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SUPPLIES OR SERVICES AND PRICES/COST

ARTICLE B-1 TYPE OF CONTRACT / DESCRIPTION OF SERVICES

This is a performance based, cost-plus-award fee contract with a performance fee feature. In support of the Kennedy Space Center's Life Sciences efforts the Contractor's prime focus shall be to provide non-personal services in the areas of project / business management, laboratory operations, educational outreach, biological science, medical operations, and occupational health as described in Section C, "Description/Specifications/Work Statement", and Section J, Attachment I, "Statement of Work. In addition, the following deliverables are required:

Item	DESCRIPTION	REFERENCE	DUE DATE
1.	Services and Data Requirement Items in accordance with the Schedule, SOW, and SOW Attachments and Appendices	Contract Schedule, Section J, Attachment I, Statement of Work, SOW Attachments and Appendices	As required by referenced document
2.	Notice of Estimated Cost Increases	Article B-6	As required by referenced document
3.	Provisional Billing Rate Proposals	Article B-7	As required by referenced document
4.	Cost Phasing Plans	Article C-4 and DRD-25	In accordance with DRD 25
5.	New and Modified Mission Plan Elements Procedures – Documentation	Article C-5	As generated
6.	Financial Management Reports	Article G-1 and DRD 1	As Required
7.	Contractor's Self Evaluation	Article G-2, Section J, and the Performance Evaluation Plan	As required by referenced document
8.	Reports of Reportable Items	Article G-4	As Required
9.	Requisition and Invoices/Shipping Documents (DD Form 1149)	Article G-6	As Required
10.	Travel Reports	Article G-9	As Required
11.	Export Licenses	Article H-1	As Required
12.	Security Controls Information	Article H-5	As Required
13.	Motor Vehicle Monthly Billings	Article H-6	Monthly
14.	Motor Vehicle Utilization Plan	Article H-6 and DRD-21	Within 30 days after contract award, update annually
15.	Compliance with Radiation Protection Requirements	Article H-7	Within 30 days after contract award
16.	Health Examinations and Physical Requirements	Article H-8	As Required
17.	Hazardous Material Safety Data	Article H-9	As Required

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Item	DESCRIPTION	REFERENCE	DUE DATE
17.	Hazardous Material Safety Data	Article H-9	As Required
18.	NASA Form 1509, Facility Project – Brief Project Document	Article H-11	As Required
19.	Centerwide Manpower Report	Article H-13 and DRD-22	Quarterly
20.	Information Technology Security Plan	Article I-7 and DRD-19	Annually
21.	National Agency Check Investigation	Article I-7	As Required

(End of Text)

ARTICLE B-2 CONTRACT VALUE

A. The contract value is comprised of the estimated cost, award fee, and performance fee as summarized in the following Contract Table B-2.A, Contract Value:

Contract Table B-2.A, Contract Value
See Next Page 5-A

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CONTRACT TABLE B-2.A

CONTRACT VALUE

<u>Period of Performance</u>	<u>Mod</u>	<u>Estimated Cost</u>	<u>Performance Award Fee</u>	<u>Performance Fee</u>	<u>Total Value (Est. Cost, AF, PF)</u>
Phase-In Period					32,669
Base Period 1/01/02-9/30/02	Initial Award				\$9,559,455
	Mod 6				282,829
Total CY1					9,842,284
10/01/02-9/30/03					12,825,837
10/01/03-9/30/04					16,494,106
10/01/04-9/30/05					15,226,603
Option Period 1 10/01/05-9/30/06					15,656,878
10/01/06-9/30/07					16,139,529
Option Period 2 10/01/07-9/30/08					16,637,875
10/01/08-9/30/09					17,148,126

* Award / Performance Fee Columns Reflect Earned Plus Available Amounts

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B. It is agreed that the total available fee pool will be divided into an available award fee pool (75% of the total available fee pool) and a performance fee pool (25% of the total available fee pool).

C. The available and earned award fees are as follows:

1. The amount of Available Award Fee (AAF) and earned award fee for each award fee period is recorded in the following Contract Table B-2.B, Available and Earned Award Fee, and will be updated in accordance with the articles of this contract:

Table B-2.B Available and Earned Award Fee				
Award Fee Period	Available	Earned	Score	Rating
Base Period:				
01/01/02-9/30/02	\$ [REDACTED]	\$TBD	TBD	TBD
10/01/02-9/30/03	\$ [REDACTED]	\$TBD	TBD	TBD
10/01/03-9/30/04	\$ [REDACTED]	\$TBD	TBD	TBD
10/01/04-9/30/05	\$ [REDACTED]	\$TBD	TBD	TBD
Option Period 1:				
10/01/05-9/30/06	\$ [REDACTED]	\$TBD	TBD	TBD
10/01/06-9/30/07	\$ [REDACTED]	\$TBD	TBD	TBD
Option Period 2:				
10/01/07-9/30/08	\$ [REDACTED]	\$TBD	TBD	TBD
10/01/08-9/30/09	\$ [REDACTED]	\$TBD	TBD	TBD

D. It is agreed that the amount of award fee earned, if any, shall be determined in accordance with Section J, Attachment III, "NASA's Performance Evaluation and Award Fee Plan for Contract NAS10-02001".

E. It is agreed that the performance fee earned, if any, shall be determined in accordance with Section J, Attachment III, "NASA's Performance Evaluation and Award Fee Plan for Contract NAS10-02001."

(End of Text)

ARTICLE B-3 CONTRACT FUNDING

Pursuant to FAR Clause 52.232-22, Limitation of Funds, funds presently allotted to this contract and the period through which they are estimated to be adequate are specified in Contract Table B-5, Contract Value and Funding as follows:

Table B-3 Contract Value and Funding
<i>See Next Page 7-A</i>

(End of Text)

ARTICLE B-4 OPTIONS TO EXTEND THE PERIOD OF CONTRACT

- A. In accordance with the values shown on Table B-3A, this contract is renewable for the following periods at the option of the Government:

Option No.	Option Period
1	10/01/05 – 9/30/07
2	10/01/07 – 9/30/09

- B. The Government may extend the term of the contract for the quantities of supplies or services and period specified in the Schedule by written modification of this contract before the current contract performance period expires, provided that the Government shall give the Contractor a preliminary written notice of intent to extend at least 60 days prior to expiration of any current period of performance. The preliminary notice does not commit the Government to exercise the option.
- C. If the Government exercises any option, the extended contract shall be considered to include this option provision.
- C. The total duration of this contract, including the exercise of any option(s) under this clause, shall not exceed seven (7) years nine (9) months.
- D. It is understood and agreed that any continued performance of services from period to period shall be at the sole determination of the Government and will be contingent upon prior satisfactory performance. Failure to renew the contract for any subsequent period of performance shall not be considered as a termination for the convenience of the Government.

(End of Text)

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CONTRACT TABLE B-4**CONTRACT VALUE & FUNDING**

AS OF MOD #	CONTRACT VALUE *	FUNDING			ADEQUATE THROUGH
		COST	FEE	TOTAL COST AND FEE	
Basic	\$54,138,670			\$367,000	
1				2,917,026	
2				858,600	
4				568,511	
5				933,211	
6	282,829				
CUMULATIVE VALUES	\$54,421,499			\$5,644,348	

* Estimated cost plus fee from Article B-3.A for awarded amounts

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ARTICLE B-5 NONPROPOSED COSTS

(a) The total estimated cost of this contract includes the following estimated costs:

Period	Travel	Materials	SERPL Activation
Base Year 1	\$318,750	\$1,125,000	N/A
Base Year 2	\$437,750	\$1,545,000	N/A
Base Year 3	\$450,883	\$1,591,350	\$1,500,000
Base Year 4	\$464,409	\$1,639,091	N/A
Option 1 – Year 1	\$478,341	\$1,688,091	N/A
Option 1 – Year 2	\$492,691	\$1,738,911	N/A
Option 2 – Year 1	\$507,472	\$1,791,078	N/A
Option 2 – Year 2	\$522,696	\$1,844,811	N/A

(b) These costs are the Government's best estimate of what the actuals will be. There will be no adjustment in the fee(s) of the contract should the actuals be different than these estimates, unless additional effort is added to the contract or there is a change to the contract under the Changes clause of this contract, which impacts these estimates.

(End of Text)

ARTICLE B-6 ESTIMATED COST INCREASES

(a) This is a completion type Performance Based Contract under which the Contractor is required to meet all the requirements irrespective of changes or variations in skills or work emphasis within the contract scope.

(b) The requirements of this clause are in conjunction with the Limitation of Cost clause or the Limitation of Funds clause of this contract.

(c) The Contractor shall notify the Contracting Officer in writing when the Contractor has reason to believe that the total cost for performance of this contract, exclusive of any fee, will be either greater or substantially less than the total estimated cost stated in this contract. Notification shall not be delayed pending preparation of a proposal.

(d) A proposal is required to support a request for an increase in the estimated cost of the contract. The proposal should be submitted as soon as possible after the above notification but no later than 60 days before the incurred costs are expected to exceed the estimated cost. This will allow adequate time for the Government to evaluate the proposal and to negotiate any increase in estimated cost with the Contractor.

(e)(1) The proposal shall be submitted in the following format unless some other format is directed or approved by the Contracting Officer:

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- Incurring costs to date
- Projected cost to completion
- Total cost at completion
- Current negotiated estimated cost
- Requested increase in estimated cost

(2) The projected cost to completion shall consist of the following: "Other than cost or pricing data" unless the Contracting Officer requests or approves the submittal of a greater or lesser amount of information:

- (i) Elements of cost with supporting detail for estimated direct labor hours, direct and indirect rates, materials and subcontracts, and other elements.
- (ii) Supporting explanation for the increases and projections, sufficient for the Government to understand the reasons for the increased estimated cost.

(End of clause)

ARTICLE B-7 KSC 52.231-90 SPECIAL COST PROVISIONS (DEC 2000) (Modified)

Pursuant to the terms of the contract clause entitled "Allowable Cost and Payment", the contractor shall be reimbursed for such actual and allowable expenditures incurred in the performance of work required by this contract as may be approved by the Contracting Officer, subject to the following limitations and provisions:

- A. Travel - Travel required in performance of work under this contract must be in accordance with the Contractor's approved travel policy.
- B. Reimbursement Ceiling Rates

Notwithstanding the terms of the contract clause entitled "Allowable Cost and Payment," the contractor shall not be reimbursed for General and Administrative in excess of the following ceilings:

Period	G&A Ceiling Rate
For the Contractor's Fiscal Year Ending:	
2002	
2003	
2004	

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2005	
2006	
2007	
2008	
2009	

The base for application of G&A expenses is defined as total cost input exclusive of G&A expense and less subcontractor cost.

C. Provisional Billing Rates

Provisional billing rates for indirect cost pools shall be set at the discretion of the Contracting Officer based upon proposals from the Contractor and following review by Government auditors. These provisional rates shall be specified in writing and may be revised either retroactively or prospectively by the Contracting Officer. Prior to each Contractor fiscal year, the Contractor shall submit a proposal for the coming year's provisional billing rates.

D. Relocation

Reimbursement for relocation costs shall be in accordance with FAR 31.205-35. No relocation costs will be reimbursable under this contract for employees whose residence at the time of hiring or assignment to this contract was within a fifty (50) mile radius of Kennedy Space Center, Florida. However, in no event shall the relocation costs exceed the following ceiling unless authorized by the Contracting Officer:

Period	Ceiling Cost Per Relocation
Base Year 1	
Base Year 2	
Base Year 3	
Base Year 4	
Option 1 - Year 1	
Option 1 - Year 2	
Option 2 - Year 1	
Option 2 - Year 2	

It is mutually agreed that the contractor shall not be entitled to reimbursement under this contract

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for cost of relocating employees to their "home site" or any other gaining contractor activity.

E. Household Goods Shipments

1. Movement of household goods and personal effects of contractor employees, when the total transportation costs are to be reimbursed by the Government, shall be made by carriers furnishing reduced rates under 49 U.S.C. Section 10721, when such rates are available. The contractor will inform the Transportation Office, TA-E1, Kennedy Space Center, Florida, Telephone No. 321-867-4105, of each planned movement; and that office will provide the contractor with applicable instructions for household goods movement and such other support or guidance that is requested.

2. The contractor shall furnish the Transportation Office, TA-E1, Kennedy Space Center, Florida, with advanced information of any planned mass movement of personnel (10 or more families) thirty (30) or more days prior to the start of any major relocations in order to provide the Government with sufficient time for rate negotiation action.

3. Carrier's bill of lading and related shipping documents will be annotated with the following statement:

"TRANSPORTATION HEREUNDER IS FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, AND THE ACTUAL TOTAL TRANSPORTATION CHARGES PAID TO THE CARRIER(S) BY THE CONSIGNOR OR CONSIGNEE ARE TO BE REIMBURSED BY THE GOVERNMENT, PURSUANT TO COST-REIMBURSABLE CONTRACT NO. NAS10-02001. THIS MAY BE CONFIRMED BY CONTACTING SUCH AGENCY AT 321-867-4105 or 867-2975."

4. One (1) copy of all carriers' bills of lading will be furnished the Transportation Office, TA-E1, Kennedy Space Center, Florida on movements of household goods and personal effects which are the result of the relocation of the contractor employees when the total transportation costs are to be reimbursed by the Government. Requests for deviations from the procedures established by this clause should be in writing and addressed to the Contracting Officer. Such requests must be made prior to the proposed move and in sufficient time for the Contracting Officer to make a decision.

5. Failure to comply with the provisions of this clause may result in the disallowance of costs, which are in excess of those which would

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have resulted from utilization of reduced rates obtainable under the provisions of this clause.

F. Severance Pay

Reimbursement for severance pay shall be in accordance with the provisions of FAR 31.205-6(g). However, in no event shall the Government reimburse the contractor for the cost of severance pay for any individual Contractor employee who voluntarily elects to stay in place and work for a succeeding Contractor.

(End of Clause)

ARTICLE B-8 NFS 1852.237-71 Pension Portability (JAN 1997)

(a) In order for pension costs attributable to employees assigned to this contract to be allowable costs under this contract, the plans covering such employees must:

- (1) Comply with all applicable Government laws and regulations;
- (2) Be a defined contribution plan, or a multiparty defined benefit plan operated under a collective bargaining agreement. In either case, the plan must be portable, i.e., the plan follows the employee, not the employer;
- (3) Provide for 100 percent employee vesting at the earlier of one year of continuous employee service or contract termination; and
- (4) Not be modified, terminated, or a new plan adopted without the prior written approval of the cognizant NASA Contracting Officer.

(b) The Contractor shall include paragraph (a) of this clause in subcontracts for continuing services under a service contract if:

- (1) The prime contract requires pension portability;
- (2) The subcontracted labor dollars (excluding any burdens or profit/fee) exceed \$2,500,000 and ten percent of the total prime contract labor dollars (excluding any burdens or profit/fee); and
- (3) Either of the following conditions exists:
 - (i) There is a continuing need for the same or similar subcontract services for a minimum of five years (inclusive of options), and if the subcontractor changes, a high percentage of the predecessor subcontractor's employees are expected to remain with the program; or
 - (ii) The employees under a predecessor subcontract were covered by a portable pension plan, a follow-on subcontract or a subcontract consolidating existing services is awarded, and the total subcontract period covered by the plan covers a minimum of five years (including both the predecessor and successor subcontracts).

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(End of Clause)

ARTICLE B-9 TRANSFER OF ACCRUED BENEFITS

The successful offeror will accept transfer of accrued sick leave hours of personnel hired from the incumbent contractor without a break in service from the predecessor contract in excess of 60 days. However, the costs of these carry-over hours will not be paid under the successor contract unless used. Additionally, the successor offeror will recognize the vacation accrual rates, earned through seniority, of personnel hired from incumbent contractor without a break in service from the predecessor contract in excess of 60 days.

The Contractor shall include a special provision similar to this provision in their major subcontracts.

(End of Text)

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ARTICLE C-1 KSC 52.210-90 SCOPE OF WORK (FEB 1990) (MODIFIED)

- A. The Contractor shall perform all the effort described in Section J, "List of Attachments," Attachment I, "Statement of Work, Life Sciences Support Contract." At the start of the contract, the Contractor shall assume, as a minimum, all services described in Section J, Attachment I, Appendix 5, "Mission Plan".
- B. The Contractor's contractual obligation is to perform the Statement of Work within the estimated cost of this contract as set forth in Article B-2, "Contract Value," and as further constrained by Article I-1, FAR 52.232-22, "Limitation of Funds," and Article B-5, "Contract Funding."
- C. The Contractor's obligation under this contract may include resolution of unusual or emergency situations or increased work volume which may occur from time to time. Such requirements shall be considered to be within the general scope of the contract, entirely within the Contractor's original contractual obligation, and will not constitute nor be construed as a change within the meaning of the "Changes" clause of this contract. However, if such work is considered by the Contractor to be outside the scope of their contractual obligation, the Contractor, before performing any effort pursuant to such Government direction, shall refer such questions to the Contracting Officer for resolution in accordance with the process set forth in Article B-6.

(End of Clause)

ARTICLE C-2 VARIATIONS IN SERVICE LEVELS

- 1. The total estimated cost and fee(s) of this contract are based upon the Contractor's estimate of the magnitude of effort required to provide the services described in Section J, Attachment I, "Statement of Work", and addenda thereto, for the entire term of the contract, including all exercised options.
- 2. The Contractor will perform its duties in a dynamic environment in which the range of effort required to support KSC's Life Sciences activities will vary. Range of effort is comprised of all activities to be supported and resources to be used in the delivery of support.
 - (a) "Activities" include any organizations, laboratories, programs, projects, systems, and tasks funded during the course of the contract.
 - (b) "Resources" include all labor, skills, professions, facilities (except as otherwise provided in the contract), supplies and materials required to deliver high quality and timely support.

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3. During the term of the contract, the Contractor shall deliver support in all functional areas identified in the Attachment I, Statement of Work, across the full range of effort identified by the Contracting Officer or his/her technical representative, regardless of the magnitude of effort actually required. The Contractor understands and agrees to the following:

(a) Variation in the number or type of specific activities to be supported shall not constitute a change to the contract, and shall not entitle the Contractor to an equitable adjustment.

(b) Variation in the magnitude or mix of resources needed by the Contractor to deliver support shall not constitute a change to the contract, and shall not entitle the Contractor to an equitable adjustment.

4. Substantial expansion of the functional areas of responsibility, as established in the Attachment I, Statement of Work, may constitute a change to the scope of the contract; however, the Contractor understands that the Attachment I, Statement of Work, is intended to be construed broadly to achieve KSC's Life Sciences objectives.

(End of Text)

ARTICLE C-3 DATA REQUIREMENTS LIST (DRL)

The Contractor shall furnish all data identified and described in Section J, Attachment I, Appendix 1, "DRL/DRD" and in supplemental DRLs to be subsequently furnished to the Contractor for additional data which the Government is authorized to request in accordance with the terms of this contract. Such data shall be prepared in accordance with the Data Requirement Description - KSC Form 16-246 (hereinafter called DRD) attached to the DRL and referenced in the DRL for each line item of data specified in the DRL.

- A. The Government reserves the right to reasonably defer the date of delivery of any or all line items of data specified in the DRL. Such right may be exercised at no increase in the contract amount. The Government also reserves the right to terminate the requirement for any or all line items of data specified in the DRL. In the event the Government exercises this latter right, the contract amount shall be subject to equitable adjustment in accordance with the clause hereof entitled "Changes."
- B. To the extent that data required to be furnished by other provisions of this contract are also identified and described in the DRL, or supplemental DRLs, and in the DRDs referenced in such DRL(s), compliance with the DRL shall be accepted as compliance with such other provisions. In the event of conflict between the identity and description of data called for by specific provisions of this contract and the DRL or DRDs, the DRL and DRDs shall control the data to be furnished.
- C. Nothing contained in this Data Requirements List provision shall relieve the Contractor from furnishing data called for by, or under the authority of, other provisions of this contract which are not identified and described in the DRL attached to this contract. Whenever such data are

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identified, either by the Contractor or the Government, they will be listed on a DRL and described on DRDs.

- D. Except as otherwise provided in this contract, the cost of data to be furnished in response to the DRL attached to this contract is included in the price of this contract if it is a fixed-price contract; or, if this is a cost-type contract, the cost is included in the estimated cost and shall be reimbursed in accordance with FAR 52.216-7, "Allowable Cost and Payment" clause.

(End of Text)

ARTICLE C-4 TRACKING AND REPORTING REQUIREMENTS

On the effective date of the contract, the Contractor shall deliver a cost phasing plan, for each of the mission plan elements designated in Section J, Attachment I, Appendix 5, Mission Plan, in accordance with the requirements of DRD 25, Cost Phasing Plan with the following conditions:

- Planned staffing by month, by identification number (mission plan element);
- Planned ODC's and indirects by month, by identification number (mission plan element);
- A total roll up of all identification numbers (mission plan element), by labor category, ODC's, indirects, etc. to be delivered to the Contracting Officer, the COTR, the Contract Resources Analyst, and other codes as identified in DRD 25.

The cost phasing plan shall be in the format designated by the NASA Contracting Officer and shall be delivered at the intervals specified in DRD 25. Financial Management Reporting Requirements, throughout the period of performance, shall be at these same levels.

(End of Text)

ARTICLE C-5 NEW AND MODIFIED MISSION PLAN ELEMENT PROCEDURES

As described in Article C-1, Scope of Work, the Contractor shall assume, at the start of the contract, the services described in Section J, Attachment I, Appendix 5, "Mission Plan". Variations to the range of services shall be handled as follows:

(a) New Mission Element Procedures:

1. The Contractor may be approached to assist an activity(ies) not previously supported but within the scope of the contract.
2. The Contractor shall then prepare a general description of how it intends to support the work, generate a unique staffing plan for that work, along with the total estimated cost—from the planned start date through the remaining contract year, and provide that documentation to the appropriate Financial Analyst and the Contracting Officer's Technical Representative. The

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Government will, in turn, use its own internal process to ensure that funds are available to support that work. The Government process includes concurrence, not of the contractor's proposed support but, of the associated cost to ensure that sufficient funds are available to support the activity, from:

- The Assigned Technical Representative (ATR)
 - The Financial Analyst
 - The Contracting Officer's Technical Representative (COTR)
3. The Contracting Officer shall notify the Contractor in writing that work may proceed. All verbal notices will be followed in writing within three business days.

(b) Modified Mission Plan Element:

1. Occasionally, an established funding source will need adjustment. Should this occur, the process is the same as described in paragraph (a) above, except the documentation shall identify a revision to the mission plan element.

The Contractor shall prepare a general description of how it intends to support the modified work and the effect to the original mission plan element workload, if any, along with the modified staffing plan(s) and revised estimated cost(s). This documentation shall be delivered to the appropriate funding organization, and the same process and distribution as described in paragraph (a) above shall be followed.

(End of Text)

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DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

**ARTICLE D-1 KSC 52.247-94 MARKING INSTRUCTIONS – CONTRACTOR
ACQUIRED EQUIPMENT (NOV 2000)**

Inbound shipments to the contractor of contractor acquired equipment and parts from all sources for the account of the Government shall be consigned to and marked as follows:

Transportation Officer, NASA
J-BOSC Warehouse, Building M6-744
Kennedy Space Center, Florida 32899

Mark for: _____ *

*Contractor to insert the name, code and address of the consignee and, if appropriate, identifying contract or order number.

NOTE: (On shipments of explosives, propellants, dangerous and potentially hazardous items via motor carrier, the contractor shall require the carrier to call KSC Transportation Office, TA-E1, phone 321-867-2975, immediately prior to arrival, in order to receive instructions as to the exact unloading point within the Kennedy Space Center.)

(End of clause)

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INSPECTION AND ACCEPTANCE

ARTICLE E-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

- (52.246-3) INSPECTION OF SUPPLIES – COST REIMBURSEMENT (MAY 2001)
- (52.246-5) INSPECTION OF SERVICES – COST REIMBURSEMENT (APR 1984)

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ARTICLE F-1 KSC 52.212-90 CONSIGNMENT ADDRESS (SEP 1998)

Ship To: Transportation Officer, NASA
 J-BOSC Warehouse, Bldg. M6-744
 Kennedy Space Center, Florida 32899

Note: See Section D for special marking instructions that may be required.

ARTICLE F-2 KSC 52.212-91 DELIVERY INSTRUCTIONS (FEB 1991)

Deliveries must be made to the receiving activity located in Building M6-744, J-BOSC Warehouse, John F. Kennedy Space Center, Florida. Unless the Contracting Officer has authorized deliveries to be made at other times because of an emergency requirement, vendor deliveries will be accepted only during normal operating hours which are from 07:20 a.m. to 03:30 p.m. daily excepting Saturdays, Sundays and legal holidays.

ARTICLE F-3 KSC 52.212-92 PLACE OF PERFORMANCE (FEB 1990)

The place of performance shall be the John F. Kennedy Space Center (KSC), Cape Canaveral Air Force Station (CCAFS), Florida; Dryden Flight Research Center, Edwards Air Force Base, CA (DFRC); Vandenberg Air Force Base, CA; Avon Park Air Force Range, Florida; and at such other locations as may be approved in writing by the Contracting Officer.

ARTICLE F-4 KSC 52.247-97 SHIPPING INSTRUCTIONS (FOREIGN PURCHASES) (NOV 2000)

SHIP BY: U. S. Customs Bonded Carrier

SHIP TO: Transportation Officer, NASA
 JBOSC Warehouse, Building M6-744
 Kennedy Space Center FL 32899
 c/o U. S. Customs Office
 Port Canaveral FL

ARTICLE F-5 KSC 52.247-99 FREIGHT SHIPMENTS (NOV 2000)

Reduced transportation rates accorded the Government under Section 22 of the Interstate Commerce Act are properly applicable to Commercial Bills of Lading covering property shipments moving under cost reimbursement type Government contracts when the contract provides for direct reimbursement by the Government of all transportation costs and such costs

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are allowable.

The following is applicable to freight shipments of 20,000 pounds or more by surface transportation or 5,000 pounds or more by air movement when the transportation costs are directly reimbursable by the Government and such costs are allowable:

a. When the Contracting Officer has authorized the Contractor to utilize Commercial Bills of Lading with application of Section 22 rates for freight shipments instead of shipment on Government Bills of Lading and/or conversion of Commercial Bills of Lading to Government Bills of Lading, the contractor will inform the KSC Transportation Office, TA-E1, Kennedy Space Center, Florida, telephone number 321-867-2975, of each planned movement. That office will furnish the contractor with pertinent information including name of carriers (by origin) providing service under Section 22 rates, citation of applicable tariff and such other support or guidance that is requested.

b. The original and all copies of the Carrier's Bills of Lading will be annotated with the following statement: "Transportation hereunder is for the Government and the actual total transportation charges paid to the carrier(s) are to be reimbursed by the Government."

c. One (1) copy of all Carrier's Bills of Lading for freight shipments will be furnished the KSC Transportation Office, TA-E1, Kennedy Space Center, Florida when total transportation costs are to be reimbursed by the Government.

ARTICLE F-6 PERIOD OF PERFORMANCE

The initial period of performance for this contract shall be January 1, 2002, through September 30, 2005. Pursuant to the option provision to extend the term of the contract, the following options are exercised:

Option Period	Date Exercised	Contract Modification Number
TBD	TBD	TBD
TBD	TBD	TBD

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ARTICLE G-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

- (1852.227-11) PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM)
- (1852.227-70) NEW TECHNOLOGY (NOV 1998)
- (1852.227-86) COMMERCIAL COMPUTER SOFTWARE LICENSING (DEC 1987)
- (1852.242-73) NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (JUL 2000)

**ARTICLE G-2 NFS 1852.216-76 AWARD FEE FOR SERVICES CONTRACTS
(JUNE 2000) (MODIFIED)**

- (a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause 1852.216-85, "Estimated Cost and Award Fee" in this contract.
- (b) The initial performance evaluation will take place nine months after full performance begins. Following the initial evaluation, the Government shall evaluate the Contractor's performance every 12 months to determine the amount of award fee earned by the contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with the Government's "Performance Evaluation and Award Fee Plan." The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.
- (c) The Government will advise the Contractor in writing of the evaluation results. The Accounts Payable Section, Code GG-B-C2, will make payment based on issuance of a unilateral modification by contracting officer.
- (d) After 85% of the potential award fee has been paid, the Contracting Officer may direct the withholding of further payment of award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total potential award fee.
- (e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth elsewhere in this contract. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

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(f)(1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the Contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80% or the prior period's evaluation score.

(2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the Contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.

(3) If the Contracting Officer determines that the Contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the Contractor in writing if it is determined that such discontinuance or reduction is appropriate. This determination is not subject to the Disputes clause.

(4) Provisional award fee payments will not be made prior to the first award fee determination by the Government.

(g) Award fee determinations made by the Government under this contract are not subject to the Disputes clause.

(End of clause)

ARTICLE G-3 NFS 1852.216-87 SUBMISSION OF VOUCHERS FOR PAYMENT
(MARCH 1998)

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

John F. Kennedy Space Center, NASA
Accounting Control and Reporting Branch
GG-B1-A
Kennedy Space Center, Fl 32899

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost 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.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:

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

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attachment to:

[NASA or DCAA mailing office address to be provided at time of award]

(2) Five copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:

- (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.

(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and be forwarded to:

John F. Kennedy Space Center, NASA
Attn: Contracting Officer, OP-OS
Kennedy Space Center, FL 32899

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

(e) 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.

(End of clause)

ARTICLE G-4 NFS 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (JULY 1997)

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

Title	Office Code	Address
New Technology Representative	YA-C1	John F. Kennedy Space Center, NASA Attn: David Makufka Technology Transfer Officer YA-C1 Kennedy Space Center, FL 32899

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Title	Office Code	Address
Patent Representative	CC-A	John F. Kennedy Space Center, NASA Attn: Randall Heald Patent Counsel CC-A Kennedy Space Center, FL 32899

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

ARTICLE G-5 RESERVED

**ARTICLE G-6 NFS 1852.245-71 INSTALLATION-ACCOUNTABLE
GOVERNMENT PROPERTY (JUNE 1998)**

a) The Government property described in the clause at 1852.245-77, List of Installation-Accountable Property and Services, shall be made available to the Contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property. Under this clause, the Government retains accountability for, and title to, the property, and the Contractor assumes the following user responsibilities:

The Contractor shall assume the responsibilities as custodian / user as defined in NPG 4200.

The contractor shall establish and adhere to a system of written procedures for compliance with these user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.

(b)(1) The official accountable recordkeeping, physical inventory, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

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- (i) The contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area;
 - (ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area:
 - (iii) The contractor shall establish a record of the property as required by FAR 45.5 and 1845.5 and furnish to the Industrial Property Officer a DD Form 1149 Requisition and Invoice/Shipping Document (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.
 - (iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the contracting officer and notification of the SEMO. The contractor shall assume accountability and financial reporting responsibility for such property. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR Part 45.5 until its return to the installation.
- (2) After transfer of accountability to the Government, the contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the contracting officer.

(End of Clause)

ARTICLE G-7 NFS 1852.245-77 LIST OF INSTALLATION-PROVIDED PROPERTY AND SERVICES (JULY 1997)

In accordance with the clause at 1852.245-71, Installation-Accountable Government Property, the Contractor is authorized use of the types of property and services listed below, to the extent they are available, in the performance of this contract within the physical borders of the installation which may include buildings and space owned or directly leased by NASA in close proximity to the installation, if so designated by the Contracting Officer.

- (a) Office space, work area space, and utilities. Government telephones are available for official purposes only; pay telephones are available for contractor employees for unofficial calls.
 - (b) General- and special-purpose equipment, including office furniture.
- (1) Equipment to be made available is listed in Section J, Attachment I, Appendix 4. The Government retains accountability for this property under the clause at 1852.245-71, Installation-Accountable Government Property, regardless of its authorized location.

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(2) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records as required by the clause at 1852.245-71, Installation-Accountable Government Property.

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

(c) Supplies from stores stock.

(d) Publications and blank forms stocked by the installation.

(e) Safety and fire protection for Contractor personnel and facilities.

(f) Installation service facilities: See Section J, Attachment I, Appendix 7

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

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

(i) Building maintenance for facilities occupied by Contractor personnel.

(j) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.

(k) The user responsibilities of the Contractor are defined in paragraph (a) of the clause at 1852.245-71, Installation-Accountable Government Property.

(End of clause)

ARTICLE G-8 KSC 52.216-90 PAYMENT PROVISIONS (CPAF) (SEP 1998)

A. Costs: Pursuant to the Allowable Cost and Payment clause of this contract, cost invoices shall be submitted by the Contractor on Standard Form 1034. Three (3) copies of each invoice, except the final voucher, shall be submitted to the cognizant Defense Contract Audit Agency Office for provisional approval and transmittal to the payment office. The final voucher shall be submitted to the Contracting Officer.

B. Award Fee:

1. Pursuant to the clause 1852.216-76, Award Fee for Service Contracts, the amount of

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award fee earned, when determined, shall be reflected in a unilateral contract modification issued by the Contracting Officer. The payment office will make payment based on the unilateral modification.

(End of Clause)

ARTICLE G-9 TRAVEL OUTSIDE OF THE UNITED STATES

The Contractor is responsible for all arrangements associated with employee travel while in performance of support under this contract.

The Contractor shall submit a travel report within 30 days after conclusion of the travel required to support the activities listed in the Attachment I, Statement of Work, and its addendum, to the Contracting Officer's Technical Representative with a copy to the Contracting Officer.

(End of text)

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SPECIAL CONTRACT REQUIREMENTS

ARTICLE H-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

- (1852.204-74) CENTRAL CONTRACTOR REGISTRATION (AUG 2000)
- (1852.223-70) SAFETY AND HEALTH (MAY 2001)
- (1852.223-75) MAJOR BREACH OF SAFETY OR SECURITY (MAY 2001)
- (1852.223-74) DRUG AND ALCOHOL FREE WORKPLACE (MAR 1996)
- (1852.225-70) EXPORT LICENSES (FEB 2000)
- (1852.228-75) MINIMUM INSURANCE COVERAGE (OCT 1988)
- (1852.246-70) MISSION CRITICAL SPACE SYSTEMS PERSONNEL RELIABILITY PROGRAM (MAR 1997)
- (1852.247-71) PROTECTION OF THE FLORIDA MANATEE (MAR 1989)

ARTICLE H-2 NFS 1852.235-71 KEY PERSONNEL AND FACILITIES (MAR 1989)

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

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

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

Name	Title
Douglas L. Britt	LSSC Project Director; Dynamac Sr. Vice President
	Manager, Biological Programs, Deputy Project Director and Dynamac Chief Scientist
	Facilities/Laboratory Utilization Manager
	Manager, Aerospace Medicine Spaceport Services
	Manager, Payload Development Programs
	Technical Lead, Ground Research & Spaceport Technology Development
	Director, Occupational Health Program Assessment

(End of clause)

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ARTICLE H-3 NFS 1852.237-70 EMERGENCY EVACUATION PROCEDURES
(DEC 1988)

The contractor shall assure that its personnel at Government facilities are familiar with the functions of the Government's emergency evacuation procedures. If requested by the Contracting Officer, the Contractor shall designate an individual or individuals as contact points to provide for efficient and rapid evacuation of the facility if and when required.

(End of clause)

ARTICLE H-4 NFS 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992), ALTERNATE II (OCT 2000)

(a) The on-site Government personnel observe the following holidays:

- New Year's Day
- Labor Day
- Martin Luther King, Jr.'s Birthday
- Columbus Day
- President's Day
- Veterans Day
- Memorial Day
- Thanksgiving Day
- Independence Day
- Christmas Day

Any other day designated by Federal statute, Executive order, or the President's proclamation.

(c) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(d) When the NASA installation grants administrative leave to its Government employees (e.g., as a result of inclement weather, potentially hazardous conditions, or other special circumstances), Contractor personnel working on-site should also be dismissed. However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

(e) Whenever administrative leave is granted to Contractor personnel pursuant to paragraph (e) of above, it shall be without loss to the Contractor. The cost of salaries and wages to the Contractor for the period of any such excused absence shall be a reimbursable item of cost under this contract for employees in accordance with the Contractor's established accounting policy.

(End of Clause)

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ARTICLE H-5 KSC 52.204-90 SECURITY CONTROLS AT KSC (NOV 2000)

A. Identification of Employees

1. The contractor shall require each employee engaged on the work site to display NASA-furnished identification badges and special access badges at all times. The contractor shall obtain and submit badging request forms for each person employed or to be employed by the contractor under this contract. The contractor shall designate its own security and badging officials to act as points-of-contact for the KSC Security Office. Prior to proceeding with onsite performance, the contractor shall submit the following information to the Protective Services Branch, Code TA-E2, Kennedy Space Center:

- a. Contract number and location of work site(s)
- b. Contract commencement and completion dates
- c. Status as prime or subcontractor
- d. Names of designated security and badging officials

2. Identification and badging of employees shall be accomplished as soon as practicable after award of the contract. During performance of the contract, the contractor shall, upon termination of an employee, immediately deliver badges and/or passes issued to the employee to the NASA Security Office. It is agreed and understood that all NASA identification badges/passes remain the property of NASA, and the Government reserves the right to invalidate such badges/passes at any time.

B. Access to Controlled Areas within KSC

1. Certain areas within KSC have been designated as Controlled Areas. These are normally surrounded by fencing and have an entrance gate monitored by a guard or monitoring device. Access into such areas is classified into "escorted" or "unescorted" access. For each employee for which the contractor desires to have unescorted access, the prescribed forms must be submitted to the NASA Security Office. Due to the time required to process requests for unescorted access, the contractor is advised to complete and submit the required forms as soon as practicable after contract award. Within 14 working days after the receipt of the forms, the NASA Security Office will determine whether the person is eligible for unescorted access.

2. The prime contractor is responsible for providing escort services for any of his employees and/or any subcontractor employees who are not eligible for unescorted access.

3. All requests for unescorted access by subcontractors will be submitted through the prime contractor for forwarding to the NASA Security Office.

(End of Clause)

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ARTICLE H-6 KSC 52.208-90 MOTOR VEHICLE MANAGEMENT (APR 2001)

The contractor shall acquire and manage motor vehicles necessary to support the performance of the contract. Such needed vehicles are to be acquired and managed in the manner most efficient and economic to the Government. Vehicles may be obtained from the GSA Interagency Motor Pool, commercial sources, or other sources. Costs related to motor vehicles shall be borne by the contractor and reimbursed by the Government to the extent allowable in accordance with the terms of the contract relating to the reimbursement of costs.

The contractor will use KSC Form 7-490 (KSC Vehicle Use Record) to record vehicle utilization for all GSA and commercial rental vehicles. These records will be maintained and made available at the request of the Contracting Officer for a period of 18 months. Two copies of the monthly billings, both GSA and commercial, for motor vehicle services will be forwarded to the Contracting Officer each month with a copy to the KSC Transportation Office, Code TA. The contractor shall assure that all vehicle operators are appropriately licensed in the state. The contractor will furnish GSA a copy of their third party automobile insurance policy if acquiring GSA motor vehicles.

The contractor shall prepare and submit a Vehicle Utilization Plan (DRD 21) semiannually. One copy of the form shall be forwarded to the Contracting Officer, with a copy to KSC Transportation Office, Code TA. This plan shall, as a minimum, demonstrate the economic and efficient management of vehicles and fuel. It shall forecast the vehicle requirements for 2 years allowing at least 6 months advance notice for additional requirements. It shall demonstrate the techniques utilized by the contractor to assure that vehicles are used for official purposes only.

(End of Clause)

ARTICLE H-7 KSC 52.223-90 RADIATION PROTECTION (OCT 1998)

A. The Contractor agrees to comply with the requirements of:

(1) KHB 1860.1, KSC Ionizing Radiation Protection Program, KHB 1860.2, KSC Nonionizing Radiation Protection Program, and applicable Federal and State regulations for activities performed at the Kennedy Space Center, NASA facilities at Cape Canaveral Air Station and Vandenberg Air Force Station; and

(2) 45th Space Wing Instruction 40-201, Radiation Protection Program, in addition to those in (1) above for activities performed at the Cape Canaveral Air Station or Eastern Test Range.

B. The Contractor further agrees to submit data and information regarding compliance with (1) and (2) above in addition to the names of laboratories to perform activities, for the Contracting Officer's approval, within thirty days after award of contract.

(End of Clause)

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ARTICLE H-8 KSC 52.223-93 OCCUPATIONAL HEALTH (NOV 2000)

1. Occupational Health Services

The medical services set forth in KMI 1810.1I entitled KSC Occupational Medicine Program, will be provided to the contractor by the Government to the extent that there will not be any restriction of the employees' rights under applicable Workmen's Compensation statutory provisions.

Information from records generated as a result of rendition of these medical services may be obtained from the Chief, Aerospace Medicine and Occupational Health Branch, Code TA-C2, upon written request.

2. Health Examinations and Physical Requirements Standards

The contractor shall provide the following data to the Chief, Aerospace Medicine and Occupational Health Branch, Code TA-C2:

a. A breakdown of the various health examinations required in support of this contract; providing type, frequency, and a roster of personnel affected.

b. The applicable physical requirements standards for personnel certification, if the contractor has physical requirements standards which are stricter than the applicable KSC (Federal) standards; otherwise the KSC (Federal) physical requirements standards are applicable to this contract.

(End of Clause)

ARTICLE H-9 KSC 52.223-94 HAZARD COMMUNICATIONS (NOV 2000)

A. In order to comply with Federal, OSHA, and State Regulations, the Contractor shall participate in the KSC Chemical Hazard Communication Program as implemented by KMI 1800.2B, Chemical Hazard Communication.

B. The Contractor shall coordinate submission of hazardous material safety data, to the NASA/KSC Materials Safety Data Sheet Archive, with the Joint Base Operations Support Contract MSDS Program Administrator.

(End of Clause)

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ARTICLE H-10 **KSC 52.223-105 EMERGENCY MEDICAL TREATMENT**
(JUL 2000)

The contractor shall immediately call (see below for applicable telephone numbers) for assistance with personnel injury or illness for any incident requiring emergency medical treatment for contractor or subcontractor personnel, or invitees on KSC, or if any person on the job site is rendered unconscious. The contractor shall require the victim to sign an appropriate "refusal of treatment" form, if medical evaluation/treatment is offered and refused.

From KSC or CCAFS property: 911

From a KSC issued cellular telephone: 867-7911

From other than a KSC issued cellular telephone: 321-867-7911

Commercial telephone users on KSC or CCAFS property: 911
(End of Clause)

ARTICLE H-11 **KSC 52.236-130 CONDUCT OF FACILITY PROJECTS**
(APR 2000)

A. Approval

The contractor shall not award or otherwise proceed with implementation of any facility project without a NASA approved Facility Project – Brief Project Document (NASA Form 1509). The contractor shall prepare or otherwise support the preparation of NASA Form 1509's in accordance with the current edition of NPG 8820.2, Facility Project Implementation Handbook, and the current version of the KSC procedure for Facility Project Approval and Implementation. For purposes of this requirement a Facility Project is defined as any new construction, repair, and /or modification affecting Government real property located on KSC regardless of the source of funding, or located elsewhere and funded by KSC, and costing more than \$50,000. Planning and design activities leading to the implementation of the actual construction, repair or modification work normally can be accomplished prior to 1509 approval. When in doubt, guidance as to whether or not a particular activity is a Facility Project, is "implementation" versus "planning and design," and / or the applicability of this requirement in relation to specific projects should be obtained from the KSC Spaceport Services Management Integration Office.

B. File Documentation

Construction subcontract file documentation shall include a copy of the approved NASA Form 1509 authorizing the project. For construction subcontracts requiring Contracting Officer consent, the consent file shall include a copy of the approved NASA Form 1509 authorizing the project.

(End of Clause)

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ARTICLE H-12 KSC 52.242-90 CONTROLS APPLICABLE TO CONTRACTOR'S ACTIVITIES (DEC 2000)

The below listed Kennedy Space Center publications and subsequent revisions thereof are applicable to this contract and are incorporated herein by reference. These publications prescribe regulatory procedural criteria, which are applicable to the contractor. The contractor, upon receipt of notice of noncompliance with any provisions of the below listed publications from the Contracting Officer or his representatives, shall promptly take corrective action.

JHB 2000	"Consolidated Comprehensive Emergency Management Plan"
KHB 1200.1	"Management of Facilities, Systems & Equipment Handbook"
KHB 1610.1	"KSC Security Handbook"
KHB 1710.2	"Kennedy Space Center Safety Practices Handbook"
KMI 1710.18	"KSC Safety Assurance Policy:"
KMI 1800.2	"KSC Hazard Communication Program"
KMI 1810.1 Rev I	"KSC Occupational Medicine Program" (On-site Contractors shall comply with Attachment D, KSC Skin Cancer Prevention Program)
KHB 1820.3	"KSC Hearing Loss Prevention Program"
KHB 1820.4	"KSC Respiratory Protection Program"
KHB 1840.1	"Industrial Hygiene Handbook"
KMI 1860.1	"KSC Radiation Protection Program"
KHB 1870.1	"KSC Sanitation and Pollution Control Handbook"
KHB 2570.1	"KSC Radio Frequency Spectrum Management Handbook"
KHB 4000.1	"Supply Support System Manual, Part 5, Equipment Management"
KHB 8800.6	"KSC Environmental Control Handbook"

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KHB 8800.7 "Hazardous Waste Management"

KMI 8800.8 "KSC Environmental Management"

(End of Clause)

**ARTICLE H-13 KSC 52.242-93 CENTERWIDE MANPOWER REPORTS
(NOV 2000)**

The Contractor shall submit, on a quarterly basis, a manpower report delineating information about its workforce. The report shall include: the contract number, the contractor's total on-site workforce, total on-site union represented employees by bargaining unit, total on-site non-union represented employees, and total off-site workforce performing on the contract. The Contractor shall provide this information no later than 10 days after the close of each reporting period which end March 31st, June 30th, September 30th, and December 31st. The report shall be submitted to the Contracting Officer with copies to KSC Administration Office, Management Planning (Code HM-E) and Industry Relations and Outreach (Code HM-B.)

(End of Clause)

ARTICLE H-14 KSC 52.243-90 AUTHORIZED CHANGES (FEB 1990)

The Contracting Officer or his duly appointed representative are the only individuals authorized to issue instructions to the contractor in matters relating to this contract. The identification, scope of authority and duties of representatives of the Contracting Officer shall be set forth in letters issued by the Contracting Officer and copies of such designations shall be furnished to the Contractor.

(End of Clause)

ARTICLE H-15 BASE SUPPORT

- A. It is the Government's policy to furnish, to the maximum practicable extent and on a no-charge-for-use basis, available property, equipment, and services for on-site use. Therefore, to avoid unnecessary duplication of facilities and capabilities, the Contractor shall utilize available assigned Government facilities, equipment, tools, supplies, materials, hardware and services as specified in the attachments of this contract; and KHB 4000.1C w/ch 3, entitled "Supply Support System Manual", and KHB 8610.1D w/ch 1, entitled "Support Services Handbook".

Property items provided in accordance with the provisions of this clause will be subject to the provisions of article G-7 entitled "List of Installation-Provided Property and Services".

- B. In the event that the Government is unable to provide the items specified in paragraph

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SPECIAL CONTRACT REQUIREMENTS

A above, or in the event the items are not available in a timely manner through Government resources, such items as are required in the performance of this contract may be procured by the Contractor with the prior written approval of the Contracting Officer or a designated approving official appointed by the Contracting Officer.

- C. The Contractor agrees to make every reasonable effort to anticipate and make known to the Government what its requirements are sufficiently in advance to permit the Government to fulfill them in a timely manner in order to minimize Contractor procurement.
- D. Items generally considered "Fixtures" (e.g., becomes a part of the premises when installed, such as water coolers, air-conditioners, partitions) shall not be purchased by the Contractor under the authority of this clause. Additionally, items of a capital nature shall not be purchased under the authority of this clause without the prior written approval of the Contracting Officer.
- E. Administrative desktop computer seats will be provided to the Contractor as base support through the NASA ODIN Contract.
- F. NASA will provide Industrial Hygiene (IH) services through the Joint Base Operations and Support Contract (J-BOSC) contractor as defined in Attachment J-1 of NASA contract NAS10-99001. These services are provided in support of the KSC Industrial Hygiene Program Office to include IH program consultation, occupational health compliance audits of workplaces and work practices to include asbestos abatement, and laboratory services.
- G. J-BOSC IH support can also include, at the discretion of the NASA health and safety organization, support to hazardous operations to ensure unprotected personnel are not affected, baseline industrial hygiene evaluations of workplaces, investigations of potential employee exposures to hazardous materials and physical agents (including ergonomic assessment), and investigation of employee complaints of potential workplace hazards including indoor air quality complaints. Other services that may be utilized include confined space evaluations, specialized support to launch, landing, and processing operations, air monitoring services to sample and analyze air contaminants (including asbestos), sampling and analysis of bulk presumed asbestos containing materials, and exhaust ventilation system testing.
- H. NASA will provide Health Physics (HP) services through the J-BOSC contractor as defined in Attachment J-1 of NASA contract NAS10-99001. These services are provided in support of the KSC Health Physics Program Office to include HP program consultation, compliance audits to ensure appropriate use and storage of radiation sources, identification and control of radiological health hazards, hazard evaluation and review of current and proposed uses of radiation sources, ionizing radiation dosimetry, handling, collection and storage and disposal of low level radioactive waste, health physics laboratory services, and emergency response

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capability.

(End of text)

ARTICLE H-16 **PERMITS AND LICENSES**

The Contractor shall procure and keep effective all necessary permits and licenses required by the Federal, State, or local Government or subdivision thereof, or of any other duly construed public authority in performance of the work unless otherwise directed by the Contracting Officer, and shall obey and abide by all applicable laws, regulations or ordinances.

Any permit involving environmental coordination shall be submitted through the Environmental Program Office (TA-C3).

(End of text)

ARTICLE H-17 **PHASE IN PERIOD**

The Contractor shall assume contract responsibility for all the requirements of this contract on January 01, 2002. During the period from contract award through 12/31/01 (NTE 30 days) under a not-to-exceed amount of \$32,669, the Contractor shall accomplish phase-in and training of Contractor personnel as required for the assumption of full contract responsibility. The Contractor shall not charge the Government nor be reimbursed for costs in excess of this not-to-exceed amount incurred for phase-in and training during said phase-in period.

(End of text)

ARTICLE H-18 **PROCUREMENT AUTHORITY**

The LSSC Contractor shall purchase items with a value equal or less than \$100,000 for use in connection with work being performed under the contract. This procurement authority excludes installation provided property and services (Article G-7). The Contractor is required to provide a monthly purchase order report (DRD-23) that summarizes the purchasing activity under the contract including the percentage awarded to small businesses, small disadvantage businesses, woman owned small businesses, and hub-zone businesses.

The LSSC and NASA project managers and the NASA Contracting Officer's Technical Representative shall approve all procurements over \$5,000 prior to placement of the order. A complete procurement package with documentation supporting all the elements identified in FAR 44.202-2 shall be presented to the Contracting Officer for consent of all subcontracts over \$25,000, and all labor hour subcontracts of any value. The consent package shall be submitted with a cover letter that has been signed by all individuals identified in this paragraph and the NASA Resources Analyst with a statement that they have reviewed and approve the procurement.

(End of text)

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ARTICLE H-19

MANAGEMENT AND PROTECTION OF DATA OF THIRD PARTIES

- A. In performance of this contract it is anticipated that the Contractor may have access to, be furnished, use, or generate the following types of data (recorded information):
1. Data of third parties bearing limited rights or restricted rights notices submitted either to NASA or directly to the Contractor; or
 2. Other data of third parties which NASA has agreed to handle under protective arrangements; or
 3. Data generated by NASA or the Contractor for third parties which NASA intends to control the use and dissemination thereof until delivered to the third parties.
- B. In order to protect the interest of the Government and the interests of the other owners of such data, the Contractor agrees with respect to data in category 1. above, and with respect to any data in categories 2. and 3. when so identified by the Contracting Officer, to:
1. Use and disclose such data only to the extent necessary to perform the work required under this contract, with particular emphasis on restricting the data to employees having a "need to know";
 2. Preclude disclosure of such data outside Contractor's organization performing work under this contract without written consent of the Contracting Officer; and
 3. Return or dispose of such data as directed by the Contracting Officer or the furnishing third party owner when such data is no longer needed for contract performance.

(End of Clause)

**ARTICLE H-20 NFS 1852.209-71 LIMITATION OF FUTURE CONTRACTING
(DEC 1988)**

- (a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of the prospective offerors is invited to FAR Subpart 9.5 –Organizational Conflicts of Interest.
- (b) The nature of this conflict is a possible unfair competitive advantage.
- (c) The restrictions upon future contracting are as follows:
 - (1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.
 - (2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as these data remain

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proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

(End of Clause)

**ARTICLE H-21 KSC 52.223-119 ASBESTOS-CONTAINING BUILDING
MATERIALS (JAN 2002) (MODIFICATION 3)**

- A. Asbestos-Containing Building Materials (ACBM) are known to be present in facilities assigned under the scope of this contract. The Government will provide information regarding the location and quantity of known ACBM in NASA/KSC facilities to the facility tenant organizations through the JBOSC Environmental Health office.

- B. Special requirements, coordination, and precautions will apply to any work taking place under contracts that involves disturbance of ACBM. Contractors whose contracts require work involving ACBM are required to provide a written program for such work as part of its health and safety plan which is consistent with the requirements of 29 CFR 1926.1101. The contractor shall coordinate any such work involving ACBM with JBOSC Environmental Health, SGS Fire Services, and any other resident government or contractor organization whose employees may have access to the work location.

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ARTICLE I-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

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

- (52.202-1) DEFINITIONS (MAY 2001)
- (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 ON RECYCLED PAPER (AUG 2000)
- (52.209-6) PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)
- (52.211-15) DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEPT 1990)
- (52.215-2) AUDIT AND RECORDS--NEGOTIATION (JUNE 1999)
- (52.215-8) ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)
- (52.215-11) PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS (OCT 1997)
- (52.215.13) SUBCONTRACTOR COST OR PRICING DATA--MODIFICAITONS (OCT 1997)
- (52.215-15) PENSION ADJUSTMENTS AND ASSET REVERSIONS (DEC 1998)
- (52.215-18) REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)
- (52.215-19) NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)
- (52.215-21) REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)
- (52.216-7) ALLOWABLE COST AND PAYMENT (MAR 2000)
- (52.217-8) OPTION TO EXTEND SERVICES (NOV 1999) Insert "within the last six months of performance" in the fill-in space.
- (52.217-9) OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000) Insert "within the last six months of performance" and "at least 60 days", respectively, into the two paragraph (a) fill-in spaces. Insert "eight years, four months" into the paragraph (b) fill-in space.
- (52.219-6) NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (JUL 1996)
- (52.219-8) UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)
- (52.219-14) LIMITATION ON SUBCONTRACTING (DEC 1996)
- (52.222-2) PAYMENT OF OVERTIME PREMIUMS (JUL 1990) Insert "\$0" in the paragraph (a) fill-in space.
- (52.222-3) CONVICT LABOR (AUG 1996)
- (52.222-4) CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSTATION (SEP 2000)
- (52.222-21) PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
- (52.222-26) EQUAL OPPORTUNITY (FEB 1999)

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- (52.222-35) AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (APR 1998)
- (52.222-36) AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)
- (52.222-37) EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999)
- (52.222-41) SERVICE CONTRACT ACT OF 1965 (MAY 1989)
- (52.223-3) HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)
None
- (52.223-5) POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (APR 1998)
- (52.223-6) DRUG FREE WORK PLACE (MAY 2001)
- (52.223-7) NOTICE OF RADIOACTIVE MATERIALS (JAN 1997) Insert "30" into the paragraph (a) fill in.
- (52.223-9) ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000)
- (52.223-10) WASTE REDUCTION PROGRAM (AUG 2000)
- (52.223-11) OZONE-DEPLETING SUBSTANCES (MAY 2001)
- (52.223-12) REFRIGERATION EQUIPMENT AND AC (MAY 1995)
- (52.223-14) TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)
- (52.225-13) RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)
- (52.227-1) AUTHORIZATION AND CONSENT (JUL 1995)
- (52.227-2) NOTICE AND ASSISTNACE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)
- (52.227-3) PATENT INDEMNITY (APR 1984)
- (52.227-11) PATENT RIGHTS—RETENTION BY THE CONTRACTOR (SHORT FORM) (JUN 1997) as modified by NASA FAR Supplement 1852.227-11
- (52.227-14) RIGHTS IN DATA-GENERAL (JUN 1987) as modified by NASA FAR Supplement 1852.227-14 - as modified by ALTERNATE II (JUN 1987)
- (52.228-7) INSURANCE--LIABILITY TO THIRD PERSONS (MAR 1996)
- (52.232-9) LIMITATION ON WITHHOLDING OF 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 (MAY 2001) (Alternate I) (NASA Modification) For interim payments under this cost-reimbursement service contract, the following paragraphs of the basic clause do not apply: (a)(2), (a)(4)(ii), (a)(4)(iii), and (a)(5)(i). Substitute the following paragraphs for (a)(1)(i) and (a)(3) of the basic clause:
(a) Invoice payments – (1) Due date. (i) For purposes of computing late payment interest penalties that may apply, the due date for payment is the 30th day after the designated office receives a proper invoice.
(a) (3) Contractor's invoice. Invoices for interim payments must be submitted to the office designated in the contract and comply with all other requirements as specified elsewhere in the contract. If the invoice does not comply with the contract requirements, it shall be returned within 7 days after the date the designated office received the invoice.
- (52.232-34) PAYMENT BY ELECTRONIC FUNDS TRANSFER--OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)[para (b)(1) fill-in: "designated office"--Accounts Payable Section, Mail Code GG-B-2A, Kennedy Space Center] no later than concurrent with the first request for payment.]
- (52.233-1) DISPUTES (DEC 1998)
- (52.233-3) PROTEST AFTER AWARD (AUG 1996)--ALTERNATE I (JUN 1985)
- (52.237-2) PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)
- (52.237-3) CONTINUITY OF SERVICES (JAN 1991)
- (52.237-10) IDENTIFICATION OF UNCOMPENSATED OVERTIME (OCT 1997)

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- (52.239-1) PRIVACY OR SECURITY SAFEGAURDS (AUG 1996)
- (52.242-1) NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)
- (52.242-3) PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)
- (52.242-4) CERTIFICATION OF FINAL INDIRECT COSTS (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 (AUG 1998)--ALTERNATE I (AUG 1998) {paragraph (e) is "Professional and consultant costs as defined at FAR 31.205-33" and paragraph (k) is (None)}
- (52.244-5) COMPETITION IN SUBCONTRACTING (DEC 1996)
- (52.245-1) PROPERTY RECORDS (APR 1984)
- (52.245-5) GOVERNMENT PROPERTY (COST REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS (JAN 1986) (DEVIATION) (JULY 1995) (As modified by NFS 18-52.245-71)
- (52.246-25) LIMITATION OF LIABILITY--SERVICES (FEB 1997)
- (52.247-1) COMMERCIAL BILL OF LADING NOTATIONS (APR 1984)
- (52.247-63) PREFERENCE FOR U.S.-FLAG AIR CARRIERS (JAN 1997)
- (52.247-64) PREFERENCE FOR PRIVATELY OWNED US FLAG COMMERCIAL VESSELS (JUN 2000)
- (52.247-67) SUBMISSION OF COMMERCIAL TRANSPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDIT (JUN 1997)
- (52.249-6) TERMINATION (COST-REIMBURSEMENT) (SEP 1996)
- (52.249-14) EXCUSABLE DELAYS (APR 1984)
- (52.251-1) GOVERNMENT SUPPLY SOURCES (APR 1984)
- (52.251-2) INTERAGENCY FLEET MANAGEMENT SYSTEM VEHICLES AND RELATED SERVICES (JAN 1991)
- (52.253-1) COMPUTER GENERATED FORMS (JAN 1991)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES:

- (1852.208-81) RESTRICTIONS ON PRINTING AND DUPLICATING (AUG 1993)
- (1852.209-72) COMPOSITION OF THE CONTRACTOR (DEC 1988)
- (1852.215-84) OMBUDSMAN (JUN 2000) The installation Ombudsman is James L. Jennings, John F. Kennedy Space Center, NASA, Mail Code AA-A, Kennedy Space Center, Florida, 32899, phone (321) 867-2355.
- (1852.219-74) USE OR RURAL AREA SMALL BUSINESS (SEP 1990)
- (1852.219-76) NASA 8 PERCENT GOAL (JUL 1997)
- (1852.219-77) NASA MENTOR-PROTEGE PROGRAM (MAY 1999)
- (1852.227-14) RIGHTS IN DATA - GENERAL
- (1852.203-70) DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS (JUN 2001)

(End of By Reference Section)

ARTICLE I-2

FAR 52.204-1 APPROVAL OF CONTRACT (DEC 1989)

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

(End of clause)

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ARTICLE I-3 FAR (52.222-42) STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (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 (Classes of Employees are based on the 2001 SF 98 submittal to the Department of Labor for Contract NAS10-12180, and rates are based on Wage Determination 1994-2118, Revision 16 dated 05/17/01)

CLASSES OF EMPLOYEES (Service Contract Act Title)	HOURLY WAGE RATE THAT WOULD BE PAID IF FEDERALLY EMPLOYED
Computer Operator	13.03
Materials Coordinator	16.43
Engineering Tech III	14.47
Engineering Tech IV	17.22
Engineering Tech V	18.84
Engineering Tech VI	20.82
Shipping / Receiving Clerk	11.03
Shipping Packer	10.57
Supply Technician	16.80
Secretary I	12.43
Secretary II	13.67
Secretary III	14.77
Secretary IV	16.80
Agricultural Technician	10.86
Animal Caretaker	9.00
Lifeguard	8.61
Order Clerk I	9.03
Order Clerk II	12.36
Material Handling Laborer	6.91
Computer Data Librarian	11.16
Technical Writer	19.62

Fringe Benefit Information:

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

Vacation: 2 weeks paid vacation after 1 year of service with a contractor or successor, 3 weeks after 5 years, 4 weeks after 15 years, and 5 weeks after 20 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.

Holidays: Minimum of 10 paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's 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.)

ARTICLE I-4

FAR 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (MAY 2001)

(a) Definitions. As used in this clause-

"Commercial item" has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

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

(c)(1) The following clauses shall be flowed down to subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (Oct 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.2198 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (Apr 1998) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

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(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (June 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

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

(End of clause)

(End of clause)

ARTICLE I-5 FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE
(FEB 1998)

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. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulation (FAR) clauses:

<http://www.arnet.gov/far/>

NASA FAR Supplement (NFS) clauses:

<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

(End of clause)

ARTICLE I-6 NFS 1852.204-75 SECURITY CLASSIFICATION REQUIREMENTS
(SEP 1989)

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

(End of Clause)

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ARTICLE I-7 NFS 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (JULY 2001)

(a) The Contractor shall be responsible for Information Technology security for all systems connected to a NASA network or operated by the Contractor for NASA, regardless of location. This clause is applicable to all or any part of the contract that includes information technology resources or services in which the Contractor must have physical or electronic access to NASA's sensitive information contained in unclassified systems that directly support the mission of the Agency. This includes information technology, hardware, software, and the management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems. Examples of tasks that require security provisions include:

- (1) Computer control of spacecraft, satellites, or aircraft or their payloads;
- (2) Acquisition, transmission or analysis of data owned by NASA with significant replacement cost should the contractor's copy be corrupted; and
- (3) Access to NASA networks or computers at a level beyond that granted the general public, e.g. bypassing a firewall.

(b) The Contractor shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. The plan shall describe those parts of the contract to which this clause applies. The Contractor's IT Security Plan shall be compliant with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.) and the Government Information Security Reform Act of 2000. The plan shall meet IT security requirements in accordance with Federal and NASA policies and procedures that include, but are not limited to:

- (1) OMB Circular A-130, Management of Federal Information Resources, Appendix III, Security of Federal Automated Information Resources;
- (2) NASA Procedures and Guidelines (NPG) 2810.1, Security of Information Technology; and
- (3) Chapter 3 of NPG 1620.1, NASA Security Procedures and Guidelines.

(c) Within 30 days after contract award, the contractor shall submit for NASA approval an IT Security Plan. This plan must be consistent with and further detail the approach contained in the offeror's proposal or sealed bid that resulted in the award of this contract and in compliance with the requirements stated in this clause. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.

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(d)(1) Contractor personnel requiring privileged access or limited privileged access to systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPG 2810.1, Section 4.5; NPG 1620.1, Chapter 3; and paragraph (d)(2) of this clause. Those Contractor personnel with non-privileged access do not require personnel screening. NASA shall provide screening using standard personnel screening National Agency Check (NAC) forms listed in paragraph (d)(3) of this clause, unless contractor screening in accordance with paragraph (d)(4) is approved. The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of the government, interim access may be granted pending completion of the NAC.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk):

(i) IT-1 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) IT-2 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" data whose cost to replace exceeds one million dollars.

(iii) IT-3 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the contractor for NASA whose function or data has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as follows:

(i) IT-1: Fingerprint Card (FC) 258 and Standard Form (SF) 85P, Questionnaire for Public Trust Positions (Information regarding financial record, question 22, and the Authorization for Release of Medical Information are not applicable);

(ii) IT-2: FC 258 and SF 85, Questionnaire for Non-Sensitive Positions; and

(iii) IT-3: NASA Form 531, Name Check, and FC 258.

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(4) The Contracting Officer may allow the Contractor to conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate that the procedures used by the Contractor are equivalent to NASA's personnel screening procedures. As used here, equivalent includes a check for criminal history, as would be conducted by NASA, and completion of a questionnaire covering the same information as would be required by NASA.

(5) Screening of contractor personnel may be waived by the Contracting Officer for those individuals who have proof of --

(i) Current or recent national security clearances (within last three years);

(ii) Screening conducted by NASA within last three years; or

(iii) Screening conducted by the Contractor, within last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer under paragraph (d)(4) of this clause.

(e) The Contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPG 2810.1, Section 4.3 requirements. The contractor may use web-based training available from NASA to meet this requirement.

(f) The Contractor shall afford NASA, including the Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime.

(g) The Contractor shall incorporate the substance of this clause in all subcontracts that meet the conditions in paragraph (a) of this clause.

(End of clause)

SECTION I OF NAS10-02001

CONTRACT CLAUSES

ARTICLE I-8 NFS 1852.242-78 EMERGENCY MEDICAL SERVICES AND EVACUATION (APR 2001)

The contractor shall, at its own expense, be responsible for making all arrangements for emergency medical services and evacuation, if required, for its employees while performing work under this contract outside the United States or in remote locations of the United States. If necessary to deal with certain emergencies, the contractor may request the Government to provide medical or evacuation services. If the Government provides such services, the contractor shall reimburse the Government for the costs incurred.

(End of clause)

SECTION J OF RFP10-00-0051

LIST OF ATTACHMENTS

J.1 LIST OF ATTACHMENTS

The following attachments constitute part of this contract:

ATTACHMENT	DESCRIPTION
I.	STATEMENT OF WORK
	Appendix 1 – Data Requirements List
	Appendix 2 – Licenses and Certifications
	Appendix 3 – List of Documents
	Appendix 4 – Equipment List
	Appendix 5 – Mission Plan
	Appendix 6 – Acronym List
	Appendix 7 – Facilities and Laboratories
	Appendix 8 – SERPL Agreement
II.	DD Form 254, CONTRACT SECURITY CLASSIFICATION SPECIFICATION
III.	NASA’s PERFORMANCE EVALUATION AND AWARD FEE PLAN
IV.	WAGE DETERMINATION
V.	SAFETY AND HEALTH PLAN
VI.	CONTRACTOR’S QUALITY MANAGEMENT PLAN
VII.	CONTRACTOR’S RISK MANAGEMENT PLAN
VIII.	CONTRACTOR’S RELIABILITY AND MAINTAINABILITY PLAN
IX.	CONTRACTOR’S INTERNAL SURVEILLANCE PLAN
X.	PENSION PLAN

(End of Clause)

STATEMENT OF WORK
LIFE SCIENCES SERVICES CONTRACT
WORK BREAKDOWN STRUCTURE

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- 1.1 Management Reviews
- 1.2 Business Management
 - 1.2.1 Human Resources
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 - 1.3.1 Safety and Health
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ATTACHMENT I
STATEMENT OF WORK
LIFE SCIENCES SERVICES CONTRACT
FOR
JOHN F. KENNEDY SPACE CENTER

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Introduction

This Statement of Work (SOW) describes the services to be provided by the Life Science Services Contractor (hereinafter referred to as "the Contractor"). The Contractor shall provide non-personal technical services to the Spaceport Engineering & Technology Directorate (YA), the International Space Station and Payload Processing Directorate (UB), the External Relations & Business Development Directorate (XA), the Space Shuttle Processing Directorate (PH), the Safety, Health & Independent Assessment Directorate (QA), and the Spaceport Services Directorate (TA) under the functional areas designated herein. The work shall be consistent with the John F. Kennedy Space Center (KSC) Life Sciences roles and responsibilities and may occur at other geographic locations.

The tasks described in this SOW require services that range from operating a variety of Government laboratories to providing scientific and engineering management of complex research and technology projects. The KSC operational mission and applied research permeate all work elements.

This is Cost-Plus-Award-Fee / Performance Fee (CPAF/PF) performance-based contract. During the budget process each year the Government and the Contractor will partner performance areas that specifically define the mission services and establish performance-based "outcomes". The Contractor shall establish and implement a Quality Surveillance Plan, which will become part of the contract, to self-monitor and report its performance.

The Government will evaluate the Contractor's performance against the entire program including these following top-level elements:

- Medical planning for shuttle launch and landing activities
- Health protection and emergency medical care for the astronauts and family members
- Ecological program implementing KSC's regulatory responsibilities and demonstrating environmental stewardship
- Biological science technical insight and development skills at the launch and landing site assuring science credibility
- Processing skills and facility/lab readiness and certifications for biological missions assuring critical-path readiness
- Health and safety initiatives protecting the general public and workforce
- Cost Control / Performance
- Schedule Performance

1.0 Project/Program Management

The Contractor shall institute and maintain an effective, efficient, and responsive program management organization that is responsible for management and oversight of Contractor personnel, other contract resources, and contract performance, deliverables, and cost. The Contractor shall promptly alert the Contracting Officer's Technical Representative (COTR) and the Contracting Officer (CO) of any problems that may adversely impact the timely and cost-effective delivery of quality products and services under this contract.

The Contractor shall comply with all NASA KSC ISO 9001- "2000 Quality Management System Requirements" processes. The contractor shall have in place a management system that could be certified as ISO 9001 compliant within 2 years of contract initiation.

1.1 Management Reviews

Management Meeting – The Contractor shall attend management meetings to discuss accomplishments, problems, corrective actions and other details of the Life Science Services Contract (LSSC) operations. The meetings will be scheduled on a weekly basis, or as otherwise scheduled, and shall be attended by cognizant Contractor and NASA personnel.

Contract Review Meeting – The Contractor shall conduct a contract review on a quarterly basis. The quarterly review shall cover all aspects of the LSSC operations, both technical and business, including a concise summary of performance and risk assessment in each major work element of the Mission Plan as addressed in its internal surveillance report. The report shall include data that supports the Contractor's accomplishment of the critical performance element metrics defined in the Performance Evaluation and Award Fee Plan. The Contractor management team, the Contracting Officer, Contracting Officer's Technical Representative, and other members of the NASA technical team, shall attend the review.

The Contractor shall submit Project Status Reports per DRD 002.

The Contractor shall submit Internal Surveillance Plan per DRD 027.

1.2 Business Management

1.2.1 Human Resources

The Contractor shall implement processes and procedures necessary to maintain a highly skilled workforce. The Contractor shall apprise the COTR and the CO of any human resources issues that could have an impact on KSC or LSSC operations.

The Contractor shall provide the following reports:

- DRD 022, Monthly KSC Headcount Report
- DRD 020, Equal Employment Opportunity Report

1.2.2 Property Control

The Contractor shall establish and implement procedures to ensure the proper control, use and maintenance of the "installation provided property" provided to support the LSSC

operations. The Contractor shall serve as the Property Custodian for all installation Accountable Property provided to the LSSC in accordance with government regulations. The contractor's custodial responsibilities are defined in the current version of KHB4000.1, Supply Support System Manual, Part 5, Section 1 – Controlled Equipment Accountability and Custodial Management. The Contractor shall provide controls for equipment, as defined in NPG 4200.1 E, "NASA Equipment Management Manual."

1.2.3 Motor Vehicle Utilization

The Contractor shall provide all motor vehicles necessary to perform the requirements of the contract and implement a plan (DRD 021) to effectively manage the motor vehicles needed.

1.2.4 Cost Control

The Contractor shall provide the following cost control documents:

- DRD 001, Financial Management Report
- DRD 025, Cost Phasing Plan

1.2.5 Licensures and Certifications

The Contractor shall assure designated Contractor personnel, activities, Contractor operated laboratories, and Government laboratories under the Contractor's purview, are properly licensed and/or certified as appropriate to their discipline, technical level, statutory requirement, or regulatory requirement (ref. Appendix 2) for the entire period of performance.

1.2.6 Export Control

The Contractor shall implement an Export Control Program to assure compliance to International Trade in Arms Regulation (ITAR) and Export Administration Regulations (EAR).

The Contractor shall identify an Export Control Official responsible for the implementation and conduct of the program and to coordinate issues with the government point of contact, KSC Center Export Administrator (CEA).

1.3 Safety, Health, Reliability, Maintainability & Quality Management

The Contractor shall develop, implement, and maintain a NASA compliant Safety, Reliability, Maintainability & Quality Assurance (SRM&QA) program, which covers all areas of performance described in this SOW.

1.3.1 Safety and Health

The Contractor shall implement and adhere to a comprehensive safety and health program in accordance with NPD 8710.2, NPD 8700.1 and the applicable safety and health policy documents (ref. Appendix 3, "List of Documents"). The Contractor shall comply with the Safety and Health Plan, Section J, Attachment 4 and other program documentation that shall be developed by the Contractor, approved by NASA, and implemented for the performance of work defined by this SOW. The Contractor shall conduct human factors analysis of mishaps and close calls to ensure identification and mitigation of root causes, with a goal of recurrence prevention (ref. MIL-STD-1472, Human Factors).

The Contractor's Safety and Health Plan (ref. DRD 010) shall apply to all aspects of the contract.

The Contractor shall comply with the reporting, investigating, and record keeping requirements of NPG 8621.1. The Contractor shall provide safety and mishap reports as identified in DRD 011 and DRD 012.

The contractor shall have a robust safety and health program that complies with the most recent OSHA Voluntary Protection Program (VPP) requirements for Star certification within 12 months after contract award. The contractor shall document its progress towards compliance with this requirement in the DRD 002, Contract Performance Assessment, quarterly submittals. Twelve months after award the contractor shall submit to the Government a report that documents compliance with OSHA Star certification requirements in the same format required for the OSHA Star certification application. Thereafter, the contractor shall document its continued compliance with VPP Star certification requirements in the DRD 002 quarterly submittals. If the contractor voluntarily obtains OSHA VPP Star certification, the contractor shall provide NASA with a copy of all reports submitted to OSHA for the purpose of maintaining Star certification

1.3.2 Reliability, Maintainability & Quality Management

The Contractor shall develop and implement a Reliability and Maintainability (RM) program that shall conform to NPD 8720.1 and NPD 8730.3. This program shall be defined in an RM Plan (DRD 013) that shall be developed, approved by NASA, and implemented for the RM tasks required in performance of this SOW.

The Contractor shall establish and implement a Quality Management System Plan, maintain it during the life of the contract, and supply at audit (ref. DRD 016).

The Contractor shall meet the requirements of all appropriate Agency documents (ref. Appendix 3, "List of Documents"), as well as those requirements described in:

- NPD 8730.3 "NASA Quality Management System Policy (ISO9000).
- NPD 8720.1 "NASA Reliability and Maintainability Program Policy
- NSTS 5300.4 (1D-2) Safety, Reliability, Maintainability, Quality Provisions for the Space Shuttle Program

1.3.3 Risk Management

The Contractor shall develop and implement a risk management plan (ref DRD 028) in accordance with the following documents and guidelines:

- NPG 7120.5, paragraph 4.2 –"Risk Management"
- NPG 8715.3– "NASA Safety Manual"

The risk management plan shall provide an organized systematic decision making process that efficiently identifies, analyzes, plans, tracks, controls, communicates, and documents risks associated with the implementation of the Life Science Services Contract at KSC.

The Contractor shall identify and discuss risk factors and issues that are relevant with the performance of assigned activities during management meetings and contract reviews. This discussion shall include methods to manage identified risks.

1.4 Environmental Compliance

The contractor shall support its role in environmental compliance as defined in KMI 8800.8, "KSC Environmental Management."

KSC is responsible for protecting natural resources while conducting Center activities. Impacts to the environment must be minimized while satisfying operational requirements. Specific guidance and responsibilities for environmental management and documentation for this Center are defined in KHB 8800.6, "Environmental Management."

The Contractor shall develop the required documentation for its assigned projects and perform the services required in this SOW in compliance with the procedures and regulations defined in KHB 8800.6.

The Contractor shall maintain appropriate data files within the NASA Environmental Tracking System (NETS) or supply data as required for input to NETS.

The Contractor shall be responsible for compliance with the procedures for handling and managing hazardous wastes as defined in KHB 8800.7, "Waste Management Handbook", for visiting scientists, principal investigators, and on-site subcontractors associated with the Life Sciences program activities. The Contractor shall comply with the most current Executive Orders on Affirmative Procurement and Recycling, Hazardous Chemical Inventory and Use Reduction, and Energy Conservation.

1.5 Procurement Management

The Contractor shall purchase goods and services of a program-specific nature necessary to accomplish assigned work on the LSSC, in accordance with the guidance of the Federal Acquisition Regulations (FAR), and the NASA FAR Supplement (NFS). Program purchasing is defined as support to projects and other program activities associated with the LSSC. The Contractor shall maintain an up-to-date comprehensive inventory of equipment and supplies, supporting the deployment, utilization, and appropriate disposal of assets for both in-house and visiting scientists and engineers.

1.5.1 Purchasing Procedures

The Contractor shall develop and implement a comprehensive set of procedures covering all phases of the purchasing process and shall ensure integrity, efficiency and protection of the government's resources in all purchasing actions.

The Contractor shall utilize the Transportation Officer, J-BOSC Receiving Warehouse, Building M6-744, Kennedy Space Center, FL, 32899, as its receiving agent.

The Contractor shall implement procedures to ensure that its suppliers identify on their shipping documents all incoming items that require Government tagging.

1.5.2 Purchase Order Report

The Contractor shall provide the Contracting Officer with a monthly Purchase Order Report, in accordance with DRD 023. The Contracting Officer will conduct Contractor Purchasing System review periodically to evaluate the Contractor's performance in this area.

1.6 Documentation and References

The Contractor shall operate and maintain a life sciences research resource capability, providing electronic media and / or hard copy archives of all research results, manuscripts, abstracts, proposals, reports, and other documentation associated with life sciences studies and experiments conducted at or on behalf of KSC.

The Contractor shall document and archive operational and scientific activities.

The Contractor shall participate in the Life Sciences Data Archiving program and be responsible for including applicable information for KSC-managed flight experiments.

1.7 Public Affairs

The Contractor shall conduct laboratory tours and interviews approved by NASA Public Affairs. The Contractor shall participate in activities, such as interviews, still photos, video taped footage, and tour escort.

2.0 Facility and Laboratory Operations

The Contractor shall provide technical services for the operation of the LSSC facilities (ref. Appendix 7) and laboratories provided as Government-furnished base support. The Contractor shall operate, maintain, and control access to the following designated facilities and laboratories required to support Life Sciences programs at KSC and CCAFS:

- the Hanger L complex, including Hangar L, Little L, and The Outback,
- laboratories located in the Operations and Checkout (O&C) Building, including the Baseline Data Collection Facility and the Aquatics Laboratory, and,
- the Bioastronautics Operations and Support Unit (BOSU).

2.1 Facilities

The Contractor shall operate life sciences facilities to provide operational and technical assistance to all approved NASA Life Sciences programs or projects. The life sciences facilities are comprised of several buildings on Kennedy Space Center, Cape Canaveral Air Force Station, and Dryden Flight Research Center providing physical infrastructure to accommodate associated laboratories, shops, offices, and equipment / supplies inventories (ref. Appendix 4).

The Contractor shall assist NASA in oversight of life sciences facility operations and maintenance tasks by identifying and tracking facility requirements.

The Contractor is responsible for daily operations and inputs to long-range planning of the assigned life sciences facilities.

Certain facilities identified in Appendix 7 will only be available through September 30, 2003, after which they will be withdrawn. The Contractor shall move those affected operations and personnel out of the Hangar facilities into a Contractor-supplied facility with minimal operational impact. See "Note" below for information on the State of Florida's agreement to finance, construct, and make available a facility for contractor use under specified terms and conditions. The Contractor-supplied facilities shall meet the following:

- Supply all the capabilities of the withdrawn facilities and laboratories, including accredited animal care facilities
- Provides enough space at a single site to facilitate the current and future laboratory activities and office space
- Provide continuous facility and personnel security systems sufficient to protect facilities, equipment, experiment material, and personnel from outside threats
- Be in close proximity of the Florida Space Research Institute (FSRI), which will be located within the SERPL and the Space Commerce Park
- Be within the KSC secure area

(NOTE): NASA and the State of Florida have collaborated in a new and unique partnership to provide the Space Experiment Research and Processing Laboratory (SERPL) to house NASA laboratory equipment and provide additional space for work associated with the LSSC. See Appendix 8 for the complete agreement. The SERPL will be a world-class laboratory facility with capability to host ISS experiment processing and biological and life sciences research. Anticipated research activity includes biotechnology, microgravity, space agriculture, biomedicine, and other fields of biological and life sciences. The SERPL will be the magnet facility for a proposed adjacent 400-acre Space Commerce Park. This facility will be available for lease on an annual basis to the LSSC contractor at a not-to-exceed amount of \$1.2 million (escalated 3% per year after 1999). Further, for periods in which the SERPL is predominantly occupied by a NASA contractor, the State of Florida shall be responsible for SERPL operation and maintenance (O&M) costs in the fixed amount of \$400,000 per year (escalated 3% per year after 1999). NASA's occupying contractor will be responsible for performance of the O&M, and payment will commence upon substantial completion of SERPL construction and predominant occupancy by a NASA contractor and will be paid directly to the contractor to be applied to overall SERPL O&M costs. SERPL O&M includes, but is not limited to, grounds keeping and building exterior maintenance, stormwater treatment system maintenance, janitorial services, painting, and building systems, including, but not limited to mechanical, plumbing, electrical, HVAC, premise wiring, communications, security, and specialty systems. NASA will be responsible for utility costs for the portions of the facility occupied by NASA or its contractor. Contact Gregory A. Popp, Spaceport Florida Authority (SFA) at 321-730-5301, ext. 1110, for information regarding the leasing arrangement for the SERPL.

The contractor will support NASA's responsibilities under the SERPL agreement as required. Such support will include, but is not limited to, providing an annual facility utilization plan establishing projected requirements for NASA program use of the SERPL for the calendar year; designing, equipping, operating, and managing all SERPL laboratories and specialized research areas as required for NASA programs; and operating and

maintaining mission-related experiment and research equipment required for NASA programs.

2.1.1 Facility Utilization

The Contractor shall maintain a monthly laboratory utilization plan/schedule reflecting all laboratory assignments, as well as, a semi-annual long-range projection of facility utilization (ref. DRD 024). The contractor shall provide quarterly briefings to the COTR and the CO. The Contractor shall assign office and laboratory space to visiting and resident investigators per direction of NASA. This includes the planning and tracking of construction of facility projects that could impact laboratory activities and assuring readiness of these assets to support mission requirements, sponsored research, and other NASA approved projects.

The Contractor shall conduct long-range flight experiment laboratory requirement projections based on current launch manifests and outfitting schedules. The Contractor shall utilize these data to determine facility utilization assignment capabilities, as well as assuring budget requirements are properly identified.

The Contractor shall prepare and perform emergency facility operations in support of Joint Handbook (JHB) 2000 (ref. DRD 026).

2.1.2 Space Experiment Research and Processing Laboratory (SERPL) Activation

The Contractor shall assist the NASA project manager during the SERPL facility construction and activation phases. Activation tasks will include disassembly, modification, relocation, and validation of all laboratory equipment located at Hangar L, Little L, BOSU, and the O&C required for the execution of the LSSC work elements targeted for movement to SERPL. The Contracting Officer will identify the specific activation tasks that the LSSC Contractor will be responsible for performing as NASA's plans become more defined.

The contractor shall provide an activation plan within 60 days after the Contracting Officer provides direction. NASA will provide the contractor a six-month window to perform these tasks. The window is anticipated to start in April 2003; however, the NASA Contracting Officer will confirm a specific start date no later than May 2002.

2.2 Laboratories

The Contractor shall operate and maintain the laboratories identified in Appendix 7 to provide the following capabilities to meet NASA requirements:

- off-line payload processing,
- payload development, mission simulation, and flight ground-control,
- ecological and biological ground research,
- environmental monitoring,
- educational outreach, and,
- flight-crew medical operations.

The Contractor shall maintain applicable accreditations as described in Appendix 2 and shall maintain Internal Operating Procedures (IOPs) to assure consistent and safe laboratory operations (ref. DRD 016).

2.2.1 Clinical Laboratories

The Contractor shall operate a clinical analytical laboratory proficient in clinical chemistry, hematology, clinical microbiology, immunology, serology, and other clinically specialized areas.

The Contractor shall operate this laboratory in a manner consistent with certification by the State of Florida Department of Health and Rehabilitative Services and shall obtain and maintain certification by the College of American Pathologists (CAP).

The Contractor shall operate and maintain the laboratory with technologists and technicians registered by the American Society of Clinical Pathologists (ASCP), and certified at the appropriate technical level by the State of Florida (ref. Appendix 2).

The Contractor shall identify laboratory requirements to assist NASA medical staff and principal investigators during performance of all experiments requiring such support. Experiment activities include pre- and post-flight baseline data collection activities, synchronous ground control experiments, and acute care of human subjects.

2.2.1.1 Clinical Chemistry and Hematology Laboratory

The Contractor shall operate a clinical chemistry and hematology laboratory providing blood chemistry, hematology, urinalysis, immunology, and serology analysis.

2.2.1.2 Clinical and Environmental Microbiology

The Contractor shall operate a microbiological services laboratory providing human bacteriological and mycological assays in the areas of clinical, environmental, facilities (including the Center's potable water system), and spacecraft-specific microbiology for KSC and Cape Canaveral Air Force Station (CCAFS). The Contractor shall operate the Microbiology Laboratory as a resource supporting Medical Operations, as well as KSC's clinical occupational medicine requirements.

The Contractor shall ensure that this laboratory meets certification by the State of Florida Department of Rehabilitative Services and other Florida State certifications (ref. Appendix 2).

2.2.1.3 Physiological Stress Laboratory

The Contractor shall provide medical monitoring and scheduling for the physiological stress laboratory, and assist in the design and implementation of biomedical studies to enhance the understanding of human physiology. Medical data shall be recorded and retained for reference and access in accordance with Privacy Act.

2.2.1.4 Baseline Data Collection Facility/Post-flight Science Support Facility

The Contractor shall operate, maintain, and support the Baseline Data Collection Facility at KSC and Post-flight Science Support Facility at DFRC for visiting scientists. The Contractor shall provide operational and technical assistance to any approved NASA investigation that requires testing human subjects, pre-, during, or post-flight, at KSC and at the DFRC when required.

2.2.2 Analytical Laboratories

The Contractor shall maintain analytical chemistry and microbiological analysis capability to support all elements of the LSSC.

2.2.2.1 Inorganic Chemistry

The Contractor shall operate an inorganic chemistry laboratory. The Contractor shall analyze samples for selected major elements at limits specified by the applicable EPA protocols (ref. Appendix 2). The Contractor shall analyze samples including water, soils, and plant and animal tissues.

2.2.2.2 Organic Chemistry

The Contractor shall operate an organic chemistry laboratory. The Contractor shall perform assays for both volatile and water-soluble trace organics and selected organic compounds in support of monitoring and research activities.

2.2.2.3 Microbiology Research Lab

The Contractor shall operate diagnostic microbiological instrumentation and be capable of interpreting ecological microbial data (bacterial and fungal) collected from field plots, plant growth chambers, and bioreactors. In the case of pathological organisms, the Contractor shall develop and test control strategies.

The Contractor shall monitor and report, in accordance with approved protocols, the microbiological status of the Life Sciences facilities (for elements such as animals, plants, nutrient solutions and water samples) and of the BDCF on a continuing basis. Sampling will be research specific, but will include nasal pharyngeal swabs and fecal specimens on animals received and maintained in the KSC Life Sciences facilities. Evaluation of microbiological sampling is accomplished per protocol and may be effected by an approved, off-site vendor. Microbiological assessment during activation, test/checkout, and operation of the aforementioned facilities is included.

2.2.2.4 Microscopy

The Contractor shall provide a capability to examine biological tissue and determine anatomical and morphological characteristics of the same. This capability requires observations at both the light and electron microscopy level.

2.2.3 Specialized Laboratories

2.2.3.1 Animal Care Facility

The Contractor shall operate and maintain a specific pathogen-free (SPF) animal holding facility. The Contractor shall operate the facility and assure its continuous accreditation by the American Association for the Accreditation of Laboratory Animal Care International (ref. Appendix 2 and DRD 018).

The Contractor shall care for animals as required pre-, during, and post-flight, including provision for veterinarian services for all vertebrate animals. The Contractor shall conduct receipt and quarantine of animals, routine animal husbandry, research, and facility readiness.

The Contractor shall operate and maintain an aquatics laboratory for ground-based testing and flight experiments.

The contractor shall ensure all annual reports and all reporting requirements concerning animal care, use, and husbandry are provided in a timely manner as outlined in the DRD.

The contractor shall maintain records and inventories on controlled substances used in the conduct of animal research activities in accordance with all applicable State and Federal guidelines, including the requirements as set forth by the United States Drug Enforcement Administration. These records shall include proper receipt, records of storage and inventory and proper disposal

2.2.3.2 Phytotron

The Contractor shall maintain a state-of-the-art plant science laboratory and establish interactions and collaborations with plant scientists. These facilities include plant growth chambers, resource recovery area, cold room, nutrient preparation area, tissue culture area, and harvesting area.

2.2.3.3 Experiments Monitoring Area

The Contractor shall configure and operate the Experiments Monitoring Area for data collection during missions per validated communications requirements (e.g., voice, video, and data). The Contractor shall conduct ground control activities in controlled chambers during flight and flight simulations.

2.2.3.4 Bio-specimen Transportation Van

The Contractor shall comply with maintenance procedures and operate a Bio-specimen Transportation Van for transportation of certain biological experiments to and from the launch/landing site.

2.2.3.5 Molecular Biology Laboratory

The Contractor shall operate and maintain a molecular biology laboratory. The Contractor shall support in-house and visiting investigator molecular biology research activities.

2.2.4 Experiment Support Laboratories

The Contractor shall provide laboratories to flight and ground research principal investigators and ensure that appropriate laboratory capabilities are available.

The Contractor shall assign experiment support laboratories to all users at the direction of NASA. The Contractor shall assure that the laboratories are equipped for biological or human research, including bio-specimen maintenance, sterile operations (tissue culturing and autoclaving), microbiology, light microscopy, analytical chemistry (spectrophotometry and chromatography), and radioactive isotope tracing.

2.2.5 Environmental Laboratories

The Contractor shall operate and maintain laboratories for receipt, preparation, and storage of field samples. The Contractor shall handle all samples with positive identification and labeling and shall store them under appropriate conditions.

The Contractor shall prepare soil samples by sieving, sizing, and treating for preservation.

The Contractor shall prepare biological samples by sorting, counting, dissecting, and treating for preservation.

The Contractor shall treat water samples for preservation and shipment to analytical chemistry laboratories.

2.3 Equipment Calibration and Maintenance

The Contractor shall assure calibration and maintenance support for all laboratory instrumentation, and shall maintain calibration and repair records for each instrument.

The Contractor shall coordinate with the KSC Calibration Laboratory on instruments and equipment that require calibration capabilities beyond the test equipment available to the Contractor technical personnel.

The Contractor shall assure that written requests to the KSC Calibration Laboratory for calibration of any such items are timely and properly submitted, and that appropriate records are maintained (ref. KHB 5330.9, "Metrology and Calibration").

2.4 Computer Resources

The Contractor shall maintain expertise in computer hardware, software, computer data management, networking, and IT Security. The Contractor shall utilize computer hardware, software, and networks in a cost effective manner to support activities of the LSSC. The Contractor shall comply with provisions of Section 508 of the Rehabilitation Act for all electronic and information technology it develops, maintains, procures, or uses.

The Contractor's desktop computer needs will be provided as base support through the NASA ODIN contract.

The Contractor shall support the needs of visiting investigators by providing desktop systems, printers, scanners, Internet connections, and related ADP equipment interfaces.

2.4.1 Hardware

The Contractor shall recommend upgrades to current non-desktop computer hardware when existing hardware is no longer cost effective to use and/or maintain. The Contractor shall assist in assessing the impact of proposed changes to computer platforms.

The Contractor shall report computer problems to the appropriate source for maintenance and track the corrective maintenance action to completion.

2.4.2 Software

The Contractor shall maintain appropriate documentation of software it develops. Software shall be documented in accordance with NPD 2820.1 "NASA Software Management, Assurance, and Engineering Policy," and controlled by the copyright laws listed in the contract.

2.4.3 Computer Data Management

The Contractor shall operate the Geographic Information System (GIS) database under the direction of NASA. The GIS computer system contains critical data generated to support the LSSC Biological Sciences and Medical Operations.

The Contractor shall backup GIS data on a weekly basis to reduce the risk of loss of electronic data.

The Contractor shall maintain, and update as necessary, all LSSC web pages.

2.4.4 Networking

The Contractor shall utilize the existing KSC computer networks.

The Contractor shall provide a method for international visitors to access the Internet exclusive of the KSC computer network.

2.4.5 IT Security

The Contractor shall prepare and deliver Information Technology Security Plans per DRD 019.

2.5 Support Operations

2.5.1 Visiting Scientist

The Contractor shall provide travel, per diem, and honoraria, as appropriate, to visiting scientists, including National Research Council (NRC) associates and professors assigned to KSC.

2.5.2 Investigator Support

The Contractor shall provide host services to on-site researchers (including KSC NASA, LSSC, National Research Council associates, and visiting professors), and off-line support for payload developers and/or principal investigators at KSC. This includes:

- gathering and documenting support requirements,
- developing and coordinating unique protocols in support of life sciences research activities,
- assuring readiness of laboratories, equipment, and specialized logistics, and
- coordinating related activities conducted in KSC Life Sciences facilities.

When KSC Life Sciences support activities are required at other locations (e.g., Dryden Flight Research Center (DFRC), secondary and contingency landing sites), the Contractor shall provide for equipment, support personnel, and mission-related travel.

The Contractor shall obtain and document the specific ground processing requirements for any ground investigation or flight mission manifested experiment or DSO/DTO, for validation by NASA. These include all the details necessary to fully define the requirements, such as:

- facilities and laboratories,
- equipment,
- supplies,
- chemicals,
- special services such as communication (e.g., voice, video, and data), and
- shipping information.

3.0 Educational Outreach

3.1 Medical Students/Residents

The Contractor shall plan and implement programs for visiting medical students, aerospace medicine residents, occupational medicine residents, and other students/trainees participating in KSC medical training programs.

3.2 Fundamental Biology Research Program Education Outreach Support

3.2.1 Programmatic Support

The Contractor shall provide support to the Fundamental Biology Outreach Program (FBOP), managed at KSC. The Contractor shall communicate and coordinate with all organizations that implement FBOP activities.

The Contractor shall develop and/or ensure FBOP products contain accurate science information and are useful as informational tools.

The Contractor shall manage the dissemination of the FBOP material inventory to internal and external customers.

The Contractor shall identify collaborative opportunities between non-FBOP Educational Outreach activities (i.e., sections 3.1 Medical Students / Residents and 3.3 Life Sciences Education Outreach) and FBOP activities, as well as, with non-LSSC FBOP implementers.

The Contractor shall assist in evaluating the effectiveness of implemented activities for accomplishing FBOP objectives.

3.2.2 Program Implementation

The Contractor shall implement specific outreach initiatives assigned to KSC. These initiatives include, as a minimum, the Life Sciences Educators Network and the Spaceflight and Life Sciences Training Program.

3.2.2.1 Life Sciences Educator Network

The Contractor shall implement the Life Sciences Educator Network. The contractor shall disseminate Life Sciences ground and flight research information and related outreach material to Network participants. The contractor shall solicit feedback for future material development enhancements. The contractor shall address daily inquiries, as well as conduct an annual symposium to focus on special interest lectures and strategic planning for future educator-oriented Life Sciences materials.

3.2.2.2 Space-flight and Life Sciences Training Program

The Contractor shall design, develop, and implement the Space Life Sciences Training Program (SLSTP) at KSC. This program shall consist of an annual six-week summer program with hands on learning experience for college undergraduate students majoring in life sciences, engineering, and other related courses of study. The program curriculum shall include lectures, laboratory projects and related demonstrations, simulations and tours, and an overview of and an exposure to all phases of NASA's Life Sciences research and flight activities and associated programs.

The Contractor shall develop scientific activities that utilize and complement KSC Life Sciences projects with minimal impact to ongoing activities. The Contractor shall coordinate SLSTP activities with the academic partners. The Contractor shall evaluate SLSTP activities for presentation to NASA Headquarters.

3.3 Life Sciences Education Outreach

The Contractor shall provide discipline support to the various educational programs sponsored by the Center.

4.0 Biological Sciences

The Contractor shall provide services to KSC Biological Sciences Programs. The major components of the programs are Environmental Programs and Space Biological and Ecological Sciences.

4.1 Environmental Programs

The Environmental Programs' primary goal is to evaluate, and ultimately to predict, the responses of living organisms to specified environmental conditions in both natural and controlled ecosystems. The various elements of the programs shall be integrated into a coordinated effort, especially in synergistic sharing of certain disciplines expertise, including analytical chemistry, systems ecology, plant physiology, microbiology, marine biology, data management, and logistic support. The Contractor shall conduct investigations in a scientifically sound manner, participate in program reviews, and actively publish in peer-reviewed journals. The Contractor shall report on the conditions of the KSC natural environment (ref. DRD 005) by providing ongoing reports and summaries on the KSC environment including statistical and trend analysis for water, air, threatened and endangered species and all other ecological parameters.

4.1.1 Environmental Monitoring Program

The Contractor shall implement DRD 006 in accordance with the KSC Ecological Monitoring Program as outlined in the Ecological Program Plan (KBR-PL-0001) and ensure monitoring support to Centerwide mitigation efforts.

The Contractor shall conduct field-monitoring activities, analyze and report the results of findings, and maintain appropriate databases. These monitoring activities adequately characterize environmental conditions and address environmental problems that may adversely affect local flora and fauna. These monitoring activities shall not duplicate, unless so directed, or interfere with environmental sanitation/pollution control support furnished by the J-BOSC under its WBS 3.5.2.2.

The Contractor shall collect, preserve, identify, catalog, and store specimens and samples to provide an archive for future reference. When preservation is not possible, the Contractor shall maintain documentation by photographic records or electronic images.

All sampling and analysis activities shall be performed according to Environmental Protection Agency (EPA) and State of Florida approved methods unless otherwise specified and agreed to by NASA.

The Contractor shall coordinate ecological monitoring activities with the U.S. Fish and Wildlife Service, National Park Service, other federal agencies, state and local governments, and Universities conducting research and monitoring on or adjacent to KSC.

4.1.1.1 Launch

The Contractor shall provide pre-launch environmental impact predictions and post-launch environmental field monitoring (ref. DRD 009).

The Contractor shall operate the Environmental Evaluation Console (EEC) in support of OMI S0007, "Shuttle Countdown (LPS)". The Contractor shall operate *Rocket Exhaust Effluent Diffusion Model* computer models, recognize and recommend corrective measures for problems in the models, and provide real-time predictions to the launch team.

The Contractor shall perform *in-situ* examination and sampling of vegetation, soils, and surface waters to determine the extent of impact to flora and fauna, both acute and chronic, resulting from Space Shuttle launches at KSC.

The Contractor shall enter the results of monitoring activities into an environmental database for the ecological assessment of long-term trends and chronic impacts, including bioaccumulation and report the ecological assessment (ref. DRD 017).

Surveillance of environmental impacts associated with launches from other locations may be required.

4.1.1.2 Pollution Events

The Contractor shall provide personnel to assess ecological impacts from pollution episodes when directed by the CO. These assessments shall include:

- determining biological impacts,
- measuring concentrations of pollutants in water, air, soil, or organisms, and,
- determining pollutant toxicity.

The Contractor shall document the findings of assessments and recommend clean-up procedures as appropriate.

4.1.1.3 Ambient Monitoring

The Contractor shall operate and maintain the KSC Permanent Air Monitoring Station (PAMS) and the National Atmospheric Deposition Program site at KSC and collect and store atmospheric and rain accumulation data to ascertain on a continuous 24-hour basis concentrations of pollutants and associated meteorological parameters according to EPA criteria (ref. DRD's 004 and 005). These systems shall be operated in accordance with accepted Federal and State of Florida Air Quality methods and standards and the National Atmospheric Deposition Program.

The Contractor shall report air quality standard exceedances to the NASA COTR (ref. Appendix 3).

The Contractor shall monitor surface and ground water in conjunction with other sampling activities, water pollution impact assessments, regulatory protection initiatives, and resource conservation criteria. Monitoring results shall be designed to characterize environmental conditions, identify changes in environmental quality, and relate monitoring results to prescribed regulatory standards (DRD 005).

4.1.1.4 Environmental Decision Support Service

The Contractor shall operate an Environmental Decision Support Service capable of providing operational elements with environmental management and impact assessment information consisting of, at a minimum:

- microcomputer-based geographic information system (GIS),
- environmental models, and
- multimedia data storage.

The system shall provide on-line information about the environmental conditions on the Center and provide timely information for resource management decisions.

The Environmental Decision Support lab shall produce, at a minimum, vegetation, soil, facility, and water imagery overlays, and have associated digitizing and stereographic equipment.

The Contractor shall enter environmental data (e.g., threatened/endangered species habitat, monitoring/study sites, permitted facility locations/specifications, waste and material storage locations) into the GIS, incorporate satellite imagery, and update all data layers and associated databases.

The Contractor shall maintain and enhance the Environmental Decision Support database program. The Contractor shall efficiently extract, display, and report information stored in the database system (ref. DRD 017). The Contractor shall provide and maintain a user-friendly interface for the database system.

The Contractor shall develop cost-effective methods of sharing computer peripherals and decision support database information.

4.1.1.5 Trend Analysis

The Contractor shall conduct trend analysis to support the development of models for predicting consequences of environmental perturbations. The Contractor shall summarize, interpret, and integrate the various ecological monitoring data sets with the primary objective of determining trends in these data.

The Contractor shall summarize ecological trends in technical reports (ref. DRD005).

4.1.1.6 Mitigation Strategies

The Contractor shall support the development and implementation of environmental mitigation strategies. This effort will include assessing the environmental problem, recommending corrective actions, and monitoring the results of implementing the adopted strategies.

The Contractor shall participate in studies of past hazardous material release sites at the Center with other KSC organizations at the direction of the COTR. This participation shall include, at a minimum:

- providing technical input to sampling plan development,
- evaluating sample analyses for regulatory significance,
- preparing two- and three-dimensional displays of the environmental contamination, and,
- preparing technical reports.

4.1.1.7 Environmental Management

The Contractor shall support the Center's environmental management programs in the areas of affirmative procurement, recycling, air permitting, remediation, and other initiatives as directed by the CO.

4.1.2 Environmental/Ecological Studies Program

4.1.2.1 Biological Assessments

The Contractor shall evaluate potential impacts to the environment from Center construction and operations. These biological evaluations require literature review, data review and interpretation, field surveys and sampling, and written final reports.

Biological Assessments shall be conducted and reported in such a manner as to satisfy regulatory requirements associated with threatened and endangered species.

The Contractor shall prepare ecological risk assessments in accordance with EPA and State of Florida protocols in support of Center investigations as directed by the CO.

4.1.2.2 Biological Investigations

The Contractor shall conduct surveys of flora and fauna at selected sites to identify and evaluate Center ecosystems. Surveys shall include surveillance of flora and fauna that could potentially be impacted by KSC operations.

The Contractor shall conduct research in habitat characteristics including, at a minimum, soils, water level, climate, and biogeochemical cycles in order to describe/evaluate Center ecosystems. Effects of natural or induced environmental perturbations such as fire, fluctuations in water level, and variations in salinities shall be investigated and reported.

Surveys shall determine impacts from KSC operations, project the cumulative effects of more subtle impacts, and develop predictive models. These impact determinations shall include accounting for relative habitat importance and Center biodiversity concerns.

The Contractor shall conduct a remote sensing, mapping, and analysis program to identify/characterize ecosystems and assess seasonal and long-term changes to major ecosystems. The Contractor shall participate in remote sensing/mapping cooperative studies between the Center and other NASA centers and/or government agencies.

The Contractor shall establish permanent sample plots that will correlate environmental information, water quality, and vegetation status over a sufficient time period to allow meaningful interpretations of environmental trends.

The Contractor shall conduct wildlife studies that concentrate on collecting population data and correlating these data with habitat information. Emphasis shall be placed on threatened and endangered species as well as species of special concern (i.e., state listed species, migratory species, species of regional importance). This environmental monitoring shall include aquatic studies, especially as they relate to sea grasses and manatees, and areas identified as National Estuary Protection sites. Some of the population studies will use radiotelemetry equipment and underground television systems furnished by the Government.

The Contractor shall ensure that all vertebrate studies are conducted in accordance with NPD 8910 and in coordination with the KSC Institutional Animal Care Use Committee (ref. Appendix 3).

4.2 Space Biological and Ecological Sciences

The Contractor shall conduct laboratory, payload development, and technology development activities that include research in fundamental biology, crop production, resource recovery, and biomass processing for long duration space habitation. Activities include, at a minimum, microgravity biological studies, crop production studies and the integration and evaluation of other components of an Advanced Life Support system. Laboratory research efforts concentrate on validating hardware or solving problems that arise during tests conducted at KSC. The Contractor shall conduct investigations in a scientifically sound manner, participate in program reviews, and actively publish in peer-reviewed journals.

4.2.1 Payload Development

The Contractor shall develop and implement Space Shuttle and Space Station flight experiments focusing mainly on plant growth and aquatic microgravity research. The Contractor shall provide Payload Development team engineering, integration, and science expertise through all phases of project development (concept definition through post-flight data analysis and archiving). The Contractor shall advise the NASA Project Manager on issues relevant to the goal of conducting safe and successful payload/experiments. The contractor shall prepare a monthly report depicting the overall progression of Spaceflight experiments (ref. DRD 003).

The Contractor shall implement risk management processes for all phases and aspects of projects including hardware design, operations, science objectives, etc.

The Contractor shall provide detailed and accurate cost, scheduling, and project management information. The contractor shall maintain project-level cost plans that are consistent with Program Operating Plan (POP) and contract budget exercises.

4.2.1.1 Flight Experiment Management

The Contractor shall provide technical integration expertise to define requirements and develop overall project objectives and goals for flight experiments assigned to KSC. The Contractor shall provide biological science expertise and advocate Principal Investigator project requirements as part of the payload development team.

The Contractor shall plan and coordinate all operations required to conduct a successful flight experiment including, but not limited to, Science Verification Testing, Payload Verification Testing, and flight experiment integration/de-integration activities. The Contractor shall conduct test readiness reviews, publish test objectives, and identify processing support requirements prior to the operations.

The Contractor shall conduct experiment research and development activities at remote locations, as appropriate. This includes flight experiment reduced-gravity certification testing on the NASA KC-135 aircraft to evaluate flight hardware performance, experiment protocols, or to gain other valuable information.

The Contractor shall train ground and flight crew personnel in experiment operations, prepare flight operation timelines, develop payload safety documentation, and provide data for the preparation of Payload Integration Plans and annexes. The Contractor shall prepare Shuttle and Station documentation while meeting applicable program requirements.

The Contractor shall provide "quick-look", "30-day", and "one-year" post-flight reports incorporating Principal Investigator information, hardware performance, and experiment results.

The Contractor shall evaluate technical feasibility of proposed flight experiments in support of NASA Research Announcements and solicitations for flight proposals.

The Contractor shall incorporate applicable information for KSC-managed flight experiments into the Life Sciences Data Archive and participate in the evolution and improvements of the Agency-wide program.

4.2.1.2 Flight Hardware Management

The Contractor shall maintain an inventory of Life Sciences flight hardware located at Kennedy Space Center. For experiments that cannot be accommodated using existing hardware, the Contractor shall propose to design, develop, and fabricate new flight hardware (or modify existing hardware) necessary to meet , project, Principal Investigator, and NASA program requirements.

The Contractor shall design and develop prototype, proto-flight, and flight hardware necessary to meet project/experiment goals and objectives as defined by NASA. The Contractor shall develop flight hardware in accordance with NASA safety regulations (e.g., Systems Safety Analysis for the Flight Safety Board per NHB NSTS 1700.7AB).

The Contractor shall prepare an End-Item-Specification to document required hardware design specifications and performance parameters. The Contractor shall conduct Preliminary and Critical Design Reviews of all flight and ground hardware.

The Contractor shall fabricate and test prototype hardware as required during the development phase. The Contractor shall certify and validate the hardware design and performance following final fabrication.

The Contractor shall conduct ground laboratory studies to evaluate flight hardware's ability to maintain biological activity during space flight. The Contractor shall develop and/or test new technologies or methods of delivering radiant energy and water/nutrients to plants grown in these flight plant growth systems. These studies shall include investigations of photosynthesis, cellular structure, synthesis and degradation, metabolism, source/sink relationships, enzyme functions, and genetic alterations.

The Contractor shall provide configuration control of assigned flight hardware and associated ground support equipment, specifically identifying components/systems associated with Flight or Ground Safety verification and hazard reports and certifications.

The Contractor shall conduct pre- and post-flight preparations for experiment hardware in association with the Principal Investigator and overall experiment requirements.

Following flight, the Contractor shall assess hardware performance, document any hardware/functional anomaly, and recommend/implement design enhancement(s).

The Contractor shall maintain the hardware in a condition to assure it will be available and operable for space-flight experiments.

4.2.2 Ground Research

The Contractor shall propose and conduct research focused on the functional utilization of plants and other biological organisms to support human space exploration and for gaining general knowledge in the control and monitoring of closed ecological environments/systems.

The Contractor shall collect, validate, and summarize data at the conclusion of each experiment. These data shall be reduced to a form that is appropriate for technical reports or scientific articles.

The Contractor shall interpret and distribute data. This data shall be archived in a Life Sciences database allowing access, search, and statistical functions.

4.2.2.1 Systems Integration and Evaluation

The Contractor shall conduct research to provide a database of plant growth chambers operational modes, plant growth and biomass processing requirements, and resource recycling optimization options:

- growth of single crops under various conditions of atmospheric closure,
- recycling of various constituents,
- multi-cropping methods,
- biomass conversion processing, and,
- introduction of nutrients generated from treatments of the inedible biomass.

The Contractor shall collect adequate data in order to describe the mass flows, energy use, chamber operations, chemical and microbiological contaminants, and physical parameters.

4.2.2.2 Biomass Production

The Contractor shall conduct research that will evaluate horticultural techniques and environmental responses for a wide range of crops and other photosynthetic organisms. This laboratory research shall concentrate on the effects of high carbon dioxide and variation in irradiance and spectral quality on crop productivity. Studies shall emphasize increasing photosynthetic efficiency of crops growing at low irradiance.

4.2.2.3 Resource Recovery

The Contractor shall develop and test bioreactors that will extract soluble minerals, carbon dioxide, and water from inedible biomass for recycling to crops. This research shall include investigations with biomass leachate, bioreactor effluent, and ash produced by incineration of inedible biomass to provide nutrients for plant growth.

The Contractor shall develop and test bioreactors that will convert inedible plant biomass into useful food products. During the development and testing of these various bioreactors, the Contractor shall investigate mass and energy fluxes through each of the components and determine the microbiological and chemical characteristics. Products from the bioreactors shall also be evaluated for their potential use as food for humans. The Contractor shall develop baseline data for these bioreactors to allow for their scale-up and integration with biomass production. These data shall include reliability and risk assessment.

The Contractor shall conduct studies base-lining mass balances and energy balance using alternative systems (e.g., aquaculture).

4.2.2.4 Biological Response to Closed Systems

The Contractor shall conduct research into biological response in closed environmental systems. These studies shall include investigations of photosynthesis, cellular structure, synthesis and degradation, metabolism, source/sink relationships, enzyme functions, and genetic alterations.

The Contractor shall evaluate biological activity between environmental conditions present in flight hardware and the response of plants to gravity in ground-control studies.

4.2.2.5 Molecular Biology

The contractor shall propose and conduct research in areas of Molecular Biology that support closed biological systems, advanced bio-regenerative life support systems, fundamental space biology, and bio-regenerative resource recovery research and investigations.

The contractor shall conduct fundamental research in the Molecular Biology of living systems exposed to the space environment.

4.2.3 Animal Spaceflight Programs

The Contractor shall assist in the development and operation of the KSC Animal Spaceflight Programs research in animal husbandry and animal care by ensuring all animal holding and processing areas are maintained in accordance with AAALAC requirements for facility accreditation (ref. Appendix 2). The Contractor shall provide laboratory research personnel and expertise in animal husbandry for design and development of innovative hardware for animal husbandry and care in the space environment.

4.2.4 Spaceport Technology Development

The Contractor shall operate and maintain plant growth chambers, bioreactors, support equipment, and control systems to support flight and ground biological research. This support includes, but is not limited to, calibrating and maintaining instruments and sensors, interfacing sensors with computers, and developing computer control software.

The Contractor shall develop and test new technologies to improve system performance of ground and flight systems. Technology development efforts shall concentrate primarily on development of:

- environmental sensors,
- plant stress monitors,
- expert computer control systems, and,
- biomass processing equipment.

Emphasis shall be placed on operational reliability, miniaturization, on-line monitoring, automation, minimum calibration, and energy conservation.

The Contractor shall develop control software for plant growth systems. The Contractor shall enhance the automated control of the plant growth systems and bioreactors through the use of advanced control techniques.

The Contractor shall conduct failure mode and risk analysis and define options for recovery from a variety of failure scenarios.

5.0 Medical Operations

The Contractor shall provide medical services (including laboratory support) for:

- pre-launch preparations,
- launch, pre-landing, landing, and recovery,
- pre- and post-flight data collection; and
- field activities for biomedical operations support.

(Note: These services shall not duplicate, unless so directed, or interfere with dedicated emergency medical support furnished by the J-BOSC under its WBS).

5.1 Spaceflight Medical Support

The Contractor shall contribute to an operational medical support program for Space Shuttle and Space Station operations by providing professional and technical services for pre- and post-flight medical care of astronauts and other Space Shuttle and Space Station crew persons as well as certain other individuals associated with Space Shuttle and Space Station flight activities. This task is for support of space flight operations at KSC, as defined in the Medical Operations Requirements Document (MORD) for the Space Shuttle, JSC-13956 and the KSC Medical Operations Support Implementation Plan (MOSIP), KBM-PL1.1.

5.1.1. Launch/Landing Emergency Medical Services Planning

The Contractor shall prepare, submit, and update emergency medical services plans for Space Shuttle launches and landings, exercises and simulations, and training for medical personnel providing this support (ref. DRD 007).

5.1.2. Space Shuttle Medical Support

The Contractor shall provide standby support to exercises and simulations, medical personnel training, emergency medical operations at KSC and emergency and general medical standby support during Space Shuttle operations; general management of designated medical examination activities and facilities including interfacing with other organizations, inventory control of all on-hand medical (including pharmaceutical) supplies and equipment and routine patient care as needed.

5.1.3. Pre- and Post Crew Medical Care

The Contractor shall provide services of aerospace physicians, clinical nursing specialists and medical technologists to the medical operations support group during the conduct of crew support activities associated with pre- and post-flight phases of all Space Shuttle and Space Station missions (ref. Appendix 2). These services, at a minimum, include: discrete crew requirements for support of crew physicals, for medical monitoring, for designated prime crew contact examination, and for flight and control experiments involving humans as subjects.

The Contractor shall be Joint Commission for Accreditation of Health care Organizations (JCAHO) (Ambulatory Care Standards) accreditable within 24 months after contract start.

The Contractor shall assist NASA Flight Surgeons in activities including Detailed Supplemental Objectives, Detailed Test Objectives, and other pre- and post-flight human research.

5.1.4. Spaceflight Medical Support Training Course

The Contractor shall plan for and conduct the Annual KSC Space Flight Medical Support Training Course. This course is designed to familiarize medical personnel specified by the COTR who support Space flight launch and landing activities with specific medical concerns associated with KSC launch and landing activities. (These medical personnel currently include designated individuals from Shands Teaching Hospital, Parrish Medical Center, Orlando Regional Medical Center, Florida Hospital, Holmes Regional Medical Center, Halifax Medical Center, Cape Canaveral Hospital, Wuesthoff Hospital, and the Department of Defense.)

5.2 Crew, Workforce, and Planetary Protection

The Contractor shall conduct microbiological and toxicological sampling and analysis of KSC flight crew quarters and of spacecraft cabin areas, including potable water systems and waste management areas, as specified in approved program requirements and procedures (ref. MORD JSC 13956 and Appendix 3). Samples and analyses shall be made using program approved protocols and results made available according to programmatic and flight requirements in support of established operational schedules.

The Contractor shall provide a continuing and comprehensive evaluation of specific interior areas of the Space Shuttle, Space Station, and spacecraft refurbishment facilities for the quantitative presence of certain viable microorganisms, including and emphasizing potential pathogens in accordance with "KSC Payload Facility Contamination Control Requirements/Plan," K-STSM-14.2.1. The Contractor shall assure that these data will serve as background for evaluation of any changes in the quantitative and qualitative microbial population in the spacecraft as a result of the Space Shuttle Program and subsequent Operational Flight Programs.

The Contractor shall select and schedule test subjects to participate in the KSC Life Sciences operational studies. As a general policy subjects will be selected from KSC civil service personnel, the Contractor's personnel, or other on site Contractor personnel on a voluntary basis whenever such personnel satisfy test subject requirements. When these means are inadequate, the Contractor shall recruit from external sources (ref. NPD 7100.8, "Protection of Human Research Subjects"). In addition, the Contractor shall assure adequate and prompt medical care and shall assure that adequate compensation for subjects or for subjects' beneficiaries is available through insurance mechanisms if a subject suffers illness, disease, injury, loss of body member, or death as a result of participation in human testing. The Contractor shall provide the capability to perform concurrent physiological testing and medical monitoring services.

The Contractor shall perform microbiological testing of interplanetary spacecraft per NHB 5340.1B, "NASA Standard Procedures for Microbiological Examination of Space Hardware" to ensure sterility of the spacecraft at launch. The Contractor shall also provide microbiological testing in support of any sample returned to Earth missions.

5.3 Physical Fitness and Health Awareness Program

The Contractor shall administer a Physical Fitness Exercise Program and oversee the use and maintenance of the exercise equipment.

The Contractor shall operate and monitor the usage of existing exercise facilities (ref. Appendix 6) that are available to all on-site federal and Contractor personnel. The Contractor shall provide personal fitness assessments, personal training, exercise classes, and motivational programs.

The Contractor shall provide fitness expertise in a Health Awareness Program that implements preventive medicine and health promotion activities for employees at KSC, such as cardiovascular risk factor reduction activities, fitness assessments, and back injury reduction.

The Contractor shall develop and manage designated special events including exercise competitions and group sponsorships intended to promote and enhance physical fitness and health.

5.4 Musculoskeletal Rehabilitation Program

The Contractor shall provide a Musculoskeletal Rehabilitation Program and provide maintenance of its related equipment.

The Contractor shall coordinate activities with the KSC Occupational Health personnel, offsite health care providers, workers' compensation specialists, and the KSC Fitness Centers to optimize injury reduction, injury rehabilitation, and return to work.

The Contractor shall implement preventive medicine and health promotion activities, such as ergonomics, repetitive motion injury reduction and rehabilitation, back injury reduction, and others.

6.0 Agency Occupational Health

6.1 Occupational Health Program Assessment

The Contractor shall provide expertise to the Agency Occupational Health Program Office during its assessment and documentation of the present status of NASA's Occupational Health Program (OHP). This service requires personnel possessing the requisite knowledge and experience in occupational medicine (physicians and nursing) and environmental health (industrial hygiene). The NASA program office is required to perform a full-scale assessment of the status of all NASA centers' implementations of the Program with appropriate reporting to, and liaison with, the NASA Headquarters overseeing officials. The program office assessment includes, at a minimum, site visits to each NASA center on a two year cycle; inventory and evaluation of facilities, resources, and practices at each center; essential data documentation and reporting; and individual center program evaluations.

The Contractor shall develop a quality assurance program, and develop occupational health initiatives, programs, and draft-policies. The Contractor shall make recommendations for enhanced future OHP operation and management. DRD 014 shall be followed for documenting and reporting recommendations.

The Contractor shall maintain and make enhancements to the Occupational Health Program web site and maintain security and operation of the independent server.

6.2 Occupational Health Program Administration Management Services

The Contractor shall provide expertise to support administration, execution, and operational management of the Agency OHP, in accordance with responsibilities directed by NPD 1800.2, "NASA Occupational Health Program" (ref. Appendix 3).

These functions require specific discipline skills in occupational medicine and environmental health, as well as, health information management expertise. Continual surveillance of, and assistance to, the implementing programs at the NASA centers is required. This includes periodic center site visits and solicitation, compilation, and reporting of required summary data for NASA Headquarters offices and external organizations. DRD 015 details the major reporting requirements.

6.3 Health Information Management System Services

The Contractor shall develop, implement, and maintain an integrated NASA Health Information Management System database containing center specific data.

6.4 Agency Policy on Weapons of Mass Destruction

The Contractor shall provide expertise to support the development of agency wide operational policy for potential threats from Weapons of Mass Destruction. At a minimum these services include medical, environmental health, and emergency medical services capabilities to evaluate policies and equipment at each center for responding to biological and radiological agents (i.e. anthrax, smallpox, ricin, "dirty" radiological exposures for likely alpha, beta, and gamma radiation sources); interface between medical and industrial hygiene and safety/security/emergency preparedness organizations to ascertain lines of communications and responsibilities; and the review of the incorporation of medical discipline fields in center Weapons of Mass Destruction policies. The Contractor shall support the development of a agency OHP policy for medical discipline responsibilities during Weapons of Mass Destruction events.

Statement of Work Appendix 1

Data Requirements List

Data Requirement Deliverables

The Contractor shall provide an electronic copy of all data deliverable items to the Contracting Officer and keep a log of data deliverables including publications throughout the life of the contract. The log shall identify the item, segregated by item type, date delivered, NASA office of primary responsibility, date accepted by NASA, and other applicable data necessary. The updated log shall be provided with the Contractor Performance Assessment report each quarter (ref. DRD 002)

**INSTRUCTIONS FOR COMPLETING CONTRACT
APPLICATION INFORMATION**

- A. LINE ITEM NO. Sequentially number line items beginning with number 001.
- B. LINE ITEM TITLE - Enter the title of the data item, as shown in the Statement of Work (SOW), the RFP and/or as directed by the CTM.
- C. OPR (OFFICE OF PRIMARY RESPONSIBILITY) - Enter the organization designated to exercise technical and or administrative control over the data requirement. Use approved organizational code.

D. TYPE - Enter "Type of Data" code as follows:

CODE	DESCRIPTION
1	Data requiring written approval by the procuring activity prior to implementation into the procurement or development program.
2	Data submitted to the procuring activity for review not later than three weeks prior to project implementation. Data shall be considered approved unless the contractor has been notified of disapproval prior to project implementation.
3	Data submitted to the procuring activity for coordination, surveillance, or information.
4	Data retained by the contractor to be made available to the procuring activity upon request. The contractor shall furnish a list to the procuring activity.
5	Data to be retained by the contractor and reviewed by NASA on request.

E. INSPECT/ACCEPT - Enter Inspection Acceptance code as follows:

CODE	INSPECTION	ACCEPTANCE	CODE	INSPECTION	ACCEPTANCE
1	Source	Source	4	Certificate of Conformance	(Mandatory)
2	Destination (OPR)	Destination (OPR)	5	Certificate of Conformance	(Optional)
3	Source	Destination (OPR)	6	No Inspection Required	No Acceptance Required

F. FREQ. OF SUBM. - Enter the frequency of the submission code as follows:

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
AD	AS DIRECTED	PC	PER CONTRACT	PV	PER VEHICLE
AN	ANNUAL	PD	PER FAILURE	QU	QUARTERLY
AR	AS REQUIRED	PE	PER EVENT	RD	AS RELEASED
BE	BIENNIAL	PF	PER FACILITY	RT	ONE TIME & REVISIONS
BM	BIMONTHLY (every two months)	PG	PER PROGRAM	SA	SEMI ANNUALLY
BW	BIWEEKLY (every two weeks)	PI	PER EQUIPMENT END ITEM	SM	SEMI MONTHLY
DA	DAILY	PJ	PER PROJECT	TY	THREE YEAR PERIOD
DD	DEFERRED DELIVERY	PL	PER LAUNCH FLIGHT MISSION	UR	UPON REQUEST
MO	MONTHLY	PS	PER SYSTEM	WK	WEEKLY
OT	ONE TIME	PT	PER TEST		

G. INITIAL SUBMITTAL - Enter date of initial submittal as follows: Month, Day, Year. If calendar date is not scheduled, enter number of days preceding, or following, event to which the data requirement is related (e.g., 90 days prior to launch). Amplify in REMARKS, Item J, if necessary.

H. AS OF DATE - For "Onetime Only" submittals, enter date by month/day/year. For recurring submittals, enter number coding (e.g., 30/10, 90/10, 15/5, etc.). The first digit(s) indicate the number of calendar days from the reporting period's (Block F) start to the data preparation cut off. The second digit(s), after the slash, indicate the number of calendar days from the cut off to the submittal date. Example: If Block F were "MO" and Block H were "30/10", the data would include the entire month and would be submitted within 10 days thereafter.

J. REMARKS: Enter in this space:

- a. Minor exceptions to the DRD.
- b. Stipulation of specific forms when multiple forms are authorized on the DRD.
- c. The paragraph, page, etc., in an existing contract where the data requirement is specified. (This data may be removed at final approval.)
- d. Additional submittal information, if necessary.

K. DISTRIBUTION - Enter organizational symbol, number of copies, and type of copy code(s) (in parenthesis) required for each office. Type of copy codes are as follows:

CODE	DEFINITION	CODE	DEFINITION
A	Regular	C	Microfilm, Aperture Cards
B	Reproducible	D	Other, (Explain in remarks, Item J).

EXAMPLE ENTRIES: IS-PRO-2 (1A) = One regular copy. IS-PRO-3 (5 A, 1B) = Five Regular copies, One Reproducible copy.
Enter the total number of copies by type in the space provided

**INSTRUCTIONS FOR COMPLETING DATA
REQUIREMENT DESCRIPTION**

GENERAL - The Data Requirement Description (DRD) will be prepared to describe the content and provide preparation information for data required in support of NASA programs.

- 1. TITLE - Enter the title or type of document required. The first word of the title should be a principal noun which best established the basic concept of the data. Subsequent words should be appropriate modifiers.
Examples: Plan, Project Development (SIVB)
Specification, Test (GSE)
Report, Quarterly Progress
Proposal, Engineering change (ECP)
- 2. NUMBER - Enter the appropriate number assigned to the DRD. This number will identify the appropriate data category.
- 3. USE - Enter a synopsis of the use of the document, stating reason for the requirement.
- 4. DATE - Enter date of preparation.
- 5. ORGANIZATION - Identify the installation preparing the DRD.
- 6. REFERENCES - List applicable documents by number, (NASA Management Manual, Mil Specifications, Federal Standards, NASA Procurement Regulation, etc.) to which the preparing office (e.g., NASA installations, contractors, etc.) may refer for additional information concerning the data requirement.
- 7. INTERRELATIONSHIP - Enter all affected approved DRDs within the scope of the program when the DRD under preparation creates a significant impact or interface relationship with existing DRDs. Include a brief narrative of the impact or relationship created and a statement that the new DRD does not cause a conflict with other DRDs.
- 8. PREPARATION INFORMATION - Provide ample information for preparation of the data required by the data requirements description; include all necessary details of preparation to satisfy the originator's formal requirements.

DATA REQUIREMENTS LIST

DRL NUMBER:	REVISION
PROJECT/SYSTEM Life Science Services Contract	
CONTRACT NUMBER	PREPARATION DATE 4/17/01
CONTRACTOR	TECHNICAL APPROVAL
ATTACHMENT NUMBER	EXHIBIT NUMBER

ITEM NO.	TITLE	CHANGE STATUS
1	Report, Contractor Financial Management (NASA Form 533 M)	
2	Reports, Contractor Performance Assessment	
3	Schedules, Flight Experiment Payload Development	
4	Report, Quarterly Air Quality Summary	
5	Report, Annual KSC Environmental Summary	
6	Plan, Long Term Ecological Program	
7	Plan, Space Shuttle Medical Operations Support	
8	Plan, Space Shuttle Ecological Launch Preparations	
9	Report, Post-Launch Ecological Impact	
10	Plan, Safety	
11	Report, Safety Statistics	
12	Report, Investigation of Mishaps	
13	Plan, Reliability and Quality Assurance	
14	Report, Occupational Health Program (OHP) Assessment	
15	Reports, Occupational Health Program Management	
16	Plan, Quality Systems Management	
17	Maps and Databases, Ecological Systems	
18	Reports, Annual Summary of Animal Use	
19	Plan, IT Security	
20	Report, Equal Employment Opportunity	
21	Report, Motor Vehicle Utilization	
22	Report, Quarterly KSC Headcount	
23	Report, Monthly Purchase Order	
24	Plan, Facility/Laboratory Utilization	
25	Plan, Cost Phasing	
26	Plan, Emergency Preparedness	
27	Plan, Internal Surveillance	
28	Plan, Risk Mitigation	

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

Page 1 of 2

A. ITEM NO.
001

B. LINE ITEM TITLE:
Report, Contractor Financial Management (NASA Form 533M)

C. OPR. GG-C-B1	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. MO	G. INITIAL SUB. See Block J	H. AS OF DATE See Block J
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J. REMARKS:

Block G: The initial submittal of NASA Form 533M shall begin no later than the 15th calendar day after the end of the first calendar month of contract performance.

Block H: As of date based on Contractor monthly accounting period cut-off-date.

K. DISTRIBUTION GG-C-A2 GG-B-C2 GG-B-B1 OP-OS DCAA YA-A	TOTALS	
	NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Contractor Financial Management (NASA Form 533M)	2. NUMBER
3. USE To provide financial management cost and financial data for ensuring that contractor operations are efficiently planned and managed.	4. DATE
7. INTERRELATIONSHIP	5. ORGANIZATION
8. PREPARATION INFORMATION	6. REFERENCES NPD 9501.1G NPG 9501.2C

- A. Prepare NASA Forms 533M per instruction NPG 9501.2C. Refer to sample 533 reporting format for desired report periods and cost elements to be presented.
- B. The reports shall be submitted electronically no later than 15th calendar day following the close of the contractor's monthly accounting period.
- C. The Contractor shall furnish with the initial NF533M its accounting calendar that lists the accounting periods, number of workdays included in each period, and all holidays. All subsequent revisions shall be provided at the time of the change. At a minimum, an updated accounting calendar shall be provided at the beginning of each government fiscal year.
- D. The reports shall include the following summaries:
 - 1. Total Contract
 - 2. WBS Level Summary (1.0, 2.0, 3.0, 4.0, 4.1, 4.2, 5.0, 6.0)
 - 3. Mission Plan Element Summary
- E. Contractors are required to indicate full-incurred costs on the NF533 Report. At the end of each fiscal year, upon submittal of final indirect cost rates, provisional billing rates shall be changed to the proposed final rates. The Contractor shall include all adjustments in the current month actual costs column of the NF533, itemizing the adjustments in an addendum to the report.
- F. Cost figures shall be reported to the nearest whole dollar, equivalent headcount shall be reported to the nearest tenth, and hours shall be reported to the nearest whole hour.
- G. Mission Plan Element level reports shall annotate specific NASA Unique Project Number (UPN) costs based on NASA-supplied percentages for "labor" and "non-labor" charges.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

Page 2 of _2_

A. ITEM NO.
001

B. LINE ITEM TITLE:

Report, Contractor Financial Management (NASA Form 533M)

C. OPR. GG-C-B1	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. MO	G. INITIAL SUB. See Block J	H. AS OF DATE See Block J
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J. REMARKS:

Block G: The initial submittal of NASA Form 533M shall begin no later than the 15th calendar day after the end of the first calendar month of contract performance.

Block H: As of date based on Contractor monthly accounting period cut-off-date.

K. DISTRIBUTION

See page 1

TOTALS	
NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Contractor Financial Management (NASA Form 533M)	2. NUMBER
3. USE To provide financial management cost and financial data for ensuring that contractor operations are efficiently planned and managed.	4. DATE
7. INTERRELATIONSHIP	5. ORGANIZATION
8. PREPARATION INFORMATION	6. REFERENCES NPD 9501.1G NPG 9501.2C

- H. Each NF533M shall contain an estimate for the next two months and for the balance of the contract year. This estimate shall include all anticipated hours and costs.
- I. The Contractor shall provide a variance analysis for any 5% exceedance for each element of cost of the difference between the *actual* and *plan* for the current month. The variance analysis is required at the Mission Plan Element level.
- J. For any indirect rate (such as overhead, G&A, etc.) charged to the contract, the Contractor is to identify in the narrative to the NF533M the provisional billing rates, ceiling rates and cumulative actual rates for the contract.
- K. Data elements to be reported include all cost elements included in the negotiated contract estimated cost.
- L. Any revisions to the Contractor's 533 submittal shall be provided to NASA via a corporate letter inclusive of revised replacement pages with an explanation for the revisions.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Contractor Performance Assessment					A. ITEM NO. 002
C. OPR. YA	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. See J	G. INITIAL SUB. 1 Week Following ATP	H. AS OF DATE See J

J. REMARKS:
F/H Prepare as per column 8 below on these frequencies and due dates based on contract year:
 1. Annual (365/30) 3. Weekly (7/5)
 2. Quarterly (90/15)

K. Electronic Media required for all submissions.

K. DISTRIBUTION	ANNUAL	QUARTERLY	WEEKLY	TOTALS	
				NO.	TYPE
YA-A	1A 1D	1A 1D	1A 1D		
OP-OS	1D	1D	1D		
UB-E	1D	1D	1D		
TA-C	1D	1D	1D		
TOTALS	1A, 4D	1A, 4D	1A, 4D		

DATA REQUIREMENT DESCRIPTION

1. TITLE CONTRACTOR PERFORMANCE ASSESSMENT	2. NUMBER
3. USE Ascertain status, document history and project changes during contract performance.	4. DATE
	5. ORGANIZATION KSC/YA
	6. REFERENCES
7. INTERRELATIONSHIP DRD 010, 013, 016, 024, 027, & 028	
8. PREPARATION INFORMATION	

1. An annual report of life sciences activities summarizing all Mission Plan Milestones and Deliverables and data to support the Government's Performance Evaluation Plan will be provided.
2. A quarterly report all Mission Plan Milestones and Deliverables and data to support the Government's Performance Evaluation Plan will be provided. The purpose of this report is to provide a Contractor/NASA senior management basis for discussion on the status of contract activity. The report will be in the form of briefing charts that addresses the summary level highlights of the past quarter's activities. The briefing should also provide a Mission Plan Element summary level discussion of planned versus actual costs and any actions required or proposed to assure performance to the cost plan. Management issues of concern to the contractor should be presented. If the Contracting Officers Technical Representative has specific management issues for the Contractor to discuss, they will be provided two weeks prior to the scheduled briefing. Fourth quarterly report is not required as such, but will be combined with the annual report.
3. A weekly summary of key activities, two to four pages in length, provided in letter form.
4. The reports shall address the results of contractor's Internal Surveillance Plan and accomplishment of the critical performance element metrics identified in the Government Performance Evaluation and Award Fee Plan.
5. Identify all actions taken within the reporting period toward meeting the requirements in SOW Section 1.3.1. The Contractor shall identify all issues, problematic areas, and identified deficiencies in complying with OSHA VPP Star certification requirements.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 003
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B. LINE ITEM TITLE:
Plan, Flight Experiment Payload Development

C. OPR. UB-E	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. See J	G. INITIAL SUB. 30 days after contract start	H. AS OF DATE Contract Start
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J. REMARKS:
1. Prepare monthly update for each flight experiment/payload assigned to KSC.

K. DISTRIBUTION	TOTALS
UB-E 1A 1D	NO. TYPE
YA-D3 1A	
YA-A 1A	

DATA REQUIREMENT DESCRIPTION

1. TITLE Plan, Flight Experiment Payload Development	2. NUMBER
3. USE To provide experiment/payload information for project management.	4. DATE
	5. ORGANIZATION KSC/YA, UB
INTERRELATIONSHIP DRD 024, DRD 002	6. REFERENCES

B. PREPARATION INFORMATION

A. The monthly plan will include:

- a. Experiment Summary Table for each Research Program customer
 - i. Experiment NRA number and title
 - ii. Principal Investigator name
 - iii. Development Phase initiation/termination dates
 - iv. Targeted mission/flight
 - v. Flight Hardware required
 - vi. General Comments
- b. Experiment Report for each experiment/payload
 - i. Narrative Information
 - 1. relevant status
 - 2. upcoming milestones
 - 3. issues
 - 4. risk management summary
 - 5. general experiment/payload parameters and team members
 - ii. Detailed Progress Schedules
 - 1. schedules will be "base-lined" annually at the beginning of each fiscal year
 - 2. milestone and activity deviations/slips will be referenced against the base-lined schedule
- c. A single integrated schedule depicting experiment phases and major milestones (SVT/PVT/Hardware delivery/Launch) for all experiments/payloads

B. All schedules and information sheets will utilize standard formats

C. Information will be made available electronically

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
004

B. LINE ITEM TITLE:
Report, Quarterly Air Quality Summary

C. OPR. TA-C	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. QU	G. INITIAL SUB. See J	H. AS OF DATE 90/30
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J. REMARKS:
G. On calendar quarters (J-M, A-J, J-S, O-D)

K. DISTRIBUTION

YA (1A)
YA-D3 (1A)
TA-C (2A)

TOTALS	
NO.	TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE REPORT, QUARTERLY AIR QUALITY SUMMARY	2. NUMBER
3. USE Document air quality and identify results that exceed EPA standards.	4. DATE
7. INTERRELATIONSHIP DRD 006	5. ORGANIZATION KSC/YA
8. PREPARATION INFORMATION	6. REFERENCES

1. Quarterly averages for O3, SO2, NO, CO, temperature, humidity, and precipitation amounts by sample sites.
2. Maximum and minimum for each day and the hourly concentrations for O3, SO2, NO, & CO,.
3. Tabulation of wind speed and direction data by sites.
4. Identification of all that exceeded Federal or State standards.
5. Averages of analysis results or precipitation samples – standard physical and chemical measures.
6. Discussion of significant results.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
005

B. LINE ITEM TITLE:

Report, Annual KSC Ecological Summary

C. OPR. TA-C	D. TYPE 5	E. INSPECT/ ACCEPT 6	F. FREQ. AN	G. INITIAL SUB. 1/15/03	H. AS OF DATE 365/15
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J. REMARKS:

K. DISTRIBUTION

TA-C (1A) (1D)
YA-D3 (1A)
YA-A (1A)
FWS (1A), NPS (1A)

TOTALS	
NO.	TYPE
5	A
1	D

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Annual KSC Ecological Summary	2. NUMBER
3. USE To provide insight to the ecological condition of the Kennedy Space Center. The reports will be used as part of the historical database documenting the long-term impact of the space industry on this ecosystem.	4. DATE
7. INTERRELATIONSHIP DRD 006 DRD 017	5. ORGANIZATION KSC
8. PREPARATION INFORMATION	6. REFERENCES

The Contractor shall submit an annual report on the conditions of the KSC natural ecosystem including statistical and trend analysis for water, air, threatened and endangered species and all other ecological parameters.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
006

B. LINE ITEM TITLE:

Plan, Long Term Ecological Program

C. OPR. YA-D3	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. RT	G. INITIAL SUB. 90 days after ATP	H. AS OF DATE 365/20
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J. REMARKS:

Update of this plan as requested by TA-C

K. DISTRIBUTION

YA-A (1A) (1D)
 YA-D3 (1A)
 TA-C (1A)
 National Park Service (1A)
 U.S. Fish & Wildlife Service (1A)

TOTALS	
NO.	TYPE
5	A
1	D

DATA REQUIREMENT DESCRIPTION

1. TITLE PLAN, LONG TERM ECOLOGICAL PROGRAM	2. NUMBER
3. USE Prepared to provide overall strategic and program guidance for ecological program support.	4. DATE
	5. ORGANIZATION KSC/TA/YA
7. INTERRELATIONSHIP DRDs 005, 008, 009, 017	6. REFERENCES Ecological Program Plan dated 1995

8. PREPARATION INFORMATION

The plan will provide:

1. Overall scope and basis for the ecological program
2. Program summary
3. Program strategy
4. Management approach
5. Schedule of all activities
6. Resources
7. References

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Plan, Space Shuttle Medical Operations Support A. ITEM NO. 007

C. OPR. TA-C2	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. AN (1 & 2) AR (3 & 4)	G. INITIAL SUB. 90 days after ATP See J	H. AS OF DATE 365/30
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J. REMARKS:
Medical plans and appropriate revisions, dictated by the launch schedule, are required as requested by NASA-Medical prior to each Space Shuttle launch (see components 1,2, and 3 in item 8 below).

K. DISTRIBUTION	1 & 2 (each)	3 & 4			
YA-A	1A	1A			
TA-C2	10A	25A			
Totals	11A	26A			

TOTALS	
NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE PLAN SPACE SHUTTLE MEDICAL OPERATIONS SUPPORT	2. NUMBER
3. USE Prepared to provide a description of medical operations support to Shuttle activities	4. DATE
INTERRELATIONSHIP See DRD 008 and DRD 016	5. ORGANIZATION KSC Medical
	6. REFERENCES KBM-PL-1.2E KBM-PL-1.1C

8. PREPARATION INFORMATION
Prepare plans which provide descriptions of the activities to meet medical operations requirements for Shuttle launch and landing support. These plans shall emphasize both routine and emergency medical support as well as any ancillary support, e.g., laboratory services. They shall consist of the following documentation:

1. KSC Medical Operations Support Implementation Plan (MOSIP)
 - Frequency: Initial Plan within one year after ATP, then as needed thereafter.
2. KSC Emergency Medical Services (EMS) Plan
 - Frequency: Initial Plan within one year after ATP, then as needed thereafter.
3. Medical Package for Launch and Landing
 - Frequency: Prior to each launch in support of Medical Readiness Meeting and prior to landing and Terminal Count Down Test
 - Provide plans for confirming all necessary medical preparations for launch and landing, including:
 1. Launch and landing timelines
 2. General mission information
 3. Launch and landing deployment staging maps
 4. General communications listing
 5. Personnel duty, notification tree, and on-call schedules
 6. Triage site maps
 7. Hospital emergency contacts and resources
 8. Flight crew identification, seating and configuration
 9. Special preparations and unique requirements
4. Mission Report
 - Frequency: Within 30 days of conclusion of Shuttle mission

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL					A. ITEM NO. 008	
B. LINE ITEM TITLE: Plan, Space Shuttle Ecological Launch Support						
C. OPR. YA-D3, TA-C	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. See J	G. INITIAL SUB. See J	H. AS OF DATE See J	
J. REMARKS: Submit thirty days after contract award and update as necessary						
K. DISTRIBUTION					TOTALS	
YA-A	(1A)				NO.	TYPE
YA-D3	(1A)				3	A
TA-C	(1A)					
DATA REQUIREMENT DESCRIPTION						
Plan, Space Shuttle Ecological Launch Preparations				2. NUMBER		
3. USE Determines readiness of ecological support to Space Shuttle launch				4. DATE		
				5. ORGANIZATION TA-C		
7. INTERRELATIONSHIP DRD009				6. REFERENCES		
8. PREPARATION INFORMATION						
Provide plan confirming all necessary ecological monitoring preparations for Space Shuttle Launch, including:						
<ol style="list-style-type: none"> 1. Key personnel assignments 2. Timelines for major activities 3. Communications readiness and console checkout procedure 4. Equipment selection and assignments 5. Security coordination 6. Special preparations and unique requirements 						

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
DRD 009

B. LINE ITEM TITLE:
Reports, Post-Launch Ecological Impact

C. OPR. YA-D3, TA-C	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. See J	G. INITIAL SUB. See J	H. AS OF DATE See J
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J. REMARKS:

1. Provide a "quick-look" report within 48 hours after launch according to block 8 below.
2. Provide a Post-Launch Summary Report as requested.

K. DISTRIBUTION YA (1A), YA-D3 (5A), FWS (1A), NPS (1A), USA Env. (1A), SGS Env Health (1A) XA (1A), TA-C (2A)	TOTALS	
	NO.	TYPE
	13	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Reports, Post-Launch Ecological Impact	2. NUMBER
3. USE Assess ecological effects of launch and recommend control measure if needed.	4. DATE
	5. ORGANIZATION KSC/TA and YA
7. INTERRELATIONSHIP DRD 006 and DRD 008	6. REFERENCES

PREPARATION INFORMATION

Provide reports following Space Shuttle launch:

Quick look report to include:

- Final REEDM plot with input weather conditions noted
- Initial assessment of model; prediction vs. actual deposition based on ground truth monitoring
- Identification of initial significant findings

Post launch summary report to include:

- Narrative of console operations, noting any announcements made
- Final assessment of REEDM prediction vs. ground truth (mapped)
- Summarization and analysis of data collected
- Identification of significant findings
- Identification of problems encountered
- Discussion of results and significance to KSC operations
- Suggested corrective actions for ecological problems noted

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
010

B. LINE ITEM TITLE:

Plan, Safety and Health

C. OPR. YA-B	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. RT	G. INITIAL SUB. See Block J	H. AS OF DATE See Block J
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J. REMARKS:

The Contractor shall submit its Safety and Health plan with its proposal and it shall maintain the plan through the life of the contract. NASA will review, make recommendations, and maintain approval authority over all updates to this plan prior to incorporation into the contract.

K. DISTRIBUTION

YA-B (1A)
QA (1A)
YA-A (1A)
OP-OS (1A)
TA-C (1A)

TOTALS	
NO.	TYPE
5	A

DATA REQUIREMENT DESCRIPTION

1. TITLE <p align="center">Plan, Safety and Health</p>	2. NUMBER
3. USE <p>To define the Contractor's safety and work health programs. It addresses activities and related controls for the protection of personnel, equipment, and supplies and compliance with the NASA and KSC Safety programs.</p>	4. DATE
	5. ORGANIZATION <p align="center">KSC /TAYA</p>
7. INTERRELATIONSHIP DRD 002, 011, 012, 026, & 027	6. REFERENCES NPD 8710.2, NPD 8700.1

8. PREPARATION INFORMATION

1. The Safety plan defines a comprehensive safety and health program in accordance with the applicable safety and health policy documents.
2. The Safety and Health Plan shall be submitted with the Contractor's proposal.
3. The format of this plan shall be at the discretion of the contractor but shall include:
 - Safety procedures to be followed,
 - Safety analyses to be performed,
 - Hazardous operations to be monitored,
 - Safety walk downs and inspections to be conducted
 - Methods for safety review and concurrence of hazardous procedures and work authorization documents,
 - Methods for resolution safety problems,
 - Methods for safety investigations and reporting of incidents/accidents (DRD 011 and 012),
 - Methods for tracking of open hazard data and safety problems,
 - Methods for compliance with applicable environmental health requirements,
 - Hazardous communications program and accident prevention program,
 - Define safety chain of command within the contract.
4. The Safety Plan shall be maintained current

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL					A. ITEM NO. 011
B. LINE ITEM TITLE: Report, Safety Statistics					
C. OPR. TA-C1	D. TYPE 3	E. INSPECT/ 6	F. FREQ. QU	G. INITIAL SUB. See J	H. AS OF DATE See J
J. REMARKS: Report due by the 10 th of each month. The initial report shall be submitted on the first reporting period after contract award.					
K. DISTRIBUTION TA-C1 (1A) OP-OS (1A) YA-A (1A) YA-B (1A) QA-D (1A)					TOTALS NO. TYPE 5 A
DATA REQUIREMENT DESCRIPTION					
1. TITLE Report, Safety Statistics				2. NUMBER	
3. USE To provide Contractor mishap and mishap exposure information.				4. DATE	
				5. ORGANIZATION TA-C1	
7. INTERRELATIONSHIP				6. REFERENCES KHB 1710.2	
8. PREPARATION INFORMATION Mishap statistical information shall be reported on KSC Form 6-22. Cumulative totals shall be by fiscal year. The report shall be submitted monthly as specified in Block J above.					

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL A. ITEM NO.
012

B. LINE ITEM TITLE:
Report, Investigation of Mishaps

C. OPR. YA-B	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. AR/PE	G. INITIAL SUB. See Block 8	H. AS OF DATE
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J. REMARKS:

K. DISTRIBUTION YA-A (1A) OP-OS (1A) YA-B (1A) TA-C1 (1A) QA (1A)	TOTALS	
	NO.	TYPE
	4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Investigation of Mishaps	2. NUMBER
3. USE Notification of mishaps and close calls	4. DATE
	5. ORGANIZATION QA
7. INTERRELATIONSHIP	6. REFERENCES KHB 1710.2 NPG 8621.1

8. PREPARATION INFORMATION
All mishaps and close calls shall be reported.

Immediate notification of all incidents with the potential for being classified as a mishap or close call shall be reported to the NASA TA-C1 (Chief of the NASA Operations Safety Office, Steven.Brisbin-1@ksc.nasa.gov) within four hours or prior to the end of the shift, whichever is first.

- For incidents occurring on evening or night shifts, the report must be received by 6:45 a.m.

The information shall be provided using NASA Form 1627 or a contractor's approved form. A follow-up report shall be sent within three days of the initial report or within one day of mishap categorization, whichever is less.

For incidents that do not to meet the definition of a mishap or close call as specified in NPG 8621.1, the follow-up report shall consist of a written assessment as to why the incident should not have been classified as a mishap or close call.

For incidents categorized as mishaps, the follow-up report shall consist of an initial NASA Mishap Report (white copy of NASA Form 1627). A completed NASA Mishap Report (yellow copy of NASA Form 1627) or investigation status report shall be provided within 10 days of the initial NASA Form 1627 submittal.

Serious mishaps (Type A, Type B, or Type C damage) shall be reported by telephone to the NASA TA-C1 at 867-SAFE, 867-6133, or 867-6695 within one hour.

The mishap must be entered in the NASA Incident Reporting Information System (IRIS) within 24 hours and updated with new information as appropriate.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 013
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B. LINE ITEM TITLE:
Plan, Reliability and Maintainability

C. OPR. YA-B	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. RT	G. INITIAL SUB. See Block J	H. AS OF DATE See Block J
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J. REMARKS:

The Contractor shall submit its Reliability and Maintainability plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION	TOTALS	
YA-A (1A)	NO.	TYPE
YA-B (1A)	4	A
TA-C1 (1A)		
QA (1A)		

DATA REQUIREMENT DESCRIPTION

1. TITLE Plan, Reliability and Maintainability	2. NUMBER
3. USE To define the Contractor's Reliability and Maintainability programs. It addresses activities performed within this contract and in compliance with the NASA and KSC Reliability and Quality Assurance programs.	4. DATE
	5. ORGANIZATION QA
INTERRELATIONSHIP DRD 002 & 027	6. REFERENCES NSTS 5300.4 (1D-2) KHB 5310.1

- B. PREPARATION INFORMATION
1. The R&M Plan should serve as the Master planning and control document for the contractor's R&M Program. The plan should describe the contractor's approach and describing "what" will be done and method of management of each task in terms of when, by which organization, and be in a format that identifies contractual requirements.
 2. The plan should show the relationship to the individual managing the R&M program with each element performing R&M program tasks, including authority to control and monitor cited tasks.
 3. The R&M should not contain detail "how to " statements or include implementing procedures or instructions on the Contractor's methodology of executing his program requirements, approach, and criteria, leaving the implementation verbiage to the procedures.
 4. As an attachment to the R&M plan, the contractor should list his implementing procedures by subject.
 5. The R&M plan should list in the body or include any corporate procedure numbers in the narrative statements. However, the plan can include higher level NASA/Government documentation references, e.g., NSTS 5300.4 (1D-2).
 6. The R&M plan shall meet the intent of NSTS 5300.4 (1D-2) and written in the general format of the KHB.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL						A. ITEM NO. 014	
B. LINE ITEM TITLE: Report, Center Occupational Health Program (OHP) Assessment							
C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE		
QA-D	4	3	AD	AD	AD		
J. REMARKS: Agency OHP assessments of NASA Centers are required in order to determine regulatory and programmatic compliance for the OHP disciplines and to update and implement state-of-the-art practices. Database output maybe requested in either written reports (A) form or electronic media (D) form.							
K. DISTRIBUTION QA (1A,1D) QA-D (1A,1D)						TOTALS	
						NO.	TYPE
						2	A
						2	D
DATA REQUIREMENT DESCRIPTION							
1. TITLE Report, Occupational Health Program (OHP) Assessment						2. NUMBER	
3. USE To provide a current inventory, evaluation and regulatory and programmatic assessment of occupational health programs at each NASA Center						4. DATE	
						5. ORGANIZATION QA	
						6. REFERENCES NPD 1800.2A, NPD 1810.2A NPD 1820.1A	
7. INTERRELATIONSHIP							
8. PREPARATION INFORMATION							
<ul style="list-style-type: none"> a. Develop assessment checklists based upon NASA requirements for each programmatic element of the OHP. b. Compile report and enter discrete date into OHP database for the on-site program assessment at the Centers with discipline specific subject matter experts in occupational health, nursing and wellness, and industrial hygiene as requested by the Principal Center for Occupational Health. c. Make data from OHP database available as required to the Principal Center for Occupational Health. 							

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 015
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B. LINE ITEM TITLE:
Reports for Occupational Health Program Management

C. OPR. QA-D	D. TYPE 1	E. INSPECT/ ACCEPT 3	F. FREQ. AD	G. INITIAL SUB. AD	H. AS OF DATE AD
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J. REMARKS:
Agency OHP management requires several and varying reports for internal and external use (see item 8).

All written reports (A) will be submitted with accompanying electronic media (D).

K. DISTRIBUTION QA (1A,1D) QA-D (1A,1D)	TOTALS	
	NO.	TYPE
	2	A
	2	D

DATA REQUIREMENT DESCRIPTION

1. TITLE Reports, supporting Agency OHP Management	2. NUMBER
3. USE To provide Agency and external organizations mandated and managerially required information.	4. DATE
	5. ORGANIZATION QA
INTERRELATIONSHIP	6. REFERENCES NPD 1800.2A, NPD 1810.2A, NPD 1820.1A

- 8. PREPARATION INFORMATION**
- a. Report (periodic) of center programmatic assessments
 - b. Reports (periodic) of OHP database development
 - c. Reports (periodic) of OHP web site utilization
 - d. Report (periodic) of OHP Conferences proceedings
 - e. Report (periodic) of status of pending and completed OHP designated actions
 - f. Report (periodic) of Agency medical quality assurance program.
 - g. Report (periodic) of statistical information from each Center's evaluation

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL					A. ITEM NO. 016
B. LINE ITEM TITLE: Plan, Quality Management System					
C. OPR. YA-B	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. RT	G. INITIAL SUB. See Block J	H. AS OF DATE See Block J
J. REMARKS: The Contractor shall submit its Quality Management System plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.					
K. DISTRIBUTION					TOTALS
YA-A (1A)					NO.
YA-B (1A)					TYPE
TA-C1 (1A)					4
QA (1A)					A
DATA REQUIREMENT DESCRIPTION					
1. TITLE Plan, Quality Management System				2. NUMBER	
3. USE To define the Contractor's Quality Management System programs. It addresses activities performed within this contract and in compliance with the NASA and KSC Quality Assurance programs and ISO 9000.				4. DATE	
				5. ORGANIZATION QA	
7. INTERRELATIONSHIP DRD 002 & 027				6. REFERENCES ISO 9000 KHB 5310.1	
8. PREPARATION INFORMATION					
<ol style="list-style-type: none"> 1. The Quality Management Plan shall serve as the Master planning and control document. The plan shall describe the contractor's approach describing "what" will be done and method of management of each task in terms of when, by which organization, and be in a format that identifies contractual requirements. 2. The plan shall show the relationship of individuals managing Mission Elements. All elements of mission performance shall be addressed as defined in ISO 9000, Quality Management Standard. 3. The Quality Management Plan shall contain the Contractor's methodology of executing his program requirements, approach, and criteria, leaving the implementation verbiage to the procedures. 4. As an attachment to the Quality Management Plan, the contractor shall list his implementing procedures by subject. 5. The Quality plan shall meet the intent of KHB 5310.1 and ISO 9000. 					

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL					A. ITEM NO. 017
B. LINE ITEM TITLE: Maps and Databases, Ecological Systems					
C. OPR. TA-C	D. TYPE 5	E. INSPECT/ ACCEPT 2	F. FREQ. AR See J	G. INITIAL SUB. See J	H. AS OF DATE See J
J. REMARKS: F. Databases will be continuously maintained and updated as needed to ensure utility for resource management G. On request H. On request					
K. DISTRIBUTION TA-C (1A)					TOTALS
					NO. TYPE
					1 A
DATA REQUIREMENT DESCRIPTION					
1. TITLE Maps and Databases, Ecological Systems				2. NUMBER	
3. USE Provide Digital maps and databases for natural resource management at KSC				4. DATE	
				5. ORGANIZATION TA-C	
INTERRELATIONSHIP DRD 006				6. REFERENCES	
8. PREPARATION INFORMATION These Maps and databases for ecological systems are called the Geographic Information System (GIS). The GIS databases will include the following data sets as defined in DRD-006					
<ol style="list-style-type: none"> 1. Terrestrial land cover 2. Soils 3. Surface Waters 4. Submerged vegetation 5. Fire management units 6. Mosquito impoundments 7. Submerged Aquatic Vegetation 8. Watersheds 9. Threatened and endangered species habitat 10. Others as requested 					

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL						A. ITEM NO. 018
B. LINE ITEM TITLE: Reports, Annual Summary of Animal Use						
C. OPR. YA-D3	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. See Block 8	G. INITIAL SUB. See Block 8	H. AS OF DATE	
J. REMARKS: These reports are to be submitted as required to summarize the use of animals in all KSC research activities.						
K. DISTRIBUTION YA-A (1A) YA-D3 (3A) UB (1A)						TOTALS
						NO.
						TYPE
						5
						A
DATA REQUIREMENT DESCRIPTION						
Reports, Annual Summary of Animal Use					2. NUMBER	
3. USE Prepared to present animal use data for all KSC animal research activity.					4. DATE	
					5. ORGANIZATION KSC/YA	
7. INTERRELATIONSHIP NONE					6. REFERENCES	
8. PREPARATION INFORMATION Reports are required for the following purposes and organizations:						
<ol style="list-style-type: none"> 1. An annual report to the U.S. Department of Agriculture summarizing KSC animal research use by species of animal, number and final disposition. Contractor report is due by November 1st of each year through YA/AA. 2. An annual report to AAALAC International that summarizes facility changes, personnel qualifications and animal use by type and number. Contractor report due by October 15th each year through YA/AA. 3. An annual report is due to the Office of Laboratory Animal Welfare (OLAW / NIH/ PHS) each year summarizing in detail the LSC animal research program, facility and personnel in detail. 4. A report is due to AAALAC International every third year summarizing in detail the Animal Research Program at KSC including all aspects of the program, research activities and husbandry. It is submitted in advance of the tri-annual accreditation visit. 						

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL						A. ITEM NO. 019	
B. LINE ITEM TITLE: Plan, Information Technology (IT) Security							
C. OPR. YA-A	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. AN	G. INITIAL SUB. see Section J below	H. AS OF DATE		
J. REMARKS: Within 30 calendar days after contract award the Contractor shall submitted a draft IT Security Plan. The NASA IT Security Manager prior to acceptance will review the initial submittal, and the Contractor is required to incorporate review comments as applicable. The plan shall be updated every 12 months to cover all changes necessary.							
K. DISTRIBUTION						TOTALS	
YA-A (3A)	QA-D (1A)				NO.	TYPE	
TA-C2 (1A)	OP-OS (1A)				9	A	
YA-E5 (1A)	TA-1 (1A)						
YA-D3 (1A)							
DATA REQUIREMENT DESCRIPTION							
1. TITLE Plan, Information Technology (IT) Security					2. NUMBER		
3. USE To ensure KSC and NASA IT Security Policies are implemented.					4. DATE		
					5. ORGANIZATION KSC/TA-1		
7. INTERRELATIONSHIP					6. REFERENCES See Below		
8. PREPARATION INFORMATION The IT Security Plan shall address the Contractor approach to implementing the following KSC and NASA policies and directives on IT Security: KSC 52.239-90 KSC Information Technology (IT) Security Program (AUG 1999) NPD 2810.1 Security of Information Technology NPG 2810 Security of Information Technology KDP-KSC-P-1836 Removing Data and Licensed Software from Information Technology Storage Devices NFS 1852.204-76 Security Requirements for Unclassified Information Technology Resources (JUL 2001)							

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL A. ITEM NO.
020

B. LINE ITEM TITLE:
Report, Equal Employment Opportunity

C. OPR. AJ	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. QU	G. INITIAL SUB. See Section J	H. AS OF DATE See Section J
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J. REMARKS:

The Contractor shall provide this report no later than 7 calendar days after the close of each reporting period which end March 31st, June 30th, September 30th, and December 31st.

K. DISTRIBUTION AJ (1A) OP-OS (1A)	TOTALS	
	NO.	TYPE
	2	

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Equal Employment Opportunity	2. NUMBER 023
3. USE This document will be used by the Government to assess the Contractor's equal employment and affirmative action management of the contract effort.	4. DATE
	5. ORGANIZATION KSC
7. INTERRELATIONSHIP	6. REFERENCES

B. PREPARATION INFORMATION

- A. Format and content of the report shall be in accordance with KSC Forms 32-58 C/G 1/91, Quarterly Equal Opportunity Statistical Report, and a narrative for equal employment activities containing, as a minimum, the following: Contract number, Community Activities, Recruitment Activities, Special Events, Other pertinent information.
- B. Reports shall be provided no later than seven calendar days after the end of a calendar quarter as defined in Section J above.
- C. The Contractor may reproduce the forms, or obtain an electronic version from the NASA EO Office.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL						A. ITEM NO. 021	
B. LINE ITEM TITLE: Plan, Motor Vehicle Utilization							
C. OPR. YA-A	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. SA / AD	G. INITIAL SUB. see Section J below	H. AS OF DATE		
J. REMARKS: The initial plan shall be submitted no later than 30 calendar days after contract award. The NASA Transportation Officer will review the submittal prior to acceptance. The plan shall be updated every six months to cover all changes necessary including continuous justification for use of vehicles and a 24 month forecast for motor vehicle requirements.							
K. DISTRIBUTION						TOTALS	
YA-A (1A)						NO.	TYPE
OP-OS (1A)						4	A
GG-C-B1 (1A)							
TA (1A)							
DATA REQUIREMENT DESCRIPTION							
1. TITLE Plan, Motor Vehicle Utilization						2. NUMBER 024	
3. USE To ensure management of motor vehicles needed to properly perform the requirements of the contract.						4. DATE	
						5. ORGANIZATION KSC/TA	
7. INTERRELATIONSHIP						6. REFERENCES See Below	
8. PREPARATION INFORMATION							
<p>The Motor Vehicle Utilization Plan shall fully describe the management techniques which assure that the proper number of vehicles are continuously justified, that operators are fully aware of "official use only" restrictions, and are properly licensed. The plan shall provide evidence that the Contractor maintains motor vehicle insurance covering bodily injury and property damage, with limits of liability as required by NFS 1852.228-75, Minimum Insurance Coverage. The plan shall detail the periodic checks (by the Contractor, GSA or other Vehicle Provider, and NASA) to ensure that the vehicles are being used exclusively for this contract. Operator discipline for improper use of vehicles shall be described. The plan shall also address operator requirements, processes for obtaining preventative maintenance, processes for accident reporting, and list the type / quantity of vehicles approved by the NASA Transportation Office for use on the contract.</p> <p>The Contractor shall provide a copy of this plan to all its employees that may use the vehicles and provide continuous awareness of its requirements to its personnel through e-mail, company newsletter announcements, safety meetings, etc.</p> <p>Block 6 reference: KHB 6000.1 C KHB 1610.1</p>							

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 022
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B. LINE ITEM TITLE:
Report, KSC Headcount

C. OPR. YA-A	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. QU	G. INITIAL SUB. See Section J	H. AS OF DATE See Section J
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J. REMARKS:

The Contractor shall provide this report no later than 10 calendar days after the close of each reporting period which end March 31st, June 30th, September 30th, and December 31st.

K. DISTRIBUTION	TOTALS
	NO. TYPE
YA-A (1A) BA-A (1A)	5 A
OP-OS (1A) BA-D(1A)	
QA-A (1A)	

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, KSC Headcount	2. NUMBER
3. USE Information for workforce reporting requirements	4. DATE
	5. ORGANIZATION KSC
7. INTERRELATIONSHIP DRD 001	6. REFERENCES

8. PREPARATION INFORMATION

- A. Labor Reports shall be submitted quarterly, not later than the 10th calendar day after close of reporting period (see Section J).
- B. The report shall include: the contract number, the contractor's total on-site workforce, total on-site non-union represented employees, and total off-site workforce performing on the contract.
- C. A complete organizational chart including all employees by skill or job classification shall be provided.
- D. The report shall also separately identify the same information for all subcontractors with on-site personnel.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 023
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B. LINE ITEM TITLE: Report, Monthly Purchase Order
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C. OPR. YA-A	D. TYPE 1	E. INSPECT/ACCEPT 2	F. FREQ. MO	G. INITIAL SUB. see Section J below	H. AS OF DATE
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J. REMARKS: Initial submittal of this report is no later than 10 calendar days after the first month of contract performance with monthly updates thereafter. Submit report in electronic media
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K. DISTRIBUTION YA-A (1D) OP-OS (1D) OP-CIAO (1D)	TOTALS	
	NO.	TYPE
	3	D

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Monthly Purchase Order	2. NUMBER 026
3. USE to report the Contractor's procurement activity.	4. DATE
	5. ORGANIZATION KSC
7. INTERRELATIONSHIP	6. REFERENCES

8. PREPARATION INFORMATION The Monthly Purchase Order Reports shall address the following information: 1. A list of procurement activity at the mission plan element level during the month with vendor name, purchase order number, purchase order amount, order date, and a total monthly amount. 2. The report shall include a summary depicting the total dollar amount and percentage of total procurements placed with large, small, small disadvantaged, woman-owned, and hub-zone businesses. The summary shall be shown for the current month and contract year cumulative amount with totals.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. DRD 024
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B. LINE ITEM TITLE:
Plan, Facility and Laboratory Utilization

C. OPR. YA-A, YA-D3, UB-E	D. TYPE 3	E. INSPECT/ACCEPT 1	F. FREQ. See J	G. INITIAL SUB. See J	H. AS OF DATE See J
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J. REMARKS:

1. Prepare monthly update of laboratory assignments and projections for current and next FY. (Provide First Submit February 1, 2002)
2. Prepare semi-annual facility utilization projections for subsequent three years. (Provide First Submit April 1, 2002)

K. DISTRIBUTION YA-A (1A) YA-D3 (2A) UB-E (2A) TA-C (2A)	TOTALS	
	NO.	TYPE
	7	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Plan, Facility and Laboratory Utilization	2. NUMBER
3. USE To provide facility and laboratory utilization information to NASA.	4. DATE
	5. ORGANIZATION KSC/ TA, YA, & UB
7. INTERRELATIONSHIP DRD 002	6. REFERENCES

8. PREPARATION INFORMATION

- Monthly update will annotate specific laboratory assignments for each experiment/activity assigned for operation in any Life Sciences-controlled lab or facility.
- Semi-annual facility utilization will annotate "category-level" requirement expectations for long-range planning. Categories include, flight experiment processing, flight experiment development, intramural research, extramural research, major modification/refurbishment, etc.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL					A. ITEM NO. 025
B. LINE ITEM TITLE: Plan, Cost Phasing					
C. OPR. YA-A	D. TYPE 3	E. INSPECT/ ACCEPT 6	F. FREQ. AN	G. INITIAL SUB. March 20, 2002	H. AS OF DATE
J. REMARKS:					
K. DISTRIBUTION					TOTALS
YA-A (1A) OP-OS (1A)					NO.
QA-D (1A)					TYPE
YA-D3 (1A)					
UB-E (1A)					
TA-C (1A)					
DATA REQUIREMENT DESCRIPTION					
1. TITLE Plan, Cost Phasing Plan				2. NUMBER	
3. USE To prepare develop Program Operating Plan for the Center and annual contract budget plans				4. DATE	
				5. ORGANIZATION	
INTERRELATIONSHIP				6. REFERENCES	
8. PREPARATION INFORMATION					
<p>Prepare and submit an initial cost phasing plan by March 20 for the known work within the 14 Elements of the Mission Plan to begin October 1 and end September of the following year</p> <ol style="list-style-type: none"> 1. Base plan on anticipated actual personnel labor costs, non-labor costs, G&A, and fee. Submittal should reflect applicable work described in the Mission Plan for the FY, in conjunction with the Statement of Work. Prepare and submit a final cost phasing plan for the 14 Elements of the Mission Plan by September 15 for the fiscal year beginning October 1 based on the budget marks received from the Government by August 1. 2. Prepare impact statements for any work identified in the Mission Plan not covered by the budget marks. Prepare and submit a updated cost phasing plan for the 14 Elements of the Mission Plan by March 30 for the remaining period of the fiscal year that began the previous October 1. 3. Prepare impact statements for any work identified in the Mission Plan not covered by the budget marks. 					

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.
DRD 027

B. LINE ITEM TITLE:

Plan, Internal Surveillance

C. OPR. YA-A,	D. TYPE 1	E. INSPECT/ ACCEPT 2	F. FREQ. RT	G. INITIAL SUB. See J	H. AS OF DATE See J
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J. REMARKS:

The Contractor shall submit its Internal surveillance plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION

YA-A (1A)
OP-OS (1A)

TOTALS	
NO.	TYPE
2	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Internal Surveillance Plan	2. NUMBER
3. USE To provide contractor self-assessment plan.	4. DATE
INTERRELATIONSHIP DRD 002, 010, 013, 016, & 028	5. ORGANIZATION KSC YA,
	6. REFERENCES

8. PREPARATION INFORMATION

Prepare and maintain a current Internal Surveillance plan for self-assessment of performance of the Life Sciences mission plan.

The plan shall provide for:

- a. An evaluation of cost, schedule, and technical performance of each element of the mission plan
- b. Evaluations of cost, schedule, and technical performance of the overall mission plan.
- c. An evaluation of Risk Mitigation activities that are in progress or being planned.
- d. The integration of Safety and Health, Risk Management, Reliability and Maintainability, and Quality Management into the Mission Plan.

The format of the plan shall be left to the contractor.

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL						A. ITEM NO. DRD 028
B. LINE ITEM TITLE: Plan, Risk Management						
C. OPR. YA-A, TA-E2	D. TYPE 1	E. INSPECT/ ACCEPT 3	F. FREQ. RT	G. INITIAL SUB. See J	H. AS OF DATE See J	
J. REMARKS: The Contractor shall submit its Risk Management plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.						
K. DISTRIBUTION YA-A (1A), OP-OS (1A)						TOTALS
						NO.
						TYPE
						2
						A
DATA REQUIREMENT DESCRIPTION						
1. TITLE Risk Management Plan					2. NUMBER	
3. USE To provide status of ongoing issues and to identify and mitigate the impending risk.					4. DATE	
					5. ORGANIZATION KSC/ YA	
7. INTERRELATIONSHIP DRD 002 & 027					6. REFERENCES NPG 8715.3	
8. PREPARATION INFORMATION Prepare and maintain a current Risk Management Plan for the identification and elimination of performance issues. The plan shall provide: <ul style="list-style-type: none"> a. Risk identification processes and procedures, b. Method to be used to train the Contractor and support personnel in risk identification and mitigation, c. Procedures to progress from risk identification through risk mitigation, d. Methods to measure the success of a risk mitigation, e. How Contractor will provide status to NASA of on-going risk mitigation efforts. The format of the plan shall be based on the format on the following-pages.						