Contract NAS1-97033

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

- Section 1, Rates per labor hour, page 2;
- Section 3.1–3.8, Time hours, pages 3–14;
- Section 20, Rates per labor hour, pages 25–26.

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).

NASA	CONTRACT	1. DPAS	2. PPC	3. Init. Ofc.	4. Page 1 of 83

5. Contract No.	6. Effective Date	7. Procurement Request No.	8. Vendor Code
NAS1-97033	02/01/98		

9. Issued By Code

National Aeronautics and Space Administration
Langley Research Center
9A Langley Boulevard, Bldg. 1195B, Rm 125
Hampton, VA 23681-0001

10. Contractor Name and Address

Modern Machine & Tool Co., Inc
11844 Jefferson Avenue
Newport News, Virginia 23606

Name and Telephone No. of Contract Administrator:
Naresh Patel
(757) 873-1212

11. Administered By Code

LARC Administrator: C. Tom Weih/(757) 864-3878

12. Payment Will Be Made By Code

Financial Management Division
Mail Stop 175, NASA, Langley Research Center
Hampton, VA 23681-0001

13. Submit Invoices To Code

National Aeronautics and Space Administration
Langley Research Center
(See Paragraph 12, Submission of Vouchers for Payment)

14. Accounting and Appropriations Data

PR: GH.3023; M1338; $200,000 (Complete)

15A. Contract Type Cost Plus Incentive Fee

15B. Incremental Funding [X]

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SECTION DESCRIPTION	PAGE	SECTION DESCRIPTION	PAGE
Contract Cover Page	1	Wage Determination	34
Full Text Clauses	2	Statement of Work	44
Clauses Incorporated by Reference	28		
Reporting Requirements	31		

Acknowledgment of Amendment #s 1 & 2

17. Items Awarded Under This Contract

FORCE MEASUREMENT SUPPORT SERVICES (FMSS)

THIS CONTRACT IS AWARDED UNDER THE NASA/LARC MIDRANGE PILOT TEST PROGRAM APPROVED BY THE OFFICE OF FEDERAL PROCUREMENT POLICY AUGUST 22, 1994

BVS [X] TPA Code 22

18A. Discount Terms	18B. Total Amount of Contract	
Net 30		See Paragraph 1B

19. Name and Title (Type or Print)	20. Name of Contracting Officer
BRENT G. MEADORS, PRESIDENT	ROSEMARY C. FROEHLICH
21. Signature (of person authorized to sign) Brent G. Meadors 1-26-98	22. Signature Rosemary C Froehlich 1-27-98
Contractor Date	United States of America Date

LARC P-320 (1994)

FULL-TEXT CLAUSES

1 LABOR CATEGORIES

The following is a list of labor categories and their associated fully burdened fixed hourly rates for both regular time and overtime that are applicable to the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause of this contract (see Paragraph 2 below). These labor categories and rates will be used by the Government to establish cost standards for comparison purposes in calculating the Incentive fee on a quarterly basis.

Labor Category	Fully Burdened Rate per Labor Hour	Fully Burdened Overtime Rate per Labor Hour	Fully Burdened Emergency Rate per Labor Hour
(a) Lead Design Engineer	[redacted]	[redacted]	[redacted]
(b) Lead Instrument Fabrication Technician	[redacted]	[redacted]	[redacted]
(c) Lead Strain Gage Technician	[redacted]	[redacted]	[redacted]
(d) Lead Calibration Technician	[redacted]	[redacted]	[redacted]
(e) Electro-Mechanical Design Engineer	[redacted]	[redacted]	[redacted]
(f) Instrument Fabrication Technician	[redacted]	[redacted]	[redacted]
(g) Strain Gage Instrumentation Technician	[redacted]	[redacted]	[redacted]
(h) Instrument Calibration Technician	[redacted]	[redacted]	[redacted]
(i) Engineering Aid/Draftsman	[redacted]	[redacted]	[redacted]
(j)	$	$	$
(k)	$	$	$

2. SUPPLIES AND/OR SERVICES TO BE FURNISHED

A. The Contractor shall provide all resources (except as may be expressly stated in this contract as furnished by the Government) necessary to furnish the required supplies and/or services in accordance with the Statement of Work in Paragraph 31.

B. The items listed below shall be provided by the Contractor as they are issued in written work requirements. In addition, the time and labor standards established below will be used by the Government to develop the cost metric for each item completed during each quarterly Incentive Fee period. These standards will be compared to the actual cost of each item and will be used in computing the amount of incentive fee for each particular period in accordance with the INCENTIVE FEE REPORT clause (see Paragraph 4) of this contract. The items listed below are not all inclusive of every requirement that will be performed under this contract. It is anticipated that from time to time items will be added to the list to account for recurring work. Unique requirements will be defined separately as defined in the WORK REQUIREMENTS clause (Paragraph 14).

C. For items below with more than one time and labor category, the proper designation will end with A and then B etc. For example item no. 10001 has three time and labor categories therefore, 10001A refers to <= 1 diameters, 10001B refers to 1<D<=2.5 diameters and 10001C refers to 2.5<D<=5.0 diameters. The first "time "column in the tables set forth below refers to the time in hours it takes to perform a quantity of one (1) of the associated item designated in the far left column of the table. The second "time (add)" column refers to the time in hours that it takes to perform additional quantities of the associated item designated in the far left column of the table. The cost standard for items ordered that exceed a quantity of one will be computed by taking the average of the time it takes to perform the first item with the time it takes to perform each additional item. For example, if it takes 8 hours to perform Item 10001 and 2 hours to perform each additional 10001 and the Government orders a quantity of 3, the time standard for that particular order will be 4 hours/item ((8 + 2 + 2)/3 = 4).

3.1 Force Transducer Evaluation and Hardware Design

Drafting

Category		Balance Diameter (D) inches								
		< = 1			1 < D < =2.5			2.5 < D < =5		
Item No	Drafting	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
10001	Balance detail drawing	[redacted]	[redacted]	.05a;.19e;.76i	[redacted]	[redacted]	.05a;.17e;.78i	[redacted]	[redacted]	.04a;.16e;.80i
10002	Balance cage shields	[redacted]	[redacted]	.20e;.80i	[redacted]	[redacted]	.20e;.80i	[redacted]	[redacted]	.20e;.80i
10003	Balance wiring diagram	[redacted]	[redacted]	.05a;.19e;.76i	[redacted]	[redacted]	.06a;.12e;.82i	[redacted]	[redacted]	.05a;.11e;.84i
10004	Balance adapter cable wiring diagram	[redacted]	[redacted]	.11a;.22e;.67i	[redacted]	[redacted]	.11a;.22e;.67i	[redacted]	[redacted]	.11a;.22e;.67i
10005	Balance calibration fixture	[redacted]	[redacted]	.07a;.13e;.80i	[redacted]	[redacted]	.06a;.12e;.82i	[redacted]	[redacted]	.05a;.11e;.84i
10006	Balance pitch adapter	[redacted]	[redacted]	.10a;.10e;.80i	[redacted]	[redacted]	.09a;.09e;.82i	[redacted]	[redacted]	.08a;.08e;.84i
10007	Balance pitch/roll/yaw arms	[redacted]	[redacted]	.10a;.10e;.80i	[redacted]	[redacted]	.09a;.09e;.82i	[redacted]	[redacted]	.08a;.08e;.84i
10008	Balance cooling shield	[redacted]	[redacted]	.06a;.10e;.84i	[redacted]	[redacted]	.04a;.10e;.86i	[redacted]	[redacted]	.04a;.09e;.87i
10009	Balance front-end expander hardware	[redacted]	[redacted]	.04a;.09e;.87i	[redacted]	[redacted]	.04a;.08e;.88i	[redacted]	[redacted]	.04a;.07e;.89i

Design

Category		Balance Diameter (D) inches								
		< = 1			1 < D < 2.5			2.5 < D < 5		
Item No.	Design	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
10010	Balance stress analysis report	[redacted]	[redacted]	.09a;.87e;.04i	[redacted]	[redacted]	.09a;.07e;.84i	[redacted]	[redacted]	.09a;.87e;.04i
10011	Balance stress analysis summary (Existing program)	[redacted]	[redacted]	.11a;.89e	[redacted]	[redacted]	.11a;.89e	[redacted]	[redacted]	.11a;.89i

3.2 Force Transducer Fabrication, Modification, and Repair

Mating Surface Inspection - No Rework

Category		Balance Diameter (D) inches								
		< = 1			1 < D < 2.5			2.5 < D < 5		
Item No.		Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
21001	Balance taper and keyway	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21002	Balance taper, keyway and set screw notches	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21003	Balance solid diameter front end and dowel hole	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21004	Balance expander front end and dowel hole	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21005	Sting taper and keyway	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21006	Sting taper, keyway and set screw notches	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21007	Model adapter bore and dowel pin	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b

Category		Balance Diameter (D) inches								
		< = 1			1 < D < 2.5			2.5 < D < 5		
Item No.		Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
21008	Assembly check fit of balance and sting	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b
21009	Assembly check fit of balance and model adapter	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b	[redacted]	[redacted]	.80f;.20b

Calibration Fixtures

Item No.	Category	Weight	Time	Time (add)	Labor Category
22001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.95f;.05b
22002	Balances with Normal Force capacity	101 - 500 pounds	[redacted]	[redacted]	.95f;.05b
22003	Balances with Normal Force capacity	501 - 1,000 pounds	[redacted]	[redacted]	.95f;.05b
22004	Balances with Normal Force capacity	1,001 - 3,000 pounds	[redacted]	[redacted]	.95f;.05b
22005	Balances with Normal Force capacity	3,001 - 10,000 pounds	[redacted]	[redacted]	.95f;.05b
22006	Balances with Normal Force capacity	10,001 - 20,000 pounds	[redacted]	[redacted]	.95f;.05b

Calibration Stump Adapters

Item No.	Category	Weight	Time	Time (add)	Labor Category
23001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.95f;.05b
23002	Balances with Normal Force capacity	101 - 500 pounds	[redacted]	[redacted]	.95f;.05b
23003	Balances with Normal Force capacity	501 - 1,000 pounds	[redacted]	[redacted]	.95f;.05b
23004	Balances with Normal Force capacity	1,001 - 3,000 pounds	[redacted]	[redacted]	.95f;.05b
23005	Balances with Normal Force capacity	3,001 - 10,000 pounds	[redacted]	[redacted]	.95f;.05b
23006	Balances with Normal Force capacity	10,001 - 20,000 pounds	[redacted]	[redacted]	.95f;.05b

Calibration Knife Edges

Item No.	Category	Weight	Time	Time (add)	Labor Category
24001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.95f;.05b
24002	Balances with Normal Force capacity	101 - 500 pounds	[redacted]	[redacted]	.95f;.05b
24003	Balances with Normal Force capacity	501 - 1,000 pounds	[redacted]	[redacted]	.95f;.05b
24004	Balances with Normal Force capacity	1,001 - 3,000 pounds	[redacted]	[redacted]	.95f;.05b
24005	Balances with Normal Force capacity	3,001 - 10,000 pounds	[redacted]	[redacted]	.95f;.05b
24006	Balances with Normal Force capacity	10,001 - 20,000 pounds	[redacted]	[redacted]	.95f;.05b

Calibration Pitch Adapters

Item No.	Category	Weight	Time	Time (add)	Labor Category
25001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.95f;.05b
25002	Balances with Normal Force capacity	101 - 500 pounds	[redacted]	[redacted]	.95f;.05b

25003	Balances with Normal Force capacity	501 - 1,000 pounds			.95f,.05b
25004	Balances with Normal Force capacity	1,001 - 3,000 pounds			.95f,.05b
25005	Balances with Normal Force capacity	3,001 - 10,000 pounds			.95f,.05b
25006	Balances with Normal Force capacity	10,001 - 20,000 pounds			.95f,.05b

Calibration Pitch/Roll/Yaw Arms (Based on 1 Arm)

Item No.	Category	Weight	Time	Time (add)	Labor Category
26001	Balances with Normal Force capacity	0 - 100 pounds			.95f,.05b
26002	Balances with Normal Force capacity	101 - 500 pounds			.95f,.05b
26003	Balances with Normal Force capacity	501 - 1,000 pounds			.95f,.05b
26004	Balances with Normal Force capacity	1,001 - 3,000 pounds			.95f,.05b
26005	Balances with Normal Force capacity	3,001 - 10,000 pounds			.95f,.05b
26006	Balances with Normal Force capacity	10,001 - 20,000 pounds			.95f,.05b

Calibration Weight Pans/Hangars (Based on 1 Pan/Hangar)

Item No.	Category	Weight	Time	Time (add)	Labor Category
27001	Balances with Normal Force capacity	0 - 100 pounds			f
27002	Balances with Normal Force capacity	101 - 500 pounds			f
27003	Balances with Normal Force capacity	501 - 1,000 pounds			f
27004	Balances with Normal Force capacity	1,001 - 3,000 pounds			f
27005	Balances with Normal Force capacity	3,001 - 10,000 pounds			f
27006	Balances with Normal Force capacity	10,001 - 20,000 pounds			f

Balance Front-End Expander Hardware Fabrication

		Balance Expander Diameter (D) inches								
Category		0.75			1, 1.25, 1.375			1.75, 2		
Item No.			Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
28001	Fabricate an expander			.95f,.05b			.95f,.05b			.95f,.05b
28002	Fabricate a pinion gear, and shaft assembly			.95f,.05b			.95f,.05b			.95f,.05b
28003	Fabricate a drive gear			.95f,.05b			.95f,.05b			.95f,.05b
28004	Fabricate a threaded collar			.95f,.05b			.95f,.05b			.95f,.05b
28005	Fabricate a pinion bushing			.95f,.05b			.95f,.05b			.95f,.05b
28006	Fabricate a drive gear bushing			.95f,.05b			.95f,.05b			.95f,.05b
28007	Fabricate a collar bushing			.95f,.05b			.95f,.05b			.95f,.05b
28008	Fabricate a thrust ring/keeper and retainer/sleeve			.95f,.05b			.95f,.05b			.95f,.05b
28009	Fabricate and expander guide key			.95f,.05b			.95f,.05b			.95f,.05b
28010	Expander wrench			.95f,.05b			.95f,.05b			.95f,.05b

Dowel Pin/Key Fabrication

Category		Balance Diameter (D) inches								
		< = 1			1 < D < =2.5			2.5 < D <= 5		
Item No		Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
29001	Fabricate a dowel pin to fit balance and calibration fixture			.95f;.05b			.95f;.05b			.95f;.05b
29002	Fabricate a dowel pin to fit balance and model adapter			.95f;.05b			.95f;.05b			.95f;.05b
29003	Fabricate a dowel pin to fit balance and model			.95f;.05b			.95f;.05b			.95f;.05b
29004	Fabricate a key to fit balance and calibration stand adapter			.95f;.05b			.95f;.05b			.95f;.05b
29005	Fabricate a key to fit balance and sting			.95f;.05b			.95f;.05b			.95f;.05b

Balance Box Modifications

Category		Balance Diameter (D) inches								
		< = 1			1 < D <= 2.5			2.5 < D <= 5		
Item No.		Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
21101	Fabricate cradles and modify balance box			f			f			f

3.3 Strain Gage Application

GROUP 1, Tasks for balances and transducers				
Category				
Item No.		Time	Time (add)	Labor Category
31001	Apparent strain run, no temp. comp. required; for balances up to .75" dia. and transducers rated up to 500 lb. force			.90g;.10c
31002	Apparent strain run, temp. comp., run again; for balances up to .75" dia. and transducers rated up to 500 lb. force			.90g;.10c
31003	Apparent strain run, no temp. comp. required; for balances up to 1.5" dia. and transducers rated up to 5000 lb. force			.90g;.10c
31004	Apparent strain run, temp. comp., run again; for balances up to 1.5" dia. and transducers rated up to 5000 lb. force			.90g;.10c
31005	Apparent strain run, no temp. comp. required; for balances over 1.5" dia. and transducers rated over 5000 lb. force			.90g;.10c
31006	Apparent strain run, temp. comp., run again; for balances over 1.5" dia. and transducers rated over 5000 lb. force			.90g;.10c
31007	Replace and leak check water cooling hardware on balance			.90g;.10c
31008	Remove/re-install balance from one tunnel sting adapter to another			.90g;.10c
31009	Re-moistureproof balance or transducer			.90g;.10c
31010	Replace mini-plug in sting on balance			.90g;.10c
31011	Replace thermocouple or P.R.T. on balance or transducer			.90g;.10c
31012	Replace all leadwires on balance; includes all interbridge wiring (No TC or connector)			.90g;.10c
31013	Replace all leadwires on transducer; includes all interbridge wiring (No TC or connector)			.90g;.10c
31014	Install mini-plug or other connector at end of balance or trans. leads			.90g;.10c
31015	Replace leadwire sleeving on balance or transducer (No connector)			.90g;.10c
31016	Remove connector from end of leads on balance or transducer, replace sleeving, reinstall connector			.90g;.10c
31017	Replace one bridge on balance or transducer (No TC)			.90g;.10c

GROUP 1. Tasks for balances and transducers				
	Category			
Item No		Time	Time (add)	Labor Category
31018	Repair or replace all leadwires on balance (No connector)			.90g;.10c
31019	Repair or replace all leadwires on transducer (No connector)			.90g;.10c
31020	Trouble-shoot balance or transducer at Contractor facility			.90g;.10c
31021	Trouble-shoot balance or transducer at LaRC test facility			.90g;.10c
31022	Remove all gages and gaging materials from balance or transducer			.90g;.10c
31023	Wire one bridge into single gages for trouble-shooting			.90g;.10c
31024	Fabricate mini-plug			.90g;.10c
31025	Fabricate adapter cable for conventional balance or transducer			.90g;.10c
31026	Fabricate adapter cable for cryogenic balance			.90g;.10c
31027	Perform microscopic exam of balance or transducer, check zeros and resistance to ground			.90g;.10c
31028	Perform assessment of balance or transducer using visual inspection system at LaRC			.90g;.10c
31029	Perform "wet-brush" moisture test on balance or transducer, dry, and check zeros			.90g;.10c
31030	Perform "gage matching" for replacing one bridge			.90g;.10c
31031	Replace Axial differential compensating resistors			.90g;.10c
31032	Replace teflon convection shield			.90g;.10c
31033	Conduct drift test on balance or transducer at designated temperature			.90g;.10c

GROUP 2, Tasks for Structural and Laboratory Test Articles				
	Category			
Item No.		Time	Time (add)	Labor Category
32001	Install and wire one strain gage with M-BOND 200, no basecoat			.90g;.10c
32002	Install and wire one strain gage with M-BOND 200, with basecoat			.90g;.10c
32003	Install and wire one strain gage with GA-2 or AE-10, no basecoat			.90g;.10c
32004	Install and wire one strain gage with GA-2 or AE-10, with basecoat			.90g;.10c
32005	Install and wire one strain gage with M-BOND 600 or M-BOND 610, no basecoat			.90g;.10c
32006	Install and wire one strain gage with M-BOND 600 or M-BOND 610, with basecoat			.90g;.10c
32007	Install and wire one strain gage with PLD-700			.90g;.10c
32008	Replace damaged or failed strain gage using M-BOND 200			.90g;.10c
32009	Replace damaged or failed strain gage using GA-2 or AE-10			.90g;.10c
32010	Replace damaged or failed strain gage with M-BOND 610, no new basecoat added			.90g;.10c
32011	Replace damaged or failed strain gage with M-BOND 610, adding new basecoat			.90g;.10c
32012	Replace damaged or failed strain gage with PLD-700			.90g;.10c
32013	Install or replace one thermocouple or PRT			.90g;.10c
32014	Trouble-shoot test article for erratic signals at LaRC test facility			.90g;.10c
32015	Fabricate one bridge completion unit for one strain gage			.90g;.10c
32016	Moisture-proof one gage for service in water			.90g;.10c

GROUP 2, Tasks for Structural and Laboratory Test Articles				
	Category			
Item No		Time	Time (add)	Labor Category
32017	Install and wire 2-arm rosette with M-BOND 200, no basecoat			.90g;.10c
32018	Install and wire 2-arm rosette with M-BOND 200, with basecoat			.90g;.10c
32019	Install and wire 2-arm rosette with GA-2 or AE-10, no basecoat			.90g;.10c
32020	Install and wire 2-arm rosette with GA-2 or AE-10, with basecoat			.90g;.10c
32021	Install and wire 2-arm rosette with M-BOND 600 or M-BOND 610, no basecoat			.90g;.10c
32022	Install and wire 2-arm rosette with M-BOND 600 or M-BOND 610, with basecoat			.90g;.10c
32023	Install and wire 2-arm rosette with PLD-700			.90g;.10c
32024	Replace damaged or failed 2-arm rosette using M-BOND 200			.90g;.10c
32025	Replace damaged or failed 2-arm rosette using GA-2 or AE-10			.90g;.10c
32026	Replace damaged or failed 2-arm rosette with M-BOND 610, no new basecoat added			.90g;.10c
32027	Replace damaged or failed 2-arm rosette with M-BOND 610, adding new basecoat			.90g;.10c
32028	Replace damaged or failed 2-arm rosette with PLD-700			.90g;.10c

GROUP 2, Tasks for Structural and Laboratory Test Articles				
	Category			
Item No.		Time	Time (add)	Labor Category
32029	Install and wire 3-arm rosette with M-BOND 200, no basecoat			.90g;.10c
32030	Install and wire 3-arm rosette with M-BOND 200, with basecoat			.90g;.10c
32031	Install and wire 3-arm rosette with GA-2 or AE-10, no basecoat			.90g;.10c
32032	Install and wire 3-arm rosette with GA-2 or AE-10, with basecoat			.90g;.10c
32033	Install and wire 3-arm rosette with M-BOND 600 or M-BOND 610, no basecoat			.90g;.10c
32034	Install and wire 3-arm rosette with M-BOND 600 or M-BOND 610, with basecoat			.90g;.10c
32035	Install and wire 3-arm rosette with PLD-700			.90g;.10c
32036	Replace damaged or failed 3arm rosette using M-BOND 200			.90g;.10c
32037	Replace damaged or failed 3-arm rosette using GA-2 or AE-10			.90g;.10c
32038	Replace damaged or failed 3-arm rosette with M-BOND 610, no new basecoat added			.90g;.10c
32039	Replace damaged or failed 3-arm rosette with M-BOND 610, adding new basecoat			.90g;.10c
32040	Replace damaged or failed 3-arm rosette with PLD-700			.90g;.10c

GROUP 3, Miscellaneous Maintenance Tasks for Strain Gages				
	Category			
Item No.		Time	Time (add)	Labor Category
33001	Install and wire one "hi-temp, free-filament" strain gage using ceramic cement			.90g;.10c
33002	Install and wire one "hi-temp, free-filament" strain gage using flame spray apparatus			.90g;.10c
33003	Replace damaged or failed hi-temp, strain gage using ceramic cement			.90g;.10c

33004	Replace damaged or failed hi-temp strain gage using flame spray apparatus	[redacted]	[redacted]	[redacted]	.90g;.10c
33005	Conduct an apparent strain run to a temperature of 1500°F on a laboratory -type test article				.90g;.10c
33006	Conduct an apparent strain run to a temperature of 1500°F on a structural test article				.90g;.10c
33007	Regage conventional balance up to 75" in diameter; use "new gaging" guide as per NASA TM110327				.90g;.10c
33008	Replace damaged or failed strain gage using M-BOND 200				.90g;.10c
33009	Regage conventional balance up to 1.5" in diameter; use "new gaging" guide as per NASA TM110327				.90g;.10c
33010	Regage conventional water-cooled balance; use "new gaging" guide as per NASA TM110327				.90g;.10c
33011	Regage cryogenic balance; use "new gaging" guide as per NASA TM110327				.90g;.10c
33012	Replace damaged or failed strain gage with PLD-700				.90g;.10c
33013	Install or replace one thermocouple or PRT				.90g;.10c
33014	Trouble-shoot test article for erratic signals at LaRC test facility				.90g;.10c
33015	Fabricate one bridge completion unit for one strain gage				.90g;.10c
33016	Moisture-proof one gage for service in water				.90g;.10c

3.4 Force Transducer Calibration

Listed below are the categories of calibrations and sub-categories based on magnitudes of loads. Items 41000 through 45000 are for six-component balances only. Item 46000 is for all balances including six-component types. Balances with normal force capacity greater than 750 pounds reflects the use of 2 calibration technicians.

41000 Full Room Temperature Calibration: this requires the loadings listed in Exhibit D to be applied to the balance in 25% of full scale increments in both increasing and decreasing order. This category enables all possible sensitivities and interactions (first order, second order squared and cross product terms) to be determined.

Item No.	Category	Weight	Time	Time (add)	Labor Category
41001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.10d;.90h
41002	Balances with Normal Force capacity	101 - 500 pounds			.10d;.90hr
41003	Balances with Normal Force capacity	501 - 750 pounds			.10d;.90h
41004	Balances with Normal Force capacity	751 - 1500 pounds			.10d;.90h
41005	Balances with Normal Force capacity	1,501 - 3,000 pounds			.10d;.90h
41006	Balances with Normal Force capacity	3,001 - 10,000 pounds			.10d;.90h
41007	Balances with Normal Force capacity	10,001 - 20,000 pounds			.10d;.90h

42000 Half and Full Primary Calibration at Room Temperature: this requires the loadings listed in exhibit D to be applied to the balance in 50% of full scale increments in both increasing and decreasing order. This category enables sensitivities and interactions (first order, and second order squared terms) to be determined.

Item No.	Category	Weight	Time	Time (add)	Labor Category
42001	Balances with Normal Force capacity	0 - 100 pounds	[redacted]	[redacted]	.10d;.90h

42002	Balances with Normal Force capacity	101 - 500 pounds			.10d;.90h
42003	Balances with Normal Force capacity	501 - 750 pounds			.10d;.90h
42004	Balances with Normal Force capacity	751 - 1500 pounds			.10d;.90h
42005	Balances with Normal Force capacity	1,501 - 3,000 pounds			.10d;.90h
42006	Balances with Normal Force capacity	3,001 - 10,000 pounds			.10d;.90h
42007	Balances with Normal Force capacity	10,001 - 20,000 pounds			.10d;.90h

43000 Half and Full Primary Calibration Above Room Temperature: to 180F: this is the same as 42000 except at an elevated temperature. The elevated temperature can be obtained by using strip heaters and a controller, with temperature sensors attached as needed, heating the balance to the desired levels.

Item No.	Category	Weight	Time	Time (add)	Labor Category
43001	Balances with Normal Force capacity	0 - 100 pounds			.10d;.90h
43002	Balances with Normal Force capacity	101 - 500 pounds			.10d;.90h
43003	Balances with Normal Force capacity	501 - 750 pounds			.10d;.90h
43004	Balances with Normal Force capacity	751 - 1,500 pounds			.10d;.90h
43005	Balances with Normal Force capacity	1,501 - 3,000 pounds			.10d;.90h
43006	Balances with Normal Force capacity	3,001 - 10,000 pounds			.10d;.90h
43007	Balances with Normal Force capacity	10,001 - 20,000 pounds			.10d;.90h

44000 Half and Full Primary Calibration at Cryogenic Temperature: this is the same as 42000 above except at cryogenic temperature. The cryogenic temperature is obtained by installing the balance into a specially designed cryogenic calibration fixture that has passages for flowing liquid nitrogen to cool the balance. A liquid nitrogen tank will be located near the calibration facility and the required plumbing will be in place for this procedure.

Item No.	Category	Weight	Time	Time (add)	Labor Category
44001	Balances with Normal Force capacity	0 - 100 pounds			.10d;.90h
44002	Balances with Normal Force capacity	101 - 500 pounds			.10d;.90h
44003	Balances with Normal Force capacity	501 - 750 pounds			.10d;.90h
44004	Balances with Normal Force capacity	751 - 1,500 pounds			.10d;.90h
44005	Balances with Normal Force capacity	1,501 - 3,000 pounds			.10d;.90h
44006	Balances with Normal Force capacity	3,001 - 10,000 pounds			.10d;.90h
44007	Balances with Normal Force capacity	10,001 - 20,000 pounds			.10d;.90h

45000 Balance/Balance and Sting Deflections at Room Temperature this requires deflections of the balance/balance and sting combinations to be measured for each component of the balance except axial force. The balance deflection can be measured with an inclinometer or other angle measuring device.

Item No.	Category	Weight	Time	Time (add)	Labor Category

45001	Balances with Normal Force capacity	0 - 100 pounds			10d;.90h
45002	Balances with Normal Force capacity	101 - 500 pounds			10d;.90h
45003	Balances with Normal Force capacity	501 - 750 pounds			10d;.90h
45004	Balances with Normal Force capacity	751 - 1,500 pounds			10d;.90h
45005	Balances with Normal Force capacity	1,501 - 3,000 pounds			10d;.90h
45006	Balances with Normal Force capacity	3,001 - 10,000 pounds			10d;.90h
45007	Balances with Normal Force capacity	10,001 - 20,000 pounds			10d;.90h

46000 Special Loadings: this is for loadings that are not covered or are subsets of the above categories.

Dead Weight Loads (no cables):		Room Temp. (est. 72°F)			Room Temp. to 180°F			Cryogenic Temp. (est. -250°F)		
Item No.	Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
46001	0 to 100 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46002	0 to 500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46003	501 to 750 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46004	751 to 1,500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46005	1,501 to 3,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46006	3,001 to 10,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46007	10,001 to 20,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h

Dead Weight Loads (with cables):		Room Temp. (est. 72°F)			Room Temp. to 180°F			Cryogenic Temp. (est. -250°F)		
Item No.	Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
46008	0 to 100 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46009	0 to 500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46010	501 to 750 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46011	751 to 1,500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46012	1,501 to 3,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46013	3,001 to 10,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46014	10,001 to 20,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h

Three Component Loading (no cables): see loading schedule		Room Temp. (est. 72°F)			Room Temp. to 180°F			Cryogenic Temp. (est. -250°F)		
Item No.	Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
46015	0 to 100 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46016	101 to 500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46017	501 to 750 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46018	751 to 1,500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46019	1,501 to 3,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h

46020	3,001 to 10,000 pounds	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	10d;.90h	[redacted]	[redacted]	.10d;.90h
46021	10,001 to 20,000 pounds	[redacted]	[redacted]	10d;.90h	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	10d;.90h

Three Component Loading (one cable load, Normal, Axial, Pitch): see loading schedule		Room Temp. (est. 72°F)			Room Temp. to 180°F			Cryogenic Temp. (est. -250°F)		
Item No.	Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
46022	0 to 100 pounds	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	.10d;.90h
46023	101 to 500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46024	501 to 750 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46025	751 to 1,500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46026	1,501 to 3,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46027	3,001 to 10,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46028	10,001 to 20,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h

Six Component Loading: see loading schedule		Room Temp. (est. 72°F)			Room Temp. to 180°F			Cryogenic Temp. (est. -250°F)		
Item No.	Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category	Time	Time (add)	Labor Category
46029	0 to 100 pounds	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	.10d;.90h	[redacted]	[redacted]	.10d;.90h
46030	101 to 500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46031	501 to 750 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46032	751 to 1,500 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46033	1,501 to 3,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46034	3,001 to 10,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h
46035	10,001 to 20,000 pounds			.10d;.90h			.10d;.90h			.10d;.90h

* Items 46015 through 46035 include all loadings and setups required to perform the items in these categories.

3.5 Force Transducer and Test Article Installation and Troubleshooting

Troubleshooting of balances, transducers and test articles is covered under Paragraph 3.3 Group 1, 31020, 31021 and Group 2, 32014. Listed below are other common tasks related to Section 3.5 of the SOW such as span checks (or shunt calibrations).

Item No.	Category	Time	Time (add)	Labor Category
51001	Perform span check of balance in LaRC facility	[redacted]	[redacted]	.10d;.90h
51002	Perform span check of balance in calibration facility	[redacted]	[redacted]	.10d;.90h

3.6 Instrument Repair/Calibration/Maintenance

Item No.	Category	Time	Time (add)	Labor Category
61001	Torque Wrenches and Testers 0 to 999 Foot Pounds	[redacted]	[redacted]	h
61002	Torque Wrenches and Testers 1000 to 2000 Foot Pounds	[redacted]	[redacted]	h
61003	Torque Wrenches and Testers 2001 to 5000 Foot Pounds	[redacted]	[redacted]	h

52001	Load Cells 0 to 60,000 Foot Pounds	[redacted]	[redacted]	h
52002	Load Cells 0 to 100,000 Foot Pounds			h
63001	Dynamometers 0 to 100,000 Foot Pounds			h
64001	Cable Tensiometers			h
65001	Force Gauges 0 to 500 pounds			h
66001	Scales and Balances			h
67001	Aircraft Scales 0 to 10,000 Foot Pounds			h
67002	Aircraft Scales 0 to 60,000 Foot Pounds			h
68001	Weight Certification 0 to 50 Pounds			h
68002	Weight Certification 51 pounds and UP			h

3.8 Metrology

The first list below will contain mass standards and load cells which require calibrations by NIST. Calibration/recall requirements:

Item No.	Category (Serial #, Manufacturer, Model)	Description	Calibration Due Date	Recall Interval (Months)	Standard Cost
81001	191, Troemner, Class "S"	Mass Standards	12/11/01	60	$3,295.00
81002	191, Troemner, Class "S"	Mass Standards	12/11/01	60	$4,851.00
81003	191, Troemner, Class "S"	Mass Standards	12/11/01	60	$3,331.00
81004	191, Troemner, Class "S"	Mass Standards	12/11/01	60	$3,331.00
81005	76393, Interface, 1610APW-1K	Load Cell	6/21/96	TBD	$1,517.00
81006	76395, Interface, 1620APW-25K	Load Cell	2/19/98	TBD	$1,517.00
81007	75244, Interface, 1620APW-50K	Load Cell	1/27/02	60	$1,873.00
81008	75897, Interface, 1632APW-100K	Load Cell	1/27/02	60	$1,873.00
81009	77107, Interface, 1610APW-10K	Load Cell	1/27/02	60	$1,517.00
81010	78393, Interface, 1620APW-50K	Load Cell	12/14/96	TBD	$1,873.00
81011	78454, Interface, 1620APW-25K	Load Cell	12/12/96	TBD	$1,517.00
81012	78571, Interface, 1632APW-100K	Load Cell	12/9/98	TBD	$1,873.00
81013	77989, Interface, 1610APW-5K	Load Cell	1/27/02	60	$1,517.00
81014	78274, Interface, 1610APW-2K	Load Cell	1/27/02	60	$1,517.00
81015	78522, Interface, 1610APW-1K	Load Cell	6/7/97	TBD	$1,517.00
81016	81166, Interface, 1610APW-10K	Load Cell	7/7/97	TBD	$1,517.00

The next list will contain items calibrated by the contractor or outside source utilizing the above mentioned traceable standards.

Item No.	Category (Manufacturer, Model, Quantity)	Description	Cal. Due Date	Recall Interval (Months)	Time	Time (add)	Labor Category
82001	Mettler, 9C4400, 1	Electronic Balance	9/3/98	12	[redacted]	[redacted]	h

82002	Mettler, H51, 1	Analytical Balance	9/4/98	12	[redacted]			h
82003	Mettler, PS30, 1	Electronic Balance	9/4/98	12				h
82004	A&D, EP-60KB, 1	Electronic Balance	9/3/98	12				h
82005	Voland, 600, 1	Balance	9/4/98	12				h
82006	Voland, 1015, 1	Balance	9/4/98	12				h
82007	Russel	Balance	9/4/98	12				h
82008	Troemner, 1g - 1Kg (set 625), 1	Mass Standards	3/4/98	24				h
82009	Troemner, 1mg - 100g (set 626), 1	Mass Standards	3/4/98	24				h
82010	NASA, , TS-1, TS-2, 2	Torque Cells	9/26/98	24				h
82011	Transducer, 500-100,000 lbs, 5	Load Cell	4/15/02	60				h
82012	Thwing Albert, 10,000-60,000lbs, 3	Load Cell	4/15/02	60				h
82013	Interface, 100,000 lbs, 1	Load Cell	6/29/02 -	60				h
82014	Toledo, 1/4 oz - 10 lbs, 1 set	Weights	3/5/98	24				h
82015	Troemner, 1 - 20 lbs, 1 set	Weights	3/5/98	24				h
82016	Troemner, 1 - 50 lbs, 1 set	Weights	3/5/98	24				h

The next list will contain items calibrated by the contractor or outside source utilizing traceable standards.

Item No.	Category (Manufacturer, Model, Quantity)	Description	Cal. Due Date	Recall Interval (Months)	Standard Cost
83001	Racal-Dana, 6900, 2	Multimeter	2/8/98	36	$165.00
83002	Fluke, 8800A, 4	Multimeter	1/10/98	36	$332.00
83003	HP, 6114A, 4	Power Supply	1/9/98	36	$332.00
83004	Interface, CX-0610, 1	Calibrator	1/20/98	12	$83.00
83005	HP, 6113A, 1	Power Supply	8/18/00	36	$83.00
83006	HP, 3478A, 1	Multimeter	11/15/98	36	$83.00
83007	Fluke, 75, 2	Multimeter	6/15/98	36	$166.00
83008	Keithley, 500, 1	Meg-ohmeter	11/19/98	12	$83.00
83009	Rubicon, 1352, 1	Wheastone Bridge	11/19/98	12	$83.00

3. ESTIMATED COST AND MAXIMUM FEE

The estimated cost of this contract is $1,866,700. The maximum fee of this contract is $186,670..

4 INCENTIVE FEE REPORT

The Contractor shall submit on a quarterly basis to the Contracting Officer Technical Representative (COTR) and the Contracting Officer (CO) a fee determination report. The report shall contain a contract number, the date, and the total fee for the period in accordance with the instructions below and FAR 52.216-10, INCENTIVE FEE. The total fee computed will be subjected to Government Surveillance in accordance with the INCENTIVE FEE SURVEILLENCE clause (Paragraph 5) of this contract. The Contractor shall use the LABOR CATEGORIES clause (Paragraph 1) in conjunction with the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause (Paragraph 2) and the Incentive fee chart below for determining the appropriate fee per period:

Incentive Fee Chart

Fee Category	Percentage
Maximum Fee	12
Target Fee	8.4
Minimum Fee	4.8

The rate per hour established in the LABOR CATEGORIES clause multiplied by the hours established in the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause will serve as the cost standard per item issued. The quality metrics are defined in the Statement of Work and the schedule metrics will be specified in each work requirement. Some work requirements will be designated as critical and will be awarded fee using a different scale as identified below. The quarterly report should appear as follows and be completed using the directions below.

Sample Fee Determination Report:

Work Requirement No. (1)	Item (2)	Quantity (3)	Standard Cost/Item (4)	Standard Total Cost (5)	Actual Cost (6)	Quality Metric (7)	Schedule Metric (8)

Step 1: Make a complete listing of the work requirements completed during the quarter in Column 1.

Step 2: Make a complete listing of all items corresponding to each work requirement completed during the quarter in Column 2. Items that require rework, need correction, or failed to meet the quality metric in a previous period should be annotated with the letter "R" and be listed in the report with a Standard Cost/Item (Column 4) and a Standard Total Cost (Column 5) as $0 and will not be fee bearing for the Quality and Schedule portions as defined further below.

Step 3: Specify the Quantity in Column 3.

Step 4: In Column 4 indicate the standard cost /item which is calculated by multiplying the rate per hour established in the LABOR CATEGORIES clause by the time standard established in the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause for each item completed during the period. The time standard for items ordered that exceed a quantity of one (1) will be computed by taking the average of the time standard for the first item with the time standard for each additional item. For example, if the time standard is 8 hours for the first unit of 10001 and 2 for each additional 10001 and the Government orders a quantity of 3, the time standard for that particular order will be 4 hours/item [(8 + 2 + 2) / 3 = 4]. The Standard Total Cost (Column 5) is computed by multiplying the Standard Cost/Item (column 4) by the Quantity (Column 3). If a particular item was performed in an over time situation than the over time rate per hour contained in the LABOR CATEGORIES clause will be used to calculate the cost standard for that item. The usage of overtime must be in accordance with FAR clause 52.222-2, Payment for Overtime Premiums. Items performed using over time should be marked with an asterisk (*). If a particular item was performed in an emergency situation then the emergency rate per hour contained in the LABOR CATEGORIES clause will be used to calculate the cost standard for that item. The emergency rates established in the Labor Categories clause of this contract are applicable to work requests received after 4:00 PM, where the emergency work to be performed must occur before the next scheduled shift. In addition, the emergency rates are also applicable to all work scheduled to begin after 10:00 PM where the emergency call for work is made by the Government within 24 hours of the scheduled work. An Emergency Call Report must be completed by the Contractor and signed by an Authorized Government Representative within 24 hours from the time of performance of the emergency requirement.

An Emergency Call Report must be completed by the Government within 24 hours of the scheduled work. Items performed using the emergency rates should be marked with a double asterisk (**). The actual cost should be reported in Column 6. The actual cost is computed by taking the fully burdened labor rate(s) for the individual(s) that actually performed the job and multiplying it by the actual hours required to perform the job. The fully burdened labor rates must be consistent with those reported on the Financial Management Report and monthly cost invoices.

Step 5: In Column 7, the Contractor shall indicate whether they have failed to meet the Quality metric by placing an "X" in the appropriate column. If the Contractor has performed the item more than once than the number of times that the metric was NOT met shall be indicated by placing that number in parenthesis behind the "X." For example, if the Government orders a quantity of 5 of a particular item and the Contractor failed to meet the quality metric on 3 of those items then Column 7 should be annotated as "X(3)," which indicates that a particular item failed to meet the quality standard 3 times. If the Contractor has met the metric for all quantities listed then the space should be left blank.

Step 6: In Column 8, the Contractor shall indicated whether they have failed to meet the Schedule listed in the work requirement by placing an "X." in the appropriate column. If the Contractor has met the schedule then the space should be left blank.

Step 7: The Contractor shall calculate the following:

A. The target cost of work requirements issued during the period by calculating the sum of Column 5.

B. The dollar amounts for Target Fee, Maximum Fee, and Minimum Fee. These are computed by multiplying the target cost by the negotiated rates for each of the fees contained in the Incentive Fee Chart listed above.

C. The percentage of items where the Contractor has exceeded or met the Quality Metric. This percentage is calculated by subtracting the total number of X's in Column 7 from the total number of items completed during the period and dividing the resulting number by the total number of items completed during the period times 100. For example, if there are 5 X's and 80 items completed during the period then the percentage of work requirements where the Contractor has exceeded or met the quality metric is ((80 - 5)/80) X 100 = 93.75%

D. The percentage of the work requirements where the Contractor has exceeded or met the Schedule Metric. This percentage is calculated by subtracting the total number of X's in column 8 from the total number of work requirements completed during the period and dividing the resulting number by the total number of work requirements completed during the period times 100. For example, if there are 2 X's and 10 work requirements completed during the period then the percentage of work requirements where the Contractor has exceeded or met the schedule is ((10 - 2)/10) X 100 = 80%. It is hereby noted that fee based on the schedule is determined on a work requirement basis and not an item basis.

Step 8: Compute the portion of fee for the quality metric (Quality Fee)and schedule metric (Schedule Fee) by using the percentages computed in Paragraphs C and D above and multiplying the maximum fee by the corresponding percentage indicated from the charts below. The Quality Fee and the Schedule Fee will be used in Step 10 to compute the Final Regular Fee.

A. Quality - Regular Items (50%)

Percentage of Quality Metrics	Maximum Fee
100% - 95%	100%
94% - 90%	80%
89% - 85%	60%
84% - 80%	50%

Below 80%	0%

B. Quality - Critical Items (50%)

Percentage of Quality Metrics	Maximum Fee
100% - 95%	100%
94% - 90%	80%
Below 90%	0%

C. Schedule - Regular Items (30%)

Percentage of Schedule Metrics	Maximum Fee
100% - 90%	100%
89% - 80%	90%
79% - 70%	70%
69% - 60%	50%
Below 60%	0%

D. Schedule - Critical Items (30%)

Percentage of Schedule Metrics	Maximum Fee
100% - 95%	100%
94% - 90%	80%
Below 90%	0%

Step 9: The fee associated with cost will be calculated using an 80/20 Fee adjustment formula which represents a share line where the Government's share is 80% and the Contractor's share is 20%. The calculation is as follows:

A. Compute the cost variance:
Cost Variance = Total Actual Cost (sum of column 6) - Target Cost(sum of column 5)

B. Compute the Change in Fee
Change in Fee = Contractor's Share (20%) X Cost Variance

C. Compute the Fee associated with the cost metric:
Fee for cost metric = Underrun (Actual Cost< Target Cost) then : Target Fee + Change in Fee or the Maximum Fee calculated in Step 7B, which ever is less.

Fee for cost metric = Overrun (Actual Cost> Target Cost) then : Target Fee - Change in Fee or the Minimum Fee calculated in Step 7B, which ever is greater.

Step 10: Final Regular Fee = (Schedule Fee from Step 6)X(0.30) + (Quality Fee from Step 6)X(0.50) + (Cost Fee from Step 8) X (0.20)

Step 11: Repeat Steps 1 through 10 above for the critical items completed during the period to obtain the final critical fee.

Step 12: Final Incentive Fee = Final Regular Fee + Final Critical Fee

5. INCENTIVE FEE SURVEILLENCE

The quarterly fee report will be reviewed by the Government to verify that the Contractor has correctly and accurately computed the appropriate amount of fee for the period. This review will be completed by the Government within 5 working days from receipt of the Incentive Fee Report. Accuracy (quality) will be determined by taking a random sample of at least 10 percent of all the items reported during the period to ensure that the percentages computed for quality are correct. Accuracy (schedule) will be determined by taking a random sample of at least 10 percent of all work requirements completed during the period to ensure that the percentages computed for schedule are correct. If the percentage derived by taking the random sample exceeds or equals the Contractor's percentage of items that met or exceeded the quality **and** schedule metrics, then the reported Final Incentive Fee will be paid in full. If the percentage derived by taking the random sample for quality **or** schedule is less than the Contractor's percentage of items or work requirements that met or exceeded the quality or schedule metrics, then the Final Incentive Fee will be reduced by the variance derived by taking the random sample. If the variance exceeds or equals 20 percentage points, then no fee will be awarded for the period.

The Government reserves the right to audit actual cost records to verify accuracy for computation of fee for the cost metric. Upon any such audit, the Government may adjust the fee claimed for the current period or previous periods to reflect the correct actual cost. The Contractor shall maintain accounting records that show costs for each work requirement.

6. INCENTIVE FEE (FAR 52.216-10) (MAR 1997)

(a) General. The Government shall pay the Contractor for performing this contract a fee determined as provided in this contract.

(b) Target cost and target fee. The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with Paragraph (d) below.

(1) "Target cost," as used in this contract, means the estimated cost of this contract as initially negotiated, adjusted in accordance with Paragraph (d) below.

(2) "Target fee," as used in this contract, means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with Paragraph (d) below.

(c) Withholding of payment. Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee. After payment of 85 percent of the applicable fee, the Contracting Officer may withhold further payment of 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 applicable fee or $100,000, whichever is less. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) Equitable adjustments. When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) Fee payable. (1) The fee payable under this contract shall be the target fee increased by 20 cents for every dollar that the total allowable cost is less than the target cost or decreased by 20 cents for every dollar that the total allowable cost exceeds the target cost. In no event shall the fee be greater than 12 percent or less than 4.8 percent of the target cost.

(2) The fee shall be subject to adjustment, to the extent provided in Paragraph (d) above, and within the minimum and maximum fee limitations in subparagraph (1) above, when the total allowable cost is increased or decreased as a consequence of (i) payments made under assignments or (ii) claims excepted from the release as required by Paragraph (h)(2) of the Allowable Cost and Payment clause.

(3) If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.

(4) For the purposes of fee adjustment, "total allowable cost" shall not include allowable costs arising out of -

(i) Any of the causes covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault or negligence of the Contractor or any subcontractor;

(ii) The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;

(iii) Any direct cost attributed to the Contractor's involvement in litigation as required by the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;

(iv) The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance - Liability to Third Persons clause;

(v) Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or

(vi) Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.

(5) All other allowable costs are included in "total allowable cost" for fee adjustment in accordance with this Paragraph (e), unless otherwise specifically provided in this contact.

(f) Contract modification. The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.

(g) Inconsistencies. In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause.

7. SHIPMENT OF HARDWARE

The Contractor shall notify the CO, COTR, or Authorized Government Representative (AGR) prior to the shipment of any hardware. The Contractor shall preserve, pack and mark for shipment all hardware deliverables under this contract in accordance with good commercial practices and adequate to ensure both acceptance by common carrier and safe transportation at the most economical rate(s). The Contractor shall ensure that all items being shipped are traceable in the event that any hardware should become lost during shipment. The Contractor shall identify lifting points or areas on the hardware that are sensitive to damage and shall specify any special handling requirements. The majority of shipments will be between the Contractor and LaRC and should be delivered to the balance check-in area (Bldg. 1230, Room 224). All logistic records shall be maintained by the Contractor.

8. PLACE OF DELIVERY (LaRC 52.212-92) (OCT 1992)

Delivery shall be f.o.b. destination as specified in specific work requirements.

9. PERIOD OF PERFORMANCE

The period of performance for issuance of work requirements is 12 months from the effective date of this contract.

10. PLACE OF PERFORMANCE (LaRC 52.212-98) (OCT 1992)

The place of performance shall be the Contractor's facility, NASA Langley Research Center, Hampton, Virginia, the Contractor's facility and other sites as may be designated by Work Requirements.

11. 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 $180,000. This allotment is for Force Measurement Support Services and covers the following estimated period of performance: February 1, 1998 through March 16, 1998.

(b) An additional amount of $20,000 is obligated under this contract for payment of fee.

12. SUBMISSION OF VOUCHERS FOR PAYMENT(FAR 1852.216-87) (OCT 1997)

(a) Public vouchers for payment of costs shall include a reference to this contract NAS1-97033 and be forwarded to:

Defense Contract Audit Agency
1919 Commerce Drive, Suite 180
Hampton, Va 23666-4246

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.

(4) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

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

Contracting Officer, MS 126
NASA LaRC
Hampton, VA 23681-0001

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

(d) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

13. COST AND FEE PAYMENTS

Payments of cost will be made in monthly installments. Payments of fee will be made in quarterly installments.

14. WORK REQUIREMENTS

A. Specific work requirements will be issued by the Contracting Officer (CO), the Contracting Officer's Technical Representative (COTR) or the Authorized Government Representative and will contain the following information:

1. Work requirement number and date.

2. Items to be performed in accordance with the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause. Items that the Government considers to be critical will be issued on a separate work requirement and annotated with the letter "C" in parenthesis following the item number, i.e. 10001(C).

3. Required completion date and/or delivery schedule.

4. Appropriate special instructions or information.

5. The requirements of any unique work not listed in the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause will be issued in accordance with the two cases listed below. All unique work requirements will begin with the letter "U."

CASE 1 - Defined Requirements

In the case where all the requirements are well defined and known up front, the requirements (including quality and schedule metrics) will be provided to the Contractor 7 working days prior to the commencement of work. The Contractor shall prepare and submit a plan to the Government on its approach to completing the effort along with a cost proposal within 5 working days of receiving the requirement. Prior to the commencement of work the CO and COTR will review the Contractor's plan and the cost estimate to complete the effort. The CO, COTR or the Authorized Government Representative will negotiate any necessary changes with the Contractor and issue the work requirement. The final cost estimate with all the negotiated changes will be specified in the final work requirement and will serve as the cost standard for that work. The quality and schedule metrics will be included in the work requirement. Unique work requirements that the Government considers to be critical will be annotated with the letter "C" in parenthesis following the ~~work requirement control~~ number. Under Case 1, work shall not commence until the CO, COTR or the Authorized Government Representative signs and issues the work requirement.

CASE 2 - Undefined Requirements

In the case where there is a unique requirement that is not well defined, the Government will provide the Contractor with the basic requirements and allow for an assessment period based on the complexity of the requirement. Upon completion of this assessment, the Contractor shall prepare and submit a plan to the Government on its approach to completing the effort along with a cost proposal within 2 working days. The CO and COTR will review the Contractor's plan and the cost estimate to complete the effort. The CO, COTR or the Authorized Government Representative will negotiate any necessary changes with the Contractor and issue the work requirement (including quality and schedule metrics). The

final cost estimate with all the negotiated changes will be specified in the final work requirement and will serve as the cost standard for that work. Unique work requirements that the Government considers to be critical will be annotated with the letter "C" in parenthesis following the ~~work requirement control~~ item number. Under Case 2, the Government may authorize the Contractor to commence work prior to definitization of the technical, schedule, and cost requirements.

B. The Contracting Officer may modify work requirements in the same manner they are issued.

C. A copy of each work requirement shall be furnished to the Contractor. To acknowledge receipt, the Contractor shall sign the "Acknowledgment" enclosed and return it to the COTR. If the Contractor anticipates the usage of overtime or has a discrepancy with the established schedule it shall be noted on the signed Acknowledgment. The usage of overtime must be in accordance with FAR clause 52.222-2, Payment for Overtime Premiums

15. EMERGENCY WORK REQUIREMENTS

During emergency situations, the Contractor shall accept verbal orders from the Contracting Officer or his/her authorized representative. Written work requirements for these emergencies shall be provided to the Contractor within three working days after verbal authorization.

16. 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.

17. OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LaRC 52.212-104) (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.

18. INSTALLATION PROVIDED EQUIPMENT AND GOVERNMENT FURNISHED EQUIPMENT

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

In keeping with the policy set forth in FAR 45.302-1, the Government will not provide NEW "facilities."

However, the Government will provide facilities as listed in Exhibit B for use on-site at Langley Research Center and EXISTING facilities as listed in Exhibit C for use at the Contractors facility. Any of these Exhibit C facilities that reach the end of their useful life during the contract period, or which are beyond economical repair, will not be replaced by the Government, nor will the Government provide funds for the purchase of new facilities (including equipment) to the Contractor. If the facilities are still needed for contract performance, they must be replaced by the Contractor. Such replacement shall be made with Contractor-owned facilities. Special test equipment contained in Exhibit C and noted with an asterisk will be provided by the Government throughout the entire period of performance of this contract.

In accordance with the Installation Provided Government Property clause of this contract, the Contractor is authorized use of office space, work area space, communication hardware storage areas, and utilities to the extent that they are available, while on-site at the NASA Installation. The Contractor shall use Government telephones for official purposes only.

19. 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

Employee Class	Monetary Wage
Supervisory Mechanical Engineer	$20.92
Mechanical Engineer	$20.92
Engineer Technician	$15.89
Electro-Mechanical Engineer	$17.45
Engineering Technician	$14.43
Engineering Draftsman	$11.79
Strain Gage Technician	$13.06
Calibration Technician	$13.06

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 0.8% 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.

20. OPTIONS

Priced Options/Extended Term

A. Pursuant to the Section I clause entitled "Option to Extend the Term of the Contract (MAR 1989)," the Contractor hereby grants to the Government options to extend the term of the contract for four 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 rates specified below will apply for each option period for computing the Incentive Fee.

Item	First Option Period	Second Option Period	Third Option Period	Fourth Option Period
Period of Performance	12 months	12 months	12 months	12 months
Estimated Cost	$ 1,903,800	$ 1,942,200	$ 1,981,900	$ 2,022,900
Maximum Fee	$ 190,380	$ 194,220	$198,190	$ 202,290

Option Period 1:

A. The following is a list of labor categories and their associated fully burdened fixed hourly rates for both regular time and overtime that are applicable to the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause of this contract. These labor categories and rates will be used by the Government to establish cost standards for calculating the Incentive fee on a quarterly basis for **Option Period 1**.

Labor Category	Fully Burdened Rate per Labor Hour	Fully Burdened Overtime Rate per Labor Hour	Fully Burdened Emergency Rate per Labor Hour
(a) Lead Design Engineer			
(b) Lead Instrument Fabrication Technician			
(c) Lead Strain Gage Technician			
(d) Lead Calibration Technician			
(e) Electro-Mechanical Design Engineer			
(f) Instrument Fabrication Technician			
(g) Strain Gage Instrumentation Technician			
(h) Instrument Calibration Technician			
(i) Engineering Aid/Draftsman			
(j)			
(k)			
(l)			

Option Period 2:

The following is a list of labor categories and their associated fully burdened fixed hourly rates for both regular time and overtime that are applicable to the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause of this contract. These labor categories and rates will be used by the Government to establish cost standards for calculating the Incentive fee on a quarterly basis for **Option Period 2**.

Labor Category	Fully Burdened Rate per Labor Hour	Fully Burdened Overtime Rate per Labor Hour	Fully Burdened Emergency Rate per Labor Hour
(a) Lead Design Engineer			
(b) Lead Instrument Fabrication Technician			
(c) Lead Strain Gage Technician			
(d) Lead Calibration Technician			
(e) Electro-Mechanical Design Engineer			
(f) Instrument Fabrication Technician			
(g) Strain Gage Instrumentation Technician			
(h) Instrument Calibration Technician			
(i) Engineering Aid/Draftsman			
(j)			
(k)			
(l)			

Option Period 3:

The following is a list of labor categories and their associated fully burdened fixed hourly rates for both regular time and overtime that are applicable to the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause of this contract. These labor categories and rates will be used by the Government to establish cost standards for calculating the Incentive fee on a quarterly basis for **Option Period 3**.

Labor Category	Fully Burdened Rate per Labor Hour	Fully Burdened Overtime Rate per Labor Hour	Fully Burdened Emergency Rate per Labor Hour
(a) Lead Design Engineer	[redacted]	[redacted]	[redacted]
(b) Lead Instrument Fabrication Technician			
(c) Lead Strain Gage Technician			
(d) Lead Calibration Technician			
(e) Electro-Mechanical Design Engineer			
(f) Instrument Fabrication Technician			
(g) Strain Gage Instrumentation Technician			
(h) Instrument Calibration Technician			
(i) Engineering Aid/Draftsman			
(j)			
(k)			
(l)			

Option Period 4:

The following is a list of labor categories and their associated fully burdened fixed hourly rates for both regular time and overtime that are applicable to the SUPPLIES AND/OR SERVICES TO BE FURNISHED clause of this contract. These labor categories and rates will be used by the Government to establish cost standards for calculating the Incentive fee on a quarterly basis for **Option Period 4**.

Labor Category	Fully Burdened Rate per Labor Hour	Fully Burdened Overtime Rate per Labor Hour	Fully Burdened Emergency Rate per Labor Hour
(a) Lead Design Engineer	[redacted]	[redacted]	[redacted]
(b) Lead Instrument Fabrication Technician			
(c) Lead Strain Gage Technician			
(d) Lead Calibration Technician			
(e) Electro-Mechanical Design Engineer			
(f) Instrument Fabrication Technician			
(g) Strain Gage Instrumentation Technician			
(h) Instrument Calibration Technician			
(i) Engineering Aid/Draftsman			
(j)			
(k)			
(l)			

21. CONTRACTOR EMPLOYEE'S 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 DOD 5220.22M, "Department of Defense Industrial Security Manual for the Safeguarding of Classified Information (ISM)". 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.

22. SECURITY PROGRAM/FOREIGN NATIONAL EMPLOYEE INVESTIGATIVE REQUIREMENTS (LaRC 52.204-91) (AUG 1997)

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, Office of Space Science and Aeronautics (Code IS). 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 450, 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.

23. WORK SCHEDULE--ON-SITE ONLY (LaRC 52.212-103) (JUL 1991)

In order that the necessary and proper inspection of the Contractor's work may be effectively accomplished, and to assure the availability of required Government interface, the Contractor shall schedule work performance hereunder so as to be compatible with the established workweek and hours of work observed by the Government organization having cognizance over the work being performed, which is 7:30 a.m. to 4:00 p.m., Monday through Friday.

24. INCORPORATION OF THE REPRESENTATIONS AND CERTIFICATIONS BY REFERENCE

Pursuant to FAR 15.406-1(b), the completed Representations and Certifications dated 9-22-97 are hereby incorporated by reference.

25. EVIDENCE OF INSURANCE

The Contractor shall submit evidence of the insurance coverage, required by the NASA Clause 18-52.228-75 in Section I entitled "Minimum Insurance Coverage" (i.e., a Certificate of Insurance or other confirmation), to the Contracting Officer at contract award. 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.

26. NASA QUALITY MANAGEMENT SYSTEM POLICY (ISO 9000)

No later than 18 months after award of the contract, the Contractor shall be certified by a third-party registrar as compliant with the requirements of the current version of the International Organization of Standardization's "ISO 9001" Standard Series or the American National Standards Institute/American Society for Quality Control's "Q9001 Series" and associated documentation. The Contractor shall maintain its registration during the contract term.

27. 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 nonapplicable taxes or taxes where an exemption exists, but shall pay applicable taxes that are reimbursable pursuant to FAR 31.205-41, Taxes. Even though title to property purchased under this contract may pass to the Government and the price is reimbursable under contract cost principles, such transactions do not in themselves provide tax immunity to the Contractor. Therefore, within 30 days after the effective date of this contract, the Contractor shall request from the Virginia State Tax Commission a

ruling on any tax exemptions that may be applicable to purchases made under this contract. The Contractor shall provide all facts relevant to the situation and shall pursue an interpretation of the law that is most favorable to both the Contractor and the Government.

28. CLAUSES INCORPORATED BY REFERENCE (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.

NOTICE: The following clauses are hereby incorporated by reference.

A. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

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)
52.203-8	Cancellation, Rescission and Recovery of Funds for Illegal or Improper Activity (Jan 1997)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (Jan 1997)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (Jun 1997)
52.204-2	Security Requirements (Aug 1996)
52.204-4	Printing/Copying Double-Sided or Recycled Paper (Jun 1996)
52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Jul 1995)
52.211-5	Material Requirements (Oct 1997)
52.211-15	Defense Priority and Allocation Requirements (Sep 1990)
52.215-2	Audit and Records -- Negotiation (Aug 1996)
52.215-8	Order of Precedence (Oct 1997)
52.215-10	Price Reduction for Defective Cost or Pricing Data (Oct 1997)
52.215-12	Subcontractor Cost or Pricing Data (Oct 1997)
52.215-14	Integrity of Unit Prices (Oct 1997)
52.215-15	Termination of Defined Benefit Pension Plans (Oct 1997)
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits Other Than Pensions (Oct 1997)
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data - Modifications (Oct 1997) Alternate I (Oct 1997)
52.216-7	Allowable Cost and Payment (Mar 1997)
52.217-8	Option to Extend Services (Aug 1989)
52.219-6	Notice of Total Small Business Set-Aside (Jul 1996)
52.219-8	Utilization of Small, Small Disadvantaged and Women-Owned Small Business Concerns (Jun 1997)
52.219-14	Limitations on Subcontracting (Dec 1996)
52.222-1	Notice to the Government of Labor Disputes (Feb 1997)
52.222-2	Payment for Overtime Premiums (Jul 1990) [Insert [$" zero"] in Paragraph (a)]
52.222-3	Convict Labor (Aug 1996)
52.222-26	Equal Opportunity (Apr 1984)
52.222-28	Equal Opportunity Preaward Clearance of Subcontracts (Apr 1984)
52.222-35	Affirmative Action for Special Disabled and Vietnam Era Veterans (Apr 1984)
52.222-36	Affirmative Action for Handicapped Workers (Apr 1984)
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (Jan 1988)
52.222-41	Service Contract Act of 1965, As Amended (May 1989)
52.222-47	Service Contract Act (SCA) Minimum Wages and Fringe Benefits (May 1989) [Modern Machine and Tool, Company, Inc.]

52.222-48	Exemption from Application of Service Contract Act Provisions for Contracts for Maintenance, Calibration, and/or Repair of Certain Information Technology, Scientific and Medical and/or Office and Business Equipment - Contract Certification (Aug 1996)
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)
52.223-14	Toxic Chemical Release Reporting (Oct 1996)
52.225-11	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)
52.227-14	Rights in Data - General (Jun 1987)—Alternate III (Jun 1987)—as modified by NASA FAR Supplement 1852.227-14
52.228-7	Insurance – Liability to Third Persons (Mar 1996)
52.232-9	Limitation on Withholding Payments (Apr 1984)
52.232-17	Interest (Jun 1996)
52.232-18	Availability of Funds (Apr 1984)
52.232-22	Limitation of Funds (Apr 1984)
52.232-23	Assignment of Claims (Jan 1986)
52.232-25	Prompt Payment (Jun 1997) [Insert 30th day in subparagraph (b)(2)]
52.232-33	Mandatory Information for Electronic Funds Transfer Payment (Aug 1996)
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)
52.239-1	Privacy or Security Safeguards (Aug 1996)
52.242-1	Notice of Intent to Disallow Costs (Apr 1984)
52.242-3	Penalties for an Unallowable Cost (Oct 1995)
52.242-4	Certification of Final Indirect Cost (Jan 1997)
52.242-13	Bankruptcy (Jul 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) (Oct 1997) – Alternate I (Aug 1996)
52.244-5	Competition in Subcontracting (Dec 1996)
52.244-6	Subcontracts for Commercial Items and Commercial Components (Oct 1995)
52.245-1	Property Records (Apr 1984)
52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (Jan 1986) (Deviation) (Jul 1995)
52.246-5	Inspection of Services–Cost-Reimbursement (Apr 1984)
52.246-11	Higher-Level Contract Quality Requirement (Government Specification) (Apr 1984)

1. Balance Calibration at NASA LaRC (Video)
2. The NASA LaRC Recommended Strain Gage Application Procedures for: Langley Balances, Transducers, Certain Composite Materials and Alloys, High-Temperature Articles, and Selected Non-Typical or Unique Materials or Test Conditions
3. Standardized Model Support System Assembly Procedure
4. NASA-Langley Research Center Calibration and Evaluation of Multi-component Strain Gage Balances, March 1964.
5. National Bureau of Standards Handbook H-94, Examination of Weighing Equipment .
6. Recommended Strain Gage Application Procedures for Various LaRC Balances and Test Articles, Technical Memorandum 110327
7. NASA-Langley Research Center Wind Tunnel Model Systems Criteria Manual (LHB 1710.15), May 1992.
8. Engineering Drawing System (LHB 7320.1) October 1986.
9. Langley Research Metrology Program (LHB 5330.9) 1986.

10. NASA-Langley Research Center - Safety Clearance Procedure (Red Tag) (LHB 1710.10)

52.246-25	Limitation of Liability -- Services (Feb 1997)
52.247-1	Commercial Bill of Lading Notations (Apr 1984)
52.249-6	Termination (Cost-Reimbursement) (Sep 1996)
52.249-14	Excusable Delays (Apr 1984)
52.251-1	Government Supply Sources (Apr 1984)
52.252-6	Authorized Deviations in Clauses (Apr 1984)
52.253-1	Computer Generated Forms (Jan 1991)

B. NASA/FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

1852.204-75	Security Classification Requirements (Sep 1989) [SECRET, Exhibit A]
1852.204-76	Security Requirements for Unclassified Automated Information Resources (Sep 1993) [to all limited or controlled areas, systems, programs and data. 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]
1852.208-81	Restrictions on Printing and Duplicating (Aug 1993)
1852.215-84	Ombudsman (Oct 1996) [LaRC: Belinda Adams, direct inquires to Sandra S. Ray, (757 864-2428) NASA: Deputy Administrator for Procurement, (202) 358-2090]
1852.216-80	Task Ordering Procedure (Oct 1996) [See Paragraph 14, Work Requirements, of Cohtract Schedule.]
1852.216-89	Assignment and Release Forms (Jul 1997)
1852.219-74	Use of Rural Area Small Businesses (Sep 1990)
1852.219-76	NASA 8 Percent Goal (Jul 1997)
1852.223-70	Safety and Health (Mar 1997)
1852.223-71	Frequency Authorization (Dec 1988)
1852.223-74	Drug and Alcohol-Free Workforce (Mar 1996)
1852.228-75	Minimum Insurance Coverage (Oct 1988)
1852.237-70	Emergency Evacuation Procedures (Dec 1988)
1852.237-71	Pension Portability (Jan 1997)
1852.242-72	Observance of Legal Holidays (Aug 1992) Alternate I (Sept 1989) Alternate II (Sept 89)
1852.242-73	NASA Contractor Financial Management Reporting (Jul 1997)
1852.243-71	Shared Savings (Mar 1997)
1852.245-70	Contractor Requests for Government Owned Equipment (Jul 1997)
1852.245-71	Installation-Accountable Government Property (Jul 1997) [Onsite]
1852.245-73	Financial Reporting of NASA Property in the Custody of Contractors (Sep 1996){Insert in Paragraph (b) "Attn: Industrial Property Office, NASA Langley Research Center, Mail Stop 377, Hampton, VA 23681-0001"]
1852.245-74	Contractor Accountable On-Site Government Property (Mar 1989)
1852.246-71	Government Contract Quality Assurance Functions (Oct 1988)

Item No.	Function
1.	Hardware Inspection(s)
2.	Strain Gage Inspection(s)
3.	Calibration Data Review(s)
4.	Design Review(s)

1852.246-72 Material Inspection and Receiving Report (Jun 1995)

29. REPORTING REQUIREMENTS

A. Financial Management Reports--The Contractor shall comply with the 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 NPG 9501.2C, NASA Contractor Financial Management Reporting as further definitized 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 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:

Direct Labor Hours:
Straight Time
Overtime
Emergency Time

Direct Labor Costs:
Straight Time
Overtime
Emergency Time

Overhead:
Direct Cost
Overtime Premium
EmergencyTime Premium
Materials
Travel
G & A
Fee

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

B. 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 involved in contract performance.

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

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

6. 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.

C. Weekly Progress Report--The Contractor shall submit a weekly progress report summarizing work progress, labor hours by category, and material expenditures. This report shall be submitted within 7 days following the end of the reporting period.

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

E. Conformable Wage Rate Agreement--Within 15 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 Paragraph 30.

F. Report of Government-Owned/Contractor Held Property (NASA FORM 1018)--The Contractor shall submit the NASA Form 1018 no later than July 31 of each year in accordance with the Paragraph 28 clause entitled "Financial Reporting of Government-owned/Contractor-held Property."

G. 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.

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

I. Virginia and Local Sales Taxes--In accordance with LaRC Clause 52.229-92, you are required to submit a copy of the letter sent to the Virginia Tax Commission and a copy of the subsequent response.

J. Reports Distribution

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: C. Tom Weih, Mail Stop 126
Contract NAS1-97033
Hampton, VA 23681-0001

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

A--Contract Specialist, Mail Stop 126

B--Contracting Officer Technical Representative, Mail Stop 235

C--Safety Manager, Mail Stop 429

D--Industry Relations Office, Mail Stop 144

E--Industrial Property Office, Mail Stop 377

F--According to instructions on form

G--Cost Accounting, Mail Stop 135

H--Program and Resources Division, Mail Stop 104

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:

DOCUMENT	LETTER CODE AND DISTRIBUTION
Financial Management Reports	A-1, B-1, G-1, H-1
Safety and Health Plan	A-1, B-1, C-1
Weekly Progress Report	A-1, B-3
Quarterly Accident/Injury Report	A-1, B-1, C-1
Conformable Wage Rate Agreement	A-1, B-1, D-1
Report of Government-Owned/Contractor Held Property (NASA Form 1018)	A-1, B-1, E-4
Report on NASA Subcontracts	F-1
Federal Contractor Veterans Employment Report (VETS-100)	F-1
Evidence of Insurance	A-1
Virginia and Local Sales Taxes Letter	A-1

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 to the delegated Administrative Contracting Officer of the cognizant DoD (or other agency) contract administrative services component.

30. WAGE DETERMINATION

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

Alan L. Moss Division of Wage Determinations
Director

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON, D.C. 20210
Wage Determination No.: 94-2544
Revision No.: 12
Date of Last Revision: 02/03/1997

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:	
01011 Accounting Clerk I	$ 6.75
01012 Accounting Clerk II	$ 8.52
01013 Accounting Clerk III	$10.60
01014 Accounting Clerk IV	$11.50
01030 Court Reporter	$10.81
01050 Dispatcher, Motor Vehicle	$ 9.23
01060 Document Preparation Clerk	$ 9.29
01090 Duplicating Machine Operator	$ 9.29
01110 Film/Tape Librarian	$ 9.28
01115 General Clerk I	$ 7.34
01116 General Clerk II	$ 9.03
01117 General Clerk III	$11.23
01118 General Clerk IV	$12.55
01120 Housing Referral Assistant	$11.98
01131 Key Entry Operator I	$ 7.78
01132 Key Entry Operator II	$ 9.79
01191 Order Clerk I	$ 7.40
01192 Order Clerk II	$ 9.68
01220 Order Filler	$ 8.46
01261 Personnel Assistant (Employment) I	$ 8.85
01262 Personnel Assistant (Employment) II	$10.23
01263 Personnel Assistant (Employment) III	$10.80
01264 Personnel Assistant (Employment) IV	$12.38
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 Order Dispatcher	$ 9.28
01341 Stenographer I	$ 8.78
01342 Stenographer II	$ 9.86
01400 Supply Technician	$11.50
01420 Survey Worker(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	$ 7.63
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 Programmer I 1/	$13.38
03072 Computer Programmer II 1/	$15.15
03073 Computer Programmer III 1/	$18.05
03074 Computer Programmer IV 1/	$21.52
03101 Computer Systems Analyst I 1/	$17.62
03102 Computer Systems 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 Installer	$14.79
05040 Automotive Worker	$14.79
05070 Electrician, Automotive	$15.49
05100 Mobile Equipment Servicer	$13.37
05130 Motor Equipment Metal Mechanic	$16.22
05160 Motor Equipment Metal Worker	$14.79
05190 Motor Vehicle Mechanic	$16.22
05220 Motor Vehicle Mechanic Helper	$12.61
05250 Motor Vehicle Upholstery Worker	$14.07
05280 Motor Vehicle Wrecker	$14.79
05310 Painter, Automotive	$15.49
05340 Radiator Repair Specialist	$14.07
05370 Tire Repairer	$13.37
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
11180 Laborer .	$ 9.68
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:

12010 Ambulance Driver	$ 9.13
12040 Emergency Medical Technician	$ 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
21071 Forklift Operator	$ 9.05
21080 Production Line Worker (Food Processing)	$10.54
21100 Shipping/Receiving Clerk	$ 8.85
21130 Shipping Packer	$ 8.85
21140 Store Worker I	$ 8.40
21150 Stock Clerk (Shelf Stocker, Store Worker II)	$ 9.92
21210 Tools 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 Control Inspector	$16.94
23060 Aircraft Servicer	$14.07
23070 Aircraft Worker	$14.79
23100 Appliance Mechanic	$15.49
23120 Bicycle Repairer	$13.37
23125 Cable Splicer	$16.22
23130 Carpenter, 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
23460 Instrument Mechanic	$16.22
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 Office Appliance Repairer	$15.49
23740 Painter, Aircraft	$15.49
23760 Painter, Maintenance	$15.49
23790 Pipefitter, Maintenance	$16.22
23800 Plumber, Maintenance	$15.49
23820 Pneudraulic Systems Mechanic	$16.22
23850 Rigger	$16.22
23870 Scale Mechanic	$14.79
23890 Sheet-metal Worker, Maintenance	$16.22
23910 Small Engine Mechanic	$14.79
23930 Telecommunications Mechanic I	$16.22
23940 Telecommunications Mechanic II	$16.94
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

PERSONAL NEEDS:

24570 Child Care Attendant	$ 6.34
24600 Chore Aide	$ 4.91
24630 Homemaker	$ 8.33

PLANT AND SYSTEM OPERATION:

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

PROTECTIVE SERVICE:

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

TECHNICAL:

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
29020 Archeological Technician	$15.87
29030 Cartographic Technician	$15.87
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
29070 Embalmer	$17.63
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 Engineering Technician V	$21.43
29086 Engineering Technician VI	$26.48
29090 Environmental Technician	$15.87
29100 Flight Simulator Instructor (Pilot)	$20.28
29150 Graphic Artist	$17.62
29210 Laboratory Technician	$11.83
29240 Mathematical Technician	$15.87
29330 Mortician	$17.63
29361 Paralegal/Legal Assistant I	$10.80
29362 Paralegal/Legal Assistant II	$13.12
29363 Paralegal/Legal Assistant III	$16.05
29364 Paralegal/Legal Assistant IV	$19.42
29390 Photooptics Technician	$15.87
29480 Technical Writer	$15.02
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	$ 9.42
31100 Driver Messenger	$ 9,01
31200 Heavy Equipment Operator	$16.22
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 Truck	$10.50
36364 Truckdriver, Tractor-Trailer	$10.50

MISCELLANEOUS :

99020 Animal Caretaker	$ 7.00
99030 Cashier	$ 5.93
99040 Child Care Center Clerk	$ 7.91
99050 Desk Clerk	$ 7.00
99260 Instructor	$15.23
99300 Lifeguard	$ 5.36
99350 Park Attendant (Aide)	$ 6.73
99400 Photofinishing Worker (Photo Lab / Dark Room Technician)	$ 6.01
99500 Recreation Specialist	$13.04
99510 Recycling Worker	$ 7.41
99610 Sales Clerk	$ 5.36
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, 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. May include such benefits as severance pay.

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 Does 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 First Supplement December 1993, 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.

31. STATEMENT OF WORK

1.0 Introduction

The goal of this program is to provide high quality force and strain instrumentation for Langley Research Center's Aerospace Research and Development programs by maintaining existing force and strain transducers and test articles.

2.0 Scope of Work

The effort to be provided under this statement of work will support daily operations for Langley Research Center's Aerospace Research and Development programs, through engineering design, drafting, instrumenting, repairing, calibrating, and evaluating existing force and strain measuring instrumentation. The Contractor will be required to perform these tasks on and off-site as needed during normal working hours of 7:30 AM to 4:00 PM and be prepared to perform exigency requirements on a 24 hour, 7-day-week basis. The Contractor shall electronically interface with LaRC personnel using computer codes of standard file formats (AutoCAD, MS Excel, MS Word, MS Project, LabVIEW) regarding geometry, drawings, analysis and reports. The work to be performed includes:

3.0 Requirements

3.1 Force Transducer Evaluation and Hardware Design

The Contractor shall provide engineering analysis of strain gage type multi-component force measuring transducers, including single piece and multi-piece designs. The transducers will include, but not limited to, wind-tunnel force balances, load cells, tension links, and related accessories. The Contractor shall measure forces from 0.001 to 200,000 pounds. Wind tunnel balances will range in size from 1/4 to 30 inches in diameter and be required to measure forces from 0.001 to 20,000 pounds and moments from 0.005 to 1,000,000 inch pounds. Typical accuracy requirements are 0.05% (95% confidence interval) of full scale output. Related accessories include water-cooling shields, wind shields, calibration fixtures, calibration arms, stings, and other calibration hardware/special adapters. This work shall encompass: (I) Force transducer related engineering studies and stress analyses; (II) Preparation of design-related documentation such as formal detailed design drawings, calculations and calibration data; (III) Evaluating and monitoring the wind-tunnel use and performance of force transducers (typically 350 tunnel installations per year). Sample drawings and reports are available for viewing in the bidders library.

Quality Metrics:

All stress analyses reports and documentation shall contain the following information or conform to specified handbooks or procedures.

a. Conformance with NASA-Langley Research Center Wind Tunnel Model Systems Criteria Manual (LHB 1710.15), May 1992 (such as: analyses of all critical sections of transducers or hardware, clearly defined equations, labeled input values and results summary tables.)

b. A cover sheet designating personnel responsible for the analyses, checking the analyses and approving the analyses with signature blocks provided for each.

All drafting tasks shall contain the following information or conform to specified handbooks or procedures.

a. Conform to ANSI Y14.5M and MIL STD 100 drafting standards.

b. All specifications (dimensions; tolerances; surface finishes; materials; material conditions; material certifications and inspections; fitting

requirements and procedure designations; axis system designation; assembly instructions; color codes; electrical component designations, schematics and installation requirements or procedures; pin outs; and title blocks and drawing numbers) to properly manufacture, modify, strain-gage, calibrate, inspect, assemble, or perform a specified function are required.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.2 Force Transducer Fabrication, Modification, and Repair

The Contractor shall fabricate, modify and repair existing force measuring transducers such as single or multi-piece balances, load cells, and tension links. This also includes fabricating, modifying and repairing related accessories (water-cooling shields, wind shields, calibration fixtures, calibration arms, stings, and other calibration hardware/special adapters). Final QA inspections and acceptance may be performed at NASA LaRC.

Mating Surface Inspections

The Contractor shall perform dimensional inspections of balance, and mating hardware interface surfaces prior to fitting them. These inspections include dimensional checks as indicated on respective drawings and fit checks with plug and ring gages and taper gage sets (these sets are provided by the Government as needed). The procedure for the fit checks is outlined in the document "Standardized Model Support System Assembly Procedures" which is available in the bidders library. In addition, inspections shall include dowel holes, keyways and set- screw notches.

Balance Calibration Fixtures and Related Hardware

As stated in Paragraph 3.2 above the Contractor shall fabricate, modify and repair the items described below:

Calibration Fixtures

Balance calibration fixtures are used to provide a reference for applying loads to the balance during calibration. The fixtures provide surfaces for applying forces, moments and hole patterns for attaching additional hardware as needed. There is a standard configuration for these fixtures and duplicate fixtures are required at times for replacing damaged ones or providing back-ups.

Calibration Stump Adapters

Stump adapters are an interface between the balance non-metric side and the calibration stand. Requirements are the same as above, for replacing damaged hardware or providing back-ups.

Calibration Knife Edges

A double knife edge arrangement is utilized for applying loads to a balance for calibration. These knife edges eliminate unwanted moments induced by misalignments involved with fixed load application interfaces. As these knife edges are used repeatedly they require rework (reshaping knife edge and grooves) or new replacements.

Calibration Pitch Adapters/Calibration Pitch/Roll/Yaw Arms

Pitch adapters, pitch/roll/yaw arms are calibration hardware required for applying moments to balances. Again these are needed as stated above.

Calibration Weight Pans/Hangars

Weight pans and hangars are a required interface for applying weights to the balances during calibrations. They are designed to rest on the knife edges and wrap around the hardware under loading to apply a force without interference.

Balance Front-End Expander Hardware Fabrication

A number of LaRC balances have front end expander mechanisms for interfacing with models. Parts are needed on a regular basis for replacing damaged or worn out parts. Therefore, a list of expander hardware to fabricate is included.

Dowel Pin/Key Fabrication

Dowel pins are used on a regular basis between the strain-gage balances and calibration fixtures as well as model hardware. The estimate should include proper material certifications as well as ultrasonic inspections required by Langley facilities (see bidders library for material paperwork required). Proper fitting dowel pins typically require 0.0001 to 0.0002 in. interference fit with balance and mating hardware. Typical materials for these dowels are: Beryllium-Copper (room temperature and above) for balances with diameters 0.75 in. and above; Nitronic 40 (room temperature and above) for balances with diameters less than 0.75 in.; Nitronic 60 (cryogenic temperatures) all diameters.

Proper fitting keys according to the document "Standardized Model Support System Assembly Procedures" which is available in the bidders library, need to be provided on a regular basis. Typical materials for these keys are the same as mentioned above for dowels and require the same material certifications and paperwork.

Balance Box Modifications to "Cradle Arrangement"

Balance boxes have traditionally utilized a foam insert for securing the balance inside. A process of changing to a more secure wooden cradle mount for the balances has been initiated. Therefore, an ongoing effort to update balance boxes to this new arrangement requires fabrication of the cradle and modifications to balance boxes to accept them.

Quality Assurance and Inspection

3.2.1 The Contractor shall provide quality assurance inspections of all hardware that includes the following documentation with appropriate signatures.

a. Material and part certifications (related to this effort).
b. Dimensional inspections with as machined or fabricated listed against drawing specifications in a summary of table with non-conformances highlighted.
c. Procedures required to be followed (including assembly, fit checks and proof the item performs its designed function) require a document stating the procedure was followed with a signature of the responsible person.

Quality Metrics

The items in this Paragraph (3.2) of the statement of work shall meet the requirement specified by their respective drawings and the documentation required is listed in Paragraph 3.2.1.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.3 Strain Gage Application

The Contractor shall apply strain gages as needed for repair on single or multi-component transducers and test articles. Strain-gage applications will be performed using Government Furnished Equipment (GFE), Government Installation Provided Equipment (GIPE) or equivalent (see GIPE and GFE contained in Exhibits B and C). Strain gage sizes range from, but not limited to, .015 inch gage length to .750 inch and include foil, semi-conductor, flame sprayed, and optic gage types. The Contractor shall attach compatible lead wires, sleeving and connectors; provide wheatstone bridge circuit adjustments (temperature compensation, modules compensation, balancing) and moisture proofing of strain gage installations; install and repair thermal conditioning devices such as cooling tubes/shields/jackets, miniature bellows, and heater strips; provide special clamps for mounting the strain gages; testing/inspecting new strain gages and special connectors, including those purchased by the Government, to ensure compliance with procurement specifications. In addition, final temperature compensation tests shall require digitally recorded temperature and strain gage output unless otherwise noted in a work requirement. Most strain gage installations operate in a normal ambient environment, however, a significant number operate in cryogenic environments and a growing emphasis on hypersonics extends some installations to 2000F or higher and a few installations extend from cryogenic to 2000F temperatures. Performance of services under this contract shall conform to the standards provided by publications in Paragraph 2.11 where applicable. (The bidders library contains sample documentation and drawings).

Quality Metrics:

The items in this Paragraph (3.3) of the statement of work shall meet the requirements specified by their respective drawings and the documentation required is listed in Paragraph 3.2.1. In addition items unique to this Paragraph (3.3) such as temperature compensation, zero unbalance, temperature cycling, strain-gage card recordings called out on drawings and in procedures shall be documented with data and signature sheets. For tasks performed without a drawing provided in advance, a drawing shall be produced and metrics for this are defined in Paragraph 3.1.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.4 Force Transducer Calibration

The Contractor shall calibrate single and multi-component strain gage type force measuring transducers in static calibration stands or in semiautomatic sting balance calibration machines that are listed in the appendix as Government Installation Provided Equipment. Pertinent combinations of loads to determine first, second or higher order interactions on each component will be applied (see the calibration load schedules in Exhibit D. Requirements shall include the proper fitting of balance fixtures

and hardware and complete evaluation of calibration data such as tabulating, plotting, and iteration of loadings necessary to assure that the required accuracy is achieved. Langley approved calibration techniques must be adhered to at all times unless stated otherwise. Contractor calibration techniques that offer improvement may be submitted at any time for approval.

A typical calibration procedure for a six-component strain-gage balance will include the following tasks.

Note: A video tape of a typical calibration is available for viewing to help illustrate these tasks.

A. Visually inspect the instrument for any anomalies that need to be corrected. For example: gall marks on mating surfaces, dowel pin holes and keyways; proper operation of instruments with adjustable mounting surfaces; and damaged wiring or connectors .

B. Attach , as needed, connectors or adapter cables to the balance that will interface with the data acquisition system.

C. Install the balance into the calibration hardware according to the document "Standardized Model Support System Assembly Procedures" which is available in the bidders library.

D. Install assembly into a calibration stand.

E. Perform and record resistance checks, record electrical zeros, perform a data acquisition system checkout.

F. Connect the wiring into the data acquisition system.

G. Obtain and assemble the required calibration hardware such as weights, knife edges, hangars and weight pans (or baskets).

H. Perform the calibration loadings according to the loading schedule. Loadings are performed with dead weights on hangars or baskets that are transferred to the calibration fixture through a double knife arrangement. Also, when loadings are required to be applied perpendicular to gravity, dead weights are applied over a bell crank mechanism and transferred to the balance as mentioned above.

I. Record the data with the data acquisition system (this has user friendly software written in QuickBasic).

J. Analyze the data (when the calibration loadings are completed) using available software, again written in Quick Basic. Review the results and determine if the required accuracy has been achieved. If not, troubleshoot data to determine the next step to take.

K. When the desired accuracy has been achieved, provide electronic data files for customer access on Langley's central computing system and hard copy printouts of the calibration results (these tasks are also performed using existing software).

L. Disassemble the calibration set-up, perform final inspections and record electrical checks as in steps A, and E and deliver the balance to the pre-determined location at Langley.

Note: All calibration data acquisition and analysis software is currently under development in LabVIEW software. When completed, the software along with new data systems will be implemented (within approximately one year).

Quality Metrics:

All calibration data, for previously calibrated transducers, shall be within 0.02% (2 sigma) uncertainty for each component analyzed for the entire calibration loading schedule. In addition, sensitivities and interactions must be within 0.02% and 0.1% respectively. For transducers that have new sensors only the uncertainty metric shall be applied. Documentation of the calibration data, results and files are provided by the software and shall be produced for each calibration with signatures for each responsible person involved in the effort.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.5 Force Transducer and Test Article Installation and Troubleshooting

The Contractor shall install and troubleshoot strain gage force measuring transducer systems, test articles and related accessories. Requirements shall include, but not be limited to, connecting interface wiring between force transducers and permanent wind tunnel instrumentation; performing sensitivity verification checks and troubleshooting of force-transducer-systems and test articles at the test site.

Quality Metrics:

A summary shall be written of the troubleshooting procedure utilized, findings and resolutions. Paragraph 3.2.1 covers the requirements for this metric related to documenting troubleshooting procedures and span recordings.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.6 Instrument Repair/Calibration/Maintenance

The Contractor shall inspect, clean, calibrate, adjust and repair instruments such as torque wrenches, load cells, test weights, scales, and analytical balances. A listing of the existing instruments, the majority of which are on a scheduled calibration and maintenance plan, that require this service may be viewed in the bidders library along with their recall schedule. The recall schedule and other information pertinent to the instruments is on a database furnished by the Government and will be required to be updated by the contractor as needed. The contractor will be required to interface with Government employees and other support service contractors concerning the database and transportation of the instruments as needed. Detailed calibration/maintenance requirements are provided in the bidders library (or exhibits) along with calibration data report requirements for the different categories of tasks. Calibrations will be performed using Government Furnished Equipment or Government Installation Provided Equipment (see listings in exhibits). All of this equipment is traceable to the National Institute of Standards and Technology (NIST) and this traceability must be maintained (see Paragraph 3.8 for more information regarding the Metrology requirements).

Repairs: All repairs that are necessary to achieve required accuracies should be performed only when the cost is less than 50% of the replacement costs (repairs are approximately 10% of this instrument repair/calibration/maintenance requirement).

Quality Metrics:

Accuracies: Calibration accuracies must be within the manufacturers specifications for new instruments and equal to or better than the previous calibrations for existing instruments. Data sheets must be provided to document the results and procedures followed for the repairs/calibrations/maintenance performed with a signature of the responsible persons.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.7 Force Transducer Exigency Requirements

The Contractor shall report to designated LaRC test facilities within 45 minutes after notification to perform exigency requirements with regard to Paragraph 3.1 through 3.6 above. The Contractor shall be prepared to perform this exigency work on a 24-hour, 7-day-week basis. A cellular phone must be carried by a contractor person, on a 24-hour, 7-day week basis, to allow for quick and easy access.

Quality Metrics:

A time of call and response time document shall be provided, with signatures of requester and persons performing the tasks, to verify reporting period.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.8 Metrology

In order to maintain maximum reliability and integrity in Langley Research Center's research testing operations, the contractor shall maintain traceability to the National Institute of Standards and Technology (NIST) for all laboratory calibration-standards including load cells, torque wrenches, scales, analytical balances, mass standards, and bi-annual certification of all force transducer calibration weights. A listing of the items to be maintained under this requirement is shown in the Supplies and/or Services to Be Furnished clause of the contract along with the schedule of calibration required for traceability. Traceability documentation must be maintained by the contractor and provided to the Government in electronic and hard copy format .

Mass Standards

NASA established a 5 year recall on the mass standards. The mass standards that go back to NIST are primaries and they stay in a locked cabinet and never leave the standards laboratory. They are only handled with gloves and a specially hook.

Load Cells

There needs to be a history established on the load cells for determining there recall interval. When they are calibrated by NIST an interval can be determined according to how they match the previous calibration. The calibration supplied consists of three runs with ten ascending points for each run. In addition, at least three points on the descending side are required.

Quality Metrics:

Data sheets shall be provided to document the results and procedures followed for the calibrations performed with signatures of the responsible persons.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.9 Force Transducer Task Processing and Record Documentation

The Contractor shall maintain an on-site processing and documentation area during normal working hours. One location is in Building 1230, Room 224. This is the central location and center for incoming and outgoing task information and hardware. A second location is in Building 1148, Room 113A. This location performs the strain-gage maintenance tasks for the Structures and Materials Divisions. The following tasks must be performed at each location.

Process and record the transfer of transducers and associated equipment to and from the Contractor's facility and Langley laboratories (see Exhibits B and C for list of balances and related equipment). Perform quality inspections prior to delivery or storage of equipment. This includes visual inspection of the instrument for any anomalies that need to be corrected. For example: gall marks on mating surfaces, dowel pin holes and keyways; proper operation of instruments with adjustable mounting surfaces; damaged wiring or connectors; and recording of electrical zeros on a Government supplied data acquisition system. Interface with customers to generate work requirements. Maintain an electronic database and data acquisition system for all pertinent transducer information .

Quality Metrics:

All of the documentation and file information listed above shall be kept up to date at all times with signatures by responsible persons.

Cost Metrics:

The rate per hour established in the Labor Categories clause multiplied by the hours established in the Supplies and/or Services to Be Furnished clause will serve as the cost standard per item issued.

Schedule Metrics:

A specific completion date will be defined for each work requirement.

3.10 Codes/Reference Publications

- NASA-Langley Research Center Calibration and Evaluation of Multi-component Strain Gage Balances, March 1964.
- National Bureau of Standards Handbook H-94, Examination of Weighing Equipment .
- Recommended Strain Gage Application Procedures for Various LaRC Balances and Test Articles, Technical Memorandum 110327
- NASA-Langley Research Center Wind Tunnel Model Systems Criteria Manual (LHB 1710.15), May 1992.
- Engineering Drawing System (LHB 7320.1) October 1986.
- Langley Research Metrology Program (LHB 5330.9) 1986.
- NASA-Langley Research Center - Safety Clearance Procedure (Red Tag)

(LHB 1710.10)

The Contractor shall adhere to the latest edition or supplements when utilizing the standards or codes set forth above.

3.11 Operating and Maintaining an Information Management System

The LaRC Information Management System (IMS), a computerized data and work order tracking system, will be provided by the Government. The IMS is an automated data processing system developed at LaRC to track, report, and store service history and metrology related data for all task orders issued to the Contractor. The Contractor shall maintain existing records and keep the data base updated.

EXHIBIT A

DEPARTMENT OF DEFENSE
CONTRACT SECURITY CLASSIFICATION SPECIFICATION
(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)

1. CLEARANCE AND SAFEGUARDING
a. FACILITY CLEARANCE REQUIRED: SECRET
b. LEVEL OF SAFEGUARDING REQUIRED: NONE

2. THIS SPECIFICATION IS FOR: (X and complete as applicable)			3. THIS SPECIFICATION IS: (X and complete as applicable)			
X	a. PRIME CONTRACT NUMBER: NAS1-97033		X	a. ORIGINAL (Complete date in all cases)		Date (YYMMDD): 98/02/02
	b. SUBCONTRACT NUMBER			b. REVISED (Supersedes all previous specs)	Revision No.	Date (YYMMDD)
	c. SOLICITATION OR OTHER NUMBER	Due Date (YYMMDD)		c. FINAL (Complete item 5 in all cases)		Date (YYMMDD)

4. IS THIS A FOLLOW-ON CONTRACT? [ ] YES [X] NO. If Yes, complete the following:
Classified material received or generated under _____ (Preceding Contract Number) is transferred to the follow-on contract.

5. IS THIS A FINAL DD FORM 254? [ ] YES [X] NO. If Yes, complete the following:
In response to the contractor's request dated _____, retention of the identified classified material is authorized for the period of _____

6. CONTRACTOR (Include Commercial and Government Entity (CAGE) Code)

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
MODERN MACHINE & TOOL CO, INC 11844 JEFFERSON AVE. NEWPORT NEWS VA. 23606	14951	DEFENSE I SECURITY SERVICES 2850 EISENHOWER AVENUE ALEXANDRIA VA 22331-1211

7. SUBCONTRACTOR

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
TBD	TBD	TBD

8. ACTUAL PERFORMANCE

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
NASA LANGLEY RESEARCH CENTER HAMPTON, VA. 23681-0001	N/A	N/A

9. GENERAL IDENTIFICATION OF THIS PROCUREMENT
FORCED MEASUREMENT SUPPORT SERVICES CONTRACT

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		X	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	X	
b. RESTRICTED DATA		X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		X
d. FORMERLY RESTRICTED DATA		X	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		X
e. INTELLIGENCE INFORMATION:			e. PERFORM SERVICES ONLY		X
(1) Sensitive Compartmented Information (SCI)		X	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S. PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		X
(2) Non-SCI		X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X
f. SPECIAL ACCESS INFORMATION		X	h. REQUIRE A COMSEC ACCOUNT		X
g. NATO INFORMATION		X	i. HAVE TEMPEST REQUIREMENTS		X
h. FOREIGN GOVERNMENT INFORMATION		X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		X
i. LIMITED DISSEMINATION INFORMATION		X	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		X
j. FOR OFFICIAL USE ONLY INFORMATION		X	l. OTHER (Specify)		
k. OTHER (Specify) N/A					

DD Form 254, DEC 90 *Previous editions are obsolete.* 805/340

EXHIBIT A

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 or unless it has been approved for public release by appropriate U. S. Government authority. Proposed public release shall be submitted for approval.

[ ] Direct [ ] Through *(Specify)*:

NASA LANGLEY RESEARCH CENTER, M/S 126, HAMPTON VA. 23681-0001" ATTN: TOM WEIH

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 by that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for the 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 of 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 compete guidance.)*

ALL WORK ON THIS CONTRACT WILL BE PERFORMED AT GOVERNMENT FACILITIES WHERE CLASSIFICATION GUIDANCE WILL BE PROVIDED AS NECESSARY.

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 additional requirements. Provide a copy of the requirements to the cognizant security office. Use item 13 if additional space is needed.)* [ ] YES [X]

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 [X]

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M/S 182
HAMPTON VA. 23681-0001
ATT: SAM A. HARVEY

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE *(Include Area Code)*
Sam A. Harvey	Program Security Team Leader	757-864-6507

d. ADDRESS *(Include Zip Code)*
NASA LANGLEY RESEARCH CENTER
M/S 182
HAMPTON VA. 23681-0001

e. SIGNATURE
Sam A. Harvey

17. REQUIRED DISTRIBUTION

X	a. CONTRACTOR
	b. SUBCONTRACTOR
X	c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
	d. U. S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
X	e. ADMINISTRATIVE CONTRACTING OFFICER
	f. OTHERS AS NECESSARY

DD Form 254 Reverse, DEC 90

EXHIBIT A

EXHIBIT B

INSTALLATION PROVIDED EQUIPMENT

FMSS Contract
Government Installation Provided Equipment (GIPE)

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00004	1	tobacco machine co.	calib.stand	nasa design	n.r.	079296	998090	11,866.05	special test equipment
00005	1	tobacco machine co.	calib.stand	nasa design	n.r.	079297	998091	11,866.05	special test equipment
00006	1	tobacco machine co.	calib.stand	nasa design	n.r.	078367	998088	8,985.35	special test equipment
00007	1	tobacco machine co.	calib.stand	nasa design	n.r.	078458	998089	12,211.62	special test equipment
00008	1	tobacco machine co.	calib.stand	nasa design	n.r.	100966	998096	3,600.00	special test equipment
00025	1	jams kearney	swaging set	no.7-5	8599	098918	000000	695.00	plant equipment
00026	1	starrett	tool vernier height gage	254	n.r.	136626	000000	305.00	other plant equipment
00027	1	brown&sharpe	surface plate steel	740-96	n.r.	075780	000000	728.00	plant equipment
00036	1	eem co.	actuator	d-1203	2-7780	101758	998097	1,750.00	plant equipment
00039	1	cooke	tool inclinometer	lg.1min.	e06114	057751	000000	480.00	other plant equipment
00040	1	cooke	tool inclinometer	ed-6133.	n.r.	071173	000000	400.00	other plant equipment
00042	1	bausch&lomb	microscope	0.7x-3	n.r.	108129	000000	444.95	other plant equipment
00050	1	henry wild	theodolite	t2	51419	110785	000000	838.00	plant equipment
00052	1	fluke	thermometer	2160a	2443016	186525	000000	448.00	other plant equipment
00059	1	elgar corp.	power supply	201	964	161028	000000	757.00	plant equipment
00060	1	hewlett packard	power supply	6113a	0-519	162795	000000	444.00	other plant equipment
00061	1	hewlett packard	power supply	6113a	0-506	162796	000000	444.00	other plant equipment
00063	1	hewlett packard	power supply	6113a	0-516	162798	000000	444.00	other plant equipment
00064	1	hewlett packard	power supply	6113a	0-517	162799	000000	444.00	other plant equipment
00065	1	hewlett packard	power supply	6113a	0-518	162800	000000	444.00	other plant equipment
00066	1	hewlett packard	power supply	6113a	0-523	162802	000000	444.00	other plant equipment
00068	1	hewlett packard	power supply	6113a	0-522	162808	000000	444.00	other plant equipment
00069	1	hewlett packard	power supply	6113a	0-680	168264	000000	371.00	other plant equipment
00070	1	comm.meas.lab.	power supply(freq.convertor)	crs-100	n.r.	156118	000000	400.00	other plant equipment
00072	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160428	998122	1,230.00	plant equipment
00078	1	gould	oscillograph	15-6327-72	1490	167501	998128	4,263.00	plant equipment
00079	1	gould	preamp	13-4215-72	441	167502	000000	970.00	plant equipment
00080	1	gould	preamp	13-4215-72	444	167503	000000	970.00	plant equipment
00135a	1	unknown	weights steel 500 lbs	class-c	FWT-13-500	000000	000000	500.00	plant equipment
00135b	1	unknown	weights steel 500 lbs	class-c	FWT-14-500	000000	000000	500.00	plant equipment
00136a	1	unknown	weights steel 400 lbs	class-c	FWT-1-400	000000	000000	400.00	other plant equipment
00136b	1	unknown	weights steel 400 lbs	class-c	FWT-2-400	000000	000000	400.00	other plant equipment
00172	1	sorenson	power supply	dcr-40-125a	686	181275	998159	1,770.25	plant equipment
00173	1	sorenson	power supply	dcr-40-125a	680	181333	998160	1,770.25	plant equipment
00174	1	sorenson	power supply	dcr-40-125a	683	181334	998161	1,770.25	plant equipment
00176a	1	lux	infrared heater	LTH 207	n.r.	000000	000000	215.00	other plant equipment
00176b	1	lux	infrared heater	LTH 207	n.r.	000000	000000	215.00	other plant equipment
00176c	1	lux	infrared heater	LTH 207	n.r.	000000	000000	215.00	other plant equipment
00185	1	aero-go	weight(aero load platform)	42x42	n.r.	179225	998137	1,600.00	plant equipment
00195	1	hertner div.	charger	3-sf-12-550	69945-ws	184133	000000	602.00	plant equipment
00196	1	crown controls	forklift	30-wrtl	w-17987	184692	998171	11,491.62	plant equipment
00197	1	data precision	multimeter	935	3150	183710	A000843	126.65	other plant equipment
00202zg	1	cem.associates	calib.stand	n.r.	n.r.	188057	998178	180,100.00	special test equipment
00207	1	economy engineering	lift(elevating table)	71-296/ad	n.r.	187037	000000	775.00	plant equipment
00208	1	economy engineering	lift(elevating table)	71-296/ad	n.r.	187036	000000	775.00	plant equipment
00222	1	hewlett packard	power supply	6274b	1712a02420	179944	000000	831.60	plant equipment
00224	1	tektronix	oscilloscope	2213	b020583	191476	998180	1,056.00	plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00225	1	fluke john mfg.co.	thermometer	2160a	2416049	186522	000000	448.00	other plant equipment
00226	1	tektronix	oscilloscope	2213	b020537	191477	998181	1,056.00	plant equipment
00230	1	unknown	heater control unit	ad2008	n.r.	000000	000000	850.00	special test equipment
00231	1	unknown	heater control unit	81	n.r.	000000	000000	850.00	special test equipment
00236	1	modern machine tool	weight(electric weight basked	nasa design	n.r.	000000	932531	20,000.00	special test equipment
00500	1	chisholm moore	puller (cm 1.5 ton)	1 1/2 ton	b-114-n6	118681	000000	116.00	other plant equipment
00502	1	comet	electric hoist 2 t	tbr	to841a	076253	000000	289.54	other plant equipment
00503	1	lodestar	electric hoist 1-t	h	l-2671g	088261	000000	228.90	other plant equipment
00504	1	comet	electric hoist 1-t	tbh	to-190	072848	000000	210.05	other plant equipment
00505	1	mcmaster carr	stepladder 20 inch	20	n.r.	000000	000000	20.00	other plant equipment
00506	1	mcmaster carr	stepladder 20 inch	20	n.r.	000000	000000	20.00	other plant equipment
00507	1	mcmaster carr	stepladder 20 inch	20	n.r.	000000	000000	20.00	other plant equipment
00508	1	mcmaster carr	stepladder 20 inch	20	n.r.	000000	000000	20.00	other plant equipment
00509	1	gaertner	cathetometer(100#-)	s-14785	sn 457a	075664	000000	190.00	other plant equipment
00510	1	gaertner	cathetometer(100#-)	s-14785	sn 662a	079841	000000	210.00	other plant equipment
00511	1	gaertner	cathetometer(100#-)	s-14785	1838a	118687	000000	257.00	other plant equipment
00512	1	gaertner	cathetometer(100#-)	s-14785	sn 498a	076011	000000	190.00	other plant equipment
00514	1	gaertner	cathetometer(100#-)	s-14785	1850a	119280	000000	257.00	other plant equipment
00515	1	gaertner	cathetometer(100#-)	s-14785	sn 613a	079840	000000	210.00	other plant equipment
00523a	1	nasa design	level(4-inch) long	n.r.	1	000000	000000	20.00	special test equipment
00523b	1	nasa design	level(4-inch) long	n.r.	3	000000	000000	20.00	special test equipment
00523c	1	nasa design	level(4-inch) long	n.r.	8	000000	000000	20.00	special test equipment
00523d	1	nasa design	level(4-inch) long	n.r.	13	000000	000000	20.00	special test equipment
00523e	1	nasa design	level(4-inch) long	n.r.	14	000000	000000	20.00	special test equipment
00523f	1	nasa design	level(4-inch) long	n.r.	15	000000	000000	20.00	special test equipment
00523g	1	nasa design	level(4-inch) long	n.r.	16	000000	000000	20.00	special test equipment
00523h	1	nasa design	level(4-inch) long	n.r.	9	000000	000000	20.00	special test equipment
00523i	1	nasa design	level(4-inch) long	n.r.	12	000000	000000	20.00	special test equipment
00523j	1	nasa design	level(4-inch) long	n.r.	21	000000	000000	20.00	special test equipment
00523k	1	nasa design	level(4-inch) long	n.r.	6	000000	000000	20.00	special test equipment
00523l	1	nasa design	level(4-inch) long	n.r.	11	000000	000000	20.00	special test equipment
00524a	1	nasa modified	level(1-inch) round	n.r.	17	000000	000000	50.00	special test equipment
00524b	1	nasa modified	level(1-inch) round	n.r.	18	000000	000000	50.00	special test equipment
00524c	1	nasa modified	level(1-inch) round	n.r.	19	000000	000000	50.00	special test equipment
00524d	1	nasa modified	level(1-inch) round	n.r.	20	000000	000000	50.00	special test equipment
00524e	1	nasa modified	level(1-inch) round	n.r.	23	000000	000000	50.00	special test equipment
00525a	1	nasa design	knife edges 1-inch	1x1	1	000000	000000	35.00	special test equipment
00525b	1	nasa design	knife edges 1-inch	1x1	2	000000	000000	35.00	special test equipment
00525c	1	nasa design	knife edges 1-inch	1x1	3	000000	000000	35.00	special test equipment
00525d	1	nasa design	knife edges 1-inch	1x1	4	000000	000000	35.00	special test equipment
00525e	1	nasa design	knife edges 1-inch	1x1	5	000000	000000	35.00	special test equipment
00525f	1	nasa design	knife edges 1-inch	1x1	6	000000	000000	35.00	special test equipment
00525g	1	nasa design	knife edges 1-inch	1x1	7	000000	000000	35.00	special test equipment
00525h	1	nasa design	knife edges 1-inch	1x1	8	000000	000000	35.00	special test equipment
00525i	1	nasa design	knife edges 1-inch	1x1	9	000000	000000	35.00	special test equipment
00525j	1	nasa design	knife edges 1-inch	1x1	10	000000	000000	35.00	special test equipment
00525k	1	nasa design	knife edges 1-inch	1x1	11	000000	000000	35.00	special test equipment
00525l	1	nasa design	knife edges 1-inch	1x1	12	000000	000000	35.00	special test equipment
00525m	1	nasa design	knife edges 1-inch	1x1	13	000000	000000	35.00	special test equipment
00525n	1	nasa design	knife edges 1-inch	1x1	14	000000	000000	35.00	special test equipment
00525o	1	nasa design	knife edges 1-inch	1x1	15	000000	000000	35.00	special test equipment
00525p	1	nasa design	knife edges 1-inch	1x1	16	000000	000000	35.00	special test equipment
00525q	1	nasa design	knife edges 1-inch	1x1	17	000000	000000	35.00	special test equipment
00525r	1	nasa design	knife edges 1-inch	1x1	18	000000	000000	35.00	special test equipment
00525s	1	nasa design	knife edges 1-inch	1x1	19	000000	000000	35.00	special test equipment
00525t	1	nasa design	knife edges 1-inch	1x1	20	000000	000000	35.00	special test equipment
00525u	1	nasa design	knife edges 1-inch	1x1	21	000000	000000	35.00	special test equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00525v	1	nasa design	knife edges 1-inch	1x1	22	000000	000000	35.00	special test equipment
00525w	1	nasa design	knife edges 1-inch	1x1	23	000000	000000	35.00	special test equipment
00525x	1	nasa design	knife edges 1-inch	1x1	24	000000	000000	35.00	special test equipment
00525y	1	nasa design	knife edges 1-inch	1x1	25	000000	000000	35.00	special test equipment
00525z	1	nasa design	knife edges 1-inch	1x1	26	000000	000000	35.00	special test equipment
00525za	1	nasa design	knife edges 1-inch	1x1	27	000000	000000	35.00	special test equipment
00525zb	1	nasa design	knife edges 1-inch	1x1	28	000000	000000	35.00	special test equipment
00525zc	1	nasa design	knife edges 1-inch	1x1	29	000000	000000	35.00	special test equipment
00525zd	1	nasa design	knife edges 1-inch	1x1	30	000000	000000	35.00	special test equipment
00525ze	1	nasa design	knife edges 1-inch	1x1	31	000000	000000	35.00	special test equipment
00525zf	1	nasa design	knife edges 1-inch	1x1	32	000000	000000	35.00	special test equipment
00525zg	1	nasa design	knife edges 1-inch	1x1	33	000000	000000	35.00	special test equipment
00525zh	1	nasa design	knife edges 1-inch	1x1	34	000000	000000	35.00	special test equipment
00525zi	1	nasa design	knife edges 1-inch	1x1	35	000000	000000	35.00	special test equipment
00525zj	1	nasa design	knife edges 1-inch	1x1	36	000000	000000	35.00	special test equipment
00525zk	1	nasa design	knife edges 1-inch	1x1	37	000000	000000	35.00	special test equipment
00525zl	1	nasa design	knife edges 1-inch	1x1	38	000000	000000	35.00	special test equipment
00525zm	1	nasa design	knife edges 1-inch	1x1	39	000000	000000	35.00	special test equipment
00525zn	1	nasa design	knife edges 1-inch	1x1	40	000000	000000	35.00	special test equipment
00525zo	1	nasa design	knife edges 1-inch	1x1	41	000000	000000	35.00	special test equipment
00525zp	1	nasa design	knife edges 1-inch	1x1	42	000000	000000	35.00	special test equipment
00525zq	1	nasa design	knife edges 1-inch	1x1	43	000000	000000	35.00	special test equipment
00525zr	1	nasa design	knife edges 1-inch	1x1	44	000000	000000	35.00	special test equipment
00525zs	1	nasa design	knife edges 1-inch	1x1	45	000000	000000	35.00	special test equipment
00525zt	1	nasa design	knife edges 1-inch	1x1	46	000000	000000	35.00	special test equipment
00525zu	1	nasa design	knife edges 1-inch	1x1	47	000000	000000	35.00	special test equipment
00525zv	1	nasa design	knife edges 1-inch	1x1	48	000000	000000	35.00	special test equipment
00525zw	1	nasa design	knife edges 1-inch	1x1	49	000000	000000	35.00	special test equipment
00525zx	1	nasa design	knife edges 1-inch	1x1	50	000000	000000	35.00	special test equipment
00525zy	1	nasa design	knife edges 1-inch	1x1	51	000000	000000	35.00	special test equipment
00525zz	1	nasa design	knife edges 1-inch	1x1	52	000000	000000	35.00	special test equipment
00525zza	1	nasa design	knife edges 1-inch	1x1	53	000000	000000	35.00	special test equipment
00525zzb	1	nasa design	knife edges 1-inch	1x1	54	000000	000000	35.00	special test equipment
00525zzc	1	nasa design	knife edges 1-inch	1x1	55	000000	000000	35.00	special test equipment
00525zzd	1	nasa design	knife edges 1-inch	1x1	56	000000	000000	35.00	special test equipment
00525zze	1	nasa design	knife edges 1-inch	1x1	57	000000	000000	35.00	special test equipment
00525zzf	1	nasa design	knife edges 1-inch	1x1	58	000000	000000	35.00	special test equipment
00525zzg	1	nasa design	knife edges 1-inch	1x1	59	000000	000000	35.00	special test equipment
00525zzh	1	nasa design	knife edges 1-inch	1x1	60	000000	000000	35.00	special test equipment
00526a	1	nasa design	knife edges 1/2 inch	1/2x1/2	1	000000	000000	25.00	special test equipment
00526b	1	nasa design	knife edges 1/2 inch	1/2x1/2	2	000000	000000	25.00	special test equipment
00526c	1	nasa design	knife edges 1/2 inch	1/2x1/2	3	000000	000000	25.00	special test equipment
00526d	1	nasa design	knife edges 1/2 inch	1/2x1/2	4	000000	000000	25.00	special test equipment
00526e	1	nasa design	knife edges 1/2 inch	1/2x1/2	5	000000	000000	25.00	special test equipment
00526f	1	nasa design	knife edges 1/2 inch	1/2x1/2	6	000000	000000	25.00	special test equipment
00526g	1	nasa design	knife edges 1/2 inch	1/2x1/2	7	000000	000000	25.00	special test equipment
00526h	1	nasa design	knife edges 1/2 inch	1/2x1/2	8	000000	000000	25.00	special test equipment
00526i	1	nasa design	knife edges 1/2 inch	1/2x1/2	9	000000	000000	25.00	special test equipment
00526j	1	nasa design	knife edges 1/2 inch	1/2x1/2	10	000000	000000	25.00	special test equipment
00526k	1	nasa design	knife edges 1/2 inch	1/2x1/2	11	000000	000000	25.00	special test equipment
00526l	1	nasa design	knife edges 1/2 inch	1/2x1/2	12	000000	000000	25.00	special test equipment
00526m	1	nasa design	knife edges 1/2 inch	1/2x1/2	13	000000	000000	25.00	special test equipment
00526n	1	nasa design	knife edges 1/2 inch	1/2x1/2	14	000000	000000	25.00	special test equipment
00526o	1	nasa design	knife edges 1/2 inch	1/2x1/2	15	000000	000000	25.00	special test equipment
00526p	1	nasa design	knife edges 1/2 inch	1/2x1/2	16	000000	000000	25.00	special test equipment
00526q	1	nasa design	knife edges 1/2 inch	1/2x1/2	17	000000	000000	25.00	special test equipment
00526r	1	nasa design	knife edges 1/2 inch	1/2x1/2	18	000000	000000	25.00	special test equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00526s	1	nasa design	knife edges 1/2 inch	1/2x1/2	19	000000	000000	25.00	special test equipment
00526t	1	nasa design	knife edges 1/2 inch	1/2x1/2	20	000000	000000	25.00	special test equipment
00526u	1	nasa design	knife edges 1/2 inch	1/2x1/2	21	000000	000000	25.00	special test equipment
00526v	1	nasa design	knife edges 1/2 inch	1/2x1/2	22	000000	000000	25.00	special test equipment
00526w	1	nasa design	knife edges 1/2 inch	1/2x1/2	23	000000	000000	25.00	special test equipment
00526x	1	nasa design	knife edges 1/2 inch	1/2x1/2	24	000000	000000	25.00	special test equipment
00526y	1	nasa design	knife edges 1/2 inch	1/2x1/2	25	000000	000000	25.00	special test equipment
00526z	1	nasa design	knife edges 1/2 inch	1/2x1/2	26	000000	000000	25.00	special test equipment
00526za	1	nasa design	knife edges 1/2 inch	1/2x1/2	27	000000	000000	25.00	special test equipment
00526zb	1	nasa design	knife edges 1/2 inch	1/2x1/2	28	000000	000000	25.00	special test equipment
00526zc	1	nasa design	knife edges 1/2 inch	1/2x1/2	29	000000	000000	25.00	special test equipment
00526zd	1	nasa design	knife edges 1/2 inch	1/2x1/2	30	000000	000000	25.00	special test equipment
00526ze	1	nasa design	knife edges 1/2 inch	1/2x1/2	31	000000	000000	25.00	special test equipment
00526zf	1	nasa design	knife edges 1/2 inch	1/2x1/2	32	000000	000000	25.00	special test equipment
00526zg	1	nasa design	knife edges 1/2 inch	1/2x1/2	33	000000	000000	25.00	special test equipment
00526zh	1	nasa design	knife edges 1/2 inch	1/2x1/2	34	000000	000000	25.00	special test equipment
00526zi	1	nasa design	knife edges 1/2 inch	1/2x1/2	35	000000	000000	25.00	special test equipment
00526zj	1	nasa design	knife edges 1/2 inch	1/2x1/2	36	000000	000000	25.00	special test equipment
00526zk	1	nasa design	knife edges 1/2 inch	1/2x1/2	37	000000	000000	25.00	special test equipment
00526zl	1	nasa design	knife edges 1/2 inch	1/2x1/2	38	000000	000000	25.00	special test equipment
00526zm	1	nasa design	knife edges 1/2 inch	1/2x1/2	39	000000	000000	25.00	special test equipment
00526zn	1	nasa design	knife edges 1/2 inch	1/2x1/2	40	000000	000000	25.00	special test equipment
00526zo	1	nasa design	knife edges 1/2 inch	1/2x1/2	41	000000	000000	25.00	special test equipment
00526zp	1	nasa design	knife edges 1/2 inch	1/2x1/2	42	000000	000000	25.00	special test equipment
00526zq	1	nasa design	knife edges 1/2 inch	1/2x1/2	43	000000	000000	25.00	special test equipment
00526zr	1	nasa design	knife edges 1/2 inch	1/2x1/2	44	000000	000000	25.00	special test equipment
00526zs	1	nasa design	knife edges 1/2 inch	1/2x1/2	45	000000	000000	25.00	special test equipment
00526zt	1	nasa design	knife edges 1/2 inch	1/2x1/2	46	000000	000000	25.00	special test equipment
00526zu	1	nasa design	knife edges 1/2 inch	1/2x1/2	47	000000	000000	25.00	special test equipment
00526zv	1	nasa design	knife edges 1/2 inch	1/2x1/2	48	000000	000000	25.00	special test equipment
00526zw	1	nasa design	knife edges 1/2 inch	1/2x1/2	49	000000	000000	25.00	special test equipment
00526zx	1	nasa design	knife edges 1/2 inch	1/2x1/2	50	000000	000000	25.00	special test equipment
00526zy	1	nasa design	knife edges 1/2 inch	1/2x1/2	51	000000	000000	25.00	special test equipment
00526zz	1	nasa design	knife edges 1/2 inch	1/2x1/2	52	000000	000000	25.00	special test equipment
00526zza	1	nasa design	knife edges 1/2 inch	1/2x1/2	53	000000	000000	25.00	special test equipment
00526zzb	1	nasa design	knife edges 1/2 inch	1/2x1/2	54	000000	000000	25.00	special test equipment
00526zzc	1	nasa design	knife edges 1/2 inch	1/2x1/2	55	000000	000000	25.00	special test equipment
00526zzd	1	nasa design	knife edges 1/2 inch	1/2x1/2	56	000000	000000	25.00	special test equipment
00526zze	1	nasa design	knife edges 1/2 inch	1/2x1/2	57	000000	000000	25.00	special test equipment
00526zzf	1	nasa design	knife edges 1/2 inch	1/2x1/2	58	000000	000000	25.00	special test equipment
00526zzg	1	nasa design	knife edges 1/2 inch	1/2x1/2	59	000000	000000	25.00	special test equipment
00526zzh	1	nasa design	knife edges 1/2 inch	1/2x1/2	60	000000	000000	25.00	special test equipment
00527	1	lyon	calib.workbench	5 ft	n.r.	076301	000000	63.24	other plant equipment
00530	1	lyon	calib.workbench	5 ft	n.r.	076304	000000	63.24	other plant equipment
00531	1	lyon	calib.workbench	6 ft	n.r.	034185	000000	79.70	other plant equipment
00532	1	equipto co.	calib.workbench	281-6	n.r.	090162	000000	185.00	other plant equipment
00536	1	precision equip.co.	calib.workbench	300-1718	n.r.	116736	000000	56.55	other plant equipment
00537	1	unknown	storage cabinet	gsa	n.r.	098538	000000	31.00	other plant equipment
00538	1	unknown	storage cabinet	a.s.e.aurora	n.r.	076155	000000	32.86	other plant equipment
00539	1	unknown	storage cabinet	parent co.	n.r.	150984	000000	240.10	other plant equipment
00540	1	unknown	storage cabinet	gsa	n.r.	098539	000000	31.00	other plant equipment
00541	1	unknown	storage cabinet	gsa	n.r.	098540	000000	31.00	other plant equipment
00543	1	unknown	storage cabinet	gsa	n.r.	104541	000000	33.90	other plant equipment
00544	1	unknown	storage cabinet	gsa fine steel	n.r.	089799	000000	30.00	other plant equipment
00550	1	unknown	storage cabinet	a.s.e.aurora	n.r.	076153	000000	32.86	other plant equipment
00552	1	unknown	storage cabinet	gsa	n.r.	065721	000000	39.90	other plant equipment
00555	1	brown&sharpe	tool dial indicator set	744	n.r.	075825	000000	48.37	other plant equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00556	1	brown&sharpe	tool dial indicator set	744	n.r.	075828	000000	48.37	other plant equipment
00557	1	brown&sharpe	tool micrometer set 0-3 inches	133rs	n.r.	075824	000000	44.62	other plant equipment
00558	1	brown&sharpe	tool micrometer depth gage 0-3	608	n.r.	000000	000000	50.00	other plant equipment
00560	1	brown&sharpe	tool vernier caliper	570	n.r.	069004	000000	210.56	other plant equipment
00562	1	starrett	tool vernier caliper	122	n.r.	136427	000000	110.00	other plant equipment
00563	1	starrett	tool steel square	20	n.r.	136165	000000	100.00	other plant equipment
00566	1	sturtevant	torque wrenches	s-200-1	200-1	088455	000000	40.86	other plant equipment
00567	1	sturtevant	torque wrenches	s-600-1	600-1	088453	000000	24.68	other plant equipment
00568	1	sturtevant	torque wrenches	s-100-1	100-1	088451	000000	42.52	other plant equipment
00569a	1	nasa	dowel puller	nasa design	n.r.	000000	000000	150.00	special test equipment
00569b	1	nasa	dowel puller	nasa design	n.r.	000000	000000	150.00	special test equipment
00570	1	patent scaffolding	aluminum scaffold	200s	n.r.	085459	000000	146.16	other plant equipment
00572	1	mcmaster carr	stepladder-work stand	8106z18	n.r.	128520	000000	104.65	other plant equipment
00573	1	mcmaster carr	stepladder-work stand	8106z21	n.r.	128521	000000	124.48	other plant equipment
00574	1	dake 00	arbor press	00	35493	135493	000000	31.00	other plant equipment
00581	1	hilger & watts	tool inclinometer	s-10 min grad	91571	075240	000000	218.25	other plant equipment
00584	1	bausch & lomb	microscope lamp	31-33-53	n.r.	143100	000000	32.40	other plant equipment
00588	1	wild heerbrugg	tripod(theodolite)	21b	n.r.	149365	000000	130.00	other plant equipment
00600	1	opad	power supply d.c.	1322	sn 4	081097	000000	150.00	other plant equipment
00604	1	trygon	power supply	hr405a	11138	121484	000000	325.50	other plant equipment
00609	1	tool-a-rama	lift(scissor)	n.r.	n.r.	137878	000000	250.00	other plant equipment
00610	1	tool-a-rama	lift(scissor)	n.r.	n.r.	137877	000000	250.00	other plant equipment
00612	1	famco	arbor press	n.r.	n.r.	135056	000000	40.00	other plant equipment
00614a	1	nutting co	weight skid	23.001.03	n.r.	000000	000000	125.00	other plant equipment
00614b	1	nutting co	weight skid	23.001.03	n.r.	000000	000000	125.00	other plant equipment
00614c	1	nutting co	weight skid	23.001.03	n.r.	000000	000000	125.00	other plant equipment
00614d	1	nutting co	weight skid	23.001.03	n.r.	000000	000000	125.00	other plant equipment
00614e	1	nutting co	weight skid	23.001.03	n.r.	000000	000000	125.00	other plant equipment
00615	1	nutting co	weight skid	420-10	n.r.	085873	000000	69.16	other plant equipment
00616	1	nutting co	weight skid	420-10	n.r.	085894	000000	69.16	other plant equipment
00617	1	nutting co	weight skid	420-10	n.r.	100076	000000	69.16	other plant equipment
00618	1	nutting co	weight skid	420-10	n.r.	100078	000000	58.78	other plant equipment
00619	1	nutting co	weight skid	420-10	n.r.	100077	000000	58.78	other plant equipment
00620	1	nutting co	weight skid	420-10	n.r.	120932	000000	58.78	other plant equipment
00621	1	nutting co	weight skid	420-10	n.r.	120933	000000	69.16	other plant equipment
00622	1	nutting co	weight skid	420-10	n.r.	085874	000000	69.16	other plant equipment
00623	1	nutting co	weight skid truck(dolly)	2419	n.r.	085872	000000	69.16	other plant equipment
00624	1	nutting co	weight skid truck(dolly)	2419	n.r.	100075	000000	69.84	other plant equipment
00631a	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-01-2.5	000000	000000	18.75	other plant equipment
00631b	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-02-2.5	000000	000000	18.75	other plant equipment
00631c	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-03-2.5	000000	000000	18.75	other plant equipment
00631d	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-04-2.5	000000	000000	18.75	other plant equipment
00631e	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-05-2.5	000000	000000	18.75	other plant equipment
00631f	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-06-2.5	000000	000000	18.75	other plant equipment
00631g	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-07-2.5	000000	000000	18.75	other plant equipment
00631h	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-08-2.5	000000	000000	18.75	other plant equipment
00631i	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-09-2.5	000000	000000	18.75	other plant equipment
00631j	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-10-2.5	000000	000000	18.75	other plant equipment
00631k	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-11-2.5	000000	000000	18.75	other plant equipment
00631l	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-12-2.5	000000	000000	18.75	other plant equipment
00631m	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-13-2.5	000000	000000	18.75	other plant equipment
00631n	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-14-2.5	000000	000000	18.75	other plant equipment
00631o	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-15-2.5	000000	000000	18.75	other plant equipment
00631p	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-16-2.5	000000	000000	18.75	other plant equipment
00631q	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-17-2.5	000000	000000	18.75	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00631r	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-18-2.5	000000	000000	18.75	other plant equipment
00631s	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-19-2.5	000000	000000	18.75	other plant equipment
00631t	1	ohaus scale	weights brass 2.5 lbs	class-c	fwt-20-2.5	000000	000000	18.75	other plant equipment
00632a	1	ohaus scale	weights brass.01	class-c	.01-1	000000	000000	7.40	other plant equipment
00632b	1	ohaus scale	weights brass.01	class-c	.01-2	000000	000000	7.40	other plant equipment
00632c	1	ohaus scale	weights brass.01	class-c	.01-3	000000	000000	7.40	other plant equipment
00632d	1	ohaus scale	weights brass.01	class-c	.01-4	000000	000000	7.40	other plant equipment
00632e	1	ohaus scale	weights brass.01	class-c	.01-5	000000	000000	7.40	other plant equipment
00632f	1	ohaus scale	weights brass.01	class-c	.01-6	000000	000000	7.40	other plant equipment
00632g	1	ohaus scale	weights brass.01	class-c	.01-7	000000	000000	7.40	other plant equipment
00632h	1	ohaus scale	weights brass.01	class-c	.01-8	000000	000000	7.40	other plant equipment
00632i	1	ohaus scale	weights brass.01	class-c	.01-9	000000	000000	7.40	other plant equipment
00632j	1	ohaus scale	weights brass.01	class-c	.01-10	000000	000000	7.40	other plant equipment
00632k	1	ohaus scale	weights brass.02	class-c	.02-1	000000	000000	7.40	other plant equipment
00632l	1	ohaus scale	weights brass.02	class-c	.02-2	000000	000000	7.40	other plant equipment
00632m	1	ohaus scale	weights brass.02	class-c	.02-3	000000	000000	7.40	other plant equipment
00632n	1	ohaus scale	weights brass.02	class-c	.02-4	000000	000000	7.40	other plant equipment
00632o	1	ohaus scale	weights brass.02	class-c	.02-5	000000	000000	7.40	other plant equipment
00632p	1	ohaus scale	weights brass.02	class-c	.02-6	000000	000000	7.40	other plant equipment
00632q	1	ohaus scale	weights brass.02	class-c	.02-7	000000	000000	7.40	other plant equipment
00632r	1	ohaus scale	weights brass.02	class-c	.02-8	000000	000000	7.40	other plant equipment
00632s	1	ohaus scale	weights brass.02	class-c	.02-9	000000	000000	7.40	other plant equipment
00632t	1	ohaus scale	weights brass.02	class-c	.02-10	000000	000000	7.40	other plant equipment
00632u	1	ohaus scale	weights brass.05	class-c	.05-1	000000	000000	7.40	other plant equipment
00632v	1	ohaus scale	weights brass.05	class-c	.05-2	000000	000000	7.40	other plant equipment
00632w	1	ohaus scale	weights brass.05	class-c	.05-3	000000	000000	7.40	other plant equipment
00632x	1	ohaus scale	weights brass.05	class-c	.05-4	000000	000000	7.40	other plant equipment
00632y	1	ohaus scale	weights brass.05	class-c	.05-5	000000	000000	7.40	other plant equipment
00632z	1	ohaus scale	weights brass.05	class-c	.05-6	000000	000000	7.40	other plant equipment
00632za	1	ohaus scale	weights brass.05	class-c	.05-7	000000	000000	7.40	other plant equipment
00632zb	1	ohaus scale	weights brass.05	class-c	.05-8	000000	000000	7.40	other plant equipment
00632zc	1	ohaus scale	weights brass.05	class-c	.05-9	000000	000000	7.40	other plant equipment
00632zd	1	ohaus scale	weights brass.05	class-c	.05-10	000000	000000	7.40	other plant equipment
00632ze	1	ohaus scale	weights brass.10	class-c	.10-1	000000	000000	7.40	other plant equipment
00632zf	1	ohaus scale	weights brass.10	class-c	.10-2	000000	000000	7.40	other plant equipment
00632zg	1	ohaus scale	weights brass.10	class-c	.10-3	000000	000000	7.40	other plant equipment
00632zh	1	ohaus scale	weights brass.10	class-c	.10-4	000000	000000	7.40	other plant equipment
00632zi	1	ohaus scale	weights brass.10	class-c	.10-5	000000	000000	7.40	other plant equipment
00632zj	1	ohaus scale	weights brass.10	class-c	.10-6	000000	000000	7.40	other plant equipment
00632zk	1	ohaus scale	weights brass.10	class-c	.10-7	000000	000000	7.40	other plant equipment
00632zl	1	ohaus scale	weights brass.10	class-c	.10-8	000000	000000	7.40	other plant equipment
00632zm	1	ohaus scale	weights brass.10	class-c	.10-9	000000	000000	7.40	other plant equipment
00632zn	1	ohaus scale	weights brass.10	class-c	.10-10	000000	000000	7.40	other plant equipment
00632zo	1	ohaus scale	weights brass.20	class-c	.20-1	000000	000000	7.40	other plant equipment
00632zp	1	ohaus scale	weights brass.20	class-c	.20-2	000000	000000	7.40	other plant equipment
00632zq	1	ohaus scale	weights brass.20	class-c	.20-3	000000	000000	7.40	other plant equipment
00632zr	1	ohaus scale	weights brass.20	class-c	.20-4	000000	000000	7.40	other plant equipment
00632zs	1	ohaus scale	weights brass.20	class-c	.20-5	000000	000000	7.40	other plant equipment
00632zt	1	ohaus scale	weights brass.20	class-c	.20-6	000000	000000	7.40	other plant equipment
00632zu	1	ohaus scale	weights brass.20	class-c	.20-7	000000	000000	7.40	other plant equipment
00632zv	1	ohaus scale	weights brass.20	class-c	.20-8	000000	000000	7.40	other plant equipment
00632zw	1	ohaus scale	weights brass.20	class-c	.20-9	000000	000000	7.40	other plant equipment
00632zx	1	ohaus scale	weights brass.20	class-c	.20-10	000000	000000	7.40	other plant equipment
00633a	1	nasa	weights brass .1 lb	class-c	.1-90-a	000000	000000	10.42	special test equipment
00633b	1	nasa	weights brass .1 lb	class-c	.1-91-a	000000	000000	10.42	special test equipment
00633c	1	nasa	weights brass .1 lb	class-c	.1-93-a	000000	000000	10.42	special test equipment
00633d	1	nasa	weights brass .1 lb	class-c	.1-96-a	000000	000000	10.42	special test equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00633e	1	nasa	weights brass .1 lb	class-c	.1-44-b	000000	000000	10.42	special test equipment
00633f	1	nasa	weights brass .1 lb	class-c	.1-46-b	000000	000000	10.42	special test equipment
00633g	1	nasa	weights brass .1 lb	class-c	.1-47-b	000000	000000	10.42	special test equipment
00633h	1	nasa	weights brass .1 lb	class-c	.1-48-b	000000	000000	10.42	special test equipment
00633i	1	nasa	weights brass .1 lb	class-c	.1-49-c	000000	000000	10.42	special test equipment
00633j	1	nasa	weights brass .1 lb	class-c	.1-50-c	000000	000000	10.42	special test equipment
00633k	1	nasa	weights brass .1 lb	class-c	.1-52-c	000000	000000	10.42	special test equipment
00633l	1	nasa	weights brass .1 lb	class-c	.1-53-c	000000	000000	10.42	special test equipment
00633m	1	nasa	weights brass .2 lb	class-c	.2-80-a	000000	000000	10.42	special test equipment
00633n	1	nasa	weights brass .2 lb	class-c	.2-81-a	000000	000000	10.42	special test equipment
00633o	1	nasa	weights brass .2 lb	class-c	.2-82-a	000000	000000	10.42	special test equipment
00633p	1	nasa	weights brass .2 lb	class-c	.2-84-a	000000	000000	10.42	special test equipment
00633q	1	nasa	weights brass .2 lb	class-c	.2-31-b	000000	000000	10.42	special test equipment
00633r	1	nasa	weights brass .2 lb	class-c	.2-32-b	000000	000000	10.42	special test equipment
00633s	1	nasa	weights brass .2 lb	class-c	.2-33-b	000000	000000	10.42	special test equipment
00633t	1	nasa	weights brass .2 lb	class-c	.2-34-b	000000	000000	10.42	special test equipment
00633u	1	nasa	weights brass .2 lb	class-c	.2-35-c	000000	000000	10.42	special test equipment
00633v	1	nasa	weights brass .2 lb	class-c	.2-36-c	000000	000000	10.42	special test equipment
00633w	1	nasa	weights brass .2 lb	class-c	.2-37-c	000000	000000	10.42	special test equipment
00633x	1	nasa	weights brass .2 lb	class-c	.2-38-c	000000	000000	10.42	special test equipment
00633y	1	nasa	weights brass .25lb	class-c	.25-61-a	000000	000000	10.42	special test equipment
00633z	1	nasa	weights brass .25lb	class-c	.25-62-a	000000	000000	10.42	special test equipment
00633za	1	nasa	weights brass .25lb	class-c	.25-63-a	000000	000000	10.42	special test equipment
00633zb	1	nasa	weights brass .25lb	class-c	.25-64-a	000000	000000	10.42	special test equipment
00633zc	1	nasa	weights brass .25lb	class-c	.25-6-b	000000	000000	10.42	special test equipment
00633zd	1	nasa	weights brass .25lb	class-c	.25-7-b	000000	000000	10.42	special test equipment
00633ze	1	nasa	weights brass .25lb	class-c	.25-8-b	000000	000000	10.42	special test equipment
00633zf	1	nasa	weights brass .25lb	class-c	.25-9-b	000000	000000	10.42	special test equipment
00633zg	1	nasa	weights brass .25lb	class-c	.25-10-c	000000	000000	10.42	special test equipment
00633zh	1	nasa	weights brass .25lb	class-c	.25-11-c	000000	000000	10.42	special test equipment
00633zi	1	nasa	weights brass .25lb	class-c	.25-12-c	000000	000000	10.42	special test equipment
00633zj	1	nasa	weights brass .25lb	class-c	.25-13-c	000000	000000	10.42	special test equipment
00633zk	1	nasa	weights brass .50lb	class-c	.50-51-a	000000	000000	10.42	special test equipment
00633zl	1	nasa	weights brass .50lb	class-c	.50-56-a	000000	000000	10.42	special test equipment
00633zm	1	nasa	weights brass .50lb	class-c	.50-57-a	000000	000000	10.42	special test equipment
00633zn	1	nasa	weights brass .50lb	class-c	.50-58-a	000000	000000	10.42	special test equipment
00633zo	1	nasa	weights brass .50lb	class-c	.50-10-b	000000	000000	10.42	special test equipment
00633zp	1	nasa	weights brass .50lb	class-c	.50-12-b	000000	000000	10.42	special test equipment
00633zq	1	nasa	weights brass .50lb	class-c	.50-14-b	000000	000000	10.42	special test equipment
00633zr	1	nasa	weights brass .50lb	class-c	.50-15-b	000000	000000	10.42	special test equipment
00633zs	1	nasa	weights brass .50lb	class-c	.50-16-c	000000	000000	10.42	special test equipment
00633zt	1	nasa	weights brass .50lb	class-c	.50-20-c	000000	000000	10.42	special test equipment
00633zu	1	nasa	weights brass .50lb	class-c	.50-49-c	000000	000000	10.42	special test equipment
00633zv	1	nasa	weights brass .50lb	class-c	.50-50-c	000000	000000	10.42	special test equipment
00634a	1	unknown	weights lead 2000 lbs	class-c	FWT-2-2000	000000	000000	400.00	other plant equipment
00634b	1	unknown	weights lead 2000 lbs	class-c	FWT-3-2000	000000	000000	400.00	other plant equipment
00634c	1	unknown	weights lead 2000 lbs	class-c	FWT-4-2000	000000	000000	400.00	other plant equipment
00634d	1	unknown	weights lead 2000 lbs	class-c	FWT-5-2000	000000	000000	400.00	other plant equipment
00634e	1	unknown	weights lead 2000 lbs	class-c	FWT-6-2000	000000	000000	400.00	other plant equipment
00635a	1	unknown	weights lead 1000 lbs	class c	FWT-2-1000	000000	000000	166.67	other plant equipment
00635b	1	unknown	weights lead 1000 lbs	class c	FWT-3-1000	000000	000000	166.67	other plant equipment
00635c	1	unknown	weights lead 1000 lbs	class c	FWT-4-1000	000000	000000	166.67	other plant equipment
00635d	1	unknown	weights lead 1000 lbs	class c	FWT-5-1000	000000	000000	166.67	other plant equipment
00635e	1	unknown	weights lead 1000 lbs	class c	FWT-6-1000	000000	000000	166.67	other plant equipment
00635f	1	unknown	weights lead 1000 lbs	class c	FWT-7-1000	000000	000000	166.67	other plant equipment
00636a	1	unknown	weights lead 500 lbs	class c	FWT-17-500	000000	000000	62.50	other plant equipment
00636b	1	unknown	weights lead 500 lbs	class c	FWT-18-500	000000	000000	62.50	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00636c	1	unknown	weights lead 500 lbs	class c	FWT-19-500	000000	000000	62.50	other plant equipment
00636d	1	unknown	weights lead 500 lbs	class c	FWT-20-500	000000	000000	62.50	other plant equipment
00636e	1	unknown	weights lead 500 lbs	class c	FWT-21-500	000000	000000	62.50	other plant equipment
00636f	1	unknown	weights lead 500 lbs	class c	FWT-22-500	000000	000000	62.50	other plant equipment
00636g	1	unknown	weights lead 500 lbs	class c	FWT-23-500	000000	000000	62.50	other plant equipment
00636h	1	unknown	weights lead 500 lbs	class c	FWT-24-500	000000	000000	62.50	other plant equipment
00637a	1	unknown	weights steel 250 lbs	class c	fwt-14-250	000000	000000	250.00	other plant equipment
00637b	1	unknown	weights steel 250 lbs	class c	fwt-15-250	000000	000000	250.00	other plant equipment
00637c	1	unknown	weights steel 250 lbs	class c	fwt-16-250	000000	000000	250.00	other plant equipment
00637d	1	unknown	weights steel 250 lbs	class c	fwt-17-250	000000	000000	250.00	other plant equipment
00638a	1	unknown	weights steel 200 lbs	class c	fwt-0-200	000000	000000	384.62	other plant equipment
00638b	1	unknown	weights steel 200 lbs	class c	fwt-1-200	000000	000000	384.62	other plant equipment
00638c	1	unknown	weights steel 200 lbs	class c	fwt-2-200	000000	000000	384.62	other plant equipment
00638d	1	unknown	weights steel 200 lbs	class c	fwt-3-200	000000	000000	384.62	other plant equipment
00638e	1	unknown	weights steel 200 lbs	class c	fwt-4-200	000000	000000	384.62	other plant equipment
00638f	1	unknown	weights steel 200 lbs	class c	fwt-5-200	000000	000000	384.62	other plant equipment
00638g	1	unknown	weights steel 200 lbs	class c	fwt-6-200	000000	000000	384.62	other plant equipment
00638h	1	unknown	weights steel 200 lbs	class c	fwt-7-200	000000	000000	384.62	other plant equipment
00638i	1	unknown	weights steel 200 lbs	class c	fwt-8-200	000000	000000	384.62	other plant equipment
00638j	1	unknown	weights steel 200 lbs	class c	fwt-9-200	000000	000000	384.62	other plant equipment
00638k	1	unknown	weights steel 200 lbs	class c	fwt-10-200	000000	000000	384.62	other plant equipment
00638l	1	unknown	weights steel 200 lbs	class c	fwt-12-200	000000	000000	384.62	other plant equipment
00638m	1	unknown	weights steel 200 lbs	class c	fwt-13-200	000000	000000	384.62	other plant equipment
00639a	1	unknown	weights steel 125 lbs	class c	fwt-125-1	000000	000000	125.00	other plant equipment
00639b	1	unknown	weights steel 125 lbs	class c	fwt-125-2	000000	000000	125.00	other plant equipment
00639c	1	unknown	weights steel 125 lbs	class c	fwt-125-4	000000	000000	125.00	other plant equipment
00639d	1	unknown	weights steel 125 lbs	class c	fwt-125-6	000000	000000	125.00	other plant equipment
00639e	1	unknown	weights steel 125 lbs	class c	fwt-125-3	000000	000000	125.00	other plant equipment
00639f	1	unknown	weights steel 125 lbs	class c	fwt-125-5	000000	000000	125.00	other plant equipment
00639g	1	unknown	weights steel 125 lbs	class c	fwt-125-7	000000	000000	125.00	other plant equipment
00639h	1	unknown	weights steel 125 lbs	class c	fwt-125-8	000000	000000	125.00	other plant equipment
00640a	1	unknown	weights steel 100 lbs	class c	fwt-0-100	000000	000000	100.00	other plant equipment
00640b	1	unknown	weights steel 100 lbs	class c	fwt-1-100	000000	000000	100.00	other plant equipment
00640c	1	unknown	weights steel 100 lbs	class c	fwt-2-100	000000	000000	100.00	other plant equipment
00640d	1	unknown	weights steel 100 lbs	class c	fwt-3-100	000000	000000	100.00	other plant equipment
00640e	1	unknown	weights steel 100 lbs	class c	fwt-4-100	000000	000000	100.00	other plant equipment
00640f	1	unknown	weights steel 100 lbs	class c	fwt-5-100	000000	000000	100.00	other plant equipment
00640g	1	unknown	weights steel 100 lbs	class c	fwt-6-100	000000	000000	100.00	other plant equipment
00640h	1	unknown	weights steel 100 lbs	class c	fwt-7-100	000000	000000	100.00	other plant equipment
00640i	1	unknown	weights steel 100 lbs	class c	fwt-8-100	000000	000000	100.00	other plant equipment
00640j	1	unknown	weights steel 100 lbs	class c	fwt-9-100	000000	000000	100.00	other plant equipment
00640k	1	unknown	weights steel 100 lbs	class c	fwt-10-100	000000	000000	100.00	other plant equipment
00641a	1	unknown	weights steel 50 lbs	class c	fwt-1	000000	000000	20.00	other plant equipment
00641b	1	unknown	weights steel 50 lbs	class c	fwt-2	000000	000000	20.00	other plant equipment
00641c	1	unknown	weights steel 50 lbs	class c	fwt-4	000000	000000	20.00	other plant equipment
00641d	1	unknown	weights steel 50 lbs	class c	fwt-12	000000	000000	20.00	other plant equipment
00641e	1	unknown	weights steel 50 lbs	class c	fwt-15	000000	000000	20.00	other plant equipment
00641f	1	unknown	weights steel 50 lbs	class c	fwt-21	000000	000000	20.00	other plant equipment
00641g	1	unknown	weights steel 50 lbs	class c	fwt-91	000000	000000	20.00	other plant equipment
00641h	1	unknown	weights steel 50 lbs	class c	fwt-95	000000	000000	20.00	other plant equipment
00641i	1	unknown	weights steel 50 lbs	class c	fwt-104	000000	000000	20.00	other plant equipment
00641j	1	unknown	weights steel 50 lbs	class c	fwt-105	000000	000000	20.00	other plant equipment
00641k	1	unknown	weights steel 50 lbs	class c	fwt-107	000000	000000	20.00	other plant equipment
00641l	1	unknown	weights steel 50 lbs	class c	fwt-108	000000	000000	20.00	other plant equipment
00641m	1	unknown	weights steel 50 lbs	class c	fwt-109	000000	000000	20.00	other plant equipment
00641n	1	unknown	weights steel 50 lbs	class c	fwt-115	000000	000000	20.00	other plant equipment
00641o	1	unknown	weights steel 50 lbs	class c	fwt-116	000000	000000	20.00	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00641p	1	unknown	weights steel 50 lbs	class c	fwt-117	000000	000000	20.00	other plant equipment
00641q	1	unknown	weights steel 50 lbs	class c	fwt-119	000000	000000	20.00	other plant equipment
00641r	1	unknown	weights steel 50 lbs	class c	fwt-121	000000	000000	20.00	other plant equipment
00641s	1	unknown	weights steel 50 lbs	class c	fwt-123	000000	000000	20.00	other plant equipment
00641t	1	unknown	weights steel 50 lbs	class c	fwt-130	000000	000000	20.00	other plant equipment
00641u	1	unknown	weights steel 50 lbs	class c	fwt-132	000000	000000	20.00	other plant equipment
00641v	1	unknown	weights steel 50 lbs	class c	fwt-140	000000	000000	20.00	other plant equipment
00641w	1	unknown	weights steel 50 lbs	class c	fwt-144	000000	000000	20.00	other plant equipment
00641x	1	unknown	weights steel 50 lbs	class c	fwt-148	000000	000000	20.00	other plant equipment
00641y	1	unknown	weights steel 50 lbs	class c	fwt-150	000000	000000	20.00	other plant equipment
00641z	1	unknown	weights steel 50 lbs	class c	fwt-151	000000	000000	20.00	other plant equipment
00641za	1	unknown	weights steel 50 lbs	class c	fwt-161	000000	000000	20.00	other plant equipment
00641zb	1	unknown	weights steel 50 lbs	class c	fwt-170	000000	000000	20.00	other plant equipment
00641zc	1	unknown	weights steel 50 lbs	class c	fwt-181	000000	000000	20.00	other plant equipment
00641zd	1	unknown	weights steel 50 lbs	class c	fwt-182	000000	000000	20.00	other plant equipment
00641ze	1	unknown	weights steel 50 lbs	class c	fwt-184	000000	000000	20.00	other plant equipment
00641zf	1	unknown	weights steel 50 lbs	class c	fwt-185	000000	000000	20.00	other plant equipment
00641zg	1	unknown	weights steel 50 lbs	class c	fwt-187	000000	000000	20.00	other plant equipment
00641zh	1	unknown	weights steel 50 lbs	class c	fwt-190	000000	000000	20.00	other plant equipment
00641zi	1	unknown	weights steel 50 lbs	class c	fwt-192	000000	000000	20.00	other plant equipment
00641zj	1	unknown	weights steel 50 lbs	class c	fwt-194	000000	000000	20.00	other plant equipment
00641zk	1	unknown	weights steel 50 lbs	class c	fwt-196	000000	000000	20.00	other plant equipment
00641zl	1	unknown	weights steel 50 lbs	class c	fwt-197	000000	000000	20.00	other plant equipment
00641zm	1	unknown	weights steel 50 lbs	class c	fwt-198	000000	000000	20.00	other plant equipment
00641zn	1	unknown	weights steel 50 lbs	class c	fwt-199	000000	000000	20.00	other plant equipment
00641zo	1	unknown	weights steel 50 lbs	class c	fwt-200	000000	000000	20.00	other plant equipment
00641zp	1	unknown	weights steel 50 lbs	class c	fwt-201	000000	000000	20.00	other plant equipment
00641zq	1	unknown	weights steel 50 lbs	class c	fwt-202	000000	000000	20.00	other plant equipment
00641zr	1	unknown	weights steel 50 lbs	class c	fwt-203	000000	000000	20.00	other plant equipment
00641zs	1	unknown	weights steel 50 lbs	class c	fwt-204	000000	000000	20.00	other plant equipment
00641zt	1	unknown	weights steel 50 lbs	class c	fwt-206	000000	000000	20.00	other plant equipment
00641zu	1	unknown	weights steel 50 lbs	class c	fwt-207	000000	000000	20.00	other plant equipment
00641zv	1	unknown	weights steel 50 lbs	class c	fwt-209	000000	000000	20.00	other plant equipment
00641zw	1	unknown	weights steel 50 lbs	class c	fwt-211	000000	000000	20.00	other plant equipment
00641zx	1	unknown	weights steel 50 lbs	class c	fwt-212	000000	000000	20.00	other plant equipment
00641zy	1	unknown	weights steel 50 lbs	class c	fwt-214	000000	000000	20.00	other plant equipment
00641zz	1	unknown	weights steel 50 lbs	class c	fwt-215	000000	000000	20.00	other plant equipment
00641zza	1	unknown	weights steel 50 lbs	class c	fwt-217	000000	000000	20.00	other plant equipment
00641zzb	1	unknown	weights steel 50 lbs	class c	fwt-220	000000	000000	20.00	other plant equipment
00641zzc	1	unknown	weights steel 50 lbs	class c	fwt-221	000000	000000	20.00	other plant equipment
00641zzd	1	unknown	weights steel 50 lbs	class c	fwt-223	000000	000000	20.00	other plant equipment
00641zze	1	unknown	weights steel 50 lbs	class c	fwt-224	000000	000000	20.00	other plant equipment
00641zzf	1	unknown	weights steel 50 lbs	class c	fwt-225	000000	000000	20.00	other plant equipment
00641zzg	1	unknown	weights steel 50 lbs	class c	fwt-227	000000	000000	20.00	other plant equipment
00641zzh	1	unknown	weights steel 50 lbs	class c	fwt-229	000000	000000	20.00	other plant equipment
00641zzi	1	unknown	weights steel 50 lbs	class c	fwt-231	000000	000000	20.00	other plant equipment
00641zzj	1	unknown	weights steel 50 lbs	class c	fwt-232	000000	000000	20.00	other plant equipment
00641zzk	1	unknown	weights steel 50 lbs	class c	fwt-235	000000	000000	20.00	other plant equipment
00641zzl	1	unknown	weights steel 50 lbs	class c	fwt-236	000000	000000	20.00	other plant equipment
00641zzm	1	unknown	weights steel 50 lbs	class c	fwt-254	000000	000000	20.00	other plant equipment
00641zzn	1	unknown	weights steel 50 lbs	class c	fwt-283	000000	000000	20.00	other plant equipment
00641zzo	1	unknown	weights steel 50 lbs	class c	fwt-288	000000	000000	20.00	other plant equipment
00641zzp	1	unknown	weights steel 50 lbs	class c	fwt-0-50	000000	000000	20.00	other plant equipment
00641zzq	1	unknown	weights steel 50 lbs	class c	fwt-2-50	000000	000000	20.00	other plant equipment
00641zzr	1	unknown	weights steel 50 lbs	class c	fwt-3-50	000000	000000	20.00	other plant equipment
00641zzs	1	unknown	weights steel 50 lbs	class c	fwt-10-50	000000	000000	20.00	other plant equipment
00641zzt	1	unknown	weights steel 50 lbs	class c	fwt-11-50	000000	000000	20.00	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00641zzu	1	unknown	weights steel 50 lbs	class c	fwt-12-50	000000	000000	20.00	other plant equipment
00641zzv	1	unknown	weights steel 50 lbs	class c	fwt-14-50	000000	000000	20.00	other plant equipment
00641zzw	1	unknown	weights steel 50 lbs	class c	fwt-17-50	000000	000000	20.00	other plant equipment
00641zzx	1	unknown	weights steel 50 lbs	class c	fwt-20-50	000000	000000	20.00	other plant equipment
00641zzy	1	unknown	weights steel 50 lbs	class c	fwt-21-50	000000	000000	20.00	other plant equipment
00641zzz	1	unknown	weights steel 50 lbs	class c	fwt-25-50	000000	000000	20.00	other plant equipment
00641zzza	1	unknown	weights steel 50 lbs	class c	fwt-26-50	000000	000000	20.00	other plant equipment
00641zzzb	1	unknown	weights steel 50 lbs	class c	fwt-28-50	000000	000000	20.00	other plant equipment
00641zzzc	1	unknown	weights steel 50 lbs	class c	fwt-30-50	000000	000000	20.00	other plant equipment
00641zzzd	1	unknown	weights steel 50 lbs	class c	fwt-33-50	000000	000000	20.00	other plant equipment
00641zzze	1	unknown	weights steel 50 lbs	class c	fwt-34-50	000000	000000	20.00	other plant equipment
00641zzzf	1	unknown	weights steel 50 lbs	class c	fwt-35-50	000000	000000	20.00	other plant equipment
00641zzzg	1	unknown	weights steel 50 lbs	class c	fwt-36-50	000000	000000	20.00	other plant equipment
00641zzzh	1	unknown	weights steel 50 lbs	class c	fwt-37-50	000000	000000	20.00	other plant equipment
00641zzzi	1	unknown	weights steel 50 lbs	class c	fwt-39-50	000000	000000	20.00	other plant equipment
00641zzzj	1	unknown	weights steel 50 lbs	class c	fwt-40-50	000000	000000	20.00	other plant equipment
00641zzzk	1	unknown	weights steel 50 lbs	class c	fwt-172-50	000000	000000	20.00	other plant equipment
00641zzzl	1	unknown	weights steel 50 lbs	class c	fwt-208-50	000000	000000	20.00	other plant equipment
00641zzzm	1	unknown	weights steel 50 lbs	class c	fwt-216-50	000000	000000	20.00	other plant equipment
00641zzzn	1	unknown	weights steel 50 lbs	class c	fwt-280-50	000000	000000	20.00	other plant equipment
00641zzzo	1	unknown	weights steel 50 lbs	class c	fwt-281-50	000000	000000	20.00	other plant equipment
00641zzzp	1	unknown	weights steel 50 lbs	class c	fwt-282-50	000000	000000	20.00	other plant equipment
00641zzzq	1	unknown	weights steel 50 lbs	class c	fwt-284-50	000000	000000	20.00	other plant equipment
00641zzzr	1	unknown	weights steel 50 lbs	class c	fwt-286-50	000000	000000	20.00	other plant equipment
00641zzzs	1	unknown	weights steel 50 lbs	class c	fwt-287-50	000000	000000	20.00	other plant equipment
00641zzzt	1	unknown	weights steel 50 lbs	class c	fwt-290-50	000000	000000	20.00	other plant equipment
00641zzzu	1	unknown	weights steel 50 lbs	class c	fwt-41-28-50	000000	000000	20.00	other plant equipment
00641zzzv	1	unknown	weights steel 50 lbs	class c	fwt-41-51-50	000000	000000	20.00	other plant equipment
00641zzzw	1	unknown	weights steel 50 lbs	class c	fwt-41-52-50	000000	000000	20.00	other plant equipment
00641zzzx	1	unknown	weights steel 50 lbs	class c	fwt-41-53-50	000000	000000	20.00	other plant equipment
00641zzzy	1	unknown	weights steel 50 lbs	class c	fwt-41-54-50	000000	000000	20.00	other plant equipment
00641zzzz	1	unknown	weights steel 50 lbs	class c	fwt-41-56-50	000000	000000	20.00	other plant equipment
00641zzzza	1	unknown	weights steel 50 lbs	class c	fwt-41-57-50	000000	000000	20.00	other plant equipment
00641zzzzb	1	unknown	weights steel 50 lbs	class c	fwt-41-58-50	000000	000000	20.00	other plant equipment
00641zzzzc	1	unknown	weights steel 50 lbs	class c	fwt-41-60-50	000000	000000	20.00	other plant equipment
00641zzzzd	1	unknown	weights steel 50 lbs	class c	fwt-41-62-50	000000	000000	20.00	other plant equipment
00641zzzze	1	unknown	weights steel 50 lbs	class c	fwt-41-64-50	000000	000000	20.00	other plant equipment
00641zzzzf	1	unknown	weights steel 50 lbs	class c	fwt-41-66-50	000000	000000	20.00	other plant equipment
00641zzzzg	1	unknown	weights steel 50 lbs	class c	fwt-41-67-50	000000	000000	20.00	other plant equipment
00641zzzzh	1	unknown	weights steel 50 lbs	class c	fwt-41-70-50	000000	000000	20.00	other plant equipment
00641zzzzi	1	unknown	weights steel 50 lbs	class c	fwt-41-71-50	000000	000000	20.00	other plant equipment
00641zzzzj	1	unknown	weights steel 50 lbs	class c	fwt-41-73-50	000000	000000	20.00	other plant equipment
00641zzzzk	1	unknown	weights steel 50 lbs	class c	fwt-41-74-50	000000	000000	20.00	other plant equipment
00641zzzzl	1	unknown	weights steel 50 lbs	class c	fwt-41-76-50	000000	000000	20.00	other plant equipment
00641zzzzm	1	unknown	weights steel 50 lbs	class c	fwt-41-77-50	000000	000000	20.00	other plant equipment
00641zzzzn	1	unknown	weights steel 50 lbs	class c	fwt-41-79-50	000000	000000	20.00	other plant equipment
00641zzzzo	1	unknown	weights steel 50 lbs	class c	fwt-41-81-50	000000	000000	20.00	other plant equipment
00641zzzzp	1	unknown	weights steel 50 lbs	class c	fwt-41-82-50	000000	000000	20.00	other plant equipment
00641zzzzq	1	unknown	weights steel 50 lbs	class c	fwt-41-87-50	000000	000000	20.00	other plant equipment
00641zzzzr	1	unknown	weights steel 50 lbs	class c	fwt-41-89-50	000000	000000	20.00	other plant equipment
00641zzzzs	1	unknown	weights steel 50 lbs	class c	fwt-41-90-50	000000	000000	20.00	other plant equipment
00641zzzzt	1	unknown	weights steel 50 lbs	class c	fwt-41-91-50	000000	000000	20.00	other plant equipment
00641zzzzu	1	unknown	weights steel 50 lbs	class c	fwt-41-92-50	000000	000000	20.00	other plant equipment
00642a	1	unknown	weights steel 20 lbs	class c	fwt-1-20	000000	000000	14.49	other plant equipment
00642b	1	unknown	weights steel 20 lbs	class c	fwt-2-20	000000	000000	14.49	other plant equipment
00642c	1	unknown	weights steel 20 lbs	class c	fwt-5-20	000000	000000	14.49	other plant equipment
00642d	1	unknown	weights steel 20 lbs	class c	fwt-6-20	000000	000000	14.49	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00642e	1	unknown	weights steel 20 lbs	class c	fwt-12-20	000000	000000	14.49	other plant equipment
00642f	1	unknown	weights steel 20 lbs	class c	fwt-14-20	000000	000000	14.49	other plant equipment
00642g	1	unknown	weights steel 20 lbs	class c	fwt-15-20	000000	000000	14.49	other plant equipment
00642h	1	unknown	weights steel 20 lbs	class c	fwt-16-20	000000	000000	14.49	other plant equipment
00642i	1	unknown	weights steel 20 lbs	class c	fwt-19-20	000000	000000	14.49	other plant equipment
00642j	1	unknown	weights steel 20 lbs	class c	fwt-20-20	000000	000000	14.49	other plant equipment
00642k	1	unknown	weights steel 20 lbs	class c	fwt-24-20	000000	000000	14.49	other plant equipment
00642l	1	unknown	weights steel 20 lbs	class c	fwt-25-20	000000	000000	14.49	other plant equipment
00642m	1	unknown	weights steel 20 lbs	class c	fwt-95-20	000000	000000	14.49	other plant equipment
00642n	1	unknown	weights steel 20 lbs	class c	fwt-98-20	000000	000000	14.49	other plant equipment
00642o	1	unknown	weights steel 20 lbs	class c	fwt-105-20	000000	000000	14.49	other plant equipment
00642p	1	unknown	weights steel 20 lbs	class c	fwt-106-20	000000	000000	14.49	other plant equipment
00642q	1	unknown	weights steel 20 lbs	class c	fwt-107-20	000000	000000	14.49	other plant equipment
00642r	1	unknown	weights steel 20 lbs	class c	fwt-111-20	000000	000000	14.49	other plant equipment
00642s	1	unknown	weights steel 20 lbs	class c	fwt-112-20	000000	000000	14.49	other plant equipment
00642t	1	unknown	weights steel 20 lbs	class c	fwt-113-20	000000	000000	14.49	other plant equipment
00642u	1	unknown	weights steel 20 lbs	class c	fwt-114-20	000000	000000	14.49	other plant equipment
00642v	1	unknown	weights steel 20 lbs	class c	fwt-118-20	000000	000000	14.49	other plant equipment
00642w	1	unknown	weights steel 20 lbs	class c	fwt-119-20	000000	000000	14.49	other plant equipment
00642x	1	unknown	weights steel 20 lbs	class c	fwt-120-20	000000	000000	14.49	other plant equipment
00642y	1	unknown	weights steel 20 lbs	class c	fwt-122-20	000000	000000	14.49	other plant equipment
00642z	1	unknown	weights steel 20 lbs	class c	fwt-123-20	000000	000000	14.49	other plant equipment
00642za	1	unknown	weights steel 20 lbs	class c	fwt-124-20	000000	000000	14.49	other plant equipment
00642zb	1	unknown	weights steel 20 lbs	class c	fwt-126-20	000000	000000	14.49	other plant equipment
00642zc	1	unknown	weights steel 20 lbs	class c	fwt-129-20	000000	000000	14.49	other plant equipment
00642zd	1	unknown	weights steel 20 lbs	class c	fwt-130-20	000000	000000	14.49	other plant equipment
00642ze	1	unknown	weights steel 20 lbs	class c	fwt-132-20	000000	000000	14.49	other plant equipment
00642zf	1	unknown	weights steel 20 lbs	class c	fwt-134-20	000000	000000	14.49	other plant equipment
00642zg	1	unknown	weights steel 20 lbs	class c	fwt-135-20	000000	000000	14.49	other plant equipment
00642zh	1	unknown	weights steel 20 lbs	class c	fwt-191-20	000000	000000	14.49	other plant equipment
00642zi	1	unknown	weights steel 20 lbs	class c	fwt-192-20	000000	000000	14.49	other plant equipment
00642zj	1	unknown	weights steel 20 lbs	class c	fwt-196-20	000000	000000	14.49	other plant equipment
00642zk	1	unknown	weights steel 20 lbs	class c	fwt-197-20	000000	000000	14.49	other plant equipment
00642zl	1	unknown	weights steel 20 lbs	class c	fwt-199-20	000000	000000	14.49	other plant equipment
00642zm	1	unknown	weights steel 20 lbs	class c	fwt-200-20	000000	000000	14.49	other plant equipment
00642zn	1	unknown	weights steel 20 lbs	class c	fwt-201-20	000000	000000	14.49	other plant equipment
00642zo	1	unknown	weights steel 20 lbs	class c	fwt-203-20	000000	000000	14.49	other plant equipment
00642zp	1	unknown	weights steel 20 lbs	class c	fwt-26-22-20	000000	000000	14.49	other plant equipment
00642zq	1	unknown	weights steel 20 lbs	class c	fwt-26-23-20	000000	000000	14.49	other plant equipment
00642zr	1	unknown	weights steel 20 lbs	class c	fwt-26-29-20	000000	000000	14.49	other plant equipment
00642zs	1	unknown	weights steel 20 lbs	class c	fwt-26-30-20	000000	000000	14.49	other plant equipment
00642zt	1	unknown	weights steel 20 lbs	class c	fwt-26-33-20	000000	000000	14.49	other plant equipment
00642zu	1	unknown	weights steel 20 lbs	class c	fwt-26-37-20	000000	000000	14.49	other plant equipment
00642zv	1	unknown	weights steel 20 lbs	class c	fwt-26-38-20	000000	000000	14.49	other plant equipment
00642zw	1	unknown	weights steel 20 lbs	class c	fwt-26-40-20	000000	000000	14.49	other plant equipment
00642zx	1	unknown	weights steel 20 lbs	class c	fwt-26-42-20	000000	000000	14.49	other plant equipment
00642zy	1	unknown	weights steel 20 lbs	class c	fwt-26-45-20	000000	000000	14.49	other plant equipment
00642zz	1	unknown	weights steel 20 lbs	class c	fwt-26-46-20	000000	000000	14.49	other plant equipment
00642zza	1	unknown	weights steel 20 lbs	class c	fwt-26-48-20	000000	000000	14.49	other plant equipment
00642zzb	1	unknown	weights steel 20 lbs	class c	fwt-26-49-20	000000	000000	14.49	other plant equipment
00642zzc	1	unknown	weights steel 20 lbs	class c	19-20-mm	000000	000000	14.49	other plant equipment
00642zzd	1	unknown	weights steel 20 lbs	class c	20-20-mm	000000	000000	14.49	other plant equipment
00642zze	1	unknown	weights steel 20 lbs	class c	21-20-mm	000000	000000	14.49	other plant equipment
00642zzf	1	unknown	weights steel 20 lbs	class c	22-20-mm	000000	000000	14.49	other plant equipment
00642zzg	1	unknown	weights steel 20 lbs	class c	23-20-mm	000000	000000	14.49	other plant equipment
00642zzh	1	unknown	weights steel 20 lbs	class c	24-20-mm	000000	000000	14.49	other plant equipment
00642zzi	1	unknown	weights steel 20 lbs	class c	25-20-mm	000000	000000	14.49	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00642zzj	1	unknown	weights steel 20 lbs	class c	26-20-mm	000000	000000	14.49	other plant equipment
00642zzk	1	unknown	weights steel 20 lbs	class c	27-20-mm	000000	000000	14.49	other plant equipment
00642zzl	1	unknown	weights steel 20 lbs	class c	fwt-28-20-mm	000000	000000	14.49	other plant equipment
00642zzm	1	unknown	weights steel 20 lbs	class c	fwt-29-20-mm	000000	000000	14.49	other plant equipment
00642zzn	1	unknown	weights steel 20 lbs	class c	fwt-3-20	000000	000000	14.49	other plant equipment
00642zzo	1	unknown	weights steel 20 lbs	class c	fwt-109-20	000000	000000	14.49	other plant equipment
00642zzp	1	unknown	weights steel 20 lbs	class c	fwt-115-20	000000	000000	14.49	other plant equipment
00642zzq	1	unknown	weights steel 20 lbs	class c	fwt-125-20	000000	000000	14.49	other plant equipment
00643a	1	unknown	weights steel 10 lbs	class c	fwt-04-10	000000	000000	3.50	other plant equipment
00643b	1	unknown	weights steel 10 lbs	class c	fwt-07-10-mm	000000	000000	3.50	other plant equipment
00643c	1	unknown	weights steel 10 lbs	class c	fwt-08-10-mm	000000	000000	3.50	other plant equipment
00643d	1	unknown	weights steel 10 lbs	class c	fwt-09-10-mm	000000	000000	3.50	other plant equipment
00643e	1	unknown	weights steel 10 lbs	class c	fwt-10-10-mm	000000	000000	3.50	other plant equipment
00643f	1	unknown	weights steel 10 lbs	class c	fwt-11-10-mm	000000	000000	3.50	other plant equipment
00643g	1	unknown	weights steel 10 lbs	class c	fwt-12-10-mm	000000	000000	3.50	other plant equipment
00643h	1	unknown	weights steel 10 lbs	class c	fwt-13-10-mm	000000	000000	3.50	other plant equipment
00643i	1	unknown	weights steel 10 lbs	class c	fwt-61-14-10	000000	000000	3.50	other plant equipment
00643j	1	unknown	weights steel 10 lbs	class c	fwt-61-16-10	000000	000000	3.50	other plant equipment
00643k	1	unknown	weights steel 10 lbs	class c	fwt-61-22-10	000000	000000	3.50	other plant equipment
00643l	1	unknown	weights steel 10 lbs	class c	fwt-61-23-10	000000	000000	3.50	other plant equipment
00643m	1	unknown	weights steel 10 lbs	class c	fwt-61-24-10	000000	000000	3.50	other plant equipment
00643n	1	unknown	weights steel 10 lbs	class c	fwt-61-25-10	000000	000000	3.50	other plant equipment
00643o	1	unknown	weights steel 10 lbs	class c	fwt-61-29-10	000000	000000	3.50	other plant equipment
00643p	1	unknown	weights steel 10 lbs	class c	fwt-13-10	000000	000000	3.50	other plant equipment
00643q	1	unknown	weights steel 10 lbs	class c	fwt-14-10	000000	000000	3.50	other plant equipment
00643r	1	unknown	weights steel 10 lbs	class c	fwt-15-10	000000	000000	3.50	other plant equipment
00643s	1	unknown	weights steel 10 lbs	class c	fwt-18-10	000000	000000	3.50	other plant equipment
00643t	1	unknown	weights steel 10 lbs	class c	fwt-20-10	000000	000000	3.50	other plant equipment
00643u	1	unknown	weights steel 10 lbs	class c	fwt-43-10	000000	000000	3.50	other plant equipment
00643v	1	unknown	weights steel 10 lbs	class c	fwt-47-10	000000	000000	3.50	other plant equipment
00643w	1	unknown	weights steel 10 lbs	class c	fwt-49-10	000000	000000	3.50	other plant equipment
00643x	1	unknown	weights steel 10 lbs	class c	fwt-55-10	000000	000000	3.50	other plant equipment
00643y	1	unknown	weights steel 10 lbs	class c	fwt-56-10	000000	000000	3.50	other plant equipment
00643z	1	unknown	weights steel 10 lbs	class c	fwt-57-10	000000	000000	3.50	other plant equipment
00643za	1	unknown	weights steel 10 lbs	class c	fwt-105-10	000000	000000	3.50	other plant equipment
00643zb	1	unknown	weights steel 10 lbs	class c	fwt-108-10	000000	000000	3.50	other plant equipment
00643zc	1	unknown	weights steel 10 lbs	class c	fwt-109-10	000000	000000	3.50	other plant equipment
00643zd	1	unknown	weights steel 10 lbs	class c	fwt-110-10	000000	000000	3.50	other plant equipment
00643ze	1	unknown	weights steel 10 lbs	class c	fwt-111-10	000000	000000	3.50	other plant equipment
00643zf	1	unknown	weights steel 10 lbs	class c	fwt-113-10	000000	000000	3.50	other plant equipment
00643zg	1	unknown	weights steel 10 lbs	class c	fwt-114-10	000000	000000	3.50	other plant equipment
00643zh	1	unknown	weights steel 10 lbs	class c	fwt-115-10	000000	000000	3.50	other plant equipment
00643zi	1	unknown	weights steel 10 lbs	class c	fwt-121-10	000000	000000	3.50	other plant equipment
00643zj	1	unknown	weights steel 10 lbs	class c	fwt-122-10	000000	000000	3.50	other plant equipment
00643zk	1	unknown	weights steel 10 lbs	class c	fwt-123-10	000000	000000	3.50	other plant equipment
00643zl	1	unknown	weights steel 10 lbs	class c	fwt-128-10	000000	000000	3.50	other plant equipment
00643zm	1	unknown	weights steel 10 lbs	class c	fwt-129-10	000000	000000	3.50	other plant equipment
00643zn	1	unknown	weights steel 10 lbs	class c	fwt-130-10	000000	000000	3.50	other plant equipment
00643zo	1	unknown	weights steel 10 lbs	class c	fwt-131-10	000000	000000	3.50	other plant equipment
00643zp	1	unknown	weights steel 10 lbs	class c	fwt-132-10	000000	000000	3.50	other plant equipment
00643zq	1	unknown	weights steel 10 lbs	class c	fwt-135-10	000000	000000	3.50	other plant equipment
00643zr	1	unknown	weights steel 10 lbs	class c	fwt-137-10	000000	000000	3.50	other plant equipment
00643zs	1	unknown	weights steel 10 lbs	class c	fwt-138-10	000000	000000	3.50	other plant equipment
00643zt	1	unknown	weights steel 10 lbs	class c	fwt-141-10	000000	000000	3.50	other plant equipment
00643zu	1	unknown	weights steel 10 lbs	class c	fwt-148-10	000000	000000	3.50	other plant equipment
00643zv	1	unknown	weights steel 10 lbs	class c	fwt-149-10	000000	000000	3.50	other plant equipment
00643zw	1	unknown	weights steel 10 lbs	class c	fwt-150-10	000000	000000	3.50	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00643zx	1	unknown	weights steel 10 lbs	class c	fwt-153-10	000000	000000	3.50	other plant equipment
00644a	1	unknown	weights steel 5 lbs	class c	fwt-1-5	000000	000000	3.50	other plant equipment
00644b	1	unknown	weights steel 5 lbs	class c	fwt-3-5	000000	000000	3.50	other plant equipment
00644c	1	unknown	weights steel 5 lbs	class c	fwt-4-5	000000	000000	3.50	other plant equipment
00644d	1	unknown	weights steel 5 lbs	class c	fwt-5-5	000000	000000	3.50	other plant equipment
00644e	1	unknown	weights steel 5 lbs	class c	fwt-7-5	000000	000000	3.50	other plant equipment
00644f	1	unknown	weights steel 5 lbs	class c	fwt-9-5	000000	000000	3.50	other plant equipment
00644g	1	unknown	weights steel 5 lbs	class c	fwt-10-5	000000	000000	3.50	other plant equipment
00644h	1	unknown	weights steel 5 lbs	class c	fwt-10a-5	000000	000000	3.50	other plant equipment
00644i	1	unknown	weights steel 5 lbs	class c	fwt-14-5	000000	000000	3.50	other plant equipment
00644j	1	unknown	weights steel 5 lbs	class c	fwt-17-5	000000	000000	3.50	other plant equipment
00644k	1	unknown	weights steel 5 lbs	class c	fwt-28-5	000000	000000	3.50	other plant equipment
00644l	1	unknown	weights steel 5 lbs	class c	fwt-31-5	000000	000000	3.50	other plant equipment
00644m	1	unknown	weights steel 5 lbs	class c	fwt-44-5	000000	000000	3.50	other plant equipment
00644n	1	unknown	weights steel 5 lbs	class c	fwt-52-5	000000	000000	3.50	other plant equipment
00644o	1	unknown	weights steel 5 lbs	class c	fwt-54-5	000000	000000	3.50	other plant equipment
00644p	1	unknown	weights steel 5 lbs	class c	fwt-60-5	000000	000000	3.50	other plant equipment
00644q	1	unknown	weights steel 5 lbs	class c	fwt-62-5	000000	000000	3.50	other plant equipment
00644r	1	unknown	weights steel 5 lbs	class c	fwt-65-5	000000	000000	3.50	other plant equipment
00644s	1	unknown	weights steel 5 lbs	class c	fwt-68-5	000000	000000	3.50	other plant equipment
00644t	1	unknown	weights steel 5 lbs	class c	fwt-69-5	000000	000000	3.50	other plant equipment
00644u	1	unknown	weights steel 5 lbs	class c	fwt-86-5	000000	000000	3.50	other plant equipment
00644v	1	unknown	weights steel 5 lbs	class c	fwt-106-5	000000	000000	3.50	other plant equipment
00644w	1	unknown	weights steel 5 lbs	class c	fwt-137-5	000000	000000	3.50	other plant equipment
00644x	1	unknown	weights steel 5 lbs	class c	fwt-138-5	000000	000000	3.50	other plant equipment
00644y	1	unknown	weights steel 5 lbs	class c	fwt-139-5	000000	000000	3.50	other plant equipment
00644z	1	unknown	weights steel 5 lbs	class c	fwt-140-5	000000	000000	3.50	other plant equipment
00644za	1	unknown	weights steel 5 lbs	class c	fwt-141-5	000000	000000	3.50	other plant equipment
00644zb	1	unknown	weights steel 5 lbs	class c	fwt-142-5	000000	000000	3.50	other plant equipment
00644zc	1	unknown	weights steel 5 lbs	class c	fwt-143-5	000000	000000	3.50	other plant equipment
00644zd	1	unknown	weights steel 5 lbs	class c	fwt-144-5	000000	000000	3.50	other plant equipment
00644ze	1	unknown	weights steel 5 lbs	class c	fwt-146-5	000000	000000	3.50	other plant equipment
00644zf	1	unknown	weights steel 5 lbs	class c	fwt-147-5	000000	000000	3.50	other plant equipment
00644zg	1	unknown	weights steel 5 lbs	class c	fwt-148-5	000000	000000	3.50	other plant equipment
00644zh	1	unknown	weights steel 5 lbs	class c	fwt-149-5	000000	000000	3.50	other plant equipment
00644zi	1	unknown	weights steel 5 lbs	class c	fwt-150-5	000000	000000	3.50	other plant equipment
00644zj	1	unknown	weights steel 5 lbs	class c	fwt-152-5	000000	000000	3.50	other plant equipment
00644zk	1	unknown	weights steel 5 lbs	class c	fwt-154-5	000000	000000	3.50	other plant equipment
00644zl	1	unknown	weights steel 5 lbs	class c	fwt-155-5	000000	000000	3.50	other plant equipment
00644zm	1	unknown	weights steel 5 lbs	class c	fwt-158-5	000000	000000	3.50	other plant equipment
00644zn	1	unknown	weights steel 5 lbs	class c	fwt-159-5	000000	000000	3.50	other plant equipment
00644zo	1	unknown	weights steel 5 lbs	class c	fwt-162-5	000000	000000	3.50	other plant equipment
00644zp	1	unknown	weights steel 5 lbs	class c	fwt-163-5	000000	000000	3.50	other plant equipment
00644zq	1	unknown	weights steel 5 lbs	class c	fwt-164-5	000000	000000	3.50	other plant equipment
00644zr	1	unknown	weights steel 5 lbs	class c	fwt-167-5	000000	000000	3.50	other plant equipment
00644zs	1	unknown	weights steel 5 lbs	class c	fwt-168-5	000000	000000	3.50	other plant equipment
00644zt	1	unknown	weights steel 5 lbs	class c	fwt-169-5	000000	000000	3.50	other plant equipment
00644zu	1	unknown	weights steel 5 lbs	class c	fwt-173-5	000000	000000	3.50	other plant equipment
00644zv	1	unknown	weights steel 5 lbs	class c	fwt-174-5	000000	000000	3.50	other plant equipment
00644zw	1	unknown	weights steel 5 lbs	class c	fwt-175-5	000000	000000	3.50	other plant equipment
00644zx	1	unknown	weights steel 5 lbs	class c	fwt-178-5	000000	000000	3.50	other plant equipment
00644zy	1	unknown	weights steel 5 lbs	class c	fwt-71-6-5	000000	000000	3.50	other plant equipment
00644zz	1	unknown	weights steel 5 lbs	class c	fwt-71-7-5	000000	000000	3.50	other plant equipment
00644zza	1	unknown	weights steel 5 lbs	class c	fwt-71-8-5	000000	000000	3.50	other plant equipment
00644zzb	1	unknown	weights steel 5 lbs	class c	fwt-71-9-5	000000	000000	3.50	other plant equipment
00644zzc	1	unknown	weights steel 5 lbs	class c	fwt-71-11-5	000000	000000	3.50	other plant equipment
00644zzd	1	unknown	weights steel 5 lbs	class c	fwt-71-13-5	000000	000000	3.50	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00644zze	1	unknown	weights steel 5 lbs	class c	fwt-71-14-5	000000	000000	3.50	other plant equipment
00644zzf	1	unknown	weights steel 5 lbs	class c	mm-29-5	000000	000000	3.50	other plant equipment
00644zzg	1	unknown	weights steel 5 lbs	class c	mm-30-5	000000	000000	3.50	other plant equipment
00644zzh	1	unknown	weights steel 5 lbs	class c	mm-31-5	000000	000000	3.50	other plant equipment
00644zzi	1	unknown	weights steel 5 lbs	class c	mm-32-5	000000	000000	3.50	other plant equipment
00644zzj	1	unknown	weights steel 5 lbs	class c	mm-33-5	000000	000000	3.50	other plant equipment
00644zzk	1	unknown	weights steel 5 lbs	class c	fwt-47-5	000000	000000	3.50	other plant equipment
00644zzl	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzm	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzn	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzo	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzp	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzq	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00644zzr	1	unknown	weights steel 5 lbs	class c	00000000	000000	000000	3.50	other plant equipment
00645a	1	unknown	weights steel 2 lbs	class c	fwt-17-2	000000	000000	3.50	other plant equipment
00645b	1	unknown	weights steel 2 lbs	class c	fwt-19-2	000000	000000	3.50	other plant equipment
00645c	1	unknown	weights steel 2 lbs	class c	fwt-21-2	000000	000000	3.50	other plant equipment
00645d	1	unknown	weights steel 2 lbs	class c	fwt-22-2	000000	000000	3.50	other plant equipment
00645e	1	unknown	weights steel 2 lbs	class c	fwt-24-2	000000	000000	3.50	other plant equipment
00645f	1	unknown	weights steel 2 lbs	class c	fwt-26-2	000000	000000	3.50	other plant equipment
00645g	1	unknown	weights steel 2 lbs	class c	fwt-27-2	000000	000000	3.50	other plant equipment
00645h	1	unknown	weights steel 2 lbs	class c	fwt-28-2	000000	000000	3.50	other plant equipment
00645i	1	unknown	weights steel 2 lbs	class c	fwt-30-2	000000	000000	3.50	other plant equipment
00645j	1	unknown	weights steel 2 lbs	class c	fwt-31-2	000000	000000	3.50	other plant equipment
00645k	1	unknown	weights steel 2 lbs	class c	fwt-32-2	000000	000000	3.50	other plant equipment
00645l	1	unknown	weights steel 2 lbs	class c	fwt-34-2	000000	000000	3.50	other plant equipment
00645m	1	unknown	weights steel 2 lbs	class c	fwt-35-2	000000	000000	3.50	other plant equipment
00645n	1	unknown	weights steel 2 lbs	class c	fwt-37-2	000000	000000	3.50	other plant equipment
00645o	1	unknown	weights steel 2 lbs	class c	fwt-38-2	000000	000000	3.50	other plant equipment
00645p	1	unknown	weights steel 2 lbs	class c	fwt-40-2	000000	000000	3.50	other plant equipment
00645q	1	unknown	weights steel 2 lbs	class c	fwt-54-2	000000	000000	3.50	other plant equipment
00645r	1	unknown	weights steel 2 lbs	class c	fwt-56-2	000000	000000	3.50	other plant equipment
00645s	1	unknown	weights steel 2 lbs	class c	fwt-59-2	000000	000000	3.50	other plant equipment
00645t	1	unknown	weights steel 2 lbs	class c	fwt-95-2	000000	000000	3.50	other plant equipment
00645u	1	unknown	weights steel 2 lbs	class c	fwt-96-2	000000	000000	3.50	other plant equipment
00645v	1	unknown	weights steel 2 lbs	class c	fwt-1a-2	000000	000000	3.50	other plant equipment
00645w	1	unknown	weights steel 2 lbs	class c	fwt-43-2-1ss	000000	000000	3.50	other plant equipment
00645x	1	unknown	weights steel 2 lbs	class c	fwt-45-2-1ss	000000	000000	3.50	other plant equipment
00645y	1	unknown	weights steel 2 lbs	class c	mmt-2-1	000000	000000	3.50	other plant equipment
00645z	1	unknown	weights steel 2 lbs	class c	mmt-2-2	000000	000000	3.50	other plant equipment
00645za	1	unknown	weights steel 2 lbs	class c	mmt-2-3	000000	000000	3.50	other plant equipment
00645zb	1	unknown	weights steel 2 lbs	class c	mmt-2-4	000000	000000	3.50	other plant equipment
00645zc	1	unknown	weights steel 2 lbs	class c	mmt-2-5	000000	000000	3.50	other plant equipment
00645zd	1	unknown	weights steel 2 lbs	class c	mmt-2-6	000000	000000	3.50	other plant equipment
00645ze	1	unknown	weights steel 2 lbs	class c	mmt-2-7	000000	000000	3.50	other plant equipment
00645zf	1	unknown	weights steel 2 lbs	class c	mmt-2-8	000000	000000	3.50	other plant equipment
00645zg	1	unknown	weights steel 2 lbs	class c	mmt-2-9	000000	000000	3.50	other plant equipment
00645zh	1	unknown	weights steel 2 lbs	class c	mm-34-2	000000	000000	3.50	other plant equipment
00645zi	1	unknown	weights steel 2 lbs	class c	mm-35-2	000000	000000	3.50	other plant equipment
00645zj	1	unknown	weights steel 2 lbs	class c	mm-36-2	000000	000000	3.50	other plant equipment
00645zk	1	unknown	weights steel 2 lbs	class c	mm-37-2	000000	000000	3.50	other plant equipment
00645zl	1	unknown	weights steel 2 lbs	class c	89-2	000000	000000	3.50	other plant equipment
00645zm	1	unknown	weights steel 2 lbs	class c	279	000000	000000	3.50	other plant equipment
00645zn	1	unknown	weights steel 2 lbs	class c	a-21	000000	000000	3.50	other plant equipment
00646a	1	unknown	weights steel 1 lbs	class c	fwt-1-1	000000	000000	3.49	other plant equipment
00646b	1	unknown	weights steel 1 lbs	class c	fwt-3-1	000000	000000	3.49	other plant equipment
00646c	1	unknown	weights steel 1 lbs	class c	fwt-5-1	000000	000000	3.49	other plant equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00646d	1	unknown	weights steel 1 lbs	class c	fwt-7-1	000000	000000	3.49	other plant equipment
00646e	1	unknown	weights steel 1 lbs	class c	fwt-9-1	000000	000000	3.49	other plant equipment
00646f	1	unknown	weights steel 1 lbs	class c	fwt-11-1	000000	000000	3.49	other plant equipment
00646g	1	unknown	weights steel 1 lbs	class c	fwt-16-1	000000	000000	3.49	other plant equipment
00646h	1	unknown	weights steel 1 lbs	class c	fwt-22-1	000000	000000	3.49	other plant equipment
00646i	1	unknown	weights steel 1 lbs	class c	fwt-23-1	000000	000000	3.49	other plant equipment
00646j	1	unknown	weights steel 1 lbs	class c	fwt-24-1	000000	000000	3.49	other plant equipment
00646k	1	unknown	weights steel 1 lbs	class c	fwt-26-1	000000	000000	3.49	other plant equipment
00646l	1	unknown	weights steel 1 lbs	class c	fwt-28-1	000000	000000	3.49	other plant equipment
00646m	1	unknown	weights steel 1 lbs	class c	fwt-29-1	000000	000000	3.49	other plant equipment
00646n	1	unknown	weights steel 1 lbs	class c	fwt-30-1	000000	000000	3.49	other plant equipment
00646o	1	unknown	weights steel 1 lbs	class c	fwt-33-1	000000	000000	3.49	other plant equipment
00646p	1	unknown	weights steel 1 lbs	class c	fwt-51-1	000000	000000	3.49	other plant equipment
00646q	1	unknown	weights steel 1 lbs	class c	fwt-54-1	000000	000000	3.49	other plant equipment
00646r	1	unknown	weights steel 1 lbs	class c	fwt-56-1	000000	000000	3.49	other plant equipment
00646s	1	unknown	weights steel 1 lbs	class c	fwt-57-1	000000	000000	3.49	other plant equipment
00646t	1	unknown	weights steel 1 lbs	class c	15-1-mm	000000	000000	3.49	other plant equipment
00646u	1	unknown	weights steel 1 lbs	class c	16-1-mm	000000	000000	3.49	other plant equipment
00646v	1	unknown	weights steel 1 lbs	class c	17-1-mm	000000	000000	3.49	other plant equipment
00646w	1	unknown	weights steel 1 lbs	class c	28-1-mm	000000	000000	3.49	other plant equipment
00646x	1	unknown	weights steel 1 lbs	class c	29-1-mm	000000	000000	3.49	other plant equipment
00646y	1	unknown	weights steel 1 lbs	class c	30-1-mm	000000	000000	3.49	other plant equipment
00646z	1	unknown	weights steel 1 lbs	class c	31-1-mm	000000	000000	3.49	other plant equipment
00646za	1	unknown	weights steel 1 lbs	class c	32-1-mm	000000	000000	3.49	other plant equipment
00646zb	1	unknown	weights steel 1 lbs	class c	33-1-mm	000000	000000	3.49	other plant equipment
00646zc	1	unknown	weights steel 1 lbs	class c	mmt-1-1	000000	000000	3.49	other plant equipment
00646zd	1	unknown	weights steel 1 lbs	class c	mmt-1-2	000000	000000	3.49	other plant equipment
00646ze	1	unknown	weights steel 1 lbs	class c	mmt-1-3	000000	000000	3.49	other plant equipment
00646zf	1	unknown	weights steel 1 lbs	class c	mmt-1-4	000000	000000	3.49	other plant equipment
00646zg	1	unknown	weights steel 1 lbs	class c	mmt-1-5	000000	000000	3.49	other plant equipment
00646zh	1	unknown	weights steel 1 lbs	class c	mmt-1-6	000000	000000	3.49	other plant equipment
00646zi	1	unknown	weights steel 1 lbs	class c	mmt-1-7	000000	000000	3.49	other plant equipment
00646zj	1	unknown	weights steel 1 lbs	class c	mmt-1-8	000000	000000	3.49	other plant equipment
00646zk	1	unknown	weights steel 1 lbs	class c	mmt-1-9	000000	000000	3.49	other plant equipment
00646zl	1	unknown	weights steel 1 lbs	class c	mmt-1-10	000000	000000	3.49	other plant equipment
00646zm	1	unknown	weights steel 1 lbs	class c	96-1	000000	000000	3.49	other plant equipment
00646zn	1	unknown	weights steel 1 lbs	class c	97-1	000000	000000	3.49	other plant equipment
00646zo	1	unknown	weights steel 1 lbs	class c	98-1	000000	000000	3.49	other plant equipment
00646zp	1	unknown	weights steel 1 lbs	class c	99-1	000000	000000	3.49	other plant equipment
00646zq	1	unknown	weights steel 1 lbs	class c	100-1	000000	000000	3.49	other plant equipment
00647a	1	unknown	weights steel 0.5 lbs	class c	7-.5	000000	000000	3.50	other plant equipment
00647b	1	unknown	weights steel 0.5 lbs	class c	000000	000000	000000	3.50	other plant equipment
00647c	1	unknown	weights steel 0.5 lbs	class c	000000	000000	000000	3.50	other plant equipment
00647d	1	unknown	weights steel 0.5 lbs	class c	000000	000000	000000	3.50	other plant equipment
00647e	1	unknown	weights steel 0.5 lbs	class c	000000	000000	000000	3.50	other plant equipment
00651a	1	cotterman co.	stepladder safety	50762	n.r.	000000	000000	192.50	other plant equipment
00651b	1	cotterman co.	stepladder safety	50762	n.r.	000000	000000	192.50	other plant equipment
00653	1	hewlett packard	power supply	6113a	n.r.	162801	000000	444.00	other plant equipment
00654	1	hewlett packard	power supply	6113a	n.r.	168263	000000	371.00	other plant equipment
00655	1	trygon	power supply	hr40-5a	21333	123028	000000	325.00	other plant equipment
00656a	1	etalon	tool vernier depth gage	22-115-105	n.r.	000000	000000	74.00	other plant equipment
00656b	1	etalon	tool vernier depth gage	22-115-105	n.r.	000000	000000	74.00	other plant equipment
00656c	1	etalon	tool vernier depth gage	22-115-105	n.r.	000000	000000	74.00	other plant equipment
00657a	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment
00657b	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment
00657c	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment
00657d	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment

Item	Qty	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00657e	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment
00657f	1	etalon	tool vernier depth gage	22-115-109	n.r.	000000	000000	87.50	other plant equipment
00658a	1	etalon	tool vernier depth gage	22-115-117	n.r.	000000	000000	24.00	other plant equipment
00658b	1	etalon	tool vernier depth gage	22-115-117	n.r.	000000	000000	24.00	other plant equipment
00658c	1	etalon	tool vernier depth gage	22-115-117	n.r.	000000	000000	24.00	other plant equipment
00659	1	eemco	actuator	d-327-c	I-171	000000	000000	600.00	plant equipment
00660	1	eemco	actuator	d-327-c	I-194	000000	000000	600.00	plant equipment
00661	1	eemco	actuator	d-327-c	e-1779	000000	000000	600.00	plant equipment
00662	1	eemco	actuator	d-327-c	e-1782	000000	000000	600.00	plant equipment
00666	1	weksler	humidity indicator	rot-2 wo	rp3845	000000	000000	374.00	other plant equipment
00667	1	c & h	rolling platform truck	stk 71	n.r.	000000	000000	200.00	other plant equipment
00668	1	hodge	rolling cart	n.r.	n.r.	000000	000000	150.00	other plant equipment
00674a	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674b	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674c	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674d	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674e	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674f	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674g	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674h	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00674i	1	rolling table	toter 2 drawer	n.r.	n.r.	000000	000000	84.00	other plant equipment
00675a	1	c&h 1/2 ton	puller(jet lever ratc)	n.r.	17568	000000	000000	138.00	other plant equipment
00675b	1	c&h 1/2 ton	puller(jet lever ratc)	n.r.	17548	000000	000000	138.00	other plant equipment
00677	1	brooks	flow indicator	n.r.	8205h4432211	000000	000000	50.00	other plant equipment
00678a	1	kenlock	tripod	3000g.b.	n.r.	000000	000000	58.00	other plant equipment
00678b	1	kenlock	tripod	3000g.b.	n.r.	000000	000000	58.00	other plant equipment
00708	1	do all company	surface plate granite	n.r.	239-4	000000	000000	09.00	other plant equipment
00709a	1	modern machine tool	wooden shelves	n.r.	n.r.	000000	000000	31.02	other plant equipment
00709b	1	modern machine tool	wooden shelves	n.r.	n.r.	000000	000000	31.02	other plant equipment
00725	1	fluke	voltage calibrator	382a	919	000000	474485	1,607.00	plant equipment
00727	1	hewlett-packard	power supply	6114a	2526a04397	000000	260242	1,509.00	plant equipment
00728	1	eemco	actuator	d327-c	99819	000000	258547	750.00	plant equipment
00729	1	eemco	actuator	d327-c	u5580	000000	258548	750.00	plant equipment
00730	1	eemco	actuator	d327-c	j5215	000000	258550	750.00	plant equipment
00731	1	eemco	actuator	d327-c	c635	000000	258545	750.00	plant equipment
00732	1	eemco	actuator	d327-c	99636	000000	258544	750.00	plant equipment
00733	1	eemco	actuator	d327-c	c9655	000000	258546	750.00	plant equipment
00734a	1	nasa	weights brass 0.125 lbs	class-c	.125-1-a	000000	000000	18.75	special test equipment
00734b	1	nasa	weights brass 0.125 lbs	class-c	.125-2-a	000000	000000	18.75	special test equipment
00734c	1	nasa	weights brass 0.125 lbs	class-c	.125-3-a	000000	000000	18.75	special test equipment
00734d	1	nasa	weights brass 0.125 lbs	class-c	.125-4-a	000000	000000	18.75	special test equipment
00734e	1	nasa	weights brass 0.125 lbs	class-c	.125-5-b	000000	000000	18.75	special test equipment
00734f	1	nasa	weights brass 0.125 lbs	class-c	.125-6-b	000000	000000	18.75	special test equipment
00734g	1	nasa	weights brass 0.125 lbs	class-c	.125-7-b	000000	000000	18.75	special test equipment
00734h	1	nasa	weights brass 0.125 lbs	class-c	.125-8-b	000000	000000	18.75	special test equipment
00734i	1	nasa	weights brass 0.125 lbs	class-c	.125-9-c	000000	000000	18.75	special test equipment
00734j	1	nasa	weights brass 0.125 lbs	class-c	.125-10-c	000000	000000	18.75	special test equipment
00734k	1	nasa	weights brass 0.125 lbs	class-c	.125-11-c	000000	000000	18.75	special test equipment
00734l	1	nasa	weights brass 0.125 lbs	class-c	.125-12-c	000000	000000	18.75	special test equipment
00739	1	modern machine & tool c	weight basked 6k	none	none	000000	932532	3,000.00	plant equipment
00740	1	modern machine & tool c	weight basked 6k	none	none	000000	932533	3,000.00	plant equipment
00741	1	modern machine & tool c	weight basked 6k	none	none	000000	932534	3,000.00	plant equipment
00743	1	Power Design Inc.	Power Supply	2020B	703024	000000	143175	785.00	plant equipment
00749	1	hewlett packard	power supply lo volt/hi curre	6274B	1712A02419	000000	468585	832.00	plant equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00755a	1	unknown	weights steel 500 lbs	0000	fwt-25-500	000000	000000	500.00	plant equipment
00755b	1	unknown	weights steel 500 lbs	0000	fwt-26-500	000000	000000	500.00	plant equipment
00755c	1	unknown	weights steel 500 lbs	0000	fwt-27-500	000000	000000	500.00	plant equipment
00755d	1	unknown	weights steel 500 lbs	0000	fwt-28-500	000000	000000	500.00	plant equipment
00755e	1	unknown	weights steel 500 lbs	0000	fwt-29-500	000000	000000	500.00	plant equipment
00755f	1	unknown	weights steel 500 lbs	0000	fwt-30-500	000000	000000	500.00	plant equipment
00755g	1	unknown	weights steel 500 lbs	0000	fwt-31-500	000000	000000	500.00	plant equipment
00755h	1	unknown	weights steel 500 lbs	0000	fwt-32-500	000000	000000	500.00	plant equipment
00767	1	modern machine &.tool co.	electric weight basket	N/A	N/A	000000	000000	15,000.00	special test equipment
00772	1	dtk co inc veltri f sons	computer,micro	tech1260	1101631	000000	g075247	971.00	plant equipment
00774	1	dtk co inc veltri f sons	computer,micro	tech1260	1101608	000000	g075249	971.00	plant equipment
00775	1	dtk co inc veltri f sons	computer,micro	tech1260	1101304	000000	g075250	971.00	plant equipment
00776	1	dtk co inc veltri f sons	computer,micro	tech1260	1101387	000000	g075251	971.00	plant equipment
00777	1	dtk co inc veltri f sons	computer,micro	tech1260	1101327	000000	g075253	971.00	plant equipment
00778	1	dtk co inc veltri f sons	computer,micro	tech1260	1101325	000000	g075254	971.00	plant equipment
00779	1	dtk co inc veltri f sons	computer,micro	tech1260	1100525	000000	g075256	971.00	plant equipment
00780	1	star micronics	printer,adp	j150nx1000ii	350091214417	000000	g075267	173.00	plant equipment
00784	1	star micronics	printer,adp	j150nx1000ii	350091214405	000000	g075274	173.00	plant equipment
00785	1	star micronics	printer,adp	j150nx1000ii	350091214415	000000	g075275	173.00	plant equipment
00786	1	star micronics	printer,adp	j150nx1000ii	350091214418	000000	g075270	173.00	plant equipment
00787	1	star micronics	printer,adp	j150nx1000ii	350091214428	000000	g075276	173.00	plant equipment
00796	1	keithley instruments inc	multimeter,digital	199	468645	000000	g074258	1,306.00	plant equipment
00797	1	keithley instruments inc	multimeter,digital	199	468644	000000	g074259	1,306.00	plant equipment
00798	1	keithley instruments inc	multimeter,digital	199	468651	000000	g074260	1,306.00	plant equipment
00799	1	keithley instruments inc	multimeter,digital	199	468650	000000	g074262	1,306.00	plant equipment
00800	1	keithley instruments inc	multimeter,digital	199	468654	000000	g074265	1,306.00	plant equipment
00801	1	keithley instruments inc	multimeter,digital	199	468655	000000	g074266	1,306.00	plant equipment
00802	1	keithley instruments inc	multimeter,digital	199	468656	000000	g074267	1,306.00	plant equipment
00803	1	hewlett-packard	multimeter,digital	3457a	2703a11822	000000	1084840	3,431.00	plant equipment
00804	1	hewlett-packard	multimeter,digital	3457a	2703a11833	000000	1084841	3,431.00	plant equipment
00805	1	hewlett-packard	multimeter,digital	3457a	2703a11825	000000	1084843	3,431.00	plant equipment
00806	1	hewlett-packard	multimeter,digital	3457a	2703a11830	000000	1084844	3,431.00	plant equipment
00807	1	hewlett-packard	multimeter,digital	3457a	2703a11828	000000	1084845	3,431.00	plant equipment
00808	1	hewlett-packard	multimeter,digital	3457a	2703a11819	000000	1084846	3,431.00	plant equipment
00812	1	keithley instruments inc	multimeter digital	199	41927	000000	0057641	995.00	plant equipment
00813	1	keithly instruments inc	multimeter,digital	199	41936	000000	0057642	995.00	plant equipment
00814	1	keithley instruments inc	multimeter,digital	199	468652	000000	g074261	1,306.00	plant equipment
00815	1	keithley instruments inc	multimeter,digital	199	468653	000000	g074263	1,306.00	plant equipment
00816	1	international business ma	monitor	5150-001	3657393	000000	0219707	187.00	plant equipment
00817	1	international business ma	monitor	5150-001	3650673	000000	0284043	187.00	plant equipment
00818	1	international business ma	monitor	5150-001	6065708	000000	0220528	187.00	plant equipment
00819	1	quantra	monitor	q120	MB-00900991	000000	0000000	60.00	plant equipment
00820	1	aamazing	monitor	MM-1288X	11033431	000000	000000	60.00	plant equipment
00821	1	zee medical service	back support	5033L	n/a	000000	000000	51.00	plant equipment
00822	1	zee medical service	back support	5032M	n/a	000000	000000	51.00	plant equipment
00823	1	zee medical service	back support	5032M	n/a	000000	000000	51.00	plant equipment
00824	1	zee medical service	back support	5032M	n/a	000000	000000	51.00	plant equipment
00825	1	zee medical service	back support	5032M	n/a	000000	000000	51.00	plant equipment
00828	1	compuadd	computer,micro	a000	84550	000000	0060903	1,557.00	plant equipment
00830	1	compuadd	computer,micro	286	SU160614	000000	0141761	1,749.00	plant equipment
00834	1	gateway 2000	computer,micro	386/33	145457	000000	1083746	2,046.00	plant equipment
00835	1	dayna	disk drive unit	dynavile	df22303	000000	0847528	867.00	plant equipment
00841	1	hayes microcomputer	modem	2400	h18700173224	000000	140860	549.00	plant equipment

Item	Qty.	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00845	1	ibm	monitor	5151001	3753571	000000	221330	60.00	plant equipment
00846	1	magnavox	monitor	9cm0800741	11448906	000000	1155923	397.00	plant equipment
00848	1	samsung	monitor	a000	90101268	000000	0060904	400.00	plant equipment
00849	1	samaung	monitor	cvb4587	00501426	000000	1083748	469.00	plant equipment
00851	1	hewlett-packard	multimeter	3457a	2703a11829	000000	1084842	3,431.00	plant equipment
00852	1	epson	printer	fx85	08063023	000000	0259627	350.00	plant equipment
00854	1	epson	printer,adp	p70ra	0011093792	000000	0057223	300.00	plant equipment
00859	1	gateway 2000	computer,micro	desktop	1276828	000000	1254658	2,095.00	plant equipment
00860	1	gateway 2000	computer,micro	386/33	145458	000000	1083747	2,046.00	plant equipment
00861	1	gateway 2000	display unit	cs1572fs	mhl1a7819	000000	1261606	400.00	plant equipment
00862	1	gateway 2000	display unit	cvb4587	00501359	000000	1083749	469.00	plant equipment
00863	1	dell	computer,micro	220e	220e000310	000000	0848268	1,640.00	plant equipment
00864	1	epson	printer,adp	fx8c	444793	000000	0549094	485.00	plant equipment
00866	1	dell-star corp.	display unit	vc1	10019941	000000	1091215	299.00	plant equipment
00874	1	danfoss electronics inc	controller	vlt3006	0129096164	000000	1262006	2,387.00	plant equipment
00875	1	epson america inc.	printer,adp	lq510	0630105421	000000	g076056	300.00	plant equipment
00876	1	hewlett-packard co	printer,adp	c2001	vst0018503	000000	1256688	1,336.00	plant equipment
00877	1	ems	motor,drive	g3u20p7	942717509	000000	1264287	1,115.00	plant equipment
00878	1	ems	motor,drive	g3u20p7	942717510	000000	1264286	1,115.00	plant equipment
00879	1	epson america inc	printer,adp	p82aa(fx86e)	14004780	000000	0140365	423.00	plant equipment
00880	1	epson america inc	printer,adp	p78sa	0630022347	000000	0061476	354.00	plant equipment
00882	1	power design inc.	power supply	2020b	9306014	000000	a006361	945.00	plant equipment
00883	1	power design inc.	power supply	2020b	9306009	000000	a006356	945.00	plant equipment
TOTAL=	973						TOTAL COST	$439,516.70	

EXHIBIT C

FMSS Contract
Government Furnished Equipment (GFE)

Item	Quantity	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
*00001	1	tobacco machine co.	calib.stand	nasa design	n.r.	079393	998092	11,866.05	special test equipment
*00009	1	sandberg serrell	semiautomatic rig	N 2500 lbs	n.r.	085106	998093	161,894.46	special test equipment
*00010	1	transmetric corp.	semiautomatic rig	N 100 lbs	3602	129974	998108	119,100.00	special test equipment
00028	1	weldmatic	welder(electric)	1016 c	16C2887	119654	000000	614.70	plant equipment
00043	1	bausch&lomb	microscope	0.7x-3	n.r.	108130	000000	444.95	other plant equipment
00044	1	bausch&lomb	microscope	0.7x-3	n.r.	131079	000000	297.63	other plant equipment
00047	1	bausch&lomb	microscope	ktvb-73	2895	132895	000000	430.20	other plant equipment
00053	1	strainsert	strain indicator	tn8c	0104	148332	000000	995.00	plant equipment
00062	1	hewlett packard	power supply	6113a	1140A0-0-508	162797	000000	444.00	other plant equipment
00067	1	hewlett packard	power supply	6113a	0-525	162803	000000	444.00	other plant equipment
00071	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160427	998121	1,230.00	plant equipment
00073	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160429	998123	1,230.00	plant equipment
00074	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160430	998124	1,230.00	plant equipment
00075	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160431	998125	1,230.00	plant equipment
00076	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	160432	998126	1,230.00	plant equipment
00077	1	doric scientific	micro-volt-meter	ds-100k5-w-y	n.r.	168460	998129	1,013.65	plant equipment
00081	1	bausch & lomb	microscope	31-26-37-73	n.r.	162924	000000	497.00	other plant equipment
00082	1	bausch & lomb	microscope	ktvb-73	2897	132897	000000	430.20	other plant equipment
00086	1	honeywell	recorder readout (cabinet)	9024-a	n.r.	113268	998104	1,756.55	plant equipment
00087	1	honeywell	recorder readout (cabinet)	9024-a	n.r.	113266	998102	1,756.55	plant equipment
00088	1	honeywell	recorder readout (cabinet)	9024-a	n.r.	113267	998103	1,756.55	plant equipment
00099	1	morehouse	calib.machine	60k	m-3560	136806	998118	1,775.00	plant equipment
00100	1	morehouse.	calib.machine	(1000	m-336	130458	998109	2,190.00	plant equipment
00102	1	ormond co.	load cell	500#	3182	136218	000000	560.00	plant equipment
00103	1	ormond co.	load cell	2000#	n.r.	136219	000000	560.00	plant equipment
00104	1	ormond co.	load cell	10000#	n.r.	136220	000000	645.00	plant equipment
00105	1	ormond co.	load cell	50000#	j.r.	136221	998116	1,000.00	plant equipment
00106	1	ormond co.	load cell	1000000#	n.r.	136222	998117	1,525.00	plant equipment
00107	1	thwing-albert	load cell	500	fh-2439	147810	000000	370.50	other plant equipment
00108	1	thwing-albert	load cell	2000#	fh-2440	147811	000000	342.00	other plant equipment
00109	1	thwing-albert	load cell	10000	fh-2441	147812	000000	342.00	other plant equipment
00110	1	thwing-albert	load cell	30000	fh-2442	147813	000000	370.50	other plant equipment
00111	1	thwing-albert	load cell	60000	fh-2443	147814	000000	380.00	other plant equipment
00112	1	despatch	oven-bake	rs-h-d-3	39495	066001	998085	1,677.00	plant equipment
00114	1	grieve&henry co.	oven-bake	hx-650	24033	107056	998101	1,452.25	plant equipment
00116	1	delta co.	oven-bake	6303	6109	134984	998113	1,560.00	plant equipment

Item	Quantity	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00117	1	delta co.	oven-bake	mk 6300	6108	134987	998115	1,560.00	plant equipment
00118	1	delta co.	oven-bake	88286	5293	131932	998111	2,420.00	plant equipment
00119	1	delta co.	oven-bake	mk 6303	6113	134983	998112	1,560.00	plant equipment
00120	1	delta co.	oven-bake	mk 6300	6111	134986	998114	1,560.00	plant equipment
00124	1	welch	vacuum pump	1402b	46832	137581	000000	389.00	other plant equipment
00125	1	precision	vacuum pump	69025	15-5529	134942	000000	140.00	other plant equipment
00128	1	mettler	scale(analytical balance)	1-909-511	503745	167343	998127	1,092.75	plant equipment
00129	1	volander	scale(analytical balance)	1015	42202	121950	998105	2,000.00	plant equipment
00130	1	volander	scale(analytical balance)	600	v-13483	146147	000000	260.00	other plant equipment
00132	1	frazier precision	scale(weight beam balance)	2-500	10-50	128010	998107	3,950.75	plant equipment
00134	1	unknown	weights set of gold standarts	class-a	gold stds.	086951	998094	1,225.00	plant equipment
00139	1	delta co.	temp.controller	mr-3	6107	135029	000000	630.00	plant equipment
00140	1	fluke	digital multimeter	8800a/ba	43556	178469	998133	1,250.95	plant equipment
00141	1	fluke	digital multimeter	8800a/ba	43576	178470	998134	1,250.95	plant equipment
00142	1	fluke	digital multimeter	8800a/ba	43561	178471	998135	1,250.95	plant equipment
00143	1	fluke	digital multimeter	8800a/ba	43586	178472	998136	1,250.95	plant equipment
00144	1	blh electronics	calib.indicator	8200a	1190	177780	998131	2,350.00	plant equipment
00145	1	blh electronics	calib.indicator	8200a	1191	177781	998132	2,350.00	plant equipment
00146	1	hewlett packard	power supply	6114a	1518a0061	176958	000000	729.00	plant equipment
00147	1	hewlett packard	power supply	6114a	1518a0062	176959	000000	729.00	plant equipment
00175	1	mettler	scale(analytical balance)	ps-30	549677	181651	998162	4,727.45	plant equipment
00178	1	honeywell	recorder multipoint	y15-6-12-42	78--5004	181752	998163	1,822.73	plant equipment
00179	1	honeywell	recorder multipoint	y15-2-12-42	78--5006	181753	998164	1,822.73	plant equipment
00181	1	honeywell	recorder multipoint	y15-6-12-42	78--5005	181755	998166	1,822.73	plant equipment
00184	1	honeywell	recorder multipoint	y15-6-12-42	78--5008	181758	998168	1,653.47	plant equipment
00186	1	racal-dana	multimeter	6900	120305	184903	998172	3,818.55	plant equipment
00187	1	racal-dana	multimeter	6900	120306	184904	998173	3,818.55	plant equipment
00188	1	hewlett packard	power supply	6114-a	1841a01511	183522	000000	787.05	plant equipment
00189	1	hewlett packard	power supply	6114-a	1841a01515	183523	000000	787.05	plant equipment
00190	1	mettler	scale(analytical balance)	pc-4400	775852	183885	998170	2,700.00	plant equipment
00191	1	troemner	weights 1kg to 20 kg	20kg-1kg	class(s)	901217	998217	2,460.00	plant equipment
00192	1	troemner	weights 1mg to 100g	100g-1mg	class(s)	000000	000000	600.00	plant equipment
00193	1	troemner	weights 1g to 1kg	1kg-1g	class(s)	000000	000000	950.00	plant equipment
00194	1	troemner	weights 001lbs to 03lbs	.3lbs.-001lbs	class(s)	000000	000000	600.00	plant equipment
00198	1	data precision	multimeter	935	3151	183711	000000	26.65	other plant equipment
00201	1	c & h	air compressor	20-105	24301	188056	998177	1,500.00	plant equipment
00203	1	norgen	drier	d10-100-040	t1880-7274-1-40	188058	000000	900.00	plant equipment
00210	1	fluke	thermometer	2160a	2442007	186523	000000	448.00	other plant equipment
00211	1	fluke	thermometer	2160a	2443000	186524	000000	448.00	other plant equipment
00212	1	fluke	thermometer	2160a	2443032	186527	000000	448.00	other plant equipment
00213	1	hewlett packard	voltmeter digital	3455a	1622a05622	183837	998169	3,281.85	plant equipment
00214	1	soltec corporation	recorder	3316-mf	3558259	187937	998176	7,348.80	plant equipment
00215	1	keithley inst.inc.	multimeter	191	22373	189546	M94484	695.00	plant equipment

Item	Quantity	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00216	1	keithley inst.inc.	multimeter	191	22377	189548	A001457	695.00	plant equipment
00217	1	fluke	thermometer	2100a-06	705017	180380	998143	1,370.50	plant equipment
00220	1	hewlett	scanner relay	3495a(mod)	1428a02403	180677	998144	1,851.30	special test equipment
00228	1	keithley inst.inc.	multimeter	191	23617	190471	M-94630	695.00	plant equipment
00229	1	soltec corporation	recorder	3316-mf	3569628	190375	998179	7,416.00	plant equipment
00232	1	moorehouse	load calib.pump	60000lb	j-5584-b	901212	998215	1,897.00	plant equipment
00234	1	hewlett-packard co	voltmeter digital	3455a	1622a02498	180670	999500	2,984.85	plant equipment
00516	1	gaertner	cathetometer(100#-)	s-14785	sn 520a	076398	000000	190.00	other plant equipment
00528	1	lyon	calib.workbench	5 ft	n.r.	076302	000000	63.24	other plant equipment
00529	1	lyon	calib.workbench	5 ft	n.r.	076303	000000	63.24	other plant equipment
00533	1	precision equip.co.	calib.workbench	300-1718	n.r.	116733	000000	56.55	other plant equipment
00534	1	precision equip.co.	calib.workbench	300-1718	n.r.	116734	000000	56.55	other plant equipment
00535	1	precision equip.co.	calib.workbench	300-1718	n.r.	116735	000000	56.55	other plant equipment
00542	1	unknown	storage cabinet	gsa	n.r.	104540	000000	33.90	other plant equipment
00545	1	unknown	storage cabinet	gsa fine steel	n.r.	089800	000000	30.00	other plant equipment
00546	1	unknown	storage cabinet	gsa fine steel	n.r.	089797	000000	30.00	other plant equipment
00547	1	unknown	storage cabinet	gsa fine steel	n.r.	089798	000000	30.00	other plant equipment
00548	1	unknown	storage cabinet	gsa fine steel	n.r.	104539	000000	33.90	other plant equipment
00549	1	unknown	storage cabinet	a.s.e.aurora	n.r.	076154	000000	32.86	other plant equipment
00551	1	unknown	storage cabinet	a.s.e.aurore&	n.r.	066046	000000	39.90	other plant equipment
00559	1	brown&sharpe	tool micrometer depth gage 0-3	607	n.r.	066358	000000	12.74	other plant equipment
00576	1	diacro	metal cutting shear	#16 cap.	#1	135603	000000	174.00	other plant equipment
00578	1	master appliance	heat gun	12300	591559-c	128471	000000	37.25	other plant equipment
00579	1	master appliance	heat gun	300-500	59874-b	000000	000000	37.25	other plant equipment
00580	1	gsa	storage cabinet (special file	st 5 dr.	n.r.	102793	000000	53.00	other plant equipment
00583	1	stocker & yale	magnifier lite mite	inc	891	088618	000000	29.45	other plant equipment
00585	1	bausch & lomb	microscope lamp	31-33-53	n.r.	143780	000000	32.40	other plant equipment
00586	1	bausch & lomb	microscope lamp	31-33-53	n.r.	143101	000000	32.40	other plant equipment
00587	1	bausch & lomb	microscope lamp	31-37-53	n.r.	143779	000000	32.40	other plant equipment
00589	1	honeywell	wheatstone indicator	1352	120015	103164	000000	166.00	other plant equipment
00590	1	rubicon instr.	wheatstone indicator	1352	n.r.	123826	000000	195.00	other plant equipment
00591	1	keithly	megohm meter	500	30234	124936	000000	164.07	other plant equipment
00592	1	keithly	megohm meter	500	30231	124885	000000	164.00	other plant equipment
00593	1	keithly	megohm meter	500	62154	150088	000000	187.25	other plant equipment
00595	1	fischer&porter	flow indicator	s-44k	n.r.	102607	000000	335.00	other plant equipment
00596	1	honeywell	thermocouple gage	2715	125445	110779	000000	245.00	other plant equipment
00601	1	opad	power supply d.c.	km87	304ko	098068	000000	185.00	other plant equipment
00625	1	troemner	weights class s 1	class-s-1	n.r.	156533	000000	100.00	other plant equipment
00626	1	troemner	weights 1mg to 100g	class-s	100gr-1mg	145931	000000	91.05	other plant equipment
00629	1	toledo scale	weights 1/4lbs to 10lbs	class-c	10lb-1/4lb	144462	000000	300.00	other plant equipment
00630	1	unknown	weights 2mg to 1kg	class-c	1kg-2mg	021133	000000	50.00	other plant equipment
00652	1	c&h distrib.	weight(hydraulic crane)	540	54771198	000000	000000	368.00	other plant equipment
00663	1	shall cross	resistance box	833	32524	112798	000000	169.00	other plant equipment

Item	Quantity	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00664	1	unitek	welder(spot welder)	1-048-03-01	12721	142603	000000	858.50	plant equipment
00665	1	hallowell	calib.workbench	0000	n.r.	145293	000000	41.40	other plant equipment
00669	1	master applian.	heat gun	hg301	679	000000	000000	55.00	other plant equipment
00670	1	brown&sharpe	tool vernier height gage	576	n.r.	000000	000000	250.00	other plant equipment
00671	1	brow&sharpe	tool caliper	n.r.	599-579-12	000000	000000	100.00	other plant equipment
00676	1	n.r.	storage cabinet	n.r.	n.r.	000000	000000	31.00	other plant equipment
00679	1	brown&sharpe	tool(caliber case(for metric-1	n.r.	n.r.	000000	000000	8.50	other plant equipment
00710	1	jerome industries	voltage adaptor	p 1db-170	p/n 100-121299	000000	000000	20.00	other plant equipment
00713	1	instr.division	strain indicator	p 3500	50816	000000	549155	985.00	plant equipment
00726	1	delta electr.	oven-gryo.	dd2859cn	0-58-1	000000	467128	4,395.00	plant equipment
00735	1	pennwalt cp ss white de	airbrasive unit	6500	2601	000000	138098	2,785.00	plant equipment
00738	1	bausch and lomb inc	microscope	31 26 94	none	143211	467714	385.00	other plant equipment
00744	1	no name	flat plates for machine shop s		202013-1	000000	932535	1,100.00	plant equipment
00745	1	no name	flat plates for machine shop s		202013-2	000000	932536	1,100.00	plant equipment
00746	1	bausch&lomb	microscope stereo	stereozoom 4	n.r.	000000	054362	525.00	plant equipment
00751	1	hewlett packard	multimeter	3478a	2301a04373	194360	777526	1,248.00	plant equipment
00756	1	Fluke	Multimeter	75	35303390	000000	533679	99.00	other plant equipment
00757	1	Fluke	Multimeter	75	35303391	000000	533680	99.00	other plant equipment
00758	1	tegam	digital thermometer	872A	T27443	000000	000000	309.00	other plant equipment
00760	1	bausch&lomb	microscope	Stero Zoom 4	n/a	000000	059115	525.00	plant equipment
00762	1	bausch&lomb	microscope	stero zoom 4	00765	000000	060459	525.00	plant equipment
00763	1	bausch&lomb	microscope	stero zoom 4	00764	000000	060458	525.00	plant equipment
00764	1	delta	controller	v(1570-4)	n/a	000000	060915	1,800.00	plant equipment
00783	1	star micronics	printer,adp	j150nx1000ii	350091214397	000000	g075271	173.00	plant equipment
00809	1	measurements gp f-vishay	welder,electric	700	089098	000000	g076067	1,878.00	plant equipment
00810	1	unitek corp equipment div	welder,electric	1-196-02	900606	000000	g076216	1,810.00	plant equipment
00811	1	national tool supply	switch and balance unit	sb-10	86560	000000	000000	999.00	plant equipment
00826	1	a and d company	balance analytical	ep60kb	50001	000000	1156731	2,474.00	plant equipment
00827	1	rice lake weighing system	weight-1mg-20g	n/a	d480	000000	000000	973.90	plant equipment
00829	1	compuadd	computer,micro	286	88063477	000000	0057217	1,650.00	plant equipment
00831	1	dell	computer,micro	200	5004855	000000	0053588	1,649.00	plant equipment
00832	1	dell	computer,micro	300	L005526	000000	0054898	3,322.00	plant equipment
00833	1	dtk co inc f-veltri f &son	computer,micro	tech1260	31707	000000	G075255	971.00	plant equipment
00836	1	partex inc	hydraulic test st	n/a	n/a	000000	1260966	7,448.00	plant equipment
00837	1	interface inc	load cell	1620apw50k	75252b	000000	1261244	3,610.00	plant equipment
00838	1	interface inc	load cell	1610apw10k	74984b	000000	1261243	2,500.00	plant equipment
00839	1	interface inc	load cell	1610apw2k	75044b	000000	1261242	2,325.00	plant equipment
00840	1	interface inc	load cell	1610apw5k	74782b	000000	1261241	2,500.00	plant equipment
00842	1	compad	monitor	420	94914544	000000	g073920	479.00	plant equipment
00843	1	dell	monitor	vc2	90713961	000000	0848105	400.00	plant equipment
00847	1	magnavox	monitor	7bm623	41242791	000000	0143881	500.00	plant equipment
00850	1	win	monitor	wmm-12hc	0z01536(c)	000000	n/a	60.00	plant equipment
00853	1	star micronics	printer	j150nx1000ll	350091214404	000000	g075269	173.00	plant equipment

Item	Quantity	Manufacturer	Description	Model	Serial	Inventory	Ecn	Cost	Category
00855	1	hewlett-packard	printer,adp	33440a	2805a99465	000000	0059881	1,690.00	plant equipment
00856	1	hewlett-packard	printer,adp	2686a	2424j86454	000000	0284088	2,306.00	plant equipment
00857	1	hytorq div of unex	pump,hydraulic	n/a	708015	000000	1261085	3,710.00	plant equipment
00858	1	consolidated devices inc.	torque tester	250/2000pt	4382	000000	1257804	1,727.00	plant equipment
00865	1	nec information systems	display unit	jc1501vma	82001067m	000000	0054910	927.00	plant equipment
00867	1	zenith electronics corp.	display unit	zvm1380	646-92450080	000000	0056607	302.00	plant equipment
00868	1	interface inc,	load cell	1610apw1k	76393	000000	1262922	2,325.00	plant equipment
00869	1	interface inc,	load cell	1633art100k	77358a	000000	1262924	5,420.00	plant equipment
00870	1	interface inc,	load cell	1620apw25k	76495	000000	1262923	3,610.00	plant equipment
00871	1	interface inc,	load cell	1632apw100k	75897a	000000	1262926	5,670.00	plant equipment
00872	1	interface inc,	load cell	1610apw1k	75244	000000	1262925	3,610.00	plant equipment
00873	1	interface inc,	load cell	1610apw10k	77107b	000000	1424769	2,500.00	plant equipment
00881	1	dell	computer,micro	286at110	19112	000000	0140348	1,485.00	plant equipment
00884	1	applied fluid power	cart,hydraulic	40nlr002	267453	000000	1263044	7,735.00	plant equipment
00885	1	interface inc	load cell	1610apw50k	78393b	000000	1425335	3,610.00	plant equipment
00886	1	interface inc	load cell	1610apw25k	78454b	000000	1425336	3,610.00	plant equipment
00887	1	interface inc	load cell	1610apw100k	785718	000000	1425337	5,470.00	plant equipment
00888	1	interface inc	load cell	1610apw5k	77989b	000000	1425338	2,500.00	plant equipment
00889	1	interface inc	load cell	1610apw2k	78274b	000000	1425339	2,325.00	plant equipment
00890	1	interface inc	load cell	1610apw1k	78552b	000000	1425340	2,325.00	plant equipment
00891	1	interface inc	standard calibration	cx0610	1163	000000	1425341	9,850.00	plant equipment
00892	1	interface inc	load cell	1610apw10k	81166a	000000	1425529	2,500.00	plant equipment
TOTAL=	187						TOTAL COST	545,814.55	

EXHIBIT D

FULL CALIBRATION LOAD SCHEDULE

Balance: UT-65A **Observer:** _____ **Date:** _____

POINT NO.	VAR	PRIM LOAD	AUX LOAD	CONDITIONS	NO. LOADS
0010	+AF	60 lb axial		60lb at Y&Z=0 15.000lb incr	1
1010	-AF	60 lb axial		60 lb at Y&Z=0 15.000 lb incr	1
0020	+NF	800 lb normal		800 lb at X&Y=0 200.000 lb incr	1
0030 1030	+PM -PM	2,000 in-lb pitch	80 lb +NF	80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr	2
1040 0040	-RM +RM	800 in-lb roll	40 lb +NF	40 lb at X&Y=0 trans 40.00 lb to +y = 20.000 in 10.000 lb incr 40 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr	2
0050	-NF	800 lb normal		800 lb at X&Y=0200.000 lb incr	1
1060 0060	-PM +PM	2,000 in-lb pitch	80 lb -NF	80 lb at X&Y=0 trans 80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr	2
0070 1070	+RM -RM	800 in-lbrol l	40 lb -NF	40 lb at X&Y=0 trans 40.00 lb to +y = 20.000 in 10.000 lb incr 40 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr	2
0080	+SF	400 lb side		400 lb at X&Z=0 100.000 lb incr	1
0090 1090	+YM -YM	1,000 in-lb yaw	40 lb +SF	40 lb at X&Z=0 trans 40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr	2
0100	-SF	400 lb side		400 lb at X&Z=0 100.000 lb incr	1
1110 0110	-YM +YM	1,000 in-lb yaw	40 lb -SF	40 lb at X&Z=0 trans 40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr	2
0120 1120	+RM -RM	800 in-lb roll	40 lb -SF	40.00 lb to +z = 20.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -z = 20.000 in 10.000 lb incr	2
0130 1130	+RM -RM	800 in-lb roll	400 lb -SF	40.00 lb to +z = 20.000 in 10.000 lb incr 400 lb at X&Z=0 trans 40.00 lb to -z = 20.000 in 10.000 lb incr	2
1140 0140	-YM +YM	1,000 in-lb yaw	80 lb -SF 800 in-lb+RM	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 40lb +z = 20 in	2
1150 0150	-YM +YM	1,000 in-lb yaw	80 lb -SF 800 in-lb -RM	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 40 lb -z = 20 in	2
1160 0160	-YM +YM	1,000 in-lb yaw	400 lb -SF	40.00 lb to +x =25.000 in 10.000 lb incr 400 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr	2
0170 1170	+YM -YM	1,000 in-lb yaw	400 lb +SF	40.00 lb to +x = 25.000 in 10.000 lb incr 400 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr	2
1180 0180	-RM +RM	800 in-lb roll	40 lb +SF	40.00 lb to +z = 20.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -z = 20.000 in 10.000 lb incr	2
1190 0190	-RM +RM	800 in-lb roll	400 lb +SF	40.00 lb to +z = 20.000 in 10.000 lb incr 400 lb at X&Z=0 trans 40.00 lb to -z = 20.000 in 10.000 lb incr	2
0200 1200	+YM -YM	1,000 in-lb yaw	80 lb +SF 800 in-lb +RM	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 40 lb -z = 20 in	2
0210 1210	+YM -YM	1,000 in-lb yaw	80 lb +SF 800 in-lb -RM	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 40lb +z = 20 in	2
0220 1220	+PM -PM	2,000 in-lb pitch	800 lb +NF	80.00 lb to +x = 25.000 in 20.000 lb incr 800 lb at X&Y=0 trans 80.00 lb to -x =-25.000 in 20.000 lb incr	2
1230 0230	-RM +RM	800 in-lb roll	800 lb +NF	40.00 lb to +y = 20.000 in 10.000 lb incr 800 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr	2
0240 1240	+PM -PM	2,000 in-lb pitch	120 lb +NF 800 in-lb +RM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 ib incr 40 lb -y = 20 in	2
0250 1250	+PM -PM	2,000 in-lb pitch	120 lb +NF 800 in-lb -RM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00lb to -x = 25.000 in 20.000 lb incr 40 lb +y = 20 in	2
1260 0260	-PM +PM	2,000 in-lb pitch	800 lb -NF	80.00 lb to +x = 25.000 in 20.000 lb incr 800 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr	2

Balance: UT-65A **Observer:** _____ **Date:** _____

POINT NO.	VAR	PRIM LOAD	AUX LOAD	CONDITIONS	NO. LOADS
0270 1270	+RM -RM	800 in-lb roll	800 lb -NF	40.00 lb to +y = 20.000 in 10.000 lb incr 800 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr	2
1280 0280	-PM +PM	2,000 in-lb pitch	120 lb -NF 800 in-lb +RM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 40 lb +y = 20 in	2
1290 0290	-PM +PM	2,000 in-lb pitch	120 lb -NF 800 in-lb -RM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 40 lb -y = 20 in	2
1300 0300	-PM +PM	2,000 in-lb pitch	80 lb -NF 60 lb +AF	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 60 lb at Y&Z=0	2
0310 1310	+RM -RM	800 in-lb roll	40 lb -NF 60 lb +AF	40.00 lb to +y = 20.000 in 10.000 lb incr 40 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr 60 lb at Y&Z=0	2
0320	-NF	800 lb normal	60 lb +AF	800 lb at X&Y=0 200.000 lb incr 60 lb at Y&Z=0	1
0330	+NF	800 lb normal	60 lb +AF	800 lb at X&Y=0 200.000 lb incr 60 lb at Y&Z=0	1
0340 1340	+PM -PM	2,000 in-lb pitch	80 lb +NF 60 lb +AF	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 60 lb at Y&Z=0	2
1350 0350	-RM +RM	800 in-lb roll	40 lb +NF 60 lb +AF	40.00 lb to +y = 20.000 in 10.000 lb incr 40 lb at X&Y=0 trans 40.00 lb to -y = 20.000 in 10.000 lb incr 60 lb at Y&Z=0	2
0360	+SF	400 lb side	60 lb +AF	400 lb at X&Z=0 100.000 lb incr 60 lb at Y&Z=0	1
0370 1370	+YM -YM	1,000 in-lb yaw	40 lb +SF 60 lb +AF	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 60 lb at Y&Z=0	2
1380 0380	-YM +YM	1,000 in-lb yaw	40 lb -SF 60 lb +AF	40.00 lb to +x = 25.000 in 10.000 lb incr 40 lb at X&Z=0 trans 40.00 lb to -x = 25.000 in 10.000 lb incr 60 lb at Y&Z=0	2
0390	-SF	400 lb side	60 lb +AF	400 lb at X&Z=0 100.000 lb incr 60 lb at Y&Z=0	1
0400	+NF	800 lb normal	400 lb +SF	800 lb at X&Y=0 200.000 lb incr 400 lb at X&Z=0	1
0420	+NF	800 lb normal	400 lb +SF 1,000 in-lb +YM	800 lb at X&Y=0 trans 200.000 lb incr 400 lb +x = 2.5 in, z=0	1
0430 1430	+PM -PM	2,000 in-lb pitch	80 lb +NF 400 lb +SF	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 400 lb at X&Z=0	2
0440 1440	+PM -PM	2,000 in-lb pitch	80 lb +NF 400 lb+SF 1,000 in-lb+YM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 400 lb +x = 2.5 in, z=0	2
0460	-NF	800 lb normal	400 lb +SF	800 lb at X&Y=0 200.000 lb incr 400 lb at X&Z=0	1
0470	-NF	800 lb normal	400 lb +SF 1,000 in-lb +YM	800 lb at X&Y=0 trans 200.000 lb incr 400 lb +x = 2.5 in, z=0	1
1490 0490	-PM +PM	2,000 in-lb pitch	80 lb -NF	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr	2

Balance: UT-65A **Observer:** _____ **Date:** _____

POINT NO.	VAR	PRIM LOAD	AUX LOAD	CONDITIONS	NO. LOADS
			400 lb +SF	400 lb at X&Z=0	
1510 0510	-PM +PM	2,000 in-lb pitch	80 lb -NF 400 lb +SF 1,000 in-lb +YM	80.00 lb to +x = 25.000 in 20.000 lb incr 80 lb at X&Y=0 trans 80.00 lb to -x = 25.000 in 20.000 lb incr 400 lb +x = 2.5 in, z=0	2

TOTAL NUMBER OF LOADS = 82

Three-component Loading + Normal Force Position

Balance: UT-65A

Observer: _____ Date: _____

STEP	CONDITIONS
8001	- Axial w/fixture only and read
8002	+ Axial and read
8003	read
8004	+ Normal and read
8005	read
8006	+ Normal (add levels) and read
8007	Add NF Hanger at x=y=0
8008	Add pitch arms
8009	Add roll arms
8010	Add pitch hangers at x = ± 25.000 in
8011	Add roll hangers at y = ± 20 in
8012	Add full NF 800 lb at x=0, y=0
8013	Trans. Full pitch 80 lb from x=y=0 to +x = 25 in
8014	Trans. Full pitch 80 lb from +x = 25 in to -x = 25 in
8015	Trans. Full roll 40 lb from x=y=0 to +y = 20 in
8016	Trans. Full roll 40 lb from +y = 20 in to -y = 20 in
8017	Trans. Full pitch 80 lb from -x = 25 in to +x = 25 in
8018	Trans. Full roll 40 lb from -y = 20 in to +y = 20 in
8019	Trans. Full pitch 80 lb from +x = 25 in to x=y=0
8020	Trans. Full roll 40 lb from +y = 20 in to -y = 20 in
8021	Trans. Full roll 40 lb from -y = 20 in to x=y=0
8022	Remove ½ NF 400 lb from x=y=0
8023	Trans. ½ pitch 40 lb from x=y=0 to +x = 25 in
8024	Trans. ½ pitch 40 lb from +x = 25 in to -x = 25 in
8025	Trans. ½ roll 20 lb from x=y=0 to +y = 20 in
8026	Trans. ½ roll 20 lb from +y = 20 in to -y = 20 in
8027	Trans. ½ pitch 40 lb from -x = 25 in to +x = 25 in
8028	Trans. ½ roll 20 lb from -y = 20 in to +y = 20 in
8029	Trans. ½ pitch 40 lb from +x = 25 in to x=y=0
8030	Trans. ½ roll 20 lb from +y = 20 in to -y = 20 in
8031	Trans. ½ roll 20 lb from -y = 20 in to x=y=0
8032	Remove all NF 400 lb from x=y=0
8033	Remove all hangers and read
8034	Remove all arms and read
8035	Remove levels and read

Three-component Loading + Side Force Position

Balance: UT-65A

Observer: _____ Date: _____

STEP	CONDITIONS
9001	- Axial w/fixture only and read
9002	+ Axial and read
9003	read
9004	+ Side and read
9005	read
9006	+ Side (add levels) and read
9007	Add SF Hanger at x=z=0
9008	Add yaw arms
9009	Add roll arms
9010	Add yaw hangers at x = ± 25.000 in
9011	Add roll hangers at z = ± 20 in
9012	Add full SF 400 lb at x=0, z=0
9013	Trans. Full yaw 40 lb from x=z=0 to +x = 25 in
9014	Trans. Full yaw 40 lb from +x = 25 in to -x = 25 in
9015	Trans. Full roll 40 lb from x=z=0 to +z = 20 in
9016	Trans. Full roll 40 lb from +z = 20 in to -z = 20 in
9017	Trans. Full yaw 40 lb from -x = 25 in to +x = 25 in
9018	Trans. Full roll 40 lb from -z = 20 in to +z = 20 in
9019	Trans. Full yaw 40 lb from +x = 25 in to x=z=0
9020	Trans. Full roll 40 lb from +z = 20 in to -z = 20 in
9021	Trans. Full roll 40 lb from -z = 20 in to x=z=0
9022	Remove ½ SF 200 lb from x=z=0
9023	Trans. ½ yaw 20 lb from x=z=0 to +x = 25 in
9024	Trans. ½ yaw 20 lb from +x = 25 in to -x = 25 in
9025	Trans. ½ roll 20 lb from x=z=0 to +z = 20 in
9026	Trans. ½ roll 20 lb from +z = 20 in to -z = 20 in
9027	Trans. ½ yaw 20 lb from -x = 25 in to +x = 25 in
9028	Trans. ½ roll 20 lb from -z = 20 in to +z = 20 in
9029	Trans. ½ yaw 20 lb from +x = 25 in to x=z=0
9030	Trans. ½ roll 20 lb from +z = 20 in to -z = 20 in
9031	Trans. ½ roll 20 lb from -z = 20 in to x=z=0
9032	Remove all SF 200 lb from x=z=0
9033	Remove all hangers and read
9034	Remove all arms and read
9035	Remove levels and read

Six-component Loading + Normal Force Position

Balance: UT-65A

Observer: _____ **Date:** _____

STEP	CONDITIONS
1101	- Axial w/fixture only and read
1102	+ Axial and read
1103	read
1104	+ Normal and read
1105	read
1106	+ Normal (add levels) and read
1107	Add AF hanger at y=z=0 with 6 lb tare
1108	Add AF light rig for cable alignment
1109	Add full AF load 60 lb plus tare at y=z=0 (Check alignment numbers)
1110	Remove AF load 60 lb from y=z=0 (leave tare)
1111	Add SF hanger with tare 40 lb at +x =4 in
1112	Add SF light rig for cable alignment
1113	Add full SF load 400 lb plus tare at +x =4 in (Check alignment numbers)
1114	Remove SF load 400 lb from +x = 4 in (leave tare)
1115	Add NF Hanger at x=y=0
1116	Add pitch arms
1117	Add roll arms
1118	Add pitch hangers at x = ± 25.000 in
1119	Add roll hangers at y = ± 20 in
1120	Add full AF load 60 lb plus tare 6 lb at y=z=0
1121	Add full SF load 400 lb plus tare 40 lb at +x = 4 in
1122	Add full NF 800 lb at x=0, y=0
1123	Trans. full pitch 80 lb from x=y=0 to +x = 25 in
1124	Trans. full pitch 80 lb from +x = 25 in to -x = 25 in
1125	Trans. full roll 40 lb from x=y=0 to -y = 20 in
1126	Trans. full pitch 80 lb from -x = 25 in to +x = 25 in
1127	Trans. full roll 40 lb from -y = 20 in to +y = 20 in
1128	Trans. full pitch 80 lb from +x = 25 in to -x = 25 in
1129	Trans. full pitch 80 lb from -x = 25 in to x=y=0
1130	Trans. full roll 40 lb from +y = 20 in to -y = 20 in
1131	Trans. full roll 40 lb from -y = 20 in to x=y=0
1132	Remove 1/2 NF 400 lb from x=y=0
1133	Remove 1/2 AF 30 lb from y=z=0
1134	Remove 1/2 SF 200 lb from +x= 4 in
1135	Trans. 1/2 roll 20 lb from x=y=0 to +y = 20 in
1136	Trans. 1/2 roll 20 lb from +y = 20 in to -y = 20 in
1137	Trans. 1/2 pitch 40 lb from x=y=0 to +x = 25 in
1138	Trans. 1/2 roll 20 lb from -y = 20 in to +y = 20 in
1139	Trans. 1/2 pitch 40 lb from +x = 25 in to -x = 25 in
1140	Trans. 1/2 roll 20 lb from +y = 20 in to -y = 20 in
1141	Trans. 1/2 roll 20 lb from -y = 20 in to x=y=0
1142	Trans. 1/2 pitch 40 lb from -x = 25 in to +x = 25 in
1143	Trans. 1/2 pitch 40 lb from +x = 25 in to x=y=0
1144	Remove all NF 400 lb from x=y=0
1145	Remove SF load 200 lb leave tare 40 lb from +x= 4 in
1146	Remove AF load 30 lb leave tare 6 lb from y=z=0
1147	Remove light rig on SF
1148	Remove SF tare 40 lb and hanger
1149	Remove light rig on AF
1150	Remove AF tare 6 lb and hanger
1151	Remove all hangers and read
1152	Remove all arms and read
1153	Remove levels and read