES	113.33	
PWRONICS	HSB552-1	HEAD PHONES	113.33	
PIANTRONICS	HSB552-1	HEAD PHONES	113.33	
PIANTRONICS	HSB552-1	HEAD PHONES	113.33	
PIANTRONICS	HSB552-1	HEAD PHONES	113.33	



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PSI	78-DSP-HH	PRESSURE DISPLAY UNIT	1,748.00	2/28/92
PSI	81-1FC	INTERFACE UNIT	1,410.00	2/6/86
PSI	8400SP	CONTROLLER, PRESSURE	11,220.00	4/29/92
PSI	8400-SP	PRESSURE MEASURING SYSTEM	11,220.00	11/1/90
PSI	8432-30	PRESSURE CALIBRATOR	5,656.00	4/1/92
PSI	8432-300	PRESSURE CALIBRATOR	5,142.00	10/1/91
PSI	8481-01	PCU EXTENDER	980.00	
PSI	CV-32L	LEAK CHECK VALVE	1,100.00	
PSI	ESP-16	PRESSURE SCANNER	2,350.00	
PSI	ESP-32	ESP MODULE	1,100.00	9/6/95
PSI	PSA-1	ANALYZER, PRESSURE SCANNR	1,700.00	5/15/89
PTX	P600	PRINTER, LINE	7,737.75	10/1/84
QMY	PS800	PRINTER/PLOTTER	2,000.00	3/1/87
QSC	1100	AMPLIFIER	400.00	
QSC	1100	AMPLIFIER	400.00	
QSC	1100	AMPLIFIER	400.00	
QSC	1100	AMPLIFIER	400.00	
QSC	1100	AMPLIFIER	398.00	
QSC	1100	AMPLIFIER	398.00	
QUD	CH 8460	CRT DISPLAY	510.00	8/1/87
RCALLEN	F2880-025	RATE GYRO	500.00	
RACAL DANA	9478	FREQUENCY DISTRIBUTION UNIT	1,872.00	5/1/88
RACAL DANA	9478	FREQUENCY DISTRIBUTION UNIT	1,872.00	6/1/88
RACAL DANA	9478	FREQUENCY DISTRIBUTION UNIT	1,872.00	6/1/88
RACAL DANA	9478	FREQUENCY DISTRIBUTION UNIT	1,872.00	6/1/88
RACALINTERLAN RLY	MPR110V 9502	REPEATER CRT DISPLAY	1,798.00 1,500.00	2/1/92 7/1/93
ROSEMOUNT	162D	SPRT CAPSULE	893.60,	
ROSEMOUNT	162D	SPRT CAPSULE	2,626.00	
ROSEMOUNT	162D	SPRT CAPSULE	2,500.00	
ROSEMOUNT	912C	FURNACE	17,000.00	12/24/84
ROSEMOUNT	914C2	TEMP BATH	14,000.00	2/1/85
ROSEMOUNT	914C4	TEMP BATH	11,175.00	8/11/75
RUSKA	2465	AIR PISTON GA.	3,690.15	6/20/79
RUSKA	2465	GAUGE, AIR PISTON	10,050.00	2/6/86
RUSKA	2470	AIR PISTON GAGE	2,785.00	10/16/73

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
RUSKA	5100	DEADWTTESTER	9,180.00	10/1/73
RUSKA	6000	MANOMETER	6,009.60	9/1/76
RUSKA	6000	MANOMETER	9,883.60	6/1/77
RUSKA	6000	PRESS. GAUGE	3,905.00	4/1/81
RUSKA	6000	MANOMETER	5,775.00	4/1/84
RUSKA	6000801	PRESSURE GAGE	10,715.00	4/1/81
RUSKA	2461-80	BELLOWS	1,200.00	7/1/84
RUSKA	2465-752	AIR PISTON GAUGE BASE	5,600.00	11/13/89
RUSKA	2465-781	WEIGHT SET	4,187.00	3/1/93
RUSKA	6000-15	MANOMETER	5,500.00	5/1/83
RUSKA	6000-150	MANOMETER, QUARTZ	8,445.00	8/1/91
RUSKA	6000-30	MANOMETER	6,385.00	2/1/86
RUSKA	6000-80	MANOMETER	8,135.00	10/1/77
RUSKA	6000-80	MANOMETER	4,483.00	1/1/79
RUSKA	600-801	PRESS MEA SYST	4,027.60	8/1/75
RUSKA	DDR6000	MANOMETER	5,073.00	6/1/79
RUSKA	DDR6000	QUARTZ PRESSURE GAGE	1,283.00	7/1/87
RUSKA	NONE	AIR PISTON GA.	2,810.00	6/20/79
RUSKA	S100714	PISTON ASSY.	4,100.00	8/18/82
SAMSUNG	CVM4967	DISPLAY	299.00	2/1/93
SAMSUNG	CVP4237P	DISPLAY	300.00	4/1/95
SBP	286	COMPUTER, PERSONAL	1,128.00	9/1/88
SBP	286	COMPUTER, PERSONAL	1,128.00	9/1/88
SBP	286	COMPUTER, PERSONAL	1,128.00	9/1/88
SBP	4095N	CRT DISPLAY	470.00	9/1/88
SBP	4095N	CRT DISPLAY	470.00	10/1/95
SBP	4095N	CRT DISPLAY	470.00	8/1/92
SBP	4095N	CRT DISPLAY	470.00	8/1/92
SBP	4095N	CRT DISPLAY	475.00	7/1/90
SEAGATE	ST42100N	DISK DRIVE	1,444.00	10/1/93
SETRA SYSTEM	270	TRANSDUCER	850.00	
SHALLCROSS	6860	PREC RES OECAD	135.00	
SHALLCROSS	6860	RESISTANCE BOX	135.00	
SIGMA INFORMATION SYSTEMS	H189-100	DISK DRIVE UNIT	2,040.00	9/1/90
SMU	SM470	CRT DISPLAY	400.00	6/1/94
SNM	3/140	GRAPHICS/HIGH END WORKSTATIONS	66,162.00	2/1/88
SONY	CPD1320	DISPLAY	400.00	6/1/90
SPECTRAL	SD104	OSCILLATOR	2,989.00	6/1/77

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
DYNAMICS				
SSU	ST1480N	SEAGATE TECHNOLOGY	3,436.00	4/1/93
STEELFAB	20-200	AIR TANK	1,166.00	8/1/94
SUN	A11-140	COMPUTER SERVEW	12,500.00	3/20/96
MICROSYSTEMS		KEYBOARD		
SUN	GDM20E20	DISPLAY	2,000.00	4/1/96
MICROSYSTEMS				
SYSTRON DONNER	8130	TIMECODEREADER	4,434.50	4/1/75
SYSTRON DONNER	8130203	TIME CODE READ	4,694.20	9/1/82
TCX	CM14SBM	CRT DISPLAY	150.00	7/1/94
TCX	MM1222	CRT DISPLAY	400.00	7/1/93
TEKTRONIX	2205	OSCILLOSCOPE	625.00	1/1/93
TEKTRONIX	2215	OSCILLOSCOPE	1,344.00	5/1/83
TEKTRONIX	7623	OSCILLOSCOPE	3,347.00	4/18/84
TEKTRONIX	015-0310-01	COMPARATOR	975.00	
TEKTRONIX	015-0311-01	PROGRAMMABLE PULSE HEAD	1,935.00	
TEKTRONIX	7A13	DIFFERENTIAL COMPARATOR	1,922.00	4/1/84
TEKTRONIX	7A26	DUAL TRACE AMPLIFIER	1,388.36	7/1/80
TEKTRONIX	7B53A	DUAL TIME BASE	1,098.11	7/24/80
TEKTRONIX	7B53A	PLUG IN	1,171.00	4/19/84
TEKTRONIX	CG5001	PROGRAMMABLE CALIBRATOR	13,085.00	5/28/85
TEKTRONIX	CG5011	PROGRAMMABLE CALIBRATION GENERATOR	18,072.00	11/1/90
TEKTRONIX	DC505A	FREQ CONVERTER	1,838.00	4/18/04
TEKTRONIX	FG504	FUNCTION GEN	1,497.00	4/1/84
TEKTRONIX	PG506	SQUARE WAVEGEN	1,636.00	4/1/84
TEKTRONIX	SC504	OSCILLOSCOPE	1,838.00	4/18/84
TEKTRONIX	SC504	OSCILLOSCOPE	5,052.00	10/1/91
TEKTRONIX	SG503	SIGNAL GEN	1,279.00	4/18/84
TEKTRONIX	T922	OSCILLOSCOPE	1,301.29	7/1/80
TEKTRONIX	T922	OSCILLOSCOPE	1,301.29	7/1/80
TEKTRONIX	T922	OSCILLOSCOPE	1,301.29	7/1/80
TEKTRONIX	T922R	OSCILLOSCOPE	1,136.81	1/2/79
TEKTRONIX	T922R	OSCILLOSCOPE	1,136.81	1/1/79
TEKTRONIX	T922R	OSCILLOSCOPE	1,180.35	8/1/82
TEKTRONIX	T922R	OSCILLOSCOPE	1,301.29	7/24/80
TEKTRONIX	TG501	TIME MARK GEN	1,475.00	4/1/84
TEKTRONIX	TM5006	POWER SUPPLY M	1,090.00	5/28/85
TEKTRONIX	TM5006A	POWER MODULE	1,267.00	11/1/90
TEKTRONIX	TM506	POWER MODULE	440.00	
TEKTRONIX	XP29	TERMINAL	2,308.00	4/1/92

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	XP29	GRAPHICS COMPUTER	5,344.00	4/1/92
TELEDYNE	VT-6B	VACUUM GAGE	245.00	
TELEDYNE	310	VACUUM GAUGE & TUBE	918.00	2/25/94
HASTINGS				
TELEX	cs-75	HEADPHONES	100.00	
TELEX	<b>cs-75</b>	HEADPHONES	100.00	
THUNDER	8500	TEMP/HUMIDITY CHAMBER	92,787.00	5/1/93
SCIENTIFIC				
TOPCON	CR2	READER/WRITER TRANSPORT	<del>490.00</del>	3/1/94
TOPCON	ITS1	OPTICAL THEODOLITE	10,500.00	3/1/94
TRIPP LITE	LCR2400	VOLTAGE REGULATOR	400.00	
TRIPP UTE	LCR2400	VOLTAGE REGULATOR	400.00	
TROEMNER	65000472	CYLINDER STAND	105.00	
TVI	955	TERMINAL, CRT, SMART	470.50	8/1/92
ULTIMATE	NONE	MICROMANAGER	130.55	
COMPUTER		WORKSTATION		
SUPPLIES				
ULTIMATE	NONE	MICROMANAGER	130.55	
COMPUTER		WORKSTATION		
SUPPLIES				
UNHOLTZ DICKIE	1611	CAL STANDARD	1,515.00	2/1/15
UNHOLTZ DICKIE	1611	CAL STANDARD	1,515.00	2/1/75
UNHOLTZ DICKIE	1611	CAL STANDARD	1,515.00	2/1/75
UNHOLTZ DICKIE	1611	STANDARDIZER, CALIBRATION	1,455.00	4/1/87
UNHOLTZ DICKIE	1611	STANDARDIZER, CALIBRATION	1,455.00	4/1/87
UNHOLTZ DICKIE	106A	SHAKER	39,594.00	10/1/73
UNHOLTZ DICKIE	106A-1/2	SHAKER, ELECTRODYNAMIC	24,345.00	4/1/87
UNHOLTZ DICKIE	MA311	CONSOLE, CONTROL	7,930.00	4/1/87
UNHOLTZ DICKIE	TA100A	POWER AMPLIFIER	7,235.00	4/1/87
UNION CARBIDE	891-KZ	NITROGEN TANK	1,045.00	10/1/77
VARIAN	V80	VACUUM PUMP SYSTEM	8,800.00	10/2/91
VEECO	MS9	LEAK DETECTOR	5,492.00	7/1/74
VEECO	SC-4	LEAK RATE STANDARD	515.00	
VEECO	SC-4	LEAK RATE STANDARD	745.00	
INSTRUMENTS				
VIEWSONIC	7033	DISPLAY UNIT	345.00	3/1/92
VIEWSONIC	7033	DISPLAY UNIT	345.00	3/1/92
VOLUMETRICS	V-1 R	CONTROLLER	250.00	
VOLUMETRICS	V-1 R	CONTROLLER	250.00	
WAVETEK	4920	VOLTAGE STANDARD	10,915.00	4/1/93
WAVETEK	4953	AC/DC SHUNT	450.00	
WAVETEK/DAYTRO	4950	CALIBRATION STANDARD	18,995.00	7/1/94

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
N				
WELCH	6915	VACUUM PUMP	1,515.00	6/1/92
WELCH	8915	VACUUM PUMP	1,525.00	6/1/92
WELCH	8814A	VACUUM PUMP	1,140.00	3/15/90
WELCH	8814A	VACUUM PUMP	1,140.00	3/15/90
WELCH	8814A	VACUUM PUMP	1,140.00	3/15/90
WELCH	8814A	VACUUM PUMP	1,140.00	3/1/90
WELCH	8915A	PUMP: VACUUM	<del>1,095.00</del>	8/13/91
WELCH	8915A	PUMP	1,095.00	8/13/91
WELCH	8915A	PUMP, VACUUM	1,095.00	8/13/91
WELCH	8915A	VACUUM PUMP	1,525.00	2/1/93
WELCH	8915A	VACUUM PUMP	1,595.00	2/1/94
WEST	2071-02- 1127-21	CONTROLLER TEMPERATURE	680.00	9/1/87
WHITELEY	600	FLOW CONSOLE	74,500.00	11/1/82
WYLE	13X11	DIVIDING HEAD BRACKET	1,000.00	7/18/95
WYLE	5GPM	LOW FLOW CONS.	500.00	
YELLOW SPRINGS INSTRUMENT	M-17669	TIN FREEZE PT	4,000.00	2/28/85
YELLOW SPRINGS INSTRUMENT	NONE	FREEZE POINT. TEMP. STD.	4,500.00	
YOKOGAWA	SO1050A-1 R	PRECISION DIVIDING HEAD THERMOCOUPLE WIRE	3,665.00 300.00	6/1/90



## GENERAL PURPOSE PUNT EQUIPMENT

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
3M	7540	READER/PRINTER	3,889.00	2/1/89
3M COMPANY	6100A	HARMONIC ANALY	3,643.20	2/1/75
3M COMPANY	610A	SWEEP GENERATOR	940.80	
<b>AAMAZING</b>	<b>CM-8484EX</b>	DISPLAY UNIT	200.00	7/1/91
ACOUSTIC POWER SYSTEMS	113	SHAKER	3,430.00	8/1/82
ACOUSTIC POWER SYSTEMS	114	PWR. AMPLIFIER	1,175.00	8/1/82
ACRP	7134T	CRT DISPLAY	150.00	
ADRET	201	GENERATOR	4,326.20	4/1/81
ADRET	210S-8	GENERATOR SYNTHESIZER	2,551.10	8/1/78
<b>AERO VAC</b>	<b>202</b>	GAGE CONT ANAL	2,000.00	9/21/73
AERO VAC	202	VAC GAGE ANALY	3,655.00	9/1/73
AHE	4320	MAG TAPE, CASSETTE	995.00	9/1/93
AINSWORTH	CLASS S	WEIGHTS	200.00	
AIR CON	1220000	CLEANING BENCH	1,200.00	10/16/73
AIR PRODUCTS	C	CYLINDER GAS	134.00	
AIR PRODUCTS	NONE C	CYLINDER GAS	134.00	
ALTEC	1591A	AMPLIFIER	589.50	
AMCO ENGINEERING CORP.	SP25	TORQUE WRENCH	12.00	
AMDEK	VIDEO-300	DISPLAY, COMPUTER	180.00	3/1/94
AMPEX	AA620	AMP SPEAKER	240.00	
AMPEX	AA620	AMP. SPEAKER	240.00	
AMPEX	TU-40	FLUTTER METER	2,788.34	10/1/73
AMSLER		INTEG CALIB.	362.50	
AMTHOR	452	TESTER, DEAD WEIGHT	532.00	
AMTHOR	460	TESTER, DEAD WEIGHT	500.00	
AMMOR		DEAD WEIGHT <b>TE</b>	418.00	
ANDATACO	X266T5 1- JX2S1X	DISK DRIVE	553.00	4/1/96
<b>APC</b>	AT	COMPUTER, PERSONAL	3,152.00	7/1/86
APCO MOSSBERG	A-100	TORQUE WRENCH	44.00	9/15/95
APM	DUODSK	DISK-DUAL FLOPPY	474.00	6/1/89
APM	HD20SC	DISK-WINCHESTER	966.00	5/1/87
APM	IMWTR	PRINTER, CHARACTER	398.00	8/1/93
<b>APM</b>	IMWTR2	PRINTER, CHARACTER	393.00	1/1/90
APM	MAC2CX	COMPUTER, PERSONAL	6,000.00	8/1/89
APM	MAC2X	COMPUTER, PERSONAL	14,727.00	1/1/90

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
APM	MACSE	COMPUTER, PERSONAL	2,034.00	2/1/80
APM	MC2RGB	CRT DISPLAY	659.00	1/1/90
APM	MC2RGB	CRT DISPLAY	699.00	4/1/09
APM	MC2RGB	DISPLAY	625.00	3/1/90
APM	MC2RGB	CRT DISPLAY	753.00	6/1/88
APM	MC2RGB	CRT DISPLAY	659.00	10/1/89
APPLE	M0115	KEYBOARD	165.00	
APPLE	M0116	KEYBOARD	85.00	
APPLE	M0401	DISPLAY	710.00	11/1/07
APPLE	M3501	KEYBOARD	76.00	
APPLE	M4300	PERSONAL COMPUTER	7,930.00	4/9/93
APPLE	M5011	COMPUTER	2,156.00	10/1/80
APPLIED DIGITAL SYSTEMS	ADLCAN	DISK DRIVE UNIT	999.00	4/1/96
APZ	FT60	TAPE HANDLER	750.00	8/1/82
ARRH	ASTECD	CRT DISPLAY	500.00	4/1/88
<b>ARRIFLEX</b>		TORQUE GAGE	50.00	
ASSOCIATED EQUIP. CORP.	R100	CHARGER BATTERY	510.00	
ASTROSYSTEMS	A1202	RESOL STANDARD	1,181.00	9/7/76
AUM	AT	COMPUTER, PERSONAL	2,261.00	10/1/86
AUTO SPERRY	550660P	TRANSDUCER	695.00	
B & K	9554	ACCESSORY KIT	3,988.00	
B & K	1616	BANDPASS FILTER	3,355.20	9/1/82
INSTRUMENTS INC				
B & K	2209	SOUNDLEVEL MTR	2,865.60	8/1/82
INSTRUMENTS INC				
B & K	2425	RMS VOLTMETER	1,160.64	4/1/79
INSTRUMENTS INC				
B & K	2606	VOLTMETER	1,632.00	10/1/73
INSTRUMENTS INC				
B & K	2607	SOUND LEVEL ME	4,346.88	3/1/80
INSTRUMENTS INC				
B & K	2617	CATHODE FOLLOW	350.86	
INSTRUMENTS INC				
B & K	2619	AMPLIFIER	535.68	
INSTRUMENTS INC				
B & K	4230	MIKE CALIBRA	177.00	
INSTRUMENTS INC				
B & K PRECISION	510	TRANSISTOR TESTER	110.00	
B & K PRECISION	830	CAPACITANCE METER	300.00	
B&K PRECISION	490	VIDEO ANALYZER	081.00	4/1/94
<b>BALDOR</b>	111	GRINDER-BUFFER	58.00	
<b>BALDWIN LIMA</b>	625	LOAD CAL KIT	272.50	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HAMILTON				
BALDWIN LIMA	626	GAGE CALIB	265.00	
HAMILTON				
BALDWIN LIMA	626	ST GAGE CALIB	265.00	
HAMILTON				
BALDWIN LIMA	626	ST GAGE CALIB	265.00	
HAMILTON				
BALLANTINE	300H	VOLTMETER, AC	500.00	
BALLANTINE	6125C	SCOPE CALIBRATOR	6,500.00	5/1/83
BALLENTINE LAB	6125C	SCOPE CALIBRATOR	7,995.00	5/1/92
BARNES	FCS-1	BLACKBODY	195.00	
BAUSCH-LOMB	NONE	MICROSCOPE	626.40	
BELL & HOWELL	NONE	CABINET	824.00	
BELL & HOWELL	SR 900	MICRO READER	175.00	
BELL & HOWELL	SR VIII	READER	177.00	
B E U & HOWELL	SR VIII	READER	177.00	
BELL & HOWELL	SR900	FILM READER	183.00	
BERGER	NONE	TRIPOD	50.00	
BIDDLE	72-6346	RESISTANCE, BOX, DECADE	2,220.00	6/7/88
BINKS	331030	AIR COMPRESSOR	516.60	
BIRD ELECTRONIC CORP	611	WATTMETER	28.00	
BLACK & DECKER	582-6	SABER SAW	94.00	
BLACK BOX	IC026A	NETWORK INTERFACE	605.00	2/1/94
BLACK BOX	LE1090A-AUI	NETWORK REPEATER	2,045.00	5/1/94
BLACK BOX	PI553A	PRINT SPOOLER	296.00	1/1/93
BLACK BOX	TS286B	INTERFACE TEST SET, CENT.	229.00	
BLACK BOX CORP	LE003A	ETHERNET TRANSCEIVER	215.00	4/2/96
BLAKE MFG CO	CO-AX	INDICATOR	160.00	
BOLEY	31047	L A M E	1,107.00	10/16/73
BOLEY		LATHE	3,000.00	2/20/75
BOONTON	102F	SIG GENERATOR	5,359.25	11/1/82
BRIDGEPORT	VBA	MILLING MACH	5,337.75	10/16/73
BROOKLYN	MERCURY	THERMOMETER	15.30	
BROOKLYN		THERMOMETER	15.30	
BROOKS	1052	FLOW CALIB	150.00	
BROOKS	1051A	FLOW CALIBRA.	12,432.42	9/1/74
BROWN & SHARPE	599	MICROMETER	250.00	
BROWN & SHARPE	942	MACHINIST KIT	235.00	
BROWN & SHARPE	C800A	VERN HT GAGE	121.75	
BTC	NT-1412A	DISPLAY	500.00	8/23/94

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
BULOVA	TR50	CLEANER	165.00	
CAMILE	22	SHUTTER ANALY	995.00	2/1/85
CANON	K10144A	PRINTER	480.00	2/3/97
CCS	7712A	INTERFACE BRD	202.00	
CEC	360313-0100	PRESSURE REGULATOR	535.00	10/20/72
CHICAGO MAJ		TRIPOD	75.85	
CLARK	C500-25	FORK LIFT	8,950.00	5/28/85
CLAROSTAT	240	POWER RESISTOR DECADE	70.00	
CLAROSTAT	240C	DEC.4.DE RESIST	99.00	
CLAROSTAT	240C	DECADE BOX	115.00	
CLAROSTAT	240-C	POWER RESISTOR DECADE BOX	72.00	
CLAROSTAT	240-C	POWER RESISTOR DECADE BOX	99.00	
CLAROSTAT	240c	DECADE RESISTOR	350.00	
CLON	286	COMPUTER, PERSONAL	1,400.00	4/1/93
CLON	286	COMPUTER, PERSONAL	2,768.00	2/1/88
CLON	286	COMPUTER, PERSONAL	1,850.00	1/1/88
CLON	MONO	CRT DISPLAY	118.00	12/1/86
CLON	MONO	CRT DISPLAY	1,115.00	8/1P 3
CLON	MONO	CRT DISPLAY	1,115.00	7/1/93
CMS	STACK3	DISK-WINCHESTER	489.00	5/1P 0
COHERENT	203	POWER METER, LASER	1,950.00	3/1/89
COMPAQ	420	DISPLAY	487.00	3/1P 0
COMPAQ	2520	COMPUTER W/KEYBOARD	2,185.00	2/1P 0
CONSOLIDATED CONTROL CORP	24-120	LEAK DETECTOR	3,900.00	2/1/75
CONSOUDATED CONTROL CORP	TD2903-	TAPE DEGAUSSER	1,353.40	2/20/75
CONTROL DATA	1209.51	CEALIGNMENT RACK	1,835.00	
CORNELL- DUBILIER	CDA5	DECADE CAP.	26.00	
CORNELL- DUBILIER	CDB3	DECADE CAP.	25.00	
CORNELL- DUBILIER	CDC3	DECADE CAP.	25.06	
CORREN	100	TORQUE GAGE	50.00	
CORREN	500	TORQUE GAGE	50.00	
COX	AIB	FREQUENCY CONVERTOR	400.00	
COX	0.0875	SONIC FLOW NOZZLE	900.00	
INSTRUMENTS COX	0.1375	SONIC FLOW NOZZLE	900.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
CPQ	420	CRT DISPLAY	496.00	6/1/91
CPQ	DP286	COMPUTER, PERSONAL	2,600.00	10/1/87
CPQ	DIP386	COMPUTER, PERSONAL	6,065.00	6/1/91
CRAFTSMAN	7830	VACUUM CLEANER	105.00	
CRAFTSMAN	65786 a 65787	TOOL CHEST	180.00	
CRAFTSMAN	965024N	CHEST/TOOLS	646.06	
CRAFTSMAN	965726N	CHEST W/TOOLS	646.06	
CRONN		CONT ALT CHAMB	250.00	
CTX INTERNATIONAL	CVP-5468N1	DISPLAY	400.00	1/19/93
CVC	GM-100	GAGE	180.00	
CXQ	286	COMPUTER, PERSONAL	2,000.00	4/1/90
CXQ	1422	CRT DISPLAY	500.00	4/1P 0
CZD	286	COMPUTER, PERSONAL	1,688.00	3/1/89
CZD	286	COMPUTER, PERSONAL	1,688.00	3/1/89
CZD	206	COMPUTER, PERSONAL	1,583.00	3/1/89
CZD	286	COMPUTER, PERSONAL	1,583.00	3/1/89
CZD	286	COMPUTER, PERSONAL	1,583.00	3/1/89
CZD	2136	COMPUTER, PERSONAL	1,583.00	3/1/89
CZD	286	COMPUTER, PERSONAL	1,226.00	5/1/89
CZD	286	COMPUTER, PERSONAL	1,749.00	7/1/87
CZD	51086	CRT DISPLAY	400.00	8/1/86
CZD	51086	CRT DISPLAY	334.00	5/1/91
CZD	51086	CRT DISPLAY	334.00	5/1P I
CZD	51086	CRT DISPLAY	334.00	5/1/91
DAKE	0	DRAKE PRESS	85.00	
DANIELS MFG	M83507/7-01	CRIMPING TOOL KIT	920.00	7/24/95
DATA CHECK	1218	POWER SUPPLY	2,050.00	3/30/92
DATA CHECK	18002	EXTENDER BOARD	250.00	7/23/96
DATA MEASUREMENTS	6275	FM TEST UNIT	200.00	
DATA PRECISION	175	MULTIMETER	183.33	
DATA PRECISION	245	DIG MULTIMETER	280.25	
DATA PRECISION	245	DIG MULTIMETER	286.15	
DATA PRECISION	938	CAPACITANCE METER	225.00	
DATAMETRICS	525	HEATER BASE	475.00	
DATAMETRICS	525	HEATER BASE	475.00	8/3/95
DATAMETRICS	525	HEATER BASE	475.00	8/3/95
DATAMETRICS	525	HEATER BASE	475.00	8/3/95
DATAMETRICS	525	HEATER BASE	475.00	
DATAMETRICS	525	BAROCEL HEATER BASE	150.00	4/2/96

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
DATAMETRICS	699	POWER SUPPLY	570.00	
DATAMETRICS	699	POWER SUPPLY	1,100.00	8/1/89
DATAMETRICS	700	POWER SUPPLY	550.00	
DATAMETRICS	700	POWER SUPPLY	604.50	
DATAMETRICS	1015	SIGNAL COND.	1,740.00	6/1/85
DATAMETRICS	1015	SIGNAL COND.	1,740.00	6/1/85
DATAMETRICS	1015	SIGNAL COND.	1,740.00	6/1/85
DATAMETRICS	1015	SIGNAL COND.	1,740.00	6/1/85
DATAMETRICS	1174	MANOMETER	1,553.25	8/1/75
DATAMETRICS	1174	PRESS SYS	1,553.25	1/1/76
DATAMETRICS	1015-	SIGNAL COND.	1,740.00	6/1/85
	<b>D4C12A1G</b>			
DATAMETRICS	1015D5C	SIG CONDITONE	1,296.75	8/1/75
DATAMETRICS	1015D5C	SIG CONDITONE	1,296.75	8/1/75
DATAMETRICS	1015D5C	SIG CONDITONE	1,296.75	8/1/75
DATAMETRICS	1015D5C	SIG CONDITONE	1,296.75	8/1/75
DATAMETRICS	10188	MANOMETER SYST	2,185.00	2/1/75
DATAMETRICS	1174-	MANOMETER	1,477.25	8/1/75
	<b>A5A4A1A1</b>			
DATAMETRICS	571D-10	PRESS SENSOR	1,254.00	3/1/76
DATAMETRICS	571D-10	PRESS SENSOR	1,372.75	8/1/75
DATAMETRICS	571D-10	PRESS SENSOR	1,254.00	3/1/76
DATAPULSE	101	PULSE GENERATOR	405.00	
DATAPULSE	101	PULSE GENERAT.	410.00	
DATAPULSE	110B	PULSE GENERATOR	1,212.50	10/1/73
DATATAPE	TSC2000	TAPE CALIBRATOR	9,952.00	3/1/89
DATATAPE	TSC-2000	TAPE CALIBRATOR	12,218.00	10/1/91
DATRON	4708	STANDARD CALIBRATION	24,810.00	9/1/90
DATRON	4000A	VOLT. CALIBRA	603.00	
DATUM	9110	GENERATOR, TIME CODE	3,088.00	6/1/76
DAYTON	32528	AIR DRYER	446.21	
DAYTON	3Z574	EXHAUSTER	421.00	
DELL	286	COMPUTER, PERSONAL	1,200.00	10/1/87
DELL	286	COMPUTER W/KEYBOARD	2,533.00	9/1/86
DELL	286	COMPUTER, PERSONAL	2,767.00	10/1/87
DELL	286	COMPUTER, PERSONAL	2,674.00	9/1/87
DELL	310/4	COMPUTER	5,889.00	10/1/89
DELL	AT121	COMPUTER, PERSONAL	2,348.00	4/1/93
DELL	D825HT	CRT DISPLAY	400.00	5/29/97
DELL	MONO1	CRT DISPLAY	350.00	3/1/90
DELL	MONO1	CRT DISPLAY	400.00	9/1/93
DELL	MONO1	CRT DISPLAY	400.00	9/1/93

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
DELL	MONO1	CRT DISPLAY	400.00	9/1/93
DELL	PC112	COMPUTER, PERSONAL	1,018.00	6/1/87
DELL	PC200	COMPUTER, PERSONAL	1,772.00	4/1/88
DELL	PC200	COMPUTER, PERSONAL	3,051.00	9/1/89
DELL	PC200	COMPUTER, PERSONAL	1,490.00	6/1/86
DELL	SMS	NETWORK SERVER	5,400.00	5/29/97
DELL	vc2	DISPLAY	400.00	10/1/89
DELL	XTURBO	COMPUTER, PERSONAL	1,000.66	9/1/88
DELTA DESIGN	3900CN	TEST CHAMBER	3,215.00	10/29/85
DELTA DESIGN	9059-5-31	TEST TEMPERATURE CHAMBER	6,290.00	4/5/90
DEQ	VR260	CRT DISPLAY	6,217.00	8/1/88
DESKTOP DISPLAYS	DDU1528	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	DDU1528T	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	DDU1528T	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GO-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DESKTOP DISPLAYS	GD-5164L	DISPLAY	200.00	4/1/96
DI-ACRO	3	SHEARER	335.00	
DI-ACRO	4	HAND SHEARS	1,230.00	10/24/81
DI-ACRO	24	BRAKE	1,100.00	10/24/81

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
DIGITEC	3110	CURRENT SOURCE	1,256.15	4/1/79
DILLON	E	FORCE GAUGE	911.00	4/1/94
DMC	6275	FM TEST UNIT	500.00	
DO ALL	779	OMNI-VISE	449.00	
DO A U	1BX24X4	GRAN SURF PLAT	187.00	
DO ALL	G-R	GAGE BLOCKS	58.50	
DO ALL	NONE	TABLE	660.00	
DO ALL		BENCH GRINDER	97.00	
DO ALL		SAND SAW	4,793.00	10/16/73
DOALL	24X24X5	INSPECTION BLOCK	500.00	7/19/95
DOLCH INSTS.	64300	ANALYZER, LOGIC	14,335.50	4/1/06
DOUGHBOY INDUSTRIES	HS-C	BAG SEALER	150.00	8/3/95
DREMEL	395	MOTO-TOOL	127.00	
DREMEL	380-S	MOTO TOOL KIT	60.00	
DRESSER	710A	PRESS.INDICATO	1,260.00	
DRESSER	ROTO TORQ	TORQUE WRENCH	116.00	
DRUCK	DPI/40	INDICATOR	3,470.00	11/1/86
DRUCK	DPI605	PRESSURE CALIBRATOR	5,950.00	4/1/93
DRUCK	DPI605	PRESSURE CALIBRATOR	6,775.00	8/9/94
DRUCK	PDCR 910- 1422	PRESSURE TRANSDUCER	550.00	8/1/94
DRUCK	PDCR910	PRESSURE TRANSDUCER	540.00	4/1/93
DUMORE	55-011	TOOL GRINDER	284.00	
DUNKLEBERGER	236	RESIST SUB BOX	20.00	
DUNKLEBERGER	236	RESIST SUB BOX	20.00	
DUNKLEBERGER	236	RESIST SUB BOX	20.00	
DUNKLEBERGER	236	RESIST SUB BOX	20.00	
DVC	6275	CAL TEST UNIT	500.00	
DYNISCO	1000	CALIBRATOR	1,875.00	11/12/86
EBERUNE	PAC-1SA	PORTABLE ALPHA COUNTER	654.00	
EBERLINE	S94-1	PLUTO ALPHA SD	300.00	
ECD CORPORATION	100	CAP METER	295.00	
ECD CORPORATION	100	CAPACIT.METER	289.00	
ELECTRON	1120	CALIBRATOR	5,078.00	10/1/84
ELECTRON	1120	THERMOCOUPLE CALIBRATOR	4,560.00	5/1/88
ELECTRON	1100CF	CALIBRATOR	2,774.40	7/1/80
ELECTRON	1100CP	THERMO CALIBR.	2,538.00	8/1/78
EDC CORPORATION	520A-D	STANDARD VOLT	5,645.00	4/30/86



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
EDC CORPORATION	MV100	VOLT. STANDARD	850.00	
EDC CORPORATION	MV-106	VOLTAGE STANDARD	1,697.50	4/1/88
EDWARDS	1570	PRESSURE INDICATOR	605.00	3/18/94
EG & G FLOW TECH	FTBP	INTERFACE UNIT	1,500.00	4/18/95
EG&G	300	HYGROMETER D.P	9,244.90	6/1/85
EG&G	300	HYGROMETER, DEWPOINT	10,264.80	7/1/87
EG&G	550-1	PHOTOMETER	2,908.00	8/19/88
EIP MICRO.	578	FREQ. COUNTER	15,375.00	5/1/83
ELEC SCIENTIFIC	242D	WHEAT BRIDGE	4,315.50	2/20/75
ELECTRO INTERNATIONAL	PLT1/PP	POWER SUPPLY	2,030.00	4/1/81
ELECTRONIC DEVELOPMENT CORP.	501	VOLT STD.	3,259.20	
ELECTRONIC DEVELOPMENT CORP.	501H	VOLTAGE STANDARD	3,259.00	4/10/87
ELECTRONIC DEVELOPMENT CORP.	CR103	DC VOLTAGE STANDARD	1,850.00	5/1/83
ELECTRONIC DEVELOPMENT CORP.	MV100N	DC STANDARD	745.610	
ELECTRONIC DEVELOPMENT CORP.	MV100N	POWER SUPPLY	805.10	
ELECTRONIC DEVELOPMENT CORP.	MV100N	VOLTAGE STD.	805.10	
ELECTRONIC DEVELOPMENT CORP.	MV100N	VOLTAGE STD.	747.50	
ELECTRONIC DEVELOPMENT CORP.	VS-111 N	DC VOLTAGE STANDARD	845.00	
ELIS	PHVD	VOLTAGE DIVIDE	2,996.00	8/1/82
EMCOR	NONE	INSTR RACK	100.00	
EMPIRE ABRAI	P-50	SANDBLASTER	100.00	
ENDNCO	2225	ACCELEROMETER	366.00	
ENDNCO	2225	ACCELEROMETER	366.00	
ENDNCO	2623	POWER SUPPLY	255.00	
ENDNCO	2224C	ACCELEROMETER	200.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
EPA	FX1050	PRINTER, DIGITAL	471 .00	
EPA	FX1050	PRINTER, DIGITAL	471.00	
EPA	FX1050	PRINTER, CHARACTER	449.00	5/1/89
EPA	FX286E	PRINTER, CHARACTER	562.00	8/1/92
EPA	FX286E	PRINTER, CHARACTER	306.00	8/1/92
EPA	FX286E	PRINTER, CHARACTER	530.00	8/1/92
EPA	FX286E	PRINTER, CHARACTER	530.00	3/1/88
EPA	FX80	PRINTER, CHARACTER	200.00	1/1/91
EPA	FX80	PRINTER, CHARACTER	630.00	6/1/83
EPA	FX80	PRINTER, CHARACTER	700.00	6/1/88
EPA	FX85	PRINTER, CHARACTER	3139.00	12/1/85
EPA	FX85	PRINTER, CHARACTER	400.00	8/1/85
EPA	FX85	PRINTER, CHARACTER	395.00	3/1/86
EPA	FX85	PRINTER, CHARACTER	359.00	1/1/86
EPA	FX85	PRINTER, CHARACTER	323.00	1/1/86
EPA	FX850	PRINTER, CHARACTER	445.55	10/1/91
EPA	FX850	PRINTER, CHARACTER	445.55	10/1/91
EPA	FX850	PRINTER, CHARACTER	536.00	2/1/90
EPA	FX-850	PRINTER, CHARACTER	200.00	1/1/92
EPA	FX86E	PRINTER, CHARACTER	386.00	12/1/87
EPA	FX86E	PRINTER, CHARACTER	289.00	4/1/88
EPA	FX86E	PRINTER, CHARACTER	369.00	4/1/87
EPA	FX86E	PRINTER, CHARACTER	346.00	9/1/87
EPA	FX86E	PRINTER, CHARACTER	309.00	6/1/87
EPA	LX800	PRINTER, CHARACTER	200.00	3/1/89
EPA	MX80	PRINTER, CHARACTER	592.00	7/1/03
EPA	MX80	PRINTER, CHARACTER	559.00	4/1/82
EPA	MX80	PRINTER, CHARACTER	710.00	4/1/82
EPA	MX80	PRINTER, CHARACTER	559.00	4/1/82
EPA	P82PA	PRINTER, CHARACTER	383.00	8/1/89
EPA	P82PB	PRINTER, CHARACTER	336.00	2/1/90
EPSON	FX850	PRINTER	367.00	8/1/89
EPSON	LQ950	PRINTER	512.00	2/1/90
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	DIGITAL PRINTER	300.00	9/1/88
EPSON	P70RA	PRINTER	200.00	3/1/89
EPSON	P70RA	PAINTER	200.00	3/1/69
EPSON	P82AA	PRINTER, DIGITAL	386.00	4/1/87
EPSON	P82PA	PRINTER	368.00	5/1/89

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACO. DATE
EPSON	P88MA	PRINTER	628.00	2/1/88
ESI	801	DETECTOR DC	1,314.35	2/20/75
ESI	874	PHASE COMP	402.00	
ESI	231C	WHEATSTONE RESISTANCE MEASURING SYSTEM	2,263.49	10/16/73
ESI	LC875B	LEAD COMPENS.	354.68	
ESI	SR1010	RESIST. STD.	715.00	
ETHERNET	LEOSOA	TRANSCEIVER	323.28	
ETHERNET	LEOSOA	TRANSCEIVER	323.28	
ETHERNET	LEOSOA	TRANSCEIVER	323.28	
ETHERNET	LEOSOA	TRANSCEIVER	323.28	
ETHERNET	LEOSOA	TRANSCEIVER	323.28	
EVV	MN200	CRT DISPLAY	400.00	8/1/88
EVX	1800A	COMPUTER, PERSONAL	2,199.00	10/1/87
EVX	1800A	COMPUTER, PERSONAL	2,327.00	11/1/87
EXACT	124	FUNCTION GENERATOR	577.15	
EXACT	124	FUNCTION GENERATOR	577.15	
FAIR MO	5901	WEIGHT SCALE	127.50	
FISHER SCIENTIFIC	1096V1	VAC PUMP	162.00	
FISHER SCIENTIFIC	50ML	BURET	37.50	
FLUKE	8.0E-09	VOLTAGE DIVIDER	395.00	
FLUKE	23	DIGITAL MULTIMETER	143.10	
FLUKE	23	DIGITAL MULTIMETER	143.10	
FLUKE	23	DIGITAL MULTIMETER	143.10	
FLUKE	23	DIGITAL MULTIMETER	143.00	
FLUKE	23	MULTIMETER	140.00	4/1/91
FLUKE	23	MULTIMETER	140.00	
FLUKE	52	DIGITAL THERMOMETER	170.10	
FLUKE	77	DIG MULTIMETER	129.00	
FLUKE	77	MULTIMETER	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	MULTIMETER, DIG.	116.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	107.10	
FLUKE	77	DIGITAL MULTIMETER	130.00	



MANUFACTURER	IMODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
FLUKE	77	DIGITAL MULTIMETER	143.00	1/1/93
FLUKE	77	DIGITAL MULTIMETER	143.00	1/1/93
FLUKE	87	DIGITAL MULTIMETER	251.00	
FLUKE	87	DIGITAL MULTIMETER	251.00	
FLUKE	87	DIGITAL MULTIMETER	251.00	
FLUKE	87	DIGITAL MULTIMETER	261.00	
FLUKE	87	DIGITAL MULTIMETER	261.00	
FLUKE	87	DIGITAL MULTIMETER	261.00	12/1/92
FLUKE	95	SCOPEMETER	1,300.00	12/1/92
FLUKE	97	SCOPEMETER	1,561.00	12/1/92
FLUKE	200	IC TESTER	431.65	
FLUKE	207	RECEIVER	2,775.00	2/1/86
FLUKE	36982	THERMOCOUPLE SELECTOR	635.00	
FLUKE	103A	COMPARATOR	1,995.00	4/1/81
FLUKE	1920A	FREQ COUNTER	1,446.41	8/9/78
FLUKE	2176A	TEMP INDICATOR	546.25	
FLUKE	2176A	THERMOMETER	617.50	
FLUKE	2190A	DIGTHERMOMETER	1,045.00	6/1/85
FLUKE	2190A	DIGTHERMOMETER	1,045.00	6/1/85
FLUKE	2190A	DIGTHERMOMETER	1,045.00	6/1/85
FLUKE	2190A	DIGITAL THERMOMETER	1,299.00	3/1/83
FLUKE	2190A1	DIGITAL THERMOMETER	1,085.00	10/1/90
FLUKE	332B	POWER SUPPLY	2,295.00	10/1/73
FLUKE	332D	POWER SUPPLY	2,935.10	2/1/75
FLUKE	332D	POWER SUPPLY	2,935.10	9/1/74
FLUKE	3320	POWER SUPPLY	6,388.75	7/1/83
FLUKE	335D	DC VOLTAGE STANDARD	3,584.15	3/1/76
FLUKE	343A	DC VOLTAGE CALIBRATOR	1,935.15	1/1/76
FLUKE	343A	DC VOLTAGE CALIBRATOR	1,935.15	3/1/76
FLUKE	343A	DC VOLTAGE CALIBRATOR	2,129.15	2/1/77
FLUKE	407D	POWER SUPPLY	360.00	
FLUKE	408A	POWER SUPPLY	990.00	
FLUKE	408A	POWER SUPPLY	2,500.00	
FLUKE	5100A	CALIBRATOR	7,918.99	1/1/79
FLUKE	5100B	VOLT.CALIBRATO	8,635.20	10/1/81
FLUKE	52 WJ	DIGITAL THERMOMETER	189.00	
FLUKE	52 WJ	DIGITAL THERMOMETER	169.00	
FLUKE	5200A	VOLT CALIBRA	3,915.10	2/1/75
FLUKE	5200A	VOLT CALIBRA	4,360.15	3/1/76
FLUKE	5200A	AC VOLTAGE CALIBRATOR	17,719.00	3/28/89
FLUKE	5205A	PWR AMPLIFIER	7,881.90	6/26/85

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
FLUKE	5205A	POWER AMPLIFIER	8,413.00	6/20/86
FLUKE	5215A	POWER AMPLIFIER	2,100.00	3/28/09
FLUKE	5220A	AMPLIFIER	3,370.00	3/5/00
FLUKE	5440A	CALIBRATOR	12,302.50	7/7/83
FLUKE	8020A	MULTIMETER	182.00	
FLUKE	8020A	DIG. MULTIMTR.	182.00	
FLUKE	8020A	DIG. MULTIMTR.	182.00	
FLUKE	8020A	DIG MULTIMTR	182.00	
FLUKE	8020B	DIGITAL MULTIMETER	186.79	
FLUKE	8050A	DIGITAL MULTIMETER	374.52	
FLUKE	8060A	DIG.MULTIMETER	349.00	
FLUKE	8060A	DIG.MULTIMETER	349.00	
FLUKE	8060A	MULTIMETER, DIG.	334.00	
FLUKE	8060A	DIGITAL MULTIMETER	351.00	
FLUKE	8062A	MULTIMETER, DIG.	265.50	
FLUKE	8062A	MULTIMETER, DIG.	265.50	
FLUKE	8062A	MULTIMETER, DIG.	265.50	
FLUKE	80E	DEC VOLT DIV.	350.00	
FLUKE	80I-410	CURRENT PROBE AC/DC	259.00	
FLUKE	80K-40	HIGH VOLTAGE PROBE	80.00	
FLUKE	80TK	THERMOCOUPLE MODULE	635.00	
FLUKE	8120A	VOLTMETER	868.15	
FLUKE	823A	AC DC DIF VMTR	1,220.00	9/1/73
FLUKE	8300A	DIGITAL VOLTMETER	2,095.00	10/1/73
FLUKE	8300A	VOLTMETER	2,701.45	2/1/75
FLUKE	8300A	DIGITAL VOLTMETER	2,701.45	2/1/75
FLUKE	8300A	DIGITAL VOLT	1,639.30	1/1/74
FLUKE	853A	DIG MULTIMETER	480.00	
FLUKE	853A	DIFFERENTIAL MULTIMETER	480.15	
FLUKE	853A	MULTIMETER	431.65	
FLUKE	853A	DIFFERENTIAL MULTIMETER	240.00	
FLUKE	8800A	DIG MULTIMETER	955.45	
FLUKE	8800A	DIGITAL MULTIMETER	955.45	
FLUKE	8800A	DIGITAL MULTIMETER	1,151.32	3/1/79
FLUKE	8800A	DIG MULTIMETER	972.69	
FLUKE	8800A	DIG MULTIMETER	9172.69	
FLUKE	8810A	MULTIMETER	1,238.40	9/10/82
FLUKE	8810A	MULTIMETER	1,238.40	9/1/02
FLUKE	8810A	DIG MULTIMETER	1,218.10	10/1/84
FLUKE	8810A	DIGITAL MULTIMETER	1,218.00	10/1/84
FLUKE	8810-A	DIG.MULTIMETER	1,100.00	10/1/84

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
FLUKE	883AB	VOLTMETER DIFFERENTIAL	1,378.70	9/1/73
FLUKE	883AB	AC/DC DIFFERENTIAL VOLTMETER	1,378.70	9/1/73
FLUKE	8840A	DIG MULTIMETER	790.08	
FLUKE	8840A	DIG MULTIMETER	790.08	
FLUKE	8840A	MULTIMETER	1,100.00	2/1/92
FLUKE	8842A	DIGITAL MULTIMETER	1,395.00	1/31/90
FLUKE	8842A	DIGITAL MULTIMETER	1,395.00	1/31/90
FLUKE	8842A	VOLTMETER	909.15	
FLUKE	8842A	VOLTMETER	909.15	
FLUKE	8842A	DIGITAL MULTIMETER	1,170.00	1/16/92
FLUKE	8842A/059	DIGITAL MULTIMETER	1,300.00	11/1/93
FLUKE	885A	DC DIFF VOLT	1,060.00	9/1/73
FLUKE	895A	DC DIFFERENTIAL VOLTMETER	2,167.56	6/6/79
FLUKE	895A	VOLTMETER, DIFF.	4,746.53	4/30/86
FLUKE	931B	VOLTMETER RMS	1,045.00	9/1/73
FLUKE	A90	SHUNT	255.00	
FLUKE	PM3065	OSCILLOSCOPE	1,745.00	9/1/90
FLUKE	Y8100	CURRENT PROBE	259.00	
FUJ	FKB293	KEYBOARD	99.00	11/1/87
FUJ	FRB2930	KEYBOARD	99.00	2/1/83
GATEWAY 2000	CS1024N12	DISPLAY	400.00	10/1/93
GATEWAY 2000	DESKTOP 386	COMPUTER W/KEYBOARD	1,980.00	6/1/92
GATEWAY 2000	MINI DESKTOP	COMPUTER WEYBOARD	1,469.00	10/1/93
GDD	LDS309	MODEM	450.00	5/1/84
GEIER & BLUHM	NONE	LEVEL	79.00	
GENERAL EASTERN	DPG-300	HUMIDITY GENERATOR	3,325.00	5/1/88
GENERAL ELECTRIC	10	RECEIVER	87.80	
GENERAL INSTRUMENT CORP.	D2213	ANTENNA	1,867.00	12/1/89
GENERAL RESISTANCE	102T	STD RESISTOR	275.00	
GENERAL RESISTANCE	103T	STD RESISTOR	275.00	
GENERAL RESISTANCE	104T	STD RESISTOR	750.00	
GENERAL RESISTANCE	105T	STD RESISTOR	750.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
GENERAL RESISTANCE	106T	STD RESISTOR	800.00	
GENERAL RESISTANCE	DAS-46	DIAL-A-SOURCE	875.00	
GENERAL RESISTANCE	DAS66AX	POWER SUPPLY	1,293.50	8/1/78
GENERAL RESISTANCE	DAS86	POWER SUPPLY	1,442.75	8/1/78
GENERAL RESISTANCE	DV4107	VOLTAGE DIV.	895.00	
GENERAL RESISTANCE	LRC201	VOLT COMPENSAT	250.00	
G E N W	1986	SOUND CALIBRA.	855.95	
GENRAD	1986	SOUND CALIBRA.	855.95	
GENRAD	12038	POWER SUPPLY	65.00	
GENRAD	1209-B	UNIT OSCILLATOR	261.95	
GENRAD	1210C	SIG. GENERATOR	210.00	
GENRAD	1218-A	UNJT OSCILLATOR	465.95	
GENRAD	1232A	AMPLIFIER	3195.00	
GENRAD	1311A	AUDIO OSCILLA.	382.89	
GENRAD	1403D	STD. CAP.	80.00	
GENRAD	1409L	STD CAP	55.00	
GENRAD	1409-R	STD. CAPACITOR	85.00	
GENRAD	1419A	DECADE CAP.	180.00	
GENRAD	1432-B	DECADE RESISTOR	220.00	
G E N W	1432M	DECADE RES	154.00	
GENRAD	1432P	DECADE RESIST	154.00	
G E N W	1432P	DECADE RESISTR	156.00	
GENRAD	1432-P	DEC. RESISTOR	154.00	
GENRAD	1432X	DECADE RESIST	100.00	
G E N W	1433W	DECADE RESIST	176.50	
GENRAD	1454A	DEC VOLT DIV	162.89	
GENRAD	1454A	DEC VOLT DIV	161.89	
G E N W	1454A	DECADE DIVIDER	600.00	
GENRAD	1454-A	DECADE VOLTAGE DIVIDER	161.00	
GENRAD	1455BH	VOLT DIVIDER	280.00	
GENRAD	1482E	STD. INDUCR.	175.00	
GENRAD	1482K	STD. INDUCR.	145.00	
GENRAD	1482N	STD. INDUCR.	160.00	-
GENRAD	1482-N	STD. INDUCTOR	110.00	
GENRAD	1482P	STD. INDUCR.	190.00	-
GENRAD	1482T	STD. INDUCR.	385.00	
GENRAD	1490F	DECADE INDUCT	586.50	

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MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
G E N W	1490F	DECADE INDUCT	635.00	
G E N W	1531A	STROBOTAC	279.77	
GENRAD	1615-P1	STD CAPACITOR	85.00	
GENRAD	1620AP	CAPACITANCE BRIDGE	4,222.00	12/1/76
GENRAD	1632A	INDUCT BRIDGE	1,395.00	2/1/77
GENRAD	1650A	IMP BRIDGE	450.00	
G E N W	722D	CONDENSER	207.85	
GENRAD	W20MT3A	VARIAC	140.00	
G E N W	W5MT3A	VARIAC	339.00	
G E N W	W5MT3A	VARIAC	178.00	
GENRAD	W5MT3A	VARIAC	178.00	
GERTSCH	so1	RATIO X FORMS	300.00	
GERTSCH	1011	VOLT DIVIDER	550.00	
GERTSCH	RT-5	RATIO TRANS.	400.00	
GLOBAL	NONE	MAG TAPE STORAGE RACK	790.00	
GLOBAL	C-6323	PRINTER STAND	149.00	
COMPUTER				
GOLDSTAR	1210A	MONITOR	95.00	
GOLDSTAR	1210A	DISPLAY	190.00	
GREINER ELEC	LTP	TIMER	549.50	
GSY	1550	COMPUTER, PERSONAL	5,269.00	10/1/91
GSY	1550	COMPUTER, PERSONAL	5,394.00	4/1/91
GTW	386	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	386	COMPUTER, PERSONAL	1,500.00	8/1/91
GTW	386	COMPUTER, PERSONAL	2,845.00	9/1/91
GTW	486	COMPUTER, PERSONAL	3,920.00	8/1/93
GTW	486	COMPUTER, PERSONAL	3,645.00	7/1/93
GTW	486	COMPUTER, PERSONAL	1,469.00	10/1/93
GTW	CS1024	CRT DISPLAY	400.00	10/1/93
GTW	PMV14	CRT DISPLAY	500.00	8/1/86
GTW	PMV14	CRT DISPLAY	640.00	4/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	300.00	8/1/91
GTW	PMV14	CRT DISPLAY	400.00	9/1/91
GUILDLINE	65201	ADAPTER BOX	540.00	1/1/93
GUILDUNE	6500A	TERAOHMMETER	11,950.00	3/30/92
HAMPTON RUBBER	2 INCH	HOSE	195.00	8/28/95
HARPER	65000469	CYLINDER HAND TRUCK	105.00	
HARPER	4WHEEL	DOLLY/CART	183.00	10/10/96
TRUCKING, INC.	UPRIGHT			
HART SCIENTIFIC	2100	CONTROLLER	1,300.00	5/1/92
HASTINGS	LV-1X	VAC GAUGE	350.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HASTINGS	SV1	VAC GAGE	1319.70	
HASTINGS	VT-5	VACUUM GAUGE	285.00	
HASTINGS	VT-6	VACUUM GAUGE	180.00	
HDS	F3D0B081	COMPUTER W/KEYBO. .RD	3,724.00	12/26/96
HEIR-KLINE (PRO CRAFT)		SOLDERING MACHINE	188.00	
HELICOIL	-834	HEUCOIL SET	23.90	
HEUCOIL	7309	HELICOIL SET	25.15	
HELICOIL	<del>8834</del>	HELICOIL SET	30.50	
HELICOIL	8903	HELICOIL SET	29.05	
HELICOIL	10231	HELICOIL SET	27.95	
HELICOIL	11841	HELICOIL SET	23.90	
HELICOIL	11963	HELICOIL SET	27.20	
HELICOIL	14702	HELICOIL SET	38.15	
HELICOIL	14768	HELICOIL SET	38.15	
HEUCOIL	35727	HELICOIL SET	24.40	
HEUCOIL	42437	HELICOIL SET	26.70	
HELICOIL	43236	HELICOIL SET	26.20	
HENES MFG CO	S	WATER WELDER	285.00	
HEWLETT PACKARD	35	CALCULATOR	307.10	
HEWLETT PACKARD	35	CALCULATOR	387.10	
HEWLETT PACKARD	6205	POWER SUPPLY	643.50	
HEWLETT PACKARD	10529A	LOGIC TESTER	1,220.18	8/1/82
HEWLETT PACKARD	1116A	SCOPE CART	100.00	
HEWLETT PACKARD	11683A	RANGE CALIBRATOR	708.75	
HEWLETT PACKARD	141T	DISPLAY	12,902.95	4/2/81
HEWLETT PACKARD	200CD	WIDE RANGE OSCILLATOR	282.49	
HEWLETT PACKARD	200CD	WIDE RANGE OSCILLATOR	2132.49	
HEWLETT PACKARD	200CDR	OSCILLATOR	225.00	
HEWLETT PACKARD	2MC	LO FREQ OSCILL	1,800.00	10/16/73
HEWLETT PACKARD	203A	VARIABLE PHASE FUNCTION GENERATOR	1,259.24	9/1/73
HEWLETT PACKARD	203A	VARIABLE PHASE FUNCTION GENERATOR	1,259.24	9/1/73

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT PACKARD	203A	GENE AUDIO SIG	1,876.05	1/1/76
H E W W PACKARD	211A	SQ WAVE GEN	313.11	
HEWLETT PACKARD	215A	PULSE GEN	1,882.69	9/1/73
HEWLRT PACKARD	241A	OSCILLATOR	492.64	
HEWLRT PACKARD	2686A	DIGITAL PRINTER	2,676.65	6/1/86
HEWLRT PACKARD	310A	ANALYZER	2,806.65	1/1/74
HEWLETT PACKARD	312A	WAVE ANALYZER	3,912.16	4/1/81
HEWLETT PACKARD	31E	CALCULATOR	42.50	
HEWLRT PACKARD	3300A	FUNCTION GEN	1,226.00	
HEWLETT PACKARD	3305A	SWEEP PLUGIN	977.25	
HEWLETT PACKARD	3310A	GENERATOR	589.05	
HEWLETT PACKARD	3310A	FUNCTION GEN	589.05	
H E W W PACKARD	3310A	FUNC. GEN	727.65	
HEWLETT PACKARD	3312A	FUNCTION GENERATOR	1,619.75	2/1/89
HEWLETT PACKARD	3312A	FUNCTION GENERATOR	1,619.75	2/1/89
HEWLETT PACKARD	3325A	SYNTHESIZER	3,458.00	7/1/80
HEWLETT PACKARD	33258	SYNTHESIZER, FREQUENCY	4,563.99	5/1/88
HEWLETT PACKARD	33258	FREQUENCY SYNTHESIZER	5,284.00	9/26/88
HEWLETT PACKARD	33440A	DIGITAL PRINTER	1,738.65	5/1/88
HEWLRT PACKARD	33440A	LASER PRINTER	1,340.00	7/1/90
HEWLETT PACKARD	33449A	PRINTER	2,406.00	4/17/91
HEWLETT PACKARD	334A	ANALYZER	1,467.18	3/21/88
HEWLETT PACKARD	334A	DISTORTION ANALYZER	1,467.18	7/24/80
HEWLETT	334A	DISTORTION ANALYZER	1,467.18	7/1/80

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PACKARD HEWLETT	334A	DISTORTION ANALYZER	867.00	
PACKARD HEWLETT	339A	DISTORTION MEASUREMENT SET	2,484.99	11/1/82
PACKARD HEWLETT	3400A	VOLTMETER RMS	562.70	
PACKARD HEWLETT	3400A	RMS VOLTMETER	528.00	
PACKARD HEWLETT	3455A	VOLTMETER	3,365.00	6/1/79
PACKARD HEWLETT	3456A	DIGITALVOLTMR	3,552.00	7/1/83
PACKARD HEWLETT	3457A	MULTIMETER, DIGITAL	2,646.00	5/19/87
PACKARD HEWLETT	3458A	DIGITAL MULTIMETER	6,311.40	1/1/89
PACKARD HEWLETT	3478A	DIG MULTIMETER	1,248.00	5/20/83
PACKARD HEWLETT	3478A	DIG MULTIMETER	1,248.00	5/20/83
PACKARD HEWLETT	3478A	DIG MULTIMETER	1,248.00	5/20/83
PACKARD HEWLETT	3478A	MULTIMETER	940.27	
PACKARD HEWLETT	3478A	DIGITAL MULTIMETER	937.29	
PACKARD HEWLETT	3478A	MULTIMETER, DIGITAL	937.29	
PACKARD HEWLETT	3488A	SWITCH/CONTROLLER	1,559.00	4/25/85
PACKARD HEWLETT	3495A	RELAY SCANNER	2,920.50	6/1/79
PACKARD HEWLETT	3495A	SCANNER	3,044.25	7/24/80
PACKARD HEWLETT	3497A	DATA ACQUISITION SYSTEM	5,939.31	10/1/88
PACKARD HEWLETT	350D	ATTENUATOR SET	126.78	
PACKARD HEWLETT	3500	ATTENUATOR SET	140.00	
PACKARD HEWLETT	350D	ATTENUATOR	160.00	
PACKARD HEWLETT	350D	ATTENUATOR	160.00	
PACKARD HEWLETT	350D	ATTENUATOR SET	165.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT PACKARD	3561A	ANALYZER SPECTRUM	11,387.25	5/1/87
HEWLETT PACKARD	400E	AC VOLTMETER	287.12	
HEWLETT PACKARD	400E	AC VOLTMETER	207.12	
HEWLETT PACKARD	400E	AC VOLTMETER	287.12	
HEWLETT PACKARD	400E	AC VOLTMETER	287.12	
HEWLETT PACKARD	400E	AC VOLTMETER	327.45	
HEWLETT PACKARD	400E	AC VOLTMETER	327.45	
HEWLETT PACKARD	400E	AC VOLTMETER	327.45	
HEWLETT PACKARD	400E	AC VOLTMETER	327.45	
HEWLETT PACKARD	400E	VOLTMETER	341.55	
HEWLETT PACKARD	400E	VOLTMETER	341.55	
HEWLETT PACKARD	400E	AC VOLTMETER	341.55	
HEWLETT PACKARD	400E	AC VOLTMETER	341.55	
HEWLETT PACKARD	400FL	VOLTMETER	336.60	
HEWLETT PACKARD	400FL	VOLTMETER	336.60	
HEWLETT PACKARD	411A	RF MILLIVOLTMETER	450.00	
HEWLETT PACKARD	415E	SWR METER	2,166.00	5/2/89
HEWLETT PACKARD	41CV	CALCULATOR	973.25	
HEWLETT PACKARD	41CV	CALCULATOR, ELECTRONIC	175.00	
HEWLETT PACKARD	425A	DC VOLT AMMETER	512.40	
HEWLETT PACKARD	428B	DC MILLIAMMETER	606.65	
HEWLETT PACKARD	431B	POWER METER	450.00	
HEWLETT PACKARD	431C	POWER METER	475.00	
HEWLETT	4329A	OHMMETER	752.85	

MANUFACTURER	MOOEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PACKARD				
HEWLETT	4329A	MEGOHMMETER	1,633.58	6/1/79
PACKARO				
HEWLETT	432A	POWER METER	495.00	
PACKARD				
HEWLETT	436A	RF POWER METER	3,213.00	4/30/86
PACKARD				
HEWLETT	4491A	MULTIPLEXER,ARMATURE	425.25	
PACKARD		DELA		
HEWLETT	461A	AMPLIFIER	352.05	
PACKARD				
HEWLETT	461A	AMPLIFIER	352.05	
PACKARO				
HEWLETT	465A	AMPLIFIER	191.54	
PACKARD				
HEWLETT	467A	POWER AMPLIFIER	24a.00	
PACKARD				
HEWLETT	467A	RF POWER AMP	580.35	
PACKARD				
HEWLETT	495A	MICROWAVE AMPLIFIER.	2,916.81	4/1/81
PACKARD				
HEWLETT	5004A	ANALYZER	1,056.00	
PACKARD				
HEWLETT	5005B	SIGNATURE MULTIMETER	3,633.75	7/11/84
PACKARD				
HEWLETT	5245L	COUNTER	2,984.15	9/21/73
PACKARD				
HEWLETT	5245L	COUNTER	2,984.15	1/7/74
PACKARD				
HEWLETT	5245L	COUNTER	2,961.65	9/21/73
PACKARD				
HEWLETT	5245L	COUNTER	2,984.15	9/21/73
PACKARD				
HEWLETT	5245L	FREQ COUNTER	2,697.75	2/20/75
PACKARD				
HEWLETT	5245L	FREQ. COUNTER	4,207.50	9/1/76
PACKARD				
HEWLETT	5245L	COUNTER	2,961.65	4/2/81
PACKARD				
HEWLETT	5245L	COUNTER	2,980.70	4/2/81
PACKARD				
HEWLETT	5253B	FREQ CONVERT	502.42	
PACKARD				
HEWLETT	5253B	FREQUENCY CONVERTER	502.42	
PACKARD				
HEWLETT	5253B	FREQUENCY CONVERTER	400.00	
PACKARD				

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT PACKARD	5254A	FREQ.CONVERTER	2,200.00	5/1/81
HEWLETT PACKARD	5254B	FREQ CONVERTER	827.40	
H E W W PACKARD	5261A	VIDEO AMP	326.83	
HEWLETT PACKARD	5261A	VIDEO AMP.	325.00	
HEWLETT PACKARD	5262A	TIME INT UNIT	250.00	
H E W W PACKARD	5262A	TIME INT. UNIT	375.00	
HEWLETT PACKARD	5265A	DIG. VOLTMETER	825.00	
HEWLRT PACKARD	5300A	COUNTER SYSTEM	391.05	
H E W W PACKARD	5300A	COUNTER SYSTEM	391.05	
H E W W PACKARD	5300B	MEASURING SYSTEM	792.00	
HEWLETT PACKARD	5302A	COUNTER PLUGON	272.25	
HEWLETT PACKARD	5302A	COUNTER PLUGON	272.25	
HEWLETT PACKARD	5302A	UNIVERSAL COUNTER MODULE	700.00	
HEWLETT PACKARD	5312A	INTERFACE	350.00	
HEWLETT PACKARD	5328A	COUNTER	1,633.50	7/24/80
HEWLETT PACKARD	5334A	FREQ. COUNTER	4,142.00	10/1/84
H E W W PACKARD	5334A	COUNTER, FREQUENCY	4,568.70	9/16/87
HEWLETT PACKARD	5512A	COUNTER	982.45	
HEWLETT PACKARD	59401A	BUS SYSTEM ANALYZER	2,500.00	9/1/76
HEWLETT PACKARD	59401A	BUS SYSTEM ANALYZER	3,700.00	5/1/85
HEWLETT PACKARD	59501A	POWER SUPPLY	544.50	
HEWLETT PACKARD	606B	SIGNAL GENERATOR	1,562.16	4/1/81
HEWLETT PACKARD	608C	VHF SIG GEN	1,220.00	9/1/73
HEWLETT	608D	VHF SIGNAL GENERATOR	1,300.00	9/1/73

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PACKARD				
HEWLETT	6102A	POWER SUPPLY	368.00	
PACKARD				
HEWLETT	6102A	POWER SUPPLY	368.00	
PACKARD				
HEWLETT	6102A	POWER SUPPLY	362.00	
PACKARD				
HEWLETT	6102A	PWR SUP.	362.00	
PACKARD				
HEWLETT	6102A	PWR SUPPLY	362.15	
PACKARD				
HEWLETT	6102A	PWR SUPPLY	362.15	
PACKARD				
HEWLETT	6102A	POWER SUPPLY	311.85	
PACKARD				
HEWLETT	6102A	POWER SUPPLY	351.45	
PACKARD				
HEWLETT	6114A	POWER SUPPLY	1,152.00	8/1/82
PACKARD				
HEWLETT	612A	UHF SIGNAL GENERATOR	1,212.16	8/1/82
PACKARD				
HEWLETT	6168	UHF SIGNAL GENERATOR	1,950.00	9/1/73
PACKARD				
HEWLETT	6188	SHF SIGNAL GENERATOR	2,268.60	4/1/81
PACKARD				
HEWLETT	6205B	POWER SUPPLY	514.80	
PACKARD				
HEWLETT	62058	POWER SUPPLY	514.80	
PACKARD				
HEWLETT	62368	PWR SUPPLY	528.00	
PACKARD				
HEWLETT	62378	POWER SUPPLY	715.00	
PACKARD				
HEWLETT	6255A	DC PWR. SUP.	641.50	
PACKARD				
HEWLETT	6255A	POWER SUPPLY	650.00	
PACKARD				
HEWLETT	6255A	POWER SUPPLY	641.50	
PACKARD				
HEWLETT	626A	SHF SIGNAL GENERATOR	3,416.81	4/2/81
PACKARD				
HEWLETT	628A	SHF SIGNAL GENERATOR	3,416.81	4/1/81
PACKARD				
HEWLETT	6450A	POWER SUPPLY	1,610.00	10/1/73
PACKARD				
HEWLETT	6459A	POWER SUPPLY	2,618.55	4/1/81
PACKARD				



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLETT PACKARD	6459A	POWER SUPPLY	2,618.55	4/1/81
HEWLETT PACKARD	651A	TEST OSCILLAT.	590.00	
HEWLETT PACKARD	651A	OSCILLATOR	613.85	
HEWLETT PACKARD	651A	TEST OSCILLATOR	599.00	
HEWLETT PACKARD	652A	TEST OSCILLATOR	999.90	
HEWLETT PACKARD	7046A	X-Y RECORDER	3,356.00	9/1/76
HEWLETT PACKARD	721A	POWER SUPPLY	149.60	
HEWLETT PACKARD	721A	POWER SUPPLY	147.40	
HEWLETT PACKARD	721A	POWER SUPPLY	147.10	
HEWLETT PACKARD	721A	POWER SUPPLY	147.75	
HEWLETT PACKARD	721A	POWER SUPPLY	147.40	
HEWLETT PACKARD	723A	POWER SUPPLY	235.95	
HEWLETT PACKARD	723A	POWER SUPPLY	233.45	
HEWLETT PACKARD	745A	VOLTAGE CALIB	4,520.98	10/1/73
HEWLETT PACKARD	745A	AC CALIBRATOR	8,177.40	9/1/76
HEWLETT PACKARD	745A	CALIBRATOR	4,521.00	2/1/86
HEWLETT PACKARD	746A	VOLTAGE AMP	2,029.50	2/1/75
HEWLETT PACKARD	746A	HIGH VOLTAGE AMPLIFIER	3,265.00	9/1/77
HEWLETT PACKARD	7470A	PLOTTER	799.00	3/1/85
HEWLETT PACKARD	7470A	GRAPH. PLOTTER	787.00	3/1/85
HEWLETT PACKARD	7550A	PLOTTER	2,613.00	8/1/88
HEWLETT PACKARD	75C	CALCULATOR	750.00	
HEWLETT PACKARD	8011A	PULSE GENERATOR	792.00	
HEWLETT	8011A	PULSE GEN.	519.75	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PACKARD				
HEWLETT	8011A	PULSE GENERATOR	1,085.63	6/1/81
PACKARD				
HEWLETT	82161A	RECORDER	467.50	
PACKARD				
HEWLETT	82162A	PRINTER	420.75	
PACKARD				
HEWLETT	82169A	INTERFACE	264.65	
PACKARD				
HEWLETT	8402A	PWR. MTR CALIB	475.00	
PACKARD				
HEWLETT	8402B	CALIBRATOR	478.03	
PACKARD				
HEWLETT	8443A	TRACKING	3,886.00	8/15/74
PACKARD		GENERATOR/COUNTER		
HEWLETT	8444A	TRACKING GENERATOR	3,341.25	4/1/81
PACKARD				
HEWLETT	8445A	PRESELECTOR	528.00	
PACKARD				
HEWLETT	8481H	POWER SENSOR	728.59	
PACKARD				
HEWLETT	8485A	POWER SENSOR	850.50	
PACKARD				
HEWLETT	85528	IF SECTION	4,325.00	
PACKARD				
HEWLETT	8553B	RF SECTION	3,540.50	9/10/82
PACKARD				
H E W W	8555A	RF SECTION	8,600.00	
PACKARD				
HEWLETT	8614A	SIGNAL GENERATOR	1,661.81	4/2/81
PACKARD				
H E W W	8616A	SIG. GENERATOR	2,100.00	4/2/81
PACKARD				
HEWLETT	940A	FREQ DOUBLER SET	1,511.81	4/1/81
PACKARD				
HEWLETT	C2001A	LASER PRINTER	2,086.00	2/1/94
PACKARD				
HEWLETT	K02-434A	CALIBRATOR	1,000.00	4/1/81
PACKARD				
HEWLETT-	11667B	RF POWER SPLITTER	1,011.00	
PACKARD				
HEWLETT-	11715A	AM/FM TEST SOURCE	2,749.00	2/5/93
PACKARD				
HEWLETT-	11722A	MODULE SENSOR	2,130.00	6/1/91
PACKARD				
HEWLETT-	11812A	VERIFICATION KIT	1,993.00	5/1/91
PACKARD				

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HEWLEIT- PACKARD	3314A	FUNCTION GENERATOR	4,915.00	311/90
HEWLETT- PACKARD	34401A	DIGITAL MULTIMETER	995.00	1/1/93
HEWLETT- PACKARD	3458A	DIGITAL MULTIMETER	6,782.40	1/1/89
HEWLETT- PACKARD	3498A	EXTENDER, OPTION HOLDER	2,508.00	8/1/91
HEWLETT- PACKARD	35731A	DISPLAY	217.00	4/1/93
HEWLEIT- PACKARD	5245L	COUNTER	3,000.00	11/19/75
HEWLETT- PACKARD	5245L	COUNTER	2,480.00	5/18/77
HEWLETT- PACKARD	5245L	COUNTER	2,480.00	6/1/70
HEWLETT- PACKARD	5254A	FREQUENCY CONVERTER	925.00	
HEWLETT- PACKARD	5254C	FREQUENCY CONVERTER	925.00	
HEWLEIT- PACKARO	62378	POWER SUPPLY	930.00	
HEWLETT- PACKARD	8116A	FUNCTION GENERATOR	4,036.47	2/1/90
HEWLEIT- PACKARD	8474C	MICROWAVE DETECTOR	346.00	
HEWLETT- PACKARD	8474C	MICROWAVE DETECTOR	346.00	
HEWLETT- PACKARD	8481D	POWER SENSOR	1,029.00	311/93
HEWLETT- PACKARO	84904K	STEP ATTENUATOR	1,900.00	2/1/93
HEWLETT- PACKARD	84906K	ATTENUATOR	1,795.00	3/1/93
HEWLEIT- PACKARD	8552B	IF SECTION PLUG IN	2,970.00	11/1/78
HEWLETT- PACKARO	87300C	DIRECTIONAL COUPLER	976.00	
HEWLEIT- PACKARD	87300C	DIRECTIONAL COUPLER	976.00	
HEWLEIT- PACKARO	9133V	DISK DRIVE	2,158.00	10/1/84
HEWLETT- PACKARD	98568A	COMPUTER EXPANDER	1,444.00	4/1/93
HEWLRT- PACKARD		LOGIC PROBE	297.00	
HICKOK	539B	TUBE TESTER	410.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HII	3001	COMPUTER, PERSONAL	1,053.00	5/1/93
HITACHI	V1085	OSCILLOSCOPE	1,646.00	1/1/93
HITACHI	V-1150	OSCILLOSCOPE	2,141.00	3/9/92
HITACHI	V-209	OSCILLOSCOPE	708.25	
HITACHI	VC6025	OSCILLOSCOPE	1,976.00	2/1/92
HI-TEK	RT101	KEYBOARD	85.00	
HI-TEK	RT-101	KEYBOARD	90.00	
HI-TEK	RT-101	KEYBOARD	90.00	
HI-TEK	RT-101	KEYBOARD	90.00	
HOLT	HCS1	CURRENT SHUNT	884.00	
HONEYWELL	320	XY RECORDER	1,353.15	9/1/73
HONEYWELL	906	OSCILLOGRAPH	2,942.00	2/20/75
HONEYWELL	1100	STD. RESISTOR	225.00	
HONEYWELL	1166	SHUNT	70.00	
HOUSTON	DMP-61	PLOTTER GRAPHICS	3,264.00	9/1/89
HP	3400A	RMS VOLTMETER	320.00	
HP	3400A	VOLTMETER	320.00	
HP	355C	ATTENUATOR	160.00	8/7/95
HP	355C	ATTENUATOR	160.00	8/7/95
HP	355D	ATTENUATOR	160.00	8/7/95
HP	355D	ATTENUATOR	160.00	8/7/95
HP	35731A	DISPLAY	796.00	5/1/86
HP	35741A	DISPLAY	1,252.00	1/1/88
HP	35741A	DISPLAY	800.00	12/14/87
HP	35751M	TERMINAL W/KEYBOARD	796.00	6/1/86
HP	777D	DUAL DIRECTIONAL COUPLER	300.00	8/7/95
HP	777D	DUAL DIRECTIONAL COUPLER	300.00	8/7/95
HP	7945A	DISK DRIVE	4,560.00	4/1/86
HP	7945A	DISK DRIVE	4,560.00	3/26/87
HP	9122D	DISK DRIVE	904.00	5/1/85
HP	9122D	DISK DRIVE	1,050.00	9/25/86
HP	9123D	DISK DRIVE	461.00	6/1/86
HP	98561X	COMPUTER W/KEYBOARD	13,428.00	5/2/86
HP	98562A	COMPUTER EXPANDER	2,067.00	10/8/96
HP	98562X	COMPUTER W/KEYBOARD	10,556.00	1/1/88
HP	98562Y	COMPUTER W/KEYBOARD	16,644.00	10/8/96
HP	98568A	COMPUTER MPANDER	1,793.00	1/1/88
HP	98568A	COMPUTER MPANDER	1,444.00	5/21/86
HP	98570A	COMPUTER EXPANDER	1,865.00	12/1/89
HP	98785A	DISPLAY	6,201.00	10/1/88

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
HP	VL24/50E	COMPUTER	2,000.08	4/18/95
HPC	300	COMPUTER, DESKTOP	2,856.00	7/1/86
HPC	2686	PRINTER, LASER	2,765.00	4/1/87
HPC	2686	PRINTER, LASER	2,676.00	6/1/87
HPC	2686	PRINTER, LASER	2,341.00	2/1/85
HPC	9122	DISK-DUAL FLOPPY	955.00	4/1/85
HPC	9816	COMPUTER, DESKTOP	3,854.00	5/1/85
HPC	33440	PRINTER, LASER	1,739.00	10/1/88
HPC	35721	CRT DISPLAY	796.00	5/1/86
HPC	82906	PRINTER, CHARACTER	715.00	8/1/84
HPC	82906	PRINTER, CHARACTER	572.00	3/1/85
HPC	2686A	PRINTER, LASER	2,676.00	11/1/86
HPC	2686D	PRINTER, LASER	3,011.00	2/1/88
HPC	33440A	PRINTER, LASER	5,520.00	1/1/89
HPC	85A	COMPUTER, PERSONAL	2,907.00	5/1/87
HPC	9122D	DISK-DUAL FLOPPY	912.00	3/1/85
HPC	9122D	DISK-DUAL FLOPPY	796.00	5/1/86
HPC	9816S	COMPUTER, DESKTOP	3,809.5	10/1/84
HPC	9830A	COMPUTER, DESKTOP	11,833.50	1/1/79
HPC	9830A	PRINTER	8,251.60	
HPC	9830A	CALCULATOR	102.00	
HPC	9835A	COMPUTER, DESKTOP	9,553.00	1/1/82
HPC	98730A	PROCESSOR	1,700.00	2/1/93
HPC	9876A	PRINTER, THERMAL	3,239.00	10/1/81
HPC	9876A	PRINTER, THERMAL	4,740.00	4/1/84
HPC	C2001A	PRINTER, LASER	1,342.00	6/1/93
HYDROTHERME	460	OVEN	125.00	
IBM	3192	COMPUTER, MICRO	747.00	8/1/86
IBM	3192	COMPUTER, MICRO	747.00	8/1/86
IBM	4201	PRINTER, CHARACTER	346.00	4/1/89
IBM	5151	CRT DISPLAY	179.00	8/1/86
IBM	5151	CRT DISPLAY	242.00	10/1/83
IBM	5151	CRT DISPLAY	192.00	7/1/84
IBM	5151	CRT DISPLAY	187.00	12/1/85
IBM	5151	DISPLAY, COMPUTER	192.00	4/1/91
IBM	5151	DISPLAY	242.00	1/1/84
IBM	5151	CRT DISPLAY	242.00	12/1/83
IBM	5151	CRT DISPLAY	260.00	5/1/85
IBM	5151	CRT DISPLAY	494.00	3/1/85
IBM	5151	PERSONAL COMPUTER DISPLAY	240.00	5/1/84

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
IBM	5151	CRT DISPLAY	240.00	3/1/84
IBM	5151	CRT DISPLAY	250.00	8/1/92
IBM	5151	CRT DISPLAY	244.00	6/1/84
IBM	5151	CRT DISPLAY	345.00	10/1/83
IBM	5151	CRT DISPLAY	192.00	12/1/84
IBM	5151	CRT DISPLAY	187.00	11/1/85
IBM	5151	CRT DISPLAY	187.00	2/1/86
IBM	5151	CRT DISPLAY	220.00	7/1/87
IBM	5151	CRT DISPLAY	187.00	2/1/86
IBM	5151	CRT DISPLAY	220.00	7/1/87
IBM	5152	PRINTER, CHARACTER	412.00	9/1/92
IBM	5153	CRT DISPLAY	476.00	3/1/84
IBM	5153	CRT DISPLAY	400.00	1/1/84
IBM	5153	CRT DISPLAY	462.00	8/1/85
IBM	5153	CRT DISPLAY	544.00	11/1/83
IBM	5153	DISPLAY	476.00	6/1/91
IBM	5153	CRT DISPLAY	476.00	4/1/85
IBM	5153	DISPLAY	476.00	3/1/85
IBM	5154	CRT DISPLAY	1,629.00	4/1/84
IBM	5154	CRT DISPLAY	552.00	5/1/86
IBM	5160	COMPUTER, PERSONAL	4,634.00	3/1/84
IBM	5160	COMPUTER, PERSONAL	4,255.00	10/1/83
IBM	5160	COMPUTER, PERSONAL	4,645.00	3/1/84
IBM	5160	COMPUTER, PERSONAL	3,460.00	5/1/85
IBM	5160	COMPUTER, PERSONAL	2,906.00	3/1/85
IBM	5160	COMPUTER, PERSONAL	3,339.00	10/1/84
IBM	5160	COMPUTER, PERSONAL	4,092.00	10/1/84
IBM	5161	P.C. EXPANDER	3,560.00	10/1/83
IBM	5170	COMPUTER, PERSONAL	4,904.00	10/1/85
IBM	5170	COMPUTER, PERSONAL	4,764.00	3/1/85
IBM	5170	COMPUTER, PERSONAL	3,636.00	10/1/86
IBM	5170	COMPUTER, PERSONAL	4,153.00	7/1/85
IBM	5170	COMPUTER, PERSONAL	4,629.00	11/1/86
IBM	8512	CRT DISPLAY	375.00	3/1/88
IBM	8570	COMPUTER	3,261.00	2/1/90
IBM	1391401	KEYBOARD	85.00	
IBM	5154001	CRT DISPLAY	594.00	5/1/85
IBM	3174-51R	COMPUTER CONTROLLER	3,540.00	9/9/88
IBM	3192KB	KEYBOARD	200.00	8/1/84
IBM	3192KB	KEYBOARD	200.00	8/1/84

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
IBM	4224-201	PRIMER	2,520.00	9/1/88
IBM	8512-001	MONITOR	375.00	2/1/90
IBM	XT286	COMPUTER, PERSONAL	2,449.00	7/1/85
ICK	TPR206	SIGNAL CONDITIONER	250.00	9/1/93
IDEAL AEROSMIM	1406R	TEST TABLE	235.00	
IDEAL AEROSMITH	18-53-4	TACH. TESTER	8,694.00	10/1/84
IEM, INC	5365	DISK DRIVE	6,750.00	3/1/90
IEM, INC.	H5HP300H	DISK DRIVE	4,496.00	12/1/89
IMPERIAL EASTMAN	447F	F1 APING TOOL	283.00	
INFRARED IND.	IR463	BLACK BODY	4,595.00	6/1/85
INMAC	B203-1	POWER SUPPLY	200.00	10/1/96
INNOVATIONS	SIMCHECK	RAM TESTER W/ADAPTERS	1,405.00	2/25/94
INNOVENTIONS	1 MEG	RAM ADAPTER	149.00	
INNOVENTIONS		RAM SPEED VERIFIER	169.00	
INNOVENTIONS		RAM TESTER	550.00	
INNOVENTIONS INC	RAM CHECK II	SIM CHECK	895.00	
INSTRULAB	4221-B-8	DIGITAL THERMOMETER	4,080.25	10/1/88
INTELLICOM	TPAIR 206	HUB INTERFACE	239.00	3/1/94
INTERNATIONAL BUSINESS MACHINES	3192	COMPUTER TERMINAL	747.00	
INTERNATIONAL BUSINESS MACHINES	1390702	KEYBOARD	200.00	
INT'L SENSORS	900P100D-4- 2-1	PRT	150.00	
IO TECH	488	ANALYZER, DIGITAL BUS	1,795.00	4/22/91
IRCON	3T06F	TEMP. CONTROL	951.00	
IRWIN		FINGER BRAKE	268.00	
ITL	640	TERMINAL, GRAPHIC	3,854.00	1/1/90
IWATSU	DS-6121A	OSCILLOSCOPE, DIGITAL	4,479.24	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5710D	OSCILLOSCOPE	1,398.99	9/1/87
IWATSU	SS-5711D	OSCILLOSCOPE	1,749.62	9/1/87
IWATSU	SS-5711D	OSCILLOSCOPE	1,749.62	9/1/87
IWATSU	SS-5711D	OSCILLOSCOPE	1,749.62	9/1/87
IWATSU	SS-5711D	OSCILLOSCOPE	1,749.62	9/1/87

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
IWATSU	SS-5711D	OSCILLOSCO	1,749.62	9/1/87
IWATSU	SS-5711D	OSCILLOSCOPE	1,749.62	9/1/87
IWATSU	SS6122	OSCILLOSCOPE	1,721.00	4/1/88
IWATSU	SS-6122	OSCILLOSCOPE	1,721.00	4/1/88
JARRETT INST.	B-11	TRIPLE POINT	658.00	
JARRETT INST.	B-13	TRIPLE POINT	658.00	
JCWS	286	COMPUTER, PERSONAL	710.00	7/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	8/1/84
JCWS	286	COMPUTER, PERSONAL	568.00	5/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	7/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	7/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	5/1/85
JCWS	286	COMPUTER, PERSONAL	560.00	9/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	7/1/84
JCWS	286	COMPUTER, PERSONAL	560.00	12/1/85
JCWS	286-16	COMPUTER	710.00	10/1/83
JDR	AT	COMPUTER, PERSONAL	3,000.00	2/1/91
JEBCO	NONE	CABINET	50.00	
JEBCO	NONE	CABINET	50.00	
JEBCO	NONE	CABINET	50.00	
JENSON TOOLS	1B301	COAX TERMINATION KIT	127.00	
JVC	GD-H8121SHW	DISPLAY	2,550.00	12/26/96
K & E		LEORY SET	87.28	
K D	18	STAKING TOOL	133.00	
KAMONIC	EP3435	KEYBOARD	100.00	
KAYE INSTRUMENTS	K 140-4	ICE POINT REF	895.00	
KAYE INSTRUMENTS	K140-4	ICE POINT REF	515.00	
KEITHLEY	130	MULTIMETER	104.52	
KEITHLEY	130	MULTIMETER	104.52	
KEITHLEY	130	DIG MULTIMETER	124.00	
KEITHLEY	177	MULTIMETER	584.00	
KEITHLEY	177	DIG. MULTIMETE	650.00	
KEITHLEY	192	MULTIMETER	1,195.00	9/10/82
KEITHLEY	199	DIGITAL MULTIMETER	1,392.00	12/1/92
KEITHLEY	199	DIGITAL MULTIMETER	1,398.00	1/1/93
KEITHLEY	220	SOURCE, CURRENT	3,067.00	4/1/88
KEITHLEY	220	CURRENT SOURCE	3,067.00	9/1/88
KEITHLEY	220	CURRENT SOURCE	3,067.20	2/1/89
KEITHLEY	260	NANOVOLT STD.	498.82	



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
KEITHLEY	260	NANOVOLT SOURCE	502.60	
KEITHLEY	261	CURRENT SOURCE	628.89	
KEITHLEY	5155	HI MEG RES STD	132.50	
KEITHLEY	5155	HI MEG RES STD	132.50	
KEITHLEY	5155	HI MEG RES STR	132.50	
KEITHLEY	5155	HI MEG RES STD	132.50	
KEITHLEY	5155	MEGOHM STD	525.00	
KEITHLEY	5155	MEGOHM STD	525.00	
KEITHLEY	35715	HI MEG RES STD	132.50	
KEITHLEY	35716	HI MEG RES STD	132.50	
KEITHLEY	130A	DIG MULTIMETER	113.90	
KEITHLEY	130A	DIG MULTIMETER	113.90	
KEITHLEY	177/1788	DIGITAL MULTIMETER	745.00	
KEITHLEY	195A	DIG MULTIMETER	1,315.20	2/1/85
KEITHLEY	261	PICOAMPERE SOURCE	498.82	
INSTRUMENTS				
KEPCO	ATE15-15M	POWER SUPPLY	1,549.52	3/1/89
KEPCO	ATE36-8M	POWER SUPPLY	1,549.00	3/1/89
KEPCO	ATE36-8M	POWER SUPPLY	1,549.00	3/1/89
KEPCO	JQE 55-2M	POWER SUPPLY	250.00	4/1/96
KEPCO	KM251	POWER SUPPLY	604.16	
KEPCO	SC-18-1M	REGULATED POWER SUPPLY	307.08	
KEYTRONIC	E03435	KEYBOARD	85.00	
KEYTRONIC	E03435	KEYBOARD	85.00	
KINEMATICS	A-468MS	ANTENNA	1,638.00	3/2/92
KINETIC SYSTEM	2210-11	VIBRATION FREE PLATFORM	975.00	
KISTLER	566	ACCEL AMP	460.00	
KISTLER	3038	ACCELEROMETER	585.00	
KISTLER	303T	ACCEL, ANG PR	750.00	
KISTLER	303T	ACCELEROMETER	750.00	
KISTLER	808K2	CAL. STD.	500.00	
KROHN HITE	3103	FILTER	651.37	
KROHN HITE	3343	BND PASS FILTR	2,337.19	9/1/82
KROHN HITE	5600	FUNCTION GEN.	483.15	
KROHN HITE	5600	GENERATOR	703.65	
KROHN HITE	5600	FUNCTION GEN.	695.00	
KROHN HITE	6500	PHASEMETER	2,000.00	9/1/76
KROHN HITE	6500	PHASEMETER	1,935.15	3/1/76
KROHN-HITE	4200	OSCILLATOR	600.00	
KYP	1254G	CRT DISPLAY	300.00	10/1/86
KYP	PC10	COMPUTER, PERSONAL	1,542.00	9/1/86

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
L & N	4360	SHUNT	432.50	
L & N	4363	SHUNT	85.00	
L & N	4959	CONDUCTIVE BR	1,067.80	3/1/80
L & N	7421	PH METER	988.00	
L & N	8163	THERMOMETER	1,000.00	10/16/73
L & N	4025B	STD. RESISTOR	150.00	
L & N	4025B	STD RESISTER	70.00	
L & N	4025B	STD RESISTOR	150.00	
L & N	4030B	STD. RESISTOR	52.00	
L & N	4035B	STD. RESISTOR	<del>52.00</del>	
L & N	40358	STD. RESISTOR	150.00	
L & N	4040B	STD. RESISTOR	57.00	
L & N	4045B	STD. RESIST.	75.00	
L & N	40508	STD. RESISTOR	80.00	
L & N	42218	STD. RESISTOR	150.00	
L & N	4222B	STD. RESISTOR	150.00	
LR	1112HP	FLEX GRINDER	60.00	
LR	HEAVY DUTY	PREC. CLEANER	160.00	
L&N	40458	STD RESISTOR	150.00	
LAB-LINE	2124	THERMO FLASK	150.00	8/3/95
LAMBDA	LH124FM	POWER SUPPLY	179.00	
LAMBDA	LH124FM	POWER SUPPLY	179.00	
LAMBDA	LH124FM	POWER SUPPLY	179.00	
LAMBDA	LH124FM	POWER SUPPLY	180.22	
LAMINAR FLOW		CLEAN BENCH	1,172.00	8/11/75,
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LARC	200 FT	CABLE	300.00	8/28/95
LASER PRECISION	CTX-530	LIGHT CHOPPER	700.00	
LASER PRECISION	RKP360	PROBE	700.00	
LASER PRECISION	RL3610	POWERMETER	1,000.00	6/1/85
LEADER	LBO315	OSCILLOSCOPE	2,072.00	2/1/92
LEADER	LTC-906	TRANSISTOR TESTER	250.00	
LECTROETCH	VT-15A	POWER UNIT	250.00	
LIN	MC5	TERMINAL, CRT, SMART	370.00	10/1/91
LIN	MC5	TERMINAL, CRT, SMART	520.00	12/1/90

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
LINGAR	1095	HEAT GUN	58.00	
LINSEIS	L2025	STRIP CHART RECORDER	3,277.78	10/1/88
LION AMERICA	LION-821B	DISK EXPANSION UNIT	650.00	4/18/96
LSI	ADM3A	TERMINAL, CRT, DUMB	550.00	9/1/92
M & G	T-150	DEAD WEIGHT	1,363.00	8/1/75
M. G. INDUSTRIES	65000049-580	PRESSURE REGULATOR	225.00	
MACHINE TOOL	50	PORTELEVATOR LIFT	1,445.00	1/22/93
MANSFIELD GREEN	T130	DEAD WT TEST	686.30	
MARQUETE		WELDING TOOLS	139.50	
MATSUSHITA	FX-RS506	IMAGE SCANNER	952.00	3/1/90
MATSUSHITA	KX-P1124	PRINTER	278.00	1/1/91
MATSUSHITA	LF5010	DISK DRIVE	2,315.00	8/1/91
MAX TECH	PB64	BUFFER	89.00	8/1/88
MAX TECH	PB64	BUFFER	89.00	8/1/88
MAX TECH	PB64	BUFFER PRINTER	99.00	8/1/88
MAX TECH	PB64	BUFFER PRINTER	99.00	8/1/88
MAX TECH	PB64	BUFFER PRINTER	99.00	
MAX TECH	PB64	BUFFER	120.00	
MAX TECH	PB-64	PRINTER BUFFER	89.00	8/1/88
MAYC	286	COMPUTER, PERSONAL	1,390.00	10/1/86
MAYC	286	COMPUTER, PERSONAL	1,645.00	8/1/86
MBI	1410	CRT DISPLAY	469.00	8/1/86
MBI	1410	CRT DISPLAY	469.00	6/1/88
MBI CORP	SC-700	CHRONOMETER	35.00	
MCM ELECTRON	72-040	CAPACITANCE METER	59.80	
MENSOR	11600	PRESS.INDICAT.	2113.75	9/1/79
MENSOR	11900	PRESS IND.	2,156.50	1/1/82
MENSOR	11900	PRESS.INDICAT.	2,489.00	1/1/82
MENSOR	11900	PRESS.INDICA.	2,489.00	3/1/82
MENSOR	11900	DIG PRESS GAGE	2,375.00	8/1/82
MENSOR	14000	INDICATOR	3,005.00	9/1/91
MENSOR	14000	INDICATOR	3,005.00	9/1/91
MENSOR	11900-402F	INDICATOR, PRESS., DIG.	3,200.00	9/1/87
MENSOR	14000B	PRESSURE INDICATOR	3,555.00	5/1/90
MESON	L92-133	POWER METER	375.00	12/1/92
MESON	L92-134	LIGHT SOURCE	300.00	12/1/92
METRAPLEX	367-01	PCM TEST SET	3,036.00	12/29/82
MG INDUSTRIES	1678	PRESSURE REGULATOR	199.00	
MG INDUSTRIES	1678	PRESSURE REGULATOR	150.00	8/3/95
MG INDUSTRIES	65000-69	HAND TRUCK	140.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
MGX	7BM623	CRT DISPLAY	500.00	8/1/86
MGX	7BM623	CRT DISPLAY	500.00	10/1/87
MGX	7BM623	CRT DISPLAY	500.00	10/1/87
MGX	7BM623	CRT DISPLAY	500.00	1/1/91
MGX	074G TY11	CRT DISPLAY	50.00	9/1/86
MICRO EXPRESS	REGALSX38 6	COMPUTER	2,099.00	9/11/91
MICRODOT	F321A	SINE WAVE OSCILLATOR	544.75	
MICRODOT	F321A	SINE WAVE OSCILLATOR	544.75	
MICROMATCH	712B	WATTMETER	141.52	
MICROSERVE	386/SX	COMPUTER/KEYBOARD	878.00	7/1/91
MIKRON	M300	IFRARED RADIATION SOURCE	7,520.00	7/1/88
MITSUMI	KPQ-E994C	KEYBOARD	98.00	
MITUTOYO	0 THRU 6	MICROMETER SET, 03219, 03220,03136,3217,3218	380.00	
MITUTOYO	BE1-10T-2	GAUGE BLOCK SET	245.00	
MKS	247C	POWER SUPPLY	1,436.00	1/1/93
MKS	2708	SIGNAL CONDITIONER	2,725.00	12/1/88
MKS	2708	SIGNAL CONDITIONER	2,325.00	12/1/88
MKS	390HA	PRESSURE SENSOR	9,280.00	
MKS	390HA	PRESSURE SENSOR	9,280.00	
MM & M	8100AW	FLUTTER METER	2,491.20	6/1/76
MOBILE-TRONICS CO., INC.	MO-07	SCOPE CART	178.00	
MODULAR CIRCUIT TECH	MUP	EPROM PROGRAMMER/TESTER	80.00	9/15/95
MONARCH	590	REEL TAPE RACK	437.00	
MONARCH	590	REEL TAPE RACK	437.00	
MONARCH	EE	LATHE	15,140.00	9/7/76
MONITOR SYSTEM	820	SIMULATOR PCM	7,785.00	10/1/84
MOTOROLA	A03CJ2468A A	RECEIVER	295.00	
MOTOROLA	A03CJ2468A A	RECEIVER	295.00	
MOTOROLA	A03CJ2468A A	RECEIVER	295.00	
MOTOROLA	A03CJC2468 AA	RECEIVER	295.00	
MOTOROLA	A03CJC2468 AA	RADIO RECEIVER	228.00	11/1/93
MOTOROLA	A03CJC2468 AA	RADIO RECEIVER - PAGER	228.00	11/1/93

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
MOTOROLA	A03CJC2468 AA	RADIO RECEIVER (PAGER)	228.00	11/1/93
MOTOROLA	A03CJC2468 AA	RADIO RECEIVER (PAGER)	228.00	11/1/93
MOTOROLA	A03CJC2468 AA	RECEIVER-PAGER	228.00	5/2/95
MOTOROLA	A03CJC2468 AA	RECEIVEFUPAGER	228.00	5/2/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/26/95
MOTOROLA	A03DNC2	PAGER	300.00	7/27/95
MOTOROLA	A03DNC2	PAGER	300.00	7/27/95
MOTOROLA	A03DNC2	PAGER	300.00	7/27/95
MOTOROLA	A03DNC2	PAGER	300.00	7/27/95
MOTOROLA	A03DNC2	PAGER	300.00	7/27/95
MOTOROLA	A03DNC2	PAGER	300.00	7/28/95
MOTOROLA	A03FNC2468 A	PAGER	300.00	7/26/95
MOTOROLA	A03FNC2468 A	PAGER	300.00	7/26/95
MOTOROLA	MVME28	MEMORY MODULE	4,000.00	2/1/94
MOTOROLA	MVME28	MEMORY MODULE	8,000.00	2/1/94
NARDA MICROWAVE	3020	DIRECTIONAL COUPLER	275.00	8/28/95
NARDA MICROWAVE	3022	DIRECTIONAL COUPLER	275.00	8/28/95
NARDA MICROWAVE	3022	DIRECTIONAL COUPLER	275.00	8/28/95
NARDA MICROWAVE	3003-10	DIRECTIONAL COUPLER	150.00	8/28/95
NARDA MICROWAVE	3003-10	DIRECTIONAL COUPLER	750.00	8/28/95
NARDA MICROWAVE	3004-20	DIRECTIONAL COUPLER	150.00	8/28/95
NARDA MICROWAVE	3004-30	DIRECTIONAL COUPLER	150.00	8/28/95

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
NARDA MICROWAVE	30448-10	DIRECTIONALCOUPLER	200.00	8/28/95
NARDA MICROWAVE	30448-10	DIRECTIONALCOUPLER	200.00	8/28/95
NARDA MICROWAVE	3045C-10	DIRECTIONALCOUPLER	250.00	8/28/95
NARDA MICROWAVE	3142-20	DIRECTIONALCOUPLER	300.00	8/28/95
NASA	5.5X8	AOA MOUNTING BRACKET	1,500.00	7/24/95
NASA	A & B	SWITCH PLUG IN	150.00	10/4/95
NASA	A & B	SWITCH PLUG IN	150.00	10/4/95
NASA	FR24A	PRESS CONSOLE	573.00	
NASA	NONE	OPTICAL BENCH	573.00	
NASA	OIL	MANOMETER	800.00	
NASA	Q FLEX	SIGNAL CONDITIONER	500.00	2/24/94
NASA	Q-FLEX	CONTROL BOX	500.00	
NASA	Q-FLEX	CONTROL BOX	500.00	
NASA	Q-FLEX	CONTROL BOX	500.00	
NASA	Q-FLEX	CONTROL 80 X	500.00	
NASA	Q-FLEX	CONTROL BOX	500.00	
NASA	Q-FLEX	CONTROL BOX	500.00	
NC	C6800	COLLIMATER	575.00	
NEC	CDR 600	CD DRIVE UNIT	644.00	3/1/94
NEC	JC1531VMA2	DISPLAY	699.00	7/1P 3
NEC	P6	DIGITAL PRINTER	470.00	
NEFF	18	AMP. RACK	271.60	
NEFF	90023301	CALIBRATION PCB	2,000.00	3/31/94
NEFF	90023301	CALIBRATION PCB	2,000.00	3/31/94
<b>NESLAB</b>	<b>CFT-25D</b>	RECIRCULATOR	1,547.15	9/28/90
NETWORK	AD16	TESTER	1,249.00	4/1/91
<b>NETWORK TECH</b>	AD24	MONITOR TESTER	1,445.00	3/1/94
NETWORK TECH	AD-24	TESTER MONITOR	1,445.00	2/7/92
<b>NEWHERM</b>		ENGRAVING MACH	368.50	
N N	JC1401	CRT DISPLAY	585.00	7/1/87
N N	JC1401	CRT DISPLAY	600.00	8/1/87
NEY	JC1401	CRT DISPLAY	450.00	9/1/87
N N	JC1402	CRT DISPLAY	496.00	8/1/88
N N	JC1403	CRT DISPLAY	649.00	5/1/89
N N	JC1405	CRT DISPLAY	406.00	11/1/90
<b>NEY</b>	<b>JC1405</b>	CRT DISPLAY	402.00	3/1/91
NEY	JC1405	CRT DISPLAY	430.00	9/1/90
<b>NEY</b>	<b>LC890</b>	PRINTER, LASER	3,117.00	10/1/88

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
NEY	LC890	PRINTER, LASER	3,069.00	6/1/89
NEY	LC890	PRINTER, LASER	3,455.00	9/1/88
NEY	P2	PRINTER, CHARACTER	685.00	4/1/85
NEY	P2	PRINTER, CHARACTER	512.00	8/1/85
NEY	P2	PRINTER, CHARACTER	512.00	8/1/85
NEY	P6	PRINTER, CHARACTER	503.00	8/1/87
NEY	P6	PRINTER, CHARACTER	474.00	10/1/87
NEY	P6	PRINTER, CHARACTER	568.00	4/1/87
NEY	P6	PRINTER, CHARACTER	568.00	4/1/87
NEY	P6	PRINTER, CHARACTER	462.00	8/1/87
NEY	P6	PRINTER, CHARACTER	474.00	11/1/87
NEY	P6	PRINTER, CHARACTER	474.00	7/1/87
NEY	P6	PRINTER, CHARACTER	587.00	4/1/88
NEY	P6	PRINTER, CHARACTER	459.00	7/1/87
NEY	P6	PRINTER, CHARACTER	577.00	10/1/86
NEY	P6	PRINTER, CHARACTER	459.00	7/1/87
NEY	P6	PRINTER, CHARACTER	474.00	4/1/87
NEY	P6	PRINTER, CHARACTER	581.00	10/1/86
NEY	P6	PRINTER, CHARACTER	512.00	21/87
NEY	P6	PRINTER, CHARACTER	450.00	8/1/07
NEY	P6	PRINTER, CHARACTER	459.00	7/1/87
NICOLET	764	LOGIC ANALYZER	18,456.50	5/1/83
NICOLET	3010	CONVERTER	755.25	
NICOLET	3010	CONVERTER	795.00	
NICOLET	3091	OSCILLOSCOPE	5,184.00	4/1/84
NICOLET	3091	OSCILLOSCOPE	4,465.00	5/28/85
NICOLET	1090A	DIGITAL OSCILLOSCOPE	6,547.20	4/1/81
NICOLET	204A	CONTROLLER	3,567.00	4/1/86
NICOLET	2090 III	DIGITAL STORAGE OSCILLOSCOPE	6,050.00	4/1/86
NJE	CR60- 18D1481	POWER SUPPLY	800.00	
NSC INTERNATIONAL	STAR	BINDING MACHINE	330.00	4/15/94
NSK	1 INCH	CALIPER MIKE	20.00	
NUDATA	921-T2	INTERFACETEST SET	163.20	
ODELL	12	CLEANER	1,665.85	10/1/73
ODELL	44	OVEN	1,665.85	10/16/73
OKI	192	PRINTER, CHARACTER	435.00	10/1/85
OKI	92A	PRINTER, CHARACTER	539.00	5/1/84
OMEGA	4201-P-F2	TEMPERATURE CONTROLLER	350.00	4/11/96

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
OPAD	KM87	POWER SUPPLY	185.00	
OPAD ELECTRIC CO.	KM87	POWER SUPPLY	206.00	4/15/68
OPTRONIC LABS	83A	POWER SUPPLY	3,990.00	9/26/95
OPTRONIC LABS	OL 1000	IRRADIANCE STANDARD	1,180.00	9/1/95
OPTRONIC LABS	OL 1000	IRRADIANCE STANDARD	1,180.00	9/1/95
ORTEC	402D	POWER SUPPLY	900.00	
PACE	MP-1	DESOLDERING STATION	480.00	
PACE	MP-1	DESOLDERING UNIT	495.00	2/1/94
PACE	PRC-15 1	POWER SUPPLY	1,250.00	6/1/86
PACE	PRC-15 1	DESOLDERING STATION	1,375.00	2/7/89
PACE INC	CRAFT 25	PCB REPAIR STATION	9,945.00	3/1/80
PACE INC	PFP40	FUSE SET REPAIR STATION	977.00	
PACE INC	PRC351	PCB REPAIR STATION	3,154.00	4/1/89
PACKARD BELL	1200	MODEM	89.00	
PACKARD BELL	1200	MODEM	89.00	
PAN	P2123	PRINTER, CHARACTER	251.00	2/1/83
PANASONIC	KXP11241	PRINTER	320.00	2/1/93
PANASONIC	KXP2123	PRINTER	255.00	3/1/94
PANASONIC	KXP2123	PRINTER	255.00	3/1/94
PANASONIC	P1124	PRINTER, CHARACTER	294.00	1/1/92
PAROSCIENTIFIC	600	PRESS.MEAS SYS	1,848.00	4/1/79
PAROSCIENTIFIC	600	PRESS.MEAS SYS	1,848.00	4/1/79
PAROSCIENTIFIC	600	PRESS.MEAS.SYS	1,848.00	4/1/79
PAROSCIENTIFIC	2100-A	PRESSURE SENSO	2,050.00	8/1/83
PAROSCIENTIFIC	215-A	PRESSURE SENSO	2,050.00	8/1/83
PAROSCIENTIFIC	230D	DIGIQUARTZ PRESSURE TRANSDUCER	2,050.00	8/1/83
PAROSCIENTIFIC	600B	PRESSURE COMPUTER	3,903.00	1/1/80
PCB	482A	POWER SUPPLY	90.00	
PCB	484B	POWER SUPPLY	295.00	
PIEZOTRONICS				
PC'S LIMITED	AT110	COMPUTER, PERSONAL	1,200.00	10/1/87
PENN AIRBORNE	9A5119	STANDARD RESISTOR,10TOHM	810.00	
PENN AIRBORNE	9A5119-105	STANDARD RESISTOR- 10TOHM	625.00	
PERKINS		SPRING WINDER	3120.00	
PGS	HX12	CRT DISPLAY	472.00	5/1/86
PGS	MAX12	CRT DISPLAY	194.00	5/1/86
PGS	MAX12	CRT DISPLAY	179.00	4/1/86
PGS	RGB-1	CRT DISPLAY	500.00	6/1/86



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
PGS	ULTRA 16	CRT DISPLAY	400.00	10/1/90
PHOTOCOM	PC125	PRESSCALIBRA	975.00	
POWER DESIGN	2005	POWER SUPPLY	379.00	
POWER MATE	BPA-20E	POWER SUPPLY	339.00	
POWSTRON	PA3001	ULTRASON CLEAN	865.00	
PRATT & WHITNEY		DRILL PRESS	250.00	
PRD ELECTRONICS	430-10	DIRECTIONAL COUPLER	150.00	8/28/95
PRECISION MOTION	CHIPTESTE R	CHIP TESTER	363.00	
PRECISION SCIENTIFIC	104	OVEN	260.00	
PSI	8481-01	PCU EXTENDER	980.00	
PSI	PS3100	PROGRAMMER POD	1,000.00	2/5/88
PSI INTEGRATION	COMSTATIO N ONE	MODEM	136.00	8/1/93
PYREX	2982	CYLINDER	30.00	
QUICK SET	3	TRIPOD	28.80	
RACAL DANA	1995	COUNTER, FREQUENCY	3,600.00	6/1/88
RADIO FREQUENCY LABS	A3 12-500	REFERENCE MAGNET	150.00	8/12/94
RADIO FREQUENCY LABS	HB9272	REFERENCE MAGNET	150.00	8/12/94
RADIO FREQUENCY LABS	HB9272	REFERENCE MAGNET	150.00	8/12/94
RADIO FREQUENCY LABS	HB9272	REFERENCE MAGNET	150.00	8/12/94
RADIO FREQUENCY LABS	VA-172T	REFERENCE MAGNET	150.00	8/12/94
RALMIKES	045-2 142	MICROMETERS	3,095.00	
RAND MATERIALS HANDUNG	4WHEEL	INSTRUMENT CART	345.00	10/10/96
RAND MATERIALS HANDLING	6WHEEL	INSTRUMENT CART	215.00	10/10/96
RANK TAYLOR	112/753	PRECISION LEVEL	1,946.00	7/1/75
RCA	1005/01	T V CAMERA	596.00	
RDZ	S20+	DISK-WINCHESTER	850.00	4/1/87
REALISTIC	TRC-83	TRANSCEIVER	39.95	
REALISTIC	TRC-83	TRANSCEIVER	39.95	
REGAL	NONE	TAP & DIE KIT	188.00	
REMIN	COMMANDE R 600	CART	104.00	
REMIN	CONCORDE II	CART	84.00	
REMIN	CONCORDE	CART	84.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
	II			
RFL	829	CALIB. STD.	2,657.40	9/21/73
RFL	1295A	FLUXMETER	623.47	
<b>ROCKWELL</b>	636	DRIU	65.00	
<b>ROCKWELL</b>	17-600	DRIUPRESS	398.50	
ROCKWELL	25-709	LATHE	1,661.35	
ROCKWELL	NONE	PED. GRINDER	223.57	
RUBICON	15A	RESISTOR	65.00	
RUBICON	4025B	<b>STD.</b> RESISTOR	150.00	
RUBICON	4035B	<b>STD</b> RESISTOR	150.00	
RUSKA	2413.5	BARRIER	300.00	
RUSKA	2413.5	PRESSURE C E U	300.00	
RUSKA	2416	NULL METER	2,000.00	
RUSKA	2416	PRES MEA SYST	2,505.00	9/1/76
RUSKA	2416.5	PRES INDICATOR	1,155.00	10/1/73
RUSKA	10735	BARRIER	300.00	
RUSKA	2416704	PRES INDICATOR	2,285.00	10/16/73
RUSKA	2416704	PRES INDICATOR	1,465.00	10/16/73
RUSKA	2417706	PRESSURE CELL	7,200.00	
RUSKA	2413-705-0	PRESSURE CELL	3,900.00	
RUSKA	2416-711	PRESSURE INDICATOR	1,560.00	2/1/93
RUSKA	3891-801	BELLOWS	1,880.00	8/3/95
RUSKA	3893-801	CONTROLLER	1,880.00	5/4/90
RUSKA	6005-20	INTERFACE	3,744.00	6/1/77
RUSKA	6211-804-721	DIGITAL PRESSURE GAGE	3,980.00	10/1/89
RUSKA	6211-806-721	PRESSURE GAGE	3,500.00	11/1/89
RUSKA	801-00	HAND PUMP	705.00	
RUSS BASSETT	NONE	CABINET	575.00	
S. S. WHITE	F	<b>ABRASIVE</b> MACH	675.00	
SAMSUNG	SM-12SFA7	MONITOR	95.00	
SARGENT WELCH	8810	VACUUM PUMP	1,500.00	
SBP	286	COMPUTER, PERSONAL	1,128.00	9/1/88
SBP	286	COMPUTER, PERSONAL	1,128.00	9/1/88
SBP	286	COMPUTER, PERSONAL	1,996.00	8/1/87
SBP	4095N	CRT DISPLAY	470.00	9/1/88
SBP	MCH-4095N	CRT DISPLAY	470.00	9/1/88
SCOTT SPECIALTY GASES	11A	REGULATOR, PRESSURE	182.00	
<b>SEAGATE</b>	ST4766N	DISC DRIVE	1,829.00	
SEARS	198618420	FREEZER	189.00	
SEARS	9H22582	SANDER BELT	75.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
SENCORE	LC102	CAPACITOR ANALYZER	1,686.00	1/1/92
SENCORE	LC53	CAPACITOMETER	647.00	
SENCORE	LC53	CAPACITOMETER	805.50	
SENCORE	LC75	CAPACITOR ANALYZER	805.50	
SENCORE	LC75	CAPACITOR-INDUCTOR ANALYZER	805.00	
SENCORE	TR139B	IN-CIRCUIT TRANSISTOR	72.98	
SENCORE	VA48	ANALYZER	1,095.00	3/1/80
SENCORE	VA62	SIG. ANALYZER	2,965.50	4/1/86
SENCORE	VC63	VCR TESTER	359.45	
SENSITIVE RESEARCH	ESD	VOLTMETER DC	235.71	
SENSITIVE RESEARCH	ESO	ELECTROSTATIC VOLTMETER	275.00	
SHALLCROSS	6860	PREC RES DEC	135.00	
SHALLCROSS	6860	RESIST BOX	190.00	
SHALLCROSS	6862	RESISTANCE BOX	212.00	
SHALLCROSS	6863	DECADE RES	180.00	
SHALLCROSS	6863	PREC RES DECAD	190.00	
SHALLCROSS	6863	DECADE RESIST	267.00	
SHALLCROSS	6860RM	RESISTANCE BOX	150.00	
SHALLCROSS	6860RM	RESISTANCE BOX	150.00	
SHARP	EL-5500 III	COMPUTER, SCIENTIFIC	70.00	
SHARP	EL5500I	CALCULATOR	70.00	
SHIELD-ARC	SAE300	WELDER	500.00	
SHIMADEN	SR-17	TEMPERATURE CONTROLLER	400.00	4/1 1/96
SIMPSON	160	METER	60.72	
SIMPSON	160	METER	60.72	
SIMPSON	260	V O M	50.00	
SIMPSON	260	V O M	50.00	
SIMPSON	260	V O M	50.00	
SIMPSON	260	V O M	54.00	
SIMPSON	260	V O M	63.00	
SIMPSON	260	VOM	61.65	
SIMPSON	260	VOM	61.65	
SIMPSON	260	VOM	63.45	
SIMPSON	260	VOM	50.00	
SIMPSON	270	VOM	50.00	
SIMPSON	260-5M	MULTIMETER	50.00	
SIMPSON	260-5M	MULTIMETER	50.00	
SIMPSON	260-5M	MULTIMETER	50.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
SIMPSON	260-5M	V O M	54.00	
SIMPSON	<b>260-5M</b>	VOM	63.00	
SIMPSON	<b>260-5M</b>	VOM	63.00	
SIMPSON	260-6	VOM	61.65	
SIMPSON	260-6	MULTIMETER	<b>60.28</b>	
SIMPSON	260-6	VOM	60.28	
SIMPSON	260-6	VOM	<b>60.28</b>	
SIMPSON	260-6	VOM	60.28	
<b>SIMPSON</b>	<b>260-6</b>	<b>VOM</b>	<b>50.28</b>	
SIMPSON	260-6	VOM	60.28	
SIMPSON	260-6M	VOM	61.50	
SINGER	5010-1	MICROWAVE AMP	3,832.00	8/1/72
<b>SKILL</b>	2016	<b>DRILL PORTABLE</b>	119.00	
SMITH	SM02805	<b>PRINTER STAND</b>	<b>85.00</b>	
MANUFACTURING COMPANY				
SMITH <b>MFG</b>	<b>SM02805</b>	PRINTER STAND	107.50	
SMITH <b>MFG</b>	<b>SM02805</b>	PRINTER STAND	107.50	
SMITH <b>MFG</b>	<b>SM02805</b>	PRINTER <b>STAND</b>	107.50	
SMITH <b>MFG CO</b>	<b>SM02805</b>	PRINTER STAND	<b>85.00</b>	
SMITH <b>MFG CO</b>	<b>SM02805</b>	PRINTER STAND	<b>85.00</b>	
SMITH <b>MFG CO</b>	<b>SM02805</b>	PRINTER STAND	<b>85.00</b>	
SMITH <b>MFG CO</b>	<b>SM02805</b>	PRINTER STAND	<b>85.00</b>	
SMN	SR-15	PRINTER, CHARACTER	674.00	4/1/86
SMU	CM4531	CRT DISPLAY	439.00	8/1/82
SMU	CM4967	CRT DISPLAY	299.00	3/1/93
SMU	<b>S286</b>	COMPUTER, PERSONAL	3,178.00	9/1/87
<b>SNAP ON TOOLS</b>	<b>TQ12B</b>	TORQUE WRENCH	50.00	
<b>SNAP ON TOOLS</b>	<b>TQ3</b>	TORQUE WRENCH	<b>44.00</b>	
<b>SNAP ON TOOLS</b>	<b>TQ3</b>	TORQUE WRENCH	<b>38.00</b>	
<b>SOLA</b>	28510	POWER SUPPLY	330.00	
<b>SOLA</b>	28510	POWER SUPPLY	330.00	
SONY	CVM1720	T V MONITOR	788.50	
SONY	PVM1270	MONITOR TV	741.00	
<b>SORENSEN</b>	61CB	NOBATRON	825.00	
<b>SORENSEN</b>	FR1000	VOLTAGE <b>REG.</b>	1,431.00	10/1/73
<b>SORENSEN</b>	<b>QB28-8</b>	POWERSUPPLY	492.00	
<b>SORENSEN</b>	no-1.5	<b>POWER SUPPLY</b>	252.00	
<b>SPECTRAL DYNAMICS</b>	<b>SD104A- 5FS2</b>	SWEEP OSCILLATOR	<b>2,215.00</b>	<b>5/1/85</b>
<b>SPECTRAL DYNAMICS</b>	<b>SD112-1</b>	VOLTMETER	<b>3,234.00</b>	<b>6/1/77</b>

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
SPECTROLINE	PE-140T	EPROM ERASER	50.00	9/14/95
SPECTRON	MUPI2	SIGNAL CONDITIONER	380.00	10/19/95
STANFORD	DS345/1	FUNCTION GENERATOR	2,405.00	3/1/92
STANFORD	DG535	GENERATOR, PULSE	4,757.00	5/1/91
RESEARCH				
STAR MICRONICS	SR10	PRINTER	549.00	5/1/85
STARRETT	199	PRECISION LEVEL	95.00	
STARRETT	199	LEVEL, PRECISION	256.60	
STARRETT	467	THICKNESS GAGE	125.00	
STARRETT	AG16CLM	GAGE BLOCK SET	2,275.00	10/1/73
STARRETT	HD46A1X	GAGE BLOCKS	876.00	
STOSS		DIAL INDICATOR	125.08	
SUNDSTRAND	<b>VVO</b>	ACCELEROMETER	1,060.00	5/1/85
SUNDSTRAND	<b>VVO</b>	ACCELEROMETER	1,060.00	5/1/85
SUNDSTRAND	QA900	ACCELEROMETER	1,060.00	5/1/85
SUPERMAC	STD9750	CRT DISPLAY	2,720.00	7/12/91
TECHNOLOGY				
SYSTRON DONNER	9015	VOLTMETER	485.10	
SYSTRON DONNER	8140-534	TAPE SEARCH UNIT	2,085.50	4/1/81
SYSTRON DONNER	8150-253	TIME CODE GENERATOR- READER	3,710.25	4/1/81
SYSTRON DONNER	TPZC48	POWER SUPPLY	145.00	
SYSTRON-DONNER	8150	TIME CODE GENERATOR- READER	4,528.00	11/1/72
T RUSS	MF-7-3	CABINET, STORAGE	575.00	3/1/80
TAB8	NONE	FILE SHELF	403.00	
TALWEL	112/753	ELECT LEVEL	1,400.00	2/1/75
TAYLOR-WHARTON	XL-45	NITROGEN DEWAR	1,539.00	8/1/94
TCA	QT-60E	MAG TAPE, CASSETTE	1,090.00	11/1/87
TCA	QT-60E	MAG TAPE, CASSETTE	1,240.00	7/1/87
TCA	ZVM136	CRT DISPLAY	550.00	12/1/85
TDB	MM1222	CRT DISPLAY	110.00	12/1/86
TECHNI-TOOL	849P0700	VACUUM CLEANER	233.00	
TEK	TM503	POWER MODULE	150.00	
TEKTRONIX	106	SQ WAVE GEN	665.00	
TEKTRONIX	130	LC METER	225.00	
TEKTRONIX	177	TEST FIXTURE	950.00	
TEKTRONIX	178	IC TEST FIXTURE	1,067.00	1/24/76
TEKTRONIX	191	SIGNAL GEN	674.15	
TEKTRONIX	191	CONSTANT AMPLITUDE SIGNAL GENERATOR	425.00	
TEKTRONIX	284	PULSE GENERATO	873.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	323	OSCILLOSCOPE	965.12	
TEKTRONIX	323	OSCILLOSCOPE	965.12	
TEKTRONIX	323	OSCILLOSCOPE	1,354.50	1/1/79
TEKTRONIX	323	OSCILLOSCOPE	1,354.50	1/1/79
TEKTRONIX	323	OSCILLOSCOPE	1,354.50	1/1/79
TEKTRONIX	324	OSCILLOSCOPE	1,285.25	4/1/74
TEKTRONIX	<b>335</b>	OSCILLOSCOPE	2,104.31	7/1/80
TEKTRONIX	<b>335</b>	OSCILLOSCOPE	2,104.31	7/1/80
TEKTRONIX	<b>335</b>	OSCILLOSCOPE	2,462.40	8/1/83
TEKTRONIX	335	OSCILLOSCOPE	2,755.20	3/1/83
TEKTRONIX	<b>455</b>	OSCILLOSCOPE	1,688.29	1/1/79
TEKTRONIX	475	OSCILLOSCOPE	2,822.70	1/1/76
TEKTRONIX	475	OSCILLOSCOPE	2,902.50	1/1/79
TEKTRONIX	475	OSCILLOSCOPE	3,128.28	4/1/81
TEKTRONIX	<b>547</b>	OSCILLOSCOPE.	1,885.97	3/1/80
TEKTRONIX	564	STORAGE OSCILLOSCOPE	886.50	
TEKTRONIX	567	OSCILLOSCOPE	759.73	
TEKTRONIX	575	TRANS TRACER	1,337.00	9/1/73
TEKTRONIX	<b>577</b>	CURVE TRACER	2,376.50	1/1/76
TEKTRONIX	602	DISPLAY UNIT	1,042.75	3/1/86
TEKTRONIX	<b>604</b>	CRT DISPLAY	916.65	
TEKTRONIX	<b>604</b>	CRT DISPLAY	894.94	
TEKTRONIX	<b>834</b>	DATATESTSET	3,990.00	10/1/84
TEKTRONIX	<b>834</b>	DATA TEST SET	2,232.00	9/18/90
TEKTRONIX	1470	<b>NTSC COLOR SYNC &amp; TEST</b> SIGNAL GENERATOR	2,600.00	8/1/78
TEKTRONIX	2215	OSCILLOSCOPE	1,344.00	5/1/83
TEKTRONIX	<b>2465</b>	OSCILLOSCOPE	4,750.00	1/1/84
TEKTRONIX	<b>5403</b>	OSCILLOSCOPE	1,212.50	8/11/75
TEKTRONIX	<b>7603</b>	OSCILLOSCOPE	1,722.00	7/1/74
TEKTRONIX	<b>7844</b>	OSCILLOSCOPE, DUAL BEAM	5,723.00	2/1/75
TEKTRONIX	<b>7844</b>	OSCILLOSCOPE	10,709.00	4/10/81
TEKTRONIX	<b>7904</b>	OSCILLOSCOPE	3,977.00	9/1/76
TEKTRONIX	<b>7904</b>	OSCILLOSCOPE	5,510.00.	6/1/80
TEKTRONIX	<b>067-0500-00</b>	CALIBRATION FIXTURE.	100.00	
TEKTRONIX	<b>067-0508-00</b>	AMPLITUDE CALIBRATOR	1,100.00	5/1/81
TEKTRONIX	067-0521-00	CALIBRATION FIXTURE	200.00	
TEKTRONIX	067-0521-00	PLUG IN	325.00	
TEKTRONIX	<b>067-0587-01</b>	SIG. STANDARD	<b>385.00</b>	
TEKTRONIX	067-0587-02	CALIBRATION FIXTURE	3,830.00	9/1/88
TEKTRONIX	<b>067-0589-00</b>	EXTENDER PLUG-IN	1,810.00	2/28/92

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	067-0616-00	PLUG-IN EXTEND	695.00	
TEKTRONIX	067-0616-00	PLUG-IN EXTEND	695.00	
TEKTRONIX	067-0625-00	DETECTOR	120.00	
TEKTRONIX	067-0680-00	CALIB.FIXTURE	547.00	
TEKTRONIX	067-0746-00	ANALYZER, BUS	1,250.00	9/29/86
TEKTRONIX	1480C	MONITOR	2,318.30	3110/76
TEKTRONIX	149A	GENERATOR	3,977.00	2/1/75
TEKTRONIX	190B	CONST AMP GEN	330.00	
TEKTRONIX	1A1	DUAL-TRACE PLUG-IN UNIT	650.00	
TEKTRONIX	1A1	PLUG IN	650.00	
TEKTRONIX	1S1	SAMPLING UNIT	1,105.50	8/1/82
TEKTRONIX	200C	SCOPE CART	125.00	
TEKTRONIX	200C	SCOPE CART	125.00	
TEKTRONIX	200C	SCOPE CART	125.00	
TEKTRONIX	2430A	OSCILLOSCOPE	7,473.00	9/1/89
TEKTRONIX	2A60	AMPLIFIER	105.00	
TEKTRONIX	2A63	DIFFERENTIAL AMPLIFIER	152.00	
TEKTRONIX	2B67	TIME BASE	212.00	
TEKTRONIX	3A75	AMPLIFIER	177.00	
TEKTRONIX	3B4	TIME BASE	495.00	
TEKTRONIX	3876	DUAL TRACE	1,100.00	10/1/73
TEKTRONIX	3T77A	SAMPLING SWEEP	691.41	
TEKTRONIX	454A	OSCILLOSCOPE	3,104.00	5/1/74
TEKTRONIX	465DM43	OSCILLOSCOPE	2,662.65	3/1/76
TEKTRONIX	475A	OSCILLOSCOPE	3,525.00	3/1/82
TEKTRONIX	520A	VECTORSCOPE	3,104.00	5/1/76
TEKTRONIX	535A	SCOPE	1,372.00	9/1/73
TEKTRONIX	545B	OSCILLOSCOPE	1,635.45	9/1/73
TEKTRONIX	545B	SCOPE	1,635.48	2/1/75
TEKTRONIX	545B	OSCILLOSCOPE.	1,550.00	5/1/83
TEKTRONIX	561A	OSCILLOSCOPE	500.00	
TEKTRONIX	5A15N	AMPLIFIER	175.00	
TEKTRONIX	5A48	DUAL TRACE AMPLIFIER	450.00	
TEKTRONIX	5812N	DUAL TIME BASE	227.50	
TEKTRONIX	5B31	DIGITALLY DELAYED TIME BASE	602.00	
TEKTRONIX	6R1A	DIGITAL UNIT	2,763.20	9/1/73
TEKTRONIX	7704A	OSCILLOSCOPE	2,806.00	10/1/77
TEKTRONIX	7904A	OSCILLOSCOPE	10,431.00	10/4/88
TEKTRONIX	7A11	AMPLIFIER	2,700.00	
TEKTRONIX	7A13	DIFFERENTIAL COMPARATOR	2,659.20	7/1/83

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	7A13	DIFFERENTIAL COMPARATOR	2,456.00	4/1/81
TEKTRONIX	7A16A	WB AMPLIFIER PLUG IN	1,334.75	8/1/88
TEKTRONIX	7A16A	AMPLIFIER	1,334.75	8/22/88
TEKTRONIX	7A16A	PLUG-IN	1,200.00	
TEKTRONIX	7A18	DUAL TRACE AMPLIFIER	535.00	
TEKTRONIX	7A19	AMPLIFIER	800.25	
TEKTRONIX	7A19	PLUG IN	2,859.50	9/8/88
TEKTRONIX	7A19	AMPLIFIER-	700.00	
TEKTRONIX	7A22	PLUG IN	1,762.25	11/8/88
TEKTRONIX	7A22	AMPLIFIER	610.00	
TEKTRONIX	7A22	AMPLIFIER, DIFFERENTIAL	610.00	
TEKTRONIX	7A24	O'SCOPE AMPLIFIER	1,509.00	1/31/80
TEKTRONIX	7A26	PREAMPLIFIER	1,062.15	9/1/76
TEKTRONIX	7A26	DUAL TRACE AMPLIFIER	1,050.00	9/1/77
TEKTRONIX	7A26	PLUG IN	1,388.00	4/1/84
TEKTRONIX	7A26	PLUG-IN DUAL TRACE AMPLIFIER	1,050.00	
TEKTRONIX	7A26	DUAL TRACE AMPLIFIER	1,050.00	
TEKTRONIX	7A26	AMPLIFIER, DUAL TRACE	1,050.00	
TEKTRONIX	7A26	DUAL TRACE AMPLIFIER	1,388.00	6/1/80
TEKTRONIX	7B53A	DUAL TIME EASE	1,249.67	8/18/82
TEKTRONIX	7B53A	DUAL TIME BASE	850.00	
TEKTRONIX	7B53A	PLUG-IN DUAL TIME BASE	850.00	
TEKTRONIX	7870	TIME BASE	675.00	
TEKTRONIX	7B70	TIME BASE	675.00	
TEKTRONIX	7B71	DELAYING TIME BASE	775.00	
TEKTRONIX	7B71	TIME BASE, DELAYING	775.00	
TEKTRONIX	7B80	PLUG-IN	1,151.00	4/10/81
TEKTRONIX	7B85	PLUG-IN	1,378.00	4/1/81
TEKTRONIX	7B92A	DUAL TIME BASE	1,430.25	9/7/76
TEKTRONIX	7B92A	DUAL TIME BASE	1,400.00	9/1/77
TEKTRONIX	7B92A	DUAL TIME BASE	3,676.00	9/22/88
TEKTRONIX	7B92A	O'SCOPE TIME BASE	2,187.00	6/1/80
TEKTRONIX	7B92A	DUAL TIME BASE PLUG IN	300.00	
TEKTRONIX	7001	LOGIC ANALYZER	4,972.95	4/1/79
TEKTRONIX	AF501	BANDPASS FILTER	782.40	
TEKTRONIX	AFG5501	FUNCTION GENERATOR	4,507.00	9/1/91
TEKTRONIX	B	SCOPE CART	110.00	
TEKTRONIX	CA	PREAMP	260.00	
TEKTRONIX	D	PLUG-IN UNIT	155.00	
TEKTRONIX	D	PLUG-IN UNIT	172.00	



MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	D	PLUG IN AMP	172.00	
TEKTRONIX	DF2	FORMATTER	2,140.00	8/1/82
TEKTRONIX	DM501	DIG MULTIMETER	459.56	
TEKTRONIX	FG501	FUNCT GEN	388.00	
TEKTRONIX	FG503	FUNCT GEN	315.25	
TEKTRONIX	FPEN834	TEST SET	2,327.50	4/30/86
TEKTRONIX	K	PLUG-IN UNIT	147.00	
TEKTRONIX	K	PLUG-IN UNIT	147.00	
TEKTRONIX	K	PLUG IN AMP	147.00	
TEKTRONIX	K	PLUG-IN UNIT	135.00	
TEKTRONIX	K213	INSTRUMENT CART	675.00	
TEKTRONIX	L	PLUG-IN UNIT	212.00	
TEKTRONIX	MR501	OSCOPE MONITOR	532.00	
TEKTRONIX	P6013	PROBE	325.00	
TEKTRONIX	P6022	CURRENT PROBE	326.00	
TEKTRONIX	P6562	PROBE/CLIP KITS	629.00	
TEKTRONIX	PG501	PULSE GEN	339.50	
TEKTRONIX	PG501	PULSE GEN.	339.50	
TEKTRONIX	PG502	GENERATOR, PULSE	2,892.75	7/1/87
TEKTRONIX	PG506	CAL.GENERATOR	1,095.00	4/1/75
TEKTRONIX	PG506	CALIBRATION GENERATOR	1,978.00	6/1/81
TEKTRONIX	PG506	CALIBRATION GENERATOR	2,845.25	7/1/87
TEKTRONIX	PG506A	CALIBRATION GENERATOR	4,743.00	
TEKTRONIX	PS503A	DUAL POWER SUPPLY.	150.00	
TEKTRONIX	PS503A	DUAL POWER SUPPLY	150.00	
TEKTRONIX	RG501	RAMP GENERATOR	175.00	
TEKTRONIX	SC501	OSCILLOSCOPE	900.00	5/12/80
TEKTRONIX	SG502	OSCILLATOR	363.75	
TEKTRONIX	SG502	OSCILLATOR, PLUG-IN	500.00	
TEKTRONIX	SG502	OSCILLATOR, PLUG IN	500.00	10/4/95
TEKTRONIX	SG503	SIGNAL GENERAT	582.00	
TEKTRONIX	SG503	GENERATOR	1,568.12	
TEKTRONIX	SG503	SINE WAVE GENERATOR	2,280.00	7/1/87
TEKTRONIX	SG504	SIGNAL GEN	2,215.00	4/18/84
TEKTRONIX	TG501	TIME BASE GENERATOR	462.00	
TEKTRONIX	TG501	GENERATOR	962.66	
TEKTRONIX	TG501	TIME MARK GENERATOR	1,592.25	6/12/81
TEKTRONIX	TG501	TIME MARK GENERATOR	2,489.00	7/6/87
TEKTRONIX	TM5006A	POWER MOOULE	1,164.00	4/1/91
TEKTRONIX	TM501	POWER SUPPLY	135.00	
TEKTRONIX	TM-501	POWER MOOULE	125.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TEKTRONIX	TM503	POWER MODULE	218.25	
TEKTRONIX	TM503	POWER MODULE	250.00	
TEKTRONIX	TM503	POWER MODULE	250.00	
TEKTRONIX	TM503	POWER MODULE	500.00	
TEKTRONIX	TM503	POWER MODULE	210.00	10/3/95
TEKTRONIX	TM503	POWER MODULE	210.00	10/6/95
TEKTRONIX	TM504	POWER MODULE	180.00	
TEKTRONIX	TM504	PWR MODULE	184.30	
TEKTRONIX	TM504	POWER MODULE	315.00	
TELEDYNE	CPR-1A	READOUT, POWER SUPPLY	695.00	
TELEDYNE	CPR-HFC	CALIBRATION BOX	395.00	
TELEDYNE	S-86-CN	PUMP	495.00	
TELEDYNE	VT-6B	VACUUM GAGE	245.00	
TELEDYNE	VT-6B	VACUUM GAGE	245.00	
TELEDYNE	VT-6B	VACUUM GAUGE	299.00	12/1/92
TELEDYNE	VT-6B	VACUUM GAGE	318.00	
HASTINGS				
TELEDYNE	VT-6B	VACUUM GAGE	318.00	
HASTINGS				
TELEVIDEO	920C	TERMINAL	794.00	
TENNEY	T-55	TEST CHAMBER	5,100.00	1/24/76
TENNEY	TENNYJR	TEMP. TEST CHAM	4,801.60	4/24/79
TENNEY	TH5-SPL	HUMIDITY CHMBR	13,800.00	6/1/81
TERMALINE	67	WATTMETER	275.00	
TEXAS	59	CALCULATOR	260.95	
INSTRUMENTS				
TEXAS	6613RX3	PULSE GENERATOR	950.00	
INSTRUMENTS				
TEXAS	TI PROG	CALCULATOR	49.80	
INSTRUMENTS				
TEXAS	TI-5142	CALCULATOR	78.00	
INSTRUMENTS				
THE MARVEL	72003	WORK STATION	906.00	10/10/96
GROUP				
THERMO ELECTRIC	31157	TEMPERATURE CALIBRATOR	2,275.00	4/1/90
TI	TI-60	CALCULATOR	35.00	
TORIT	66	DUSTCOLLECTOR	422.00	
TRANSISTOR	DLR-130-5-	DYNA-LOAD	497.00	
DEVICES	100			
TRANSISTOR	DLR15-50-	DYNA-LOAD	497.00	
DEVICES	150			
TRANSMATICS	2632CC- 44SEL/488	DIGITAL ANGLE INDICATOR	3,132.00	7/1/88

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
TRIPLETT	3525	DIGI-PROBE MULTIMETER	65.00	
TRIPLETT	3525	DIGI-PROBE MULTIMETER	65.00	
TROEMNER	65000472	CYLINDER STAND	105.00	
TRYGON	HR20-5	POWER SUPPLY	352.50	4/15/68
TRYGON	HR36-5	POWER SUPPLY	352.50	
TRYGON	HR40500	POWER SUPPLY	152.50	
TRYGON	HR405B	POWER SUPPLY	573.00	
TRYGON	HR40750	POWER SUPPLY	329.00	
TRYGON	SHR40-1.SA	PWR. SUP.	199.00	
TRYGON	SHR4015	PWR. SUP.	199.00	
TVI	955	TERMINAL, CRT, SMART	478.00	12/1/88
ULTIMATE COMPUTER SUPPLIES	NONE	MICROMANAGER WORK STATION	130.55	
ULTIMATE COMPUTER SUPPLIES	NONE	COMPUTER CART	130.55	
ULTIMATE COMPUTER SUPPLIES	NONE	MICROMANAGER WORKSTATION	130.55	
ULTIMATE COMPUTER SUPPLIES	NONE	MICROMANAGER WORKSTATION	130.55	
ULTIMATE COMPUTER SUPPLIES	NONE	MICROMANAGER WORKSTATION	130.55	
ULTIMATE COMPUTER SUPPLIES	NONE	MICROMANAGER WORKSTATION	130.55	
ULTRADEX AA IND		INDEXER	2,000.00	
UNHOLTZ DICKIE	608PS-1	PWR. SUP.	425.00	
UNHOLTZ DICKIE	608PS-1	PWR SUPPLY	425.00	
UNIMATION		LATHE & ACCES.	381.75	
UNION CARBIDE	50LD	LIQUID NITROGEN REFRIG.	606.00	
UNION CARBIDE	LR50	REFRIGERATOR	636.00	
UNION CARBIDE	LS-160	NITROGEN DEWAR	1,500.00	4/11/96
UNION CARBIDE	PGS-45	NITROGEN CONT.	1,785.00	5/28/85
UNITED DETECTOR	S351F	RADIOMETER	980.00	
UNITED SYSTEMS	311	VOLT. CALIBRA	637.00	
UNITEK	1048A	WELDMATIC	743.70	
UNIVERSAL DYNAMICS	PSP271	EXTENDER CARD	1,000.00	3/10/94
US ROBOTICS	735	FAX SERVER	1,640.00	11/1/94
US ROBOTICS	V.32 BIS	MODEM	378.00	4/1/94

UNITEK

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
UVP	C-25	ERASE EPROM	319.00	
VAISALA	HM133	TEMP/HUM. INDICATOR	1,286.00	5/1/87
VALHALLA	2724A	STANDARD, CALIB	4,713.00	7/1/86
VALHALLA	2724A	RESISTANCE CALIB.STANDARD	5,045.00	4/1/89
VARIAN	NONE	PRESSURE CHAMBER	500.00	8/3/95
VEECO	RG-31X	CONTROLLER	573.00	
VIBROGRAF	B200A	RECORDER, TIME	1,865.00	5/14/87
VICTOREEN	2000A	DOSIMETER CHARGER	200.00	
VIDEOTEK	DM-40-R	DEMODULATOR	1,270.00	7/9/84
VIGOR	BN225	WATCHMAKE BENC	125.00	
VIGOR	EN-225	WTCHMKRS BENCH	140.00	
VISHAY	1301	DECADE RESIS	265.00	
VISHAY	1301	DECADE RESIS	265.00	
VISI RECORD	M	CABINET	962.15	
VISUAL INFO	27	GENERATOR BAR	850.00	
VLT	PST160	MAG TAPE, CASSETTE	1,885.00	3/1/92
VLT	PST160F	TAPE BACKUP SYSTEM	1,577.00	2/1/92
VOCUMETRICS	V-1R	CONTROLLER	250.00	
VOLUMETRICS	V-1R	PRES. BELLOWS	535.00	
VOLUMETRICS	VIR	CONTROLLER	400.00	
WADDY	NONE	CABINET	154.00	
WALLACE & TIERNAN	FA129	GAUGE	700.00	
WALLACE & TIERNAN	FA145	PRESS GAUGE	280.00	
WALLACE & TIERNAN	FA145	PRESS GAUGE	282.00	
WALLACE & TIERNAN	FA145	PRESS GAUGE	282.00	
WALLACE & TIERNAN	FA160	PRESS GAUGE	171.00	
WALLACE & TIERNAN	FA160	PRESS GAUGE	171.00	
W A U C E & TIERNAN	FA160	DIAL GAGE	194.00	
WALLACE & TIERNAN	FA160	PRESSURE GAGE	234.00	
WALLACE & TIERNAN	FA233	PRESS GAUGE	417.00	
WAVETEK	164	SWEEP GENERATOR	2,095.00	7/1/83
WAVETEK	164	SWEEP GENERATOR	2,095.00	7/1/83
WAVETEK	3000	SIGNAL GEN	2,692.00	4/18/84
WAVETEK	4708	CALIBRATION STANDARD	22,900.00	12/1/89

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. BATE
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEATHERTRONICS	5021	HYGROTHERMOGRA	365.00	
WEINSCHTEL	430A	OSCILLATOR	2200.00	5/1/81
WEINSCHTEL	4310A/K	SWEEPER SYSTEM	27,930.00	4/1/81
WEINSCHTEL	436A	RF UNIT	1,189.00	1/1/83
WELCH	1 402	VAC PUMP	342.50	
WELCH	1402	VAC PUMP	342.50	
WELCH	1402	VAC PUMP	342.50	
WELCH	1402	VAC PUMP	325.00	
WELCH	1 402	VAC PUMP	327.50	
WELCH	1402	VACUUMPUMP	342.50	
WELCH	1402	VACUUM PUMP	420.00	
WELCH	1402	VACUUM PUMP	420.00	
WELCH	1402	VACUUM PUMP	420.00	
WELCH	881 0	VACUUM PUMP	600.00	
WELCH	1402B	VAC PUMP	405.00	
WELCH	8915A	PUMP, VACUUM	1,095.00	8/13/91
WELCH		VAC PUMP	200.00	
WELCH		VAC PUMP	158.00	
WESTINGHOUSE	1777564	LOADBANK	400.00	7/28/95
WESTON	433	AC AMMETER	153.00	
WESTON	622	MICROAMMETER	258.37	
WESTON	799	INSULAT TESTER	108.00	
WHITE INSTRUMENTS	2640	FILTER SET	625.00	
WHITEY	SS-33V54-31CC	SOLENOID VALVE	359.00	
WILKE TECH	DATABLUE2 00	TEST SET, DATA	1,054.00	3/6/92
WILKERSON	A01AH	REFRI. DRYER	400.00	
WYLE	3	SIGNAL CONDITIONER	300.00	7/19/95
WYLE	200 FT	CABLE	300.00	9/6/95
WYLE	200 FT	CABLE	300.00	9/6/95
WYLE	NONE	LOAD BANK	500.00	7/28/95
WYS	VW60	TERMINAL, CRT, SMART	294.00	10/1/92
WYSE	900128-02	KEYBOARD	117.00	
WYSE	900128-02	KEYBOARD	117.00	
WYSE	900128-02	KEYBOARD	117.00	

MANUFACTURER	MODEL	DESCRIPTION	ACQ. COST	ACQ. DATE
WYSE	WY-60-01-01	TERMINAL, COMPUTER	317.00	
XCELITE	3CSK-BR	COAX STRIPPER	68.00	
YAMAHA	KM802	MIXER, AUDIO	275.00	
ZENITH	ZCM1490	DISPLAY	629.00	9/1/88
	B	THERMOCOUPLE	300.00	
	B	THERMOCOUPLE WIRE	300.00	
	R	THERMOCOUPLE WIRE	300.00	

**EXHIBIT D****REGISTER OF WAGE DETERMINATIONS UNDER  
THE SERVICE CONTRACT ACT**

By direction of the Secretary of Labor

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

Wage Determination No.: 94-2544

Revision No.: 14

Date of **Last** Revision: 07/02/1997William W. Gross                      Division of  
Director                                      Wage Determinations

State(s): North Carolina, Virginia

**Area:**    **NORTH CAROLINA** COUNTIES OF CAMDEN, CHOWAN, CURRITUCK, GATES,  
PASQUOTANK, PERQUIMANS,  
VIRGINIA COUNTIES OF **CHESAPEAKE**, GLOUCESTER, HAMPTON, ISLE OF WIGHT, JAMES  
CITY, MATHEWS, NEWPORT NEWS, NORFOLK, POQUOSON, PORTSMOUTH,  
SOUTHAMPTON, SUFFOLK, SURRY, VIRGINIA BEACH, WILLIAMSBURG, YORK.

\*\* Fringe Benefits Required For All Occupations Included In  
This Wage Determination Follow The Occupational Listing \*\*

**OCCUPATION CODE AND TITLE****MINIMUM HOURLY WAGE****ADMINISTRATIVE SUPPORT AND CLERICAL:**

<b>01011</b> Accounting Clerk I	<b>\$ 6.75</b>
<b>01012</b> Accounting Clerk II	<b>\$ 8.52</b>
<b>01013</b> Accounting Clerk III	<b>\$10.60</b>
<b>01014</b> Accounting Clerk IV	<b>\$11.50</b>
<b>01030</b> Court Reporter	<b>\$10.81</b>
<b>01050</b> Dispatcher, Motor Vehicle	<b>\$ 9.23</b>
<b>01060</b> Document Preparation Clerk	<b>\$ 9.29</b>
<b>01070</b> Messenger (Courier)	<b>\$ 9.01</b>
<b>01090</b> Duplicating Machine Operator	<b>\$ 9.29</b>
<b>01110</b> Film/Tape Librarian	<b>\$ 9.28</b>
<b>01115</b> General Clerk I	<b>\$ 7.34</b>
<b>01116</b> General Clerk II	<b>\$ 9.03</b>
<b>01117</b> General Clerk III	<b>\$11.23</b>
<b>01118</b> General Clerk IV	<b>\$12.55</b>
<b>01120</b> Housing Referral Assistant	<b>\$11.98</b>
<b>01131</b> Key Entry Operator I	<b>\$ 7.78</b>
<b>01132</b> Key Entry Operator II	<b>\$ 9.79</b>
<b>01191</b> Order Clerk I	<b>\$ 7.40</b>
<b>01192</b> Order Clerk II	<b>\$ 9.68</b>
<b>01261</b> Personnel Assistant (Employment) I	<b>\$ 8.85</b>
<b>01262</b> Personnel Assistant (Employment) II	<b>\$10.23</b>
<b>01263</b> Personnel Assistant (Employment) III	<b>\$10.80</b>
<b>01264</b> Personnel Assistant (Employment) IV	<b>\$12.38</b>

01270 Production Control Clerk	\$11.98
01290 Rental Clerk	\$ 9.28
01300 Scheduler, Maintenance	\$ 9.28
01311 Secretary I	\$ 9.28
01312 Secretary II	\$10.80
01313 Secretary III	\$12.38
01314 Secretary IV	\$14.46
01315 Secretary V	\$15.18
01320 Service <del>Order</del> Dispatcher	\$ 9.28
01341 Stenographer I	\$ 8.78
01342 Stenographer II	\$ 9.86
01400 Supply Technician	\$11.50
01420 Survey <del>Worker</del> (Interviewer)	\$10.80
01460 Switchboard Operator-Receptionist	\$ 8.08
01510 Test Examiner	\$10.80
01520 Test Proctor	\$10.80
01531 Travel Clerk I	\$ 6.91
01532 Travel Clerk II	\$ 7.53
01533 Travel Clerk III	\$ 8.13
01611 Word Processor I	\$10.00
01612 Word Processor II	\$11.27
01613 Word Processor III	\$12.62

**AUTOMATIC DATA PROCESSING:**

03010 Computer Data Librarian	\$ 8.26
03041 Computer Operator I	\$ 9.25
03042 Computer Operator II	\$10.70
03043 Computer Operator III	\$13.25
03044 Computer Operator IV	\$15.34
03045 Computer Operator V	\$16.31
03071 Computer <del>Programmer</del> I 1/	\$13.38
03072 Computer Programmer II 1/	\$15.15
03073 Computer <del>Programmer</del> III 1/	\$18.05
03074 Computer Programmer IV 1/	\$21.52
03101 Computer Systems Analyst I 1/	\$17.62
03102 Computer <del>Systems</del> Analyst II 1/	\$20.28
03103 Computer Systems Analyst III 1/	\$24.98
03160 Peripheral Equipment Operator	\$ 8.26

**AUTOMOTIVE SERVICE:**

05005 Automobile Body Repairer, Fiberglass	\$16.22
05010 Automotive Glass <del>Installer</del>	\$14.79
05040 Automotive <del>Worker</del>	\$14.79
05070 <del>Electrician</del> , Automotive	\$15.49
05100 Mobile Equipment <del>Service</del>	\$13.37
05130 <del>Motor</del> Equipment Metal <del>Mechanic</del>	\$16.22
05160 Motor Equipment Metal <del>Worker</del>	\$14.79
05190 <del>Motor</del> Vehicle Mechanic	\$16.22
05220 <del>Motor</del> Vehicle Mechanic Helper	\$12.61
05250 Motor Vehicle Upholstery <del>Worker</del>	\$14.07
05280 <del>Motor</del> Vehicle <del>Wrecker</del>	\$14.79
05310 Painter, Automotive	\$15.49



05340 Radiator Repair Specialist	\$14.07
05370 Tire Repairer	\$ 1337
05400 Transmission Repair Specialist	\$16.22

**FOOD PREPARATION AND SERVICE:**

07010 Baker	\$ 8.68
07041 Cook I	\$ 7.85
07042 Cook II	\$ 8.68
07070 Dishwasher	\$ 6.05
07100 Food Service Worker (Cafeteria Worker)	\$ 6.05
07130 Meat Cutter	\$ 8.68
07250 Waiter/Waitress	\$ 6.58

**FURNITURE MAINTENANCE AND REPAIR:**

09010 Electrostatic Spray Painter	\$15.49
09040 Furniture Handler	\$11.21
09070 Furniture Refinisher	\$15.49
09100 Furniture Refinisher Helper	\$12.61
09110 Furniture Repairer, Minor	\$ 14.07
09130 Upholsterer	\$ 15.49

**GENERAL SERVICES AND SUPPORT.**

11030 Cleaner, Vehicles	\$ 6.05
11060 Elevator Operator	\$ 6.05
11090 Gardener	\$ 7.75
11121 Housekeeping Aide I	\$ 5.93
11122 Housekeeping Aide II	\$ 6.49
11150 Janitor	\$ 6.05
11210 Laborer, Grounds Maintenance	\$ 6.58
11240 Maid or Houseman	\$ 5.52
11270 Pest Controller	\$ 8.25
11300 Refuse Collector	\$ 6.05
11330 Tractor Operator	\$ 7.38
11360 Window Cleaner	\$ 6.58

**HEALTH:**

12020 Dental Assistant	\$10.15
12040 Emergency Medical Technician/ Paramedic Ambulance Driver	\$ 9.13
12070 Licensed Practical Nurse I	\$ 8.00
12071 Licensed Practical Nurse II	\$ 8.98
12072 Licensed Practical Nurse III	\$10.05
12100 Medical Assistant	\$ 8.98
12130 Medical Laboratory Technician	\$ 8.98
12160 Medical Record Clerk	\$ 8.98
12190 Medical Record Technician	\$12.45
12221 Nursing Assistant I	\$ 6.52
12222 Nursing Assistant II	\$ 7.33
12223 Nursing Assistant III	\$ 8.00
12224 Nursing Assistant IV	\$ 8.98

12250 Pharmacy Technician	\$11.20
12280 Phlebotomist	\$ 8.98
12311 Registered Nurse I	\$ 12.45
12312 Registered Nurse II	\$15.23
12313 Registered Nurse II, Specialist	\$15.23
12314 Registered Nurse III	\$18.43
12315 Registered Nurse III, Anesthetist	\$18.43
12316 Registered Nurse IV	\$22.09

**INFORMATION AND ARTS :**

13002 Audiovisual Librarian	\$11.96
13011 Exhibits Specialist I	\$ 15.02
13012 Exhibits Specialist II	\$ 18.25
13013 Exhibits Specialist III	\$20.27
13041 Illustrator I	\$15.02
13042 Illustrator II	\$ 18.25
13043 Illustrator III	\$20.27
13047 Librarian	\$ 13.75
13050 Library Technician	\$11.02
13071 Photographer I	\$11.33
13072 Photographer II	\$15.02
13073 Photographer III	\$18.25
13074 Photographer IV	\$20.27
13075 Photographer V	\$24.53

**LAUNDRY, DRY CLEANING, PRESSING:**

15010 Assembler	\$ 5.49
15030 Counter Attendant	\$ 5.49
15040 Dry Cleaner	\$ 6.77
15070 Finisher, Flatwork, Machine	\$ 5.49
15090 Presser, Hand	\$ 5.49
15100 Presser, Machine, Dry Cleaning	\$ 5.49
15130 Presser, Machine, Shirts	\$ 5.49
15160 Presser, Machine, Wearing Apparel, Laundry	\$ 5.49
15190 Sewing Machine Operator	\$ 7.22
15220 Tailor	\$ 7.67
15250 Washer, Machine	\$ 5.93

**MACHINE TOOL OPERATION AND REPAIR:**

19010 Machine-tool Operator (Toolroom)	\$15.49
19040 Tool and Die Maker	\$17.84

**MATERIALS HANDLING AND PACKING:**

21010 Fuel Distribution System Operator	\$13.37
21020 Material Coordinator	\$12.19
21030 Material Expediter	\$12.19
21040 Material Handling Laborer	\$ 7.44
21050 Order Filler	\$ 8.46
21071 Forklift Operator	\$ 9.05
21080 Production Line Worker (Food Processing)	\$10.54

21100 Shipping/Receiving Clerk	\$ 8.85
21130 Shipping Packer	4 8.85
21140 Store Worker I	\$ 8.40
21150 <del>Stock</del> Clerk (Shelf Stocker, Store Worker II)	\$ 9.92
21210 <del>Tools</del> and Parts Attendant	\$ 10.95
21400 Warehouse Specialist	\$10.54

### MECHANICS AND MAINTENANCE AND REPAIR:

23010 Aircraft Mechanic	\$ 16.22
23040 Aircraft Mechanic Helper	\$ 12.61
23050 Aircraft Quality <del>Control</del> Inspector	\$ 16.94
23060 Aircraft <del>Service</del>	\$ 14.07
23070 Aircraft Worker	\$ 14.79
23100 Appliance Mechanic	\$15.49
23120 Bicycle <del>Repairer</del>	\$13.37
23125 Cable Splicer	\$ 16.22
23130 <del>Carpenter</del> , Maintenance	\$15.49
23140 Carpet Layer	\$ 14.79
23160 Electrician, Maintenance	\$ 16.22
23181 Electronics Technician, Maintenance I	\$ 13.99
23182 Electronics Technician, Maintenance II	\$ 14.31
23183 Electronics Technician, Maintenance III	\$ 15.33
23260 Fabric Worker	\$14.07
23290 Fire Alarm System Mechanic	\$ 16.22
23310 Fire Extinguisher Repairer	\$13.37
23340 Fuel Distribution System Mechanic	\$16.22
23370 General Maintenance Worker	\$ 14.79
23400 Heating, Refrigeration and Air Conditioning Mechanic	\$16.22
23430 Heavy Equipment Mechanic	\$ 16.22
23440 Heavy Equipment Operator	\$ 16.22
23460 Instrument Mechanic	\$ 16.22
23470 <del>Laborer</del>	\$ 9.68
23500 Locksmith	\$ 15.49
23530 Machinery Maintenance Mechanic	\$16.18
23550 Machinist, Maintenance	\$ 16.22
23580 Maintenance Trades Helper	\$12.61
23640 Millwright	\$ 16.22
23700 <del>Office</del> Appliance Repairer	\$15.49
23740 Painter, <del>Aircraft</del>	\$ 15.49
23760 Painter, Maintenance	\$ 15.49
23790 Pipefitter, Maintenance	\$ 16.22
23800 Plumber, Maintenance	\$ 15.49
23820 Pneudraulic <del>Systems</del> Mechanic	\$16.22
23850 <del>Rigger</del>	\$ 14.79
23870 Scale Mechanic	\$16.22
23890 Sheet-metal Worker, Maintenance	\$ 14.79
23910 Small Engine Mechanic	\$ 16.22
23930 Telecommunications Mechanic I	\$ 16.94
23940 Telecommunications Mechanic II	\$ 16.22
23950 Telephone Lineman	\$ 16.22
23960 Welder, Combination, Maintenance	\$ 16.22
23965 Well Driller	\$ 16.22
23970 Woodcraft Worker	\$ 16.22

23980 Woodworker	\$ 13.37
<b>PERSONAL NEEDS:</b>	
24570 Child Cart Attendant	\$ 6.34
24580 Child Care Center Clerk	\$ 7.91
24600 Chore Aide	\$ 4.91
24630 Homemaker	\$ 8.33
<b>PLANT AND SYSTEM OPERATION:</b>	
25010 Boiler Tender	\$ 16.22
25040 Sewage Plant Operator	\$ 15.49
25070 Stationary Engineer	\$ 16.22
25190 Ventilation Equipment Tender	\$ 12.61
25210 Water Treatment Plant Operator	\$ 15.49
<b>PROTECTIVE SERVICE:</b>	
27004 Alarm Monitor	\$ 7.21
27006 Corrections Officer	\$ 11.47
27010 Court Security Officer	\$ 11.47
27040 Detention Officer	\$ 11.47
27070 Firefighter	\$ 11.47
27101 Guard I	\$ 6.03
27102 Guard II	\$ 7.21
27130 Police Officer	\$ 12.28
<b>STEVEDORING/LONGSHOREMEN SERVICE OCCUPATIONS:</b>	
28010 Blocker and Bracer	\$ 12.33
28020 Hatch Tender	\$ 12.33
28030 Line Handler	\$ 12.33
28040 Stevedore I	\$ 11.80
28050 Stevedore II	\$ 12.96
<b>TECHNICAL:</b>	
29010 Air Traffic Control 2/Specialist, Center	\$ 23.96
29011 Air Traffic Control 2/Specialist, Station	\$ 16.53
29012 Air Traffic Control 2/Specialist, Terminal	\$ 18.20
29023 Archeological Technician I	\$ 11.43
29024 Archeological Technician II	\$ 12.85
29025 Archeological Technician III	\$ 15.87
29030 Cartographic Technician	\$ 15.47
29035 Computer Based Training Specialist/Instructor	\$ 17.62
29040 Civil Engineering Technician	\$ 15.87
29061 Drafter I	\$ 10.07
29062 Drafter II	\$ 11.33
29063 Drafter III	\$ 14.24
29064 Drafter IV	\$ 17.30
29081 Engineering Technician I	\$ 11.50
29082 Engineering Technician II	\$ 12.30
29083 Engineering Technician III	\$ 15.15

29084 Engineering Technician IV	\$18.35
29085 <del>Engineering</del> Technician V	\$21.43
29086 <del>Engineering</del> Technician VI	\$26.48
29090 <del>Environmental</del> Technician	\$15.87
29100 Flight Simulator Instructor (Pilot)	\$20.28
29150 Graphic <i>Artist</i>	\$ 17.62
29160 Instructor	\$15.23
29210 Laboratory Technician	\$11.83
<b>29240</b> Mathematical Technician	\$ 15.87
29361 <del>Paralegal/Legal</del> Assistant I	\$10.80
29362 <del>Paralegal/Legal</del> Assistant II	\$13.12
29363 <del>Paralegal/Legal</del> Assistant III	\$16.05
29364 <del>Paralegal/Legal</del> Assistant IV	\$19.42
29390 Photooptics Technician	\$ 15.87
29480 Technical Writer	\$ 15.02
29491 <del>Unexploded Ordinance Technician I</del>	\$15.23
29492 <del>Unexploded Ordinance Technician II</del>	<b>\$18.43</b>
29493 <del>Unexploded Ordinance Technician III</del>	\$22.09
29494 <del>Unexploded Safety Escort</del>	\$ 15.23
29495 <del>Unexploded Sweep Personnel</del>	\$ 15.23
29620 Weather Observer, Senior 3/	\$ 12.80
29621 Weather Observer. Combined 3/Upper Air and Surface Programs	\$11.83
29622 Weather Observer, Upper Air 3/	\$11.83

#### TRANSPORTATION/MOBILE EQUIPMENT OPERATION:

31030 Bus Driver	<b>\$ 9.42</b>
31260 Parking and Lot Attendant	\$ 6.98
31290 Shuttle Bus Driver	\$ 9.01
31300 Taxi Driver	\$ 8.50
31361 Truckdriver, Light Truck	\$ 9.01
31362 Truckdriver, Medium Truck	\$ 9.42
31363 Truckdriver, Heavy <del>Truck</del>	\$10.50
36364 Truckdriver, Tractor-Trailer	<b>\$10.50</b>

#### MISCELLANEOUS :

99020 Animal Caretaker	\$ 7.00
99030 Cashier	<b>\$ 5.93</b>
99041 Carnival Equipment Operator	<b>\$ 5.93</b>
99042 Carnival Equipment Repairer	<b>\$ 7.38</b>
99043 Carnival Worker	<b>\$ 7.75</b>
<b>99050</b> Desk Clerk	\$ 7.00
99095 Embalmer	\$17.63
99300 Lifeguard	\$ 5.36
99310 Mortician	\$17.63
<b>99350</b> Park Attendant (Aide)	<b>\$ 6.73</b>
<b>99400</b> Photofinishing Worker ( <del>Photo Lab / Dark Room Technician</del> )	<b>\$ 6.01</b>
<b>99500</b> Recreation Specialist	<b>\$13.04</b>
99510 Recycling Worker	<b>\$ 7.41</b>
<b>99610</b> Sales Clerk	\$ 5.36
99620 School Crossing Guard (Crosswalk Attendant)	<b>\$ 6.05</b>
99630 Sports Official	\$ 5.36

99658 Survey Party Chief	\$ 7.85
99659 Surveying Technician	\$ 7.50
99660 Surveying Aide	\$ 4.91
99690 Swimming Pool Operator	\$ 8.68
99720 Vending Machine Attendant	\$ 7.41
99730 Vending Machine Repairer	\$ 8.68
99740 Vending Machine Repairer Helper	\$ 7.41

**\*\* Fringe Benefits Required For All Occupations Included In This Wage Determination \*\***

**HEALTH & WELFARE:** Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of \$2.56 per hour computed on the basis of all hours worked by service employees employed on the contract.

**VACATION:** 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years; 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with predecessor contractors in the performance of similar work at the same Federal facility. (See 29 CFR, 4.173)

**HOLIDAYS:** Minimum of ten 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.) (See 29 CFR 4.174)

- 1 Docs not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See 29 CFR 4.156)
- 2 APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.
- 3 APPLICABLE TO WEATHER OBSERVERS ONLY - NIGHT PAY & SUNDAY PAY: If you work at night as a part of a regular tour of duty, you will earn a NIGHT DIFFERENTIAL and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employee (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**\*\* 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 \$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.

**\*\* NOTES APPLYING TO THIS WAGE DETERMINATION \*\***

Source of Occupational Titles and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Second Supplement, dated August 1995, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

**REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE**  
{Standard Form 1444 (SF 1444)}

Conformance Process:

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 process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. (See Section 4.6 (C)(vi)) When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), 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. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

- 3) The contracting officer reviews the proposed action and promptly submits a **report** of the action, together with the agency's recommendations and 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 Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

U.S. DEPARTMENT OF LABOR  
EMPLOYMENT STANDARDS ADMINISTRATION  
WAGE AND HOUR DIVISION  
WASHINGTON, D.C. 20301



## **EXHIBIT E - 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 Contractor 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 Policy and Guidelines (NPG) 9501.2C, "NASA Contractor Financial Management Reporting," as further defined below.

1. Due not later than the 10th operating day following the close of the Contractor's accounting period being reported.
2. Columns 7.b. and d. shall be completed using the approved time-phased financial baseline plan.
3. Columns 8.a. and b. shall be completed using estimates (forecasts) for the succeeding two months.
4. Minimum reporting categories (applicable to contract, CLIN, and Task Level 533M's):
  - a. Direct Labor Dollars
  - b. Direct Labor Hours
  - c. Overhead(s)/Salary Related Expenses
  - d. Subcontracts
  - e. Material
  - f. Other Direct Costs
  - g. Total Estimated Cost
  - h. Fee
  - i. Total Estimated Cost and Fee
5. Each 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.
6. A 533M shall also be provided for each CLIN, and for each Task Order under CUN 3.

B. Quarterly Financial Management Report--The Contractor shall submit a quarterly financial report detailed by categories specified in 1 above on NASA Form 5330 at times and in accordance with the instructions contained on the reverse side of the form. The initial 533Q shall be submitted within 10 operating days after award of the contract.

C. Financial Baseline Plan--A time-phased financial baseline plan, detailing by month how you plan to incur costs for the period, shall be submitted for the first 12-month interval of the total five year contract period. Financial baseline plans for each of the remaining 12-month intervals shall be submitted within 10 days of the anniversary of the effective date of this contract. Financial baseline plan revisions resulting from the exercise of priced option hours shall be submitted 10 days following the effective date of the option being exercised. This plan shall include the periods by the cost categories specified in Paragraph A.4 above. The total estimated cost reflected in the baseline plans must equal the contract values for the total contract period. No overrun costs will be included in the baseline plan.

The Financial Baseline Plan will be revised each time a contract modification is executed which increases or decreases the contract estimated cost for a reason other than an overrun. The Financial

Baseline Plan shall not be revised to include overrun costs. Revisions to the Financial Baseline Plan are subject to Contracting Officer approval.

D. Safety and Health Plan--Within 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, 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.
5. Hazardous Operations--
  - (a) Description of hazardous operations invoked 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. People with Disabilities--In accordance with the Americans with Disabilities Act, the plans should specify that prior to assigning a person with disabilities to this contract, the Contractor shall contact the Disability Program Manager at (804) 864-7718.
7. Other Safety Considerations--Any other safety considerations unique to your operation.

E. Semiannual Equipment Report--The Contractor shall submit a Semiannual Government-furnished Equipment Report summarizing maintenance/calibration performed on the equipment. This report shall be submitted within 10 operating days following the end of the reporting period.

F. Semiannual Accident/Injury Report--The Contractor shall submit a Semiannual Accident/Injury Report within 10 operating days after the end of each quarter.

G. Conformable Wage Rate Agreement--Within 15 operating 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 D.

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. **NASA Property in the Custody of Contractors (NASA FORM 1018)**--The Contractor shall submit the **NASA Form 1018** no later than October 31 of each year in accordance with the Section I clause entitled 'Financial Reporting of NASA Property in the Custody of Contractors.'

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

In addition to **the** instructions on the reverse of **the SF 295**, the Contractor is required to comply with Clause 1852.219-75, Small and Small Disadvantaged Subcontracting Reporting.

Pursuant to the contract clause entitled 'Small Business **and** Small Disadvantaged Subcontracting **Plan**' (**FAR 52.219-9 and 19.704(a)(5)**), you are required to submit a letter progress report on a monthly basis. The 'Monthly Progress Report for Socioeconomic Goals' shall be limited to the monthly data only (excluding cumulative data from beginning of Subcontract Plan) as required for Lines 10A, 10B, 10C, 11, and 12 **of** the Standard **Form 294**. Letter progress reports may be signed by **the** Contract Administrator or equivalent organizational level, and each report is due by the 10<sup>th</sup> calendar day of the month following the close of the reporting period.

K. **List of Instruments Due for Calibration**--Shall be submitted monthly in accordance with Statement of Work paragraph 1.5.3.

L. **Federal Contractor Veterans Employment Report**--In compliance with Clause 52.222-37, Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era, the Contractor shall submit the Federal Contractor Veterans Employment Reports (VETS-100) as required by this clause.

M. **Evidence of Insurance**--The Contractor shall submit evidence of the insurance coverage, required by the **NASA Clause 1852.228-75** in Section I entitled 'Minimum Insurance Coverage' (Le., 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.

N. **Virginia and Local Sales Taxes**--In accordance with Section H. , you are required to submit a copy of the letter sent to the Virginia Tax Commission and a copy of the subsequent response.

O. **New Technology Report**--The Contractor shall submit **all disclosures** of reportable items and subject inventions, interim reports, subcontract identification and other information as required by **the** clause at 1852.227-70, New Technology. Further, upon completion of the work under **the** contract (or subcontract, **if** any) a **final** report shall be submitted.

P. **Quality Plan** -- Within 30 calendar days after contract award, the Contractor **shall** submit a Quality Plan which addresses how the contract quality requirements will be met. The **Plan** will be reviewed and approved by the Contracting Officer, and the approved Quality Plan shall become a **part of the** contract.

Q. **Monthly Progress Report (CLIN 3 Task Orders Only)** --The Contractor **shall** provide a **narrative** description of technical **progress/work** accomplished during the month. A **summary of cost** incurred for the month **and** cumulative cost since task inception shall also be provided.

R. **Semiannual Technical Progress Report**--The Contractor shall provide a **narrative report** of the technical progress made under each CLIN during the 6-month period.

S. **Monthly Staffing Report**--The Contractor shall submit a monthly report **listing the staffing** for **that** month by contract CLIN.

II. DOCUMENT DISTRIBUTION REQUIREMENTS

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: D. H. Jones, Mail Stop 126  
 Contract NAS1-\_\_\_\_\_  
 Hampton, VA 23681-0001

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:

1. A--Contract Specialist, Mail Stop 126
2. B--Contracting Officer Technical Representative, Mail Stop 235
3. C--New Technology Representative, Mail Stop 212
4. D--Cost Accounting, Mail Stop 135
5. E--Safety Manager, Mail Stop 429
6. F--Industry Relations Office, Mail Stop 144
7. G--Programs and Resources Division, Mail Stop 104
8. H--Patent Counsel, Mail Stop 212
9. I--Industrial Property Office, Mail Stop 377
10. J--According to instructions on form
11. K--Small Business Specialist, Mail Stop 144

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, G-1
Financial Baseline Plan	A-2, B-1
Safety and Health Plan	A-1, B-1, E-1
Semiannual Equipment Report	A-1, B-3
Semiannual Accident/Injury Report	A-1, B-1, E-1
Conformable Wage Rate Agreement	A-1, B-1, F-1
Collective Bargaining Agreement	A-1, B-1, F-1

NASA Property in <del>the</del> Custody of Contractors (NASA Form 1018)	J
Subcontracting Report for Individual Contracts (Standard Form 294)	A-1, K-1
Summary Subcontractor Report (Standard Form 295)	J
Monthly Progress Report for Socioeconomic <del>Goals</del>	A-1, K-1
List of instruments Due <del>For</del> Calibration	B-2
Federal Contractor Veterans Employment Report (VETS-100)	J
Evidence of Insurance	A-1
Virginia <del>and</del> Local Sales Tax Correspondence	A-1
New Technology Report	A-1, 8-2, C-1, H-1
Quality Plan	A-2, B-2
Monthly <del>Progress</del> Report (CLIN 3 Task <del>Orders</del> only)	A-1, 8-3
Semiannual Technical Progress Report	A-1, B-3
Patent Rights Report	A-1, B-2, C-1, H-1
Requisition and <del>Invoice/Shipping</del> Document (DO Form 1149)	I-1
Response to LaRC Notice of Violation (Safety)	J
Monthly Staffing Report	A-1, B-3

**O.** 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 F

### INFORMATION MANAGEMENT SYSTEM FOR ETTD SUPPORT SERVICES

In January 1992, NASA Langley's Experimental Testing Technology Division (ETTD), formerly the Instrument Research Division (IRD), and its instrument services Contractor initiated a project to design, develop, and assemble a PC server-based Information Management System (IMS) network. The IMS tracks the Contractor effort in repairing, servicing and calibrating digital instrumentation, data acquisition systems, computers, and electronic test and measurement equipment.

The IMS is a relational database (Advanced Revelation) with many ancillary programs and files. It is the principal operating vehicle, touching many areas internally as well as externally in the daily administration of instrument support services activities. The IMS, which resides on Ethernet-based file servers using Novell Netware 3.11 as the operating system, is located at building 1230, ETTD and at the Contractor's facility (s).

The two mirror imaged networks are synchronized by maintaining communications by way of LARCNET. INFOPC, the heart of the IMS, is a highly automated work order control system that allows ETTD's technical area managers simultaneously to access, via workstations on the Local Area Network (LAN), data in real time for tracking progress and monitoring the work flow process.

The IMS is configuration controlled with anti-virus protection operating continuously and back ups to tape made daily. Daily update from NASA Equipment Management System (NEMS) are being performed to maintain congruency with that system. Data entry originates from multiple workstations throughout the networks both at Contractor(s) facility(s) and ETTD. INFOPC is Electronic Data Interchange technology (EDI), that when necessary, generates forms, shipping tags, delay notifications, calibration due notices, equipment repair cost notifications, etc. The database includes: equipment file, work order file, GFE inventory, stockroom inventory and issues, purchase order files, calibration software, engineering drawings, and software configuration control documentation. Task information, service details, and data are all electronically stored to either hard drives or optical disks (worm). All stored information is available at an individual users' workstation.

In FY 96, ETTD initiated a project to design and develop a testing technology server for the World Wide Web to serve the needs of Langley's research community. With the collaboration of the Instrument Systems and Services Division and their support service Contractor, a forms-based query facility was incorporated into the testing technology Web offerings to facilitate convenient and widespread access to information within INFOPC. With this enhancement, this information has become readily available not only to Langley's testing technology community, but to all potential users of this equipment at Langley.

**EXHIBIT G**List of **NASA Software/Hardware Documentation Standards**

Documentation for hardware and software deliverables shall conform to the NASA Software Documentation Standard Software Engineering Program, **NASA-STD-2100-91**, dated July 1991 (or later revision). This documentation shall include the following Data Item Descriptions (DIDs), with deviations in **breadth/scope** specified by each Task Order or ESR:

Product Description DIDs

- P000 Product Specification
- P100 Concept
- P200 Requirements
- ~~P300 Architectural Design~~
- P400 Detailed Design
- P410 Firmware Support Manual
- P500 Version Description
- P600 User's Guide
- P700 Operational Procedures Manual

Management Plan DIDs

- M000 Management Plan
- M100 Acquisition ~~Plan~~
- M200 Development Activities Plan
- ~~M210~~ Training Development Plan
- M300 Sustaining Engineering and Operations Activities Plan
- M400 Assurance Plan
- M500 Risk Management Plan
- M600 Configuration Management **Plan**
- M700 Delivery and **Operational** Transition Plan

Assurance and Test Procedures DIDs

- A000 Assurance and Test Procedures
- A100 Assurance Procedures
- A200 Test Procedures

Management, Engineering, and Assurance Reports DIDs

- R000 Management, Engineering, and Assurance Reports
- R001 Certification Report
- R002 Audit Report
- R003 Inspection Report
- R004 Discrepancy Report
- R005 Engineering Change Proposal
- R006 Lessons Learned Report
- R007 Performance/Status Reports
- R008 Assurance Activity Report
- R009 Test Report
- R010 Waiver/Deviation Request
- R011 Review Report

Additionally, software items **developed** under this contract shall be in a programming **language mutually** acceptable by the **Government** and the Contractor and shall include annotated source code. Hardware **deii**verables shall include original or updated drawings and schematics.

## EXHIBIT # - UST OF ACRONYMS

<u>ACRONYM</u>	<u>DEFINITION</u>
AD	Acquisition Division, NASA LaRC
ADPE	Automatic Data Processing Equipment
AGR	Authorized Government Representative
ANSI	American National Standards Institute
BER	Beyond Economical Repair
CLIN	Contract Line Item Number
COTR	Contracting Officer's Technical Representative
DAS	Data Acquisition System
DID	Data Item Description
DOD	Department of Defense
ECN	Equipment Control Number
ESP	Electronically Scanned Pressure
ESR	Engineering Service Request
ETTD	Experimental Testing Technology Division, NASA LaRC
FMD	Financial Management Division, NASA LaRC
GFE	Government Furnished Equipment
INFOPC	LaRC Metrology and Information System
IRD	Instrument Research Division, NASA LaRC (Note: Although IRD no longer exists as a Langley organization, this acronym still appears in the title of various <u>current</u> Langley documents.)
ISO	International Standards Organization
ISTP	instrument Scoring & Tracking Program
IWO	Instrument Work Order
LAN	Local Area Network
LaRC	Langley Research Center
LHB	Langley Handbook
LIDAR	Light, Distance & Ranging
LMO	Logistics Management Office, NASA LaRC
MAP'	Measurement Assurance Programs
MCN	Metrology Control Number
MCWG	Metrology & Calibration Working Group
MET/TRACK®	Metrology Tracking Software
NASA	National Aeronautics and Space Administration
NCSL	National Conference of Standards Laboratories
NEMS	NASA Equipment Management System
NHB	NASA Handbook
NIST	National Institute of Standards
NMI	NASA Management Instruction
R&I	Receipt & Inspection Report
RFP	Request For Proposal
SOW	Statement of Work
STI	Sensors, Transducers, Instruments
TAM	Task Area Monitor