

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING DO-C9	PAGE OF PAGES 1 96
2. CONTRACT (Proc. Inst. Ident.) NO. NAS8-40836		3. EFFECTIVE DATE FEB 26 1996	4. REQUISITION/PURCHASE REQUEST/PROJECT NO. See Clause G.10	
5. ISSUED BY Procurement Office George C. Marshall Space Flight Center National Aeronautics & Space Administration Marshall Space Flight Center, AL 35812		CODE GP22-N	6. ADMINISTERED BY (If other than Item 5) GP22-N/Michael L. Sweigart/205-544-0281	

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP Code) Sverdrup Technology, Inc. MSFC Group 620 Discovery Drive Huntsville, AL 35806		8. DELIVERY See Clause F.1 <input type="checkbox"/> FOB ORIGIN <input type="checkbox"/> OTHER (See below)
Approved: ORIGINAL SIGNED BY Procurement Officer FEB 26 1996		9. DISCOUNT FOR PROMPT PAYMENT N/A
CODE 14671		10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: ITEM See Clause G.1

11. SHIP TO/MARK FOR See Clause D.1	12. PAYMENT WILL BE MADE BY Financial Management Office George C. Marshall Space Flight Center Marshall Space Flight Center, AL 35812
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()	
14. ACCOUNTING AND APPROPRIATION DATA See Clause G.10	

15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
	Science and Engineering Services for MSFC's Science & Engineering Directorate			Est. Cost Max Award Fee	\$10,747,495 736,747
	Cost-Plus-Award-Fee/Level of Effort				

15G. TOTAL AMOUNT OF CONTRACT \$ 11,484,242

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.
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19A. NAME AND TITLE OF SIGNER (Type or print)		20A. NAME OF CONTRACTING OFFICER Byron W. Butler	
19B. NAME OF CONTRACTOR BY _____ (Signature of person authorized to sign)	19C. DATE SIGNED	20B. UNITED STATES OF AMERICA BY ORIGINAL SIGNED BY (Signature of Contracting Officer)	20C. DATE SIGNED FEB 23 1996

SECTION B

SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SUPPLIES AND/OR SERVICES TO BE FURNISHED (1852.210-72)
(DEC 1988)

The Contractor shall provide all resources (except as may be expressly stated in this contract as furnished by the Government) necessary to furnish the items below in accordance with the Description/Specifications/Work Statement in Section C.

Science and Engineering Services for the George C. Marshall Space Flight Center's Science and Engineering Directorate.

(End of clause)

B.2 ESTIMATED COST AND AWARD FEE (1852.216-85) (SEP 1993)

(a) The estimated cost of this contract is \$10,747,495. The maximum available award fee, excluding base fee, if any, is \$736,747. The base fee is \$-0-. Total estimated cost, base fee, and maximum award fee are \$11,484,242.

(b) Breakout of contract cost and fees is as follows:

<u>Period Covered</u>	<u>Estimated Cost</u>	<u>Base Fee</u>	<u>Maximum Award Fee</u>	<u>Total Contract Value</u>	<u>Earned Award Fee</u>
2/26/96 -2/25/97	\$10,747,495	-0-	\$736,747	\$11,484,242	-0-

(c) Estimated cost and fees applicable to each option period are set forth below:

<u>Option No.</u>	<u>Period Covered</u>	<u>Estimated Cost</u>	<u>Base Fee</u>	<u>Maximum Award Fee</u>	<u>Total Option Value</u>	<u>Earned Award Fee</u>
1	2/26/97-2/25/98	\$10,964,888	-0-	\$751,661	\$11,716,549	-0-
2	2/26/98-2/25/99	\$11,299,205	-0-	\$775,830	\$12,075,035	-0-
3	2/26/99-2/25/00	\$11,586,966	-0-	\$794,780	\$12,381,746	-0-
4	2/26/00-2/25/01	\$11,874,256	-0-	\$815,725	\$12,689,981	-0-

(d) The Government may increase the number of direct labor hours set forth in Clause B.3 Level of Effort (Cost) by exercise of the following contingency options. Each option shall be exercised only during the period specified below. The estimated cost and fee for each of the options are as follows:

Cont. Option No.	Period Covered	Estimated Cost	Base Fee	Maximum Award Fee	Total Option Value	Earned Award Fee
C1	2/26/96-2/25/97	\$2,613,908	-0-	\$77,173	\$2,691,081	-0-
C2	2/26/97-2/25/98	\$2,670,295	-0-	\$78,780	\$2,749,075	-0-
C3	2/26/98-2/25/99	\$2,746,933	-0-	\$81,274	\$2,828,207	-0-
C4	2/26/99-2/25/00	\$2,816,449	-0-	\$83,259	\$2,899,708	-0-
C5	2/26/00-2/25/01	\$2,897,644	-0-	\$85,474	\$2,983,118	-0-

(End of clause)

B.3 LEVEL-OF-EFFORT (COST) (18-52.216-82) (DEC 1991)

(a) (1) During the term of the contract, the Contractor is obligated to provide not less than 296,149 or more than 311,736 total direct labor hours. If the Government elects to exercise any of the options identified in Clause B.2 Estimated Cost and Award Fee, the Contractor is obligated to provide the direct labor hours specified below for the applicable option.

Option No.	Minimum Number of Hours	Maximum Number of Hours
1	294,882	310,402
2	296,149	311,736
3	296,149	311,736
4	297,418	313,072
C1	72,403	76,214
C2	72,093	75,888
C3	72,403	76,214
C4	72,403	76,214
C5	72,713	76,541

(b) "Direct labor hours" are those productive hours (including 2 percent OT) expended by Contractor personnel performing work under this contract that are charged as direct labor under the Contractor's established accounting policy and procedures. The term does not include sick leave, vacation, holiday leave, military leave, or any type of administrative leave but does include direct labor hours provided under level-of-effort subcontracts.

(c) Once the maximum number of direct labor hours is reached or the contract term has ended, the Contractor's obligations under the contract are fulfilled, even though the specified work may not have been completed. The Contractor is not authorized to exceed the maximum of the direct labor hours specified in paragraph (a) of this clause. Any estimated cost and fee(s) adjustments for additional direct labor hours shall be based solely upon those hours being added to the maximum number of direct labor hours specified in this clause.

(d) The fee, if any, is based upon the furnishing of at least the specified minimum number of direct labor hours, including subcontract hours. If the Contractor provides less than that specified minimum number of hours prior to expiration of the contract term, and the Government has not invoked its rights under the Termination clause of this contract to adjust the contract for such reduced effort, the Contracting Officer may unilaterally make an equitable downward adjustment to the contract fee. The downward adjustment in fee will be based upon the difference between the minimum direct labor hours specified under this clause and the amount of direct labor hours provided by the Contractor. Prior to making such an adjustment, the Contracting Officer will request the Contractor provide a written discussion of any extenuating circumstances (e.g., productivity improvements or reductions in contract scope) which contributed to the underrun. Any information provided by the Contractor will be considered by the Contracting Officer in determining the amount of the downward adjustment in fee.

(End of clause)

**B.4 AWARD FEE FOR SERVICE CONTRACTS (1852.216-76)
(SEP 1993)**

(a) The Contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause 1852.216-85, "Estimated Cost and Award Fee" in this contract.

(b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the Contractor's performance every 6 months to determine the amount of award fee earned by the Contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with Attachment J-3. 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 Contracting Officer will issue a unilateral modification to the contract that will recognize the award fee earned. The Contractor is not required to submit a separate voucher for earned award fee. The MSFC payment office will make payment based on the unilateral modification.

(d) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth at Clause B.2 Estimated Cost and Award Fee. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

(e) (1) Pending a determination of the amount of award fee earned for an evaluation period, a portion of the available award fee for that period will be paid to the Contractor on a monthly basis. The portion paid will be 50 percent the current period's available amount; provided, however, that when 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 shall 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.

(2) In the event the amount of award fee earned, as determined by the FDO, is less than the sum of the provisional payments made for that period, 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) Provisional award fee payments will be made prior to the first award fee determination by the Government.

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

(End of clause)

B.5 PREMIUM FOR SCHEDULED OVERTIME (MSFC 52.222-93) (AUG 1988)

Pursuant to the clause entitled "Payment for Overtime Premiums," the amount of overtime premium authorized shall not exceed the amount specified below for the indicated period.

<u>Period</u>	<u>Amount</u>
2/26/96 - 2/25/97	\$500
2/26/97 - 2/25/98	\$500
2/26/98 - 2/25/99	\$500
2/26/99 - 2/25/00	\$500
2/26/00 - 2/25/01	\$500

(End of clause)

B.6 CONTRACT FUNDING (1852.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$374,652. This allotment is for Science and Engineering Services for MSFC's S&E Directorate and covers the following estimated period of performance: February 26, 1996 through March 8, 1996.

(b) An additional amount of \$15,348 is obligated under this contract for payment of fee.

(c) Recapitulation of funding is as follows:

	<u>Previous</u>	<u>This Action</u>	<u>Total</u>
Estimated Cost	-0-	\$374,652	\$374,652
Provisional Award Fee	-0-	15,348	15,348
Earned Award Fee	-0-	<u>-0-</u>	<u>-0-</u>
Total Sum Allotted	-0-	\$390,000	\$390,000

(End of clause)

B.7 ALLOWABLE ITEMS OF COST

(a) In accordance with advance agreement between the Government and the Contractor for this contract, allowable costs for the items listed below are subject to the ceilings shown:

	<u>Base Year</u>	<u>Option Year 1</u>	<u>Option Year 2</u>	<u>Option Year 3</u>	<u>Option Year 4</u>
G&A Costs	(b)(4)				

(b) It is mutually agreed that when indirect cost rate ceilings are specified, (1) the Government shall not be obligated to pay any additional amount should the final indirect cost rates exceed the negotiated ceiling rates and, (2) in the event the final indirect cost rates are less than the negotiated ceiling rates, the negotiated rates shall be reduced to conform with the lower rates.

(c) In accordance with advance agreements between the Government and the Contractor for this contract, allowable costs for the items listed below are subject to the terms and conditions of the Contractor's administrative policies shown. It is agreed that none of the policies identified below will be changed without the prior approval of the Contracting Officer.

<u>Item of Cost</u>	<u>Agreement Number or Policy Number</u>	<u>Date</u>
Office Furniture, Equipment and ADPE	OL96-382	1/31/96
Defined Benefits Pension Plan	OL96-383	2/1/96
Severance Allowance	2624	2/6/96

(End of clause)

B.8 CONTRACT EXTENSION RESULTING FROM PROTESTS

A. If the award of a successor contract to perform services similar to those being performed under this contract is delayed because of a protest, the Contracting Officer may extend the period of performance of this contract to cover any delay caused by such a protest. The Contractor shall be entitled to an equitable adjustment for such an extension, subject to the limitations in Paragraph B.

B. The final award fee evaluation period set forth in the contract shall be held as originally scheduled. Any contract extension provided for in Paragraph A, shall be subject to a separate award fee evaluation. If the Contractor is the protestor or one of the protestors, no additional fee shall be put into the award fee pool or otherwise made available to the Contractor, unless the Contractor or another protestor substantially prevails in the protest.

(End of clause)

[END OF SECTION]

SECTION C

DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C.1 DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK
(MSFC 52.210-94) (MAR 1989)

The Description/Specifications/Statement of Work is Attachment J-1.

(End of clause)

C.2 WORK STATEMENT

(a) It is understood and agreed that the statement of work contained in this contract is stated in broad terms in order to achieve the required flexibility. The Contractor's obligation under this contract is expressed as a level-of-effort in terms of direct labor hours. If any work directed by the Government through Task Directives is within the general scope of this contract such direction is within the Contractor's original contractual obligation and will not constitute nor be construed as a change within the meaning of FAR clause 52.243-2 Changes -- Cost Reimbursement -- Alternate II. However, if any written direction by the Government through Task Directives is considered by the Contractor, to be outside the scope of its contractual obligation, the Contractor, before performing any effort pursuant to such Government direction, shall refer such questions to the Contracting Officer for resolution.

(b) The Government hereby agrees to substantially utilize the maximum labor hours (including overtime) specified in Clause B.3 Level-of-Effort (Cost) in satisfaction of the Government's requirement for work and services as defined and provided for under this contract; provided, however, that nothing contained herein shall restrict the Government's right to terminate or to limit the Government's obligation as provided for elsewhere in this contract.

(End of clause)

[END OF SECTION]

SECTION D

PACKAGING AND MARKING

D.1 PACKAGING AND MARKING (1852.210-75) (SEP 1990) --
ALTERNATE I (SEP 1990)

(a) The Contractor shall preserve, pack, and mark for shipment all items deliverable under this contract in accordance with good commercial practices and adequate to ensure both acceptance by common carrier and safe transportation at the most economical rate(s).

(b) The Contractor's markings on shipping containers shall be clearly legible from a distance of 36 inches. The Contractor may mark by stencil, rubber stamp, or lacquer over a coated gummed label.

(c) The Contractor shall place identical requirements on all subcontracts.

(End of clause)

[END OF SECTION]

SECTION E

INSPECTION AND ACCEPTANCE

E.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following clause is hereby incorporated by reference:

52.246-5 Inspection of Services -- Cost-Reimbursement (Apr 1984)

(End of clause)

E.2 GOVERNMENT CONTRACT QUALITY ASSURANCE FUNCTIONS
(1852.246-71) (OCT 1988)

In accordance with the Inspection clause of this contract, the Government intends to perform final inspection and acceptance at the George C. Marshall Space Flight Center.

(End of clause)

[END OF SECTION]

SECTION F

DELIVERIES OR PERFORMANCE

F.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following clauses are hereby incorporated by reference:

- 52.242-10 F.O.B. Origin -- Government Bills of Lading or Prepaid Postage (Apr 1984)
- 52.242-15 Stop-Work Order (Aug 1989) -- Alternate I (Apr 1984)
- 52.247-65 F.O.B. Origin, Prepaid Freight -- Small Package Shipments (Jan 1991)

(End of clause)

F.2 PERIOD OF PERFORMANCE (1852.212-74) (DEC 1988)

(a) The period of performance of this contract shall be February 26, 1996 through February 25, 1997.

(b) In the event the Government elects to exercise its option(s) pursuant to the terms of this contract, the period of performance for each option shall be as set forth below:

<u>Option No.</u>	<u>Period of Performance</u>
1	2/26/97 - 2/25/98
2	2/26/98 - 2/25/99
3	2/26/99 - 2/25/00
4	2/26/00 - 2/25/01

(End of clause)

F.3 PLACE OF PERFORMANCE (MSFC 52.237-92) (AUG 1988)

The Contractor shall perform the work under this contract at the Contractor's and Subcontractor's facilities; George C. Marshall Space Flight Center; and at such other locations as may be approved in writing by the Contracting Officer.

(End of clause)

F.4 SHIPMENT BY GOVERNMENT BILLS OF LADING (1852.247-73) (MAR 1989)

(a) The Contractor shall ship items deliverable under this contract, if the transportation cost per shipment exceeds \$100, by Government bills of lading (GBLs). At least 15 days before shipment, the Contractor shall request in writing GBLs from: National Aeronautics and Space Administration, George C.

Marshall Space Flight Center, Attn: CN72/Transportation Officer, Building 4471, Marshall Space Flight Center, AL 35812. If time is limited, requests may be by telephone: 205-544-4557. Requests for GBLs shall include the following information.

- (1) Item identification/description.
- (2) Origin and destination.
- (3) Individual and total weights.
- (4) Dimensions and total cubic footage.
- (5) Total number of pieces.
- (6) Total dollar value.
- (7) Other pertinent data.

(b) The Contractor shall prepay transportation charges of \$100 or less per shipment. The Government shall reimburse the Contractor for these charges if they are added to the invoice as a separate line item supported by the paid freight receipts. If paid receipts in support of the invoice are not obtainable, a certificate as described below must be completed, signed by an authorized company representative, and attached to the invoice.

"I certify that the shipments identified below have been made, transportation charges have been paid by (company name), and paid freight or comparable receipts are not obtainable.

Contract or Order Number:

Destination: _____"

(End of clause)

F.5 OPTION TO EXTEND THE TERM OF THE CONTRACT (52.217-9)
(MAR 1989)

(a) The Government may extend the term of this contract by written notice to the Contractor anytime before contract expiration; provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option provision.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 60 months.

(End of clause)

F.6 SECTION 10721 RATES (MSEC 52.247-94) (OCT 1988)

The Contractor shall use carriers that offer acceptable service at reduced rates (Section 10721 rates), if available.

(End of clause)

[END OF SECTION]

SECTION G

CONTRACT ADMINISTRATION DATA

G.1 SUBMISSION OF VOUCHERS FOR PAYMENT (1852.216-87)
(DEC 1988)

(a) Public vouchers for payment of costs shall include a reference to this contract NAS8-40836 and be forwarded through the Contracting Officer to:

BF52/Financial Management Office
NASA
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812

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

(b) The Contractor shall prepare vouchers as follows:

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

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

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

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

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

BF52/Financial Management Office
NASA
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812

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

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

(End of clause)

G.2 CONTRACTOR EMPLOYEE BADGING AND EMPLOYMENT TERMINATION CLEARANCE (MSFC 52.204-90) (APR 1994)

(a) It is anticipated that performance of the requirements of this contract will require employee access to and picture badging by the Marshall Space Flight Center. Contractor requests for badging of employees shall be by MSFC Form 1739, Contractor Badge/Decal Application. Requests for badging shall be submitted to the attention of the appointed Contracting Officer Technical Representative for completion and approval prior to processing by the MSFC Security Division.

(b) The Contractor shall establish procedures to ensure that each badged employee is properly cleared in accordance with MSFC Form 383-1, "Contractor Employee Clearance Document," prior to finalization of employment termination.

(c) Requests for copies of MSFC Forms 383-1, and 1739 shall be directed to the MSFC Security Division, Marshall Space Flight Center, Alabama 35812.

(End of clause)

G.3 TECHNICAL DIRECTION (1852.242-70) (SEP 1993)

(a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 1842.270. "Technical direction" means a directive to the Contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Section C of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instruction purporting to be technical direction that --

(1) Constitutes an assignment of additional work outside the statement of work;

(2) Constitutes a change as defined in the changes clause;

(3) Constitutes a basis for any increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;

(4) Changes any of the expressed terms, conditions, or specifications of the contract; or

(5) Interferes with the Contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The Contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the Contractor's opinion, any instruction or direction by the COTR falls within any of the categories defined in paragraph (b) above, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 days that the instruction or direction is --

(1) Rescinded in its entirety; or

(2) Within the requirements of the contract and does not constitute a change under the Changes clause of the contract, and that the Contractor should proceed promptly with its performance.

(e) A failure of the Contractor and Contracting Officer to agree that the instruction or direction is both within the requirements of the contract and does not constitute a change under the Changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction, shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the Contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the Contractor's risk.

(End of clause)

G.4 WORK AUTHORIZATION REQUESTS AND TASK DIRECTIVES

(a) Work to be performed under this contract will be within the broad parameters of the Statement of Work and, with the exception of WBS Element 1.1, will be more specifically

defined by the issuance of Work Authorization Requests (WARs) and Task Directives (TDs). The COTR will issue a WAR for each task as it is defined by the S&E task initiator. The WAR will provide the following information:

(1) WAR number which includes the project code of the MSFC program supported

(2) S&E task initiator

(3) Task Description/Objective

(4) Estimated manpower required

(5) Travel requirements (if any)

(6) Deliverables and milestone dates

(7) Benefiting program(s)

(8) Special instructions

(b) In response to each WAR, the contractor shall prepare a proposed TD for the accomplishment of the work. The TD shall include the following information:

(1) Contract identity, Task number (which identifies task, WBS, UPN)

(2) S&E Task Manager

(3) Contractor Task Leader

(4) Task Description/Objective

(5) Technical approach for performing task which includes required input data, guidelines, and assumptions

(6) Skills Required

(7) Identification of subcontractor(s) (if any) performing/contributing

(8) Prime/Sub manpower estimates, skill level distribution, and dollars required for travel and materials

(Estimates specified in a TD shall be considered ceilings and will require an approved TD revision if they will be exceeded by more than 10 percent)

(9) Identification of overtime hours (if required)

(10) Schedule showing work flow, milestones, and deliverables

(c) The COTR will review each proposed TD and revise as necessary. Once acceptable, the TD will be approved by the COTR and the Contractor may begin work on that task. Other than for WBS Element 1.1, no work shall be performed on this contract without an approved TD.

(End of clause)

G.5 GOVERNMENT PROVIDED/FURNISHED PROPERTY

(a) This clause describes the categories of property that will either be provided to, furnished to, or acquired by the Contractor during performance of the contract and the applicable requirements associated with each category. The two categories of property are: (1) Government Furnished and Contractor Acquired Property; and (2) Installation Provided Property.

(b) Government Furnished and Contractor Acquired Property will be utilized by the Contractor at the contractor's facility. The Contractor is the property custodian and will be accountable for the property. Requirements associated with Government furnished and Contractor acquired property are further defined in Clause G.6 List of Government-Furnished Property and Clause G.7 Financial Reporting of Government-owned/Contractor-held Property.

(c) Installation provided property will be used by the Contractor for performance of work on-site at MSFC. The Contractor is not the property custodian for this property. Accountability of installation provided property remains with the Government. Requirements associated with installation provided property are further defined in Clause G.8 List of Installation-Provided Property and Services.

(End of clause)

G.6 LIST OF GOVERNMENT-FURNISHED PROPERTY (1852.245-76) (OCT 1988)

For performance of work under this contract, the Government will make available Government property identified below or in Attachment J-7 of this contract on a no-charge-for-use basis. The Contractor shall use this property in the performance of this contract at its facility and at other location(s) as may be approved by the Contracting Officer. Under FAR 52.245 Government Property clause of this contract, the Contractor is accountable for the identified property.

(End of clause)

G.7 FINANCIAL REPORTING OF GOVERNMENT-OWNED/CONTRACTOR-HELD PROPERTY (1852.245-73) (JUL 1994)

(a) The Contractor shall prepare and submit annually a NASA Form 1018, Report of Government-Owned/Contractor-Held Property, in accordance with 1845.505-14 and the instructions on the form and in section 1845.7101 of the NASA FAR Supplement, except that the reporting of space hardware shall be required only as directed in clause 1852.245-78, Space Hardware Reporting, of this contract, if applicable.

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

George C. Marshall Space Flight Center
Contract Property/GP18
Marshall Space Flight Center, AL 35812

(c) The annual reporting period shall be from October 1 of each year to September 30 of the following year. The report shall be submitted by October 31.

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

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

(End of clause)

G.8 LIST OF INSTALLATION-PROVIDED PROPERTY AND SERVICES (1852.245-77) (MAR 1989)

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

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

only. Pay telephone stations are available for the convenience and use of employees in making unofficial calls, both local and long distance.

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

(1) Equipment to be made available to the Contractor for use in performance of this contract on-site and at such other locations as approved by the Contracting Officer is listed in Attachment J-8. The Government retains accountability for this property under the Installation-Provided Government Property clause, regardless of its authorized location.

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

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

(c) 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: None.

(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 responsibilities of the Contractor as contemplated by paragraph (a) of the Installation-Provided Government Property clause are defined in the following property

management directives and installation supplements to these Directives:

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

(End of clause)

G.9 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (1852.227-72) (APR 1984)

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

New Technology Representative
Mail Code LA10
George C. Marshall Space Flight Center
National Aeronautics and Space Administration
Marshall Space Flight Center, AL 35812

Patent Representative
Chief, Intellectual Property Counsel
Mail Code CC01
George C. Marshall Space Flight Center
National Aeronautics and Space Administration
Marshall Space Flight Center, AL 35812

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

(End of clause)

G.10 CONTINUATION OF STD. FORM 26 DATA (MSFC 52.204-93)
(AUG 1988)

Requisition/Purchase Request/Project No.
Accounting and Appropriation Data

P-6-EM-00206 (1F)	806/70111	953-36-00-S651-EM-6-00M-335-2550	\$390,000
1-4-EA-00101 (1F)			<u>-0-</u>
			\$390,000

(End of clause)

[END OF SECTION]

SECTION H

SPECIAL CONTRACT REQUIREMENTS

H.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following clauses are hereby incorporated by reference:

1852.208-81 Restrictions on Printing and Duplicating (Aug 1993)
1852.228-75 Minimum Insurance Coverage (Oct 1988)
1852.242-71 Travel Outside of the United States (Dec 1988)

(End of clause)

H.2 ASBESTOS MATERIAL (MSFC 52.223-90) (MAR 1993)

During performance of this contract, Contractor personnel performing work in MSFC buildings may come in contact with materials containing asbestos. MSFC Buildings 4200, 4201, 4202, 4663 and 4666 are of special concern since they are known to contain a sprayed on fire insulation on or above the ceiling, usually located on the metal or concrete structure of the buildings. These buildings and all other MSFC buildings may contain asbestos in floor tile, pipe and lagging insulation, exterior siding, roofing felt, and many other building materials. Prior to disturbing suspected asbestos material in any manner, the Contractor shall notify representatives of the Environmental Health Office, an office within the MSFC Medical Center, for guidance. Contractor shall be responsible for ensuring that all Contractor personnel working onsite are made aware of and comply with this clause.

(End of clause)

H.3 APPROVAL OF CONTRACT (52.204-1) (DEC 1989)

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

(End of clause)

H.4 LIMITATION OF FUTURE CONTRACTING (1852.209-71) (DEC 1988)

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

(b) The nature of these conflicts include:

(1) An unfair competitive advantage; and (2) the existence of conflicting roles that might bias the Contractor's judgment.

(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 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.

(d) The limitation on the Contractor's performance is described below:

(1) The Contractor shall not be given nor perform any task the result of which would place it in a conflicting role with regard to any other MSFC contract held by the Contractor, such that the Contractor's judgment might be biased.

(2) The Contractor, therefore, shall review all Task Directives and notify the Contracting Officer of any requirements which may cause a conflict of interest prior to performing any work.

(3) Upon such notification the Contracting Officer will determine whether or not the Task Directive will be performed by the Contractor.

(End of clause)

H.5 EMERGENCY EVACUATION PROCEDURES (1852.237-70) (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)

H.6 SECURITY REQUIREMENTS FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (1852.204-76) (SEP 1993)

(a) In addition to complying with any functional and technical security requirements set forth in the schedule and the clauses of this contract, the Contractor shall initiate personnel screening checks and obtain user responsibility agreements, as required by this clause, for each Contractor employee requiring unescorted or unsupervised physical access or electronic access to the following limited or controlled areas, systems, programs and data:

(1) The Contractor shall submit a personnel security questionnaire (NASA Form 531, Name Check Request, for National Agency Check (NAC) investigations and Standard Form 85P, Questionnaire for Public Trust Positions, for specified sensitive positions) and a Fingerprint Card (FD-258 with NASA overprint in Origin Block) to the installation Security Officer for each Contractor employee who requires access. The required forms may be obtained from the installation security office. Employees may have finger-prints taken at the MSFC Security Guard Headquarters, Building 4312, or at any police department.

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

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

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

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

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

(End of clause)

H.7 SECURITY PLAN FOR UNCLASSIFIED FEDERAL COMPUTER SYSTEMS
(1852.204-78) (SEP 1993)

In addition to complying with any functional and technical security requirements set forth in the Schedule and the clauses of this contract, the Contractor shall comply with the Security Plan for Unclassified Federal Computer Systems submitted pursuant to provision 1852.204-77, Submission of Security Plan For Unclassified Federal Computer Systems, as approved by the Contracting Officer.

(End of clause)

H.8 FIRMR APPLICABILITY (201-39.5202-1) (OCT 1990 FIRMR)

This solicitation/contract requires the use or delivery of Federal information processing resources but the agency has determined that FIRMR part 201-39 does not apply based on the exception set forth in Section 201-39.101-3(b) 4 and 5.

(End of clause)

H.9 HAZARDOUS MATERIAL REPORTING

A. If during the performance of this contract, the Contractor brings any hazardous materials (hazardous as defined under the latest version of Federal Standard No. 313, including revisions adopted during the term of the contract) on-site to the Marshall Space Flight Center, a completed MSFC Form 4099 (MSFC Hazardous Material Input Sheet) shall be immediately forwarded to the address on the form. The Contractor shall be responsible for ensuring that all Contractor/subcontractor personnel are made aware of and comply with this clause.

B. Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material; or with other clauses regarding hazardous materials which may be contained in the contract.

(End of clause)

H.10 EXCLUDED FUNCTIONS AND RESPONSIBILITIES

Functions and responsibilities directly involved or associated with the management of any MSFC laboratory or office are expressly excluded from this contract. Any instructions,

directives, or orders issued under this contract involving such MSFC management functions and responsibilities shall be null and void. The following activities are representative of the excluded functions and responsibilities that cannot be provided by the Contractor for the Government.

- Policy making or management of MSFC operations;
- Program or project management;
- Technical management of Government contracts;
- MSFC management planning, programming (including preparation of scopes of work and/or procurement requests for items to be contracted for by MSFC), budgeting, review, and analysis;
- Government purchasing, contracting, contract administration, acceptance of materials and/or performance, and pay and accounting therefor;
- Direction or supervision of other Government Contractors or Government agencies, or otherwise acting as an agent to obligate or commit MSFC in any capacity;
- Clerical and other administration-type functions required to be performed by civil service personnel; and
- Supervision of Government employees.

(End of clause)

[END OF SECTION]

SECTION I
CONTRACT CLAUSES

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

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

(End of clause)

NOTICE: The following clauses are hereby incorporated by reference:

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

<u>Clause No.</u>	<u>Title</u>
52.202-1	Definitions (Oct 1995)
52.203-3	Gratuities (Apr 1984)
52.203-5	Covenant Against Contingent Fees (Apr 1984)
52.203-6	Restrictions on Subcontractor Sales to the Government (Oct 1995)
52.203-7	Anti-Kickback Procedures (Jul 1995)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (Sep 1990)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (Jan 1990)
52.204-4	Printing/Copying Double-sided on Recycled Paper (May 1995)
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Jul 1995)
52.212-8	Defense Priority and Allocation Requirements (Sep 1990)
52.215-1	Examination of Records by Comptroller General (Jul 1995)
52.215-2	Audit and Records - Negotiation (Oct 1995)
52.215-21	Changes or Additions to Make-Or-Buy-Program (Apr 1984)
52.215-22	Price Reduction for Defective Cost or Pricing Data (Oct 1995)
52.215-24	Subcontractor Cost or Pricing Data (Oct 1995)
52.215-26	Integrity of Unit Prices (Oct 1995)
52.215-27	Termination of Defined Benefit Pension Plans (Sep 1989)
52.215-30	Facilities Capital Cost of Money (Sep 1987)
52.215-33	Order of Precedence (Jan 1986)

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

<u>Clause No.</u>	<u>Title</u>
52.215-39	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions (Feb 1995)
52.215-40	Notification of Ownership Changes (Feb 1995)
52.216-7	Allowable Cost and Payment (Jul 1991)
52.219-8	Utilization of Small, Small Disadvantaged and Women-Owned Small Business Concerns (Oct 1995)
52.219-9	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Oct 1995)
52.219-16	Liquidated Damages -- Subcontracting Plan (Oct 1995)
52.222-1	Notice to the Government of Labor Disputes (Apr 1984)
52.222-2	Payment for Overtime Premiums (Jul 1990) (Insert (See Section B) in paragraph (a))
52.222-3	Convict Labor (Apr 1984)
52.222-4	Contract Work Hours and Safety Standards -- Overtime Compensation (Jul 1995)
52.222-26	Equal Opportunity (Apr 1984)
52.222-28	Equal Opportunity Preaward Clearance of Subcontracts (Apr 1984)
52.222-35	Affirmative Action for Special Disabled and Vietnam Era Veterans (Apr 1984)
52.222-36	Affirmative Action for Handicapped Workers (Apr 1984)
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (Jan 1988)
52.223-2	Clean Air and Water (Apr 1984)
52.223-6	Drug-Free Workplace (Jul 1990)
52.223-14	Toxic Chemical Release Reporting (Oct 1995)
52.224-1	Privacy Act Notification (if applicable) (Apr 1984)
52.224-2	Privacy Act (if applicable) (Apr 1984)
52.225-3	Buy American Act - Supplies (Jan 1994)
52.225-11	Restrictions on Certain Foreign Purchases (May 1992)
52.227-1	Authorization and Consent (Jul 1995)
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (Apr 1984)
52.227-14	Rights in Data -- General (Jun 1987) -- As Modified by NASA FAR Supplement 18-52.227-14
52.227-16	Additional Data Requirements (Jun 1987)
52.228-7	Insurance -- Liability to Third Persons (Apr 1984)
52.230-2	Cost Accounting Standards (Aug 1992)
52.230-5	Administration of Cost Accounting Standards (Feb 1995)
52.232-9	Limitation on Withholding of Payments (Apr 1984)
52.232-17	Interest (Jan 1991)
52.232-22	Limitation of Funds (Apr 1984)

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

<u>Clause No.</u>	<u>Title</u>
52.232-23	Assignment of Claims (Jan 1986)
52.232-25	Prompt Payment (Mar 1994) (Insert 30th day subparagraph (b)(2))
52.232-28	Electronic Funds Transfer Payment Methods (Apr 1989) -- As Modified by NASA FAR Supplement 18-32.908(a)
52.233-1	Disputes (Oct 1995) -- Alternate I (Dec 1991)
52.233-3	Protest After Award (Oct 1995) -- Alternate I (Jun 1985)
52.237-2	Protection of Government Buildings, Equipment, and Vegetation (Apr 1984)
52.242-1	Notice of Intent to Disallow Costs (Apr 1984)
52.242-3	Penalties for Unallowable Cost (Oct 1995)
52.242-4	Certification of Indirect Cost (Oct 1995)
52.242-13	Bankruptcy (Jul 1995)
52.243-2	Changes -- Cost-Reimbursement (Aug 1987) -- Alternate II (Apr 1984)
52.244-2	Subcontracts (Cost-Reimbursement and Letter Contracts)(Feb 1995) -- Alternate I (Jul 1995) (Insert _____ in paragraph (e).)
52.244-5	Competition in Subcontracting (Apr 1984)
52.246-25	Limitation of Liability - Services (Apr 1984)
52.247-1	Commercial Bill of Lading Notations (Apr 1984)
52.249-6	Termination (Cost-Reimbursement) (May 1986)
52.249-14	Excusable Delays (Apr 1984)
52.251-1	Government Supply Sources (Apr 1984)
52.252-6	Authorized Deviations in Clauses (Apr 1984)
52.253-1	Computer Generated Forms (Jan 1991)

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

<u>Clause No.</u>	<u>Title</u>
1852.215-84	Ombudsman (Oct 1995)
1852.216-89	Allowable Cost and Payment (Apr 1994)
1852.219-74	Use of Rural Area Small Businesses (Sep 1990)
1852.219-75	Small Business and Small Disadvantaged Business Subcontracting Reporting (Oct 1995)
1852.219-76	NASA Small Disadvantaged Business Goal (Jul 1991)
1852.223-70	Safety and Health (Sep 1993)
1852.227-70	New Technology (Apr 1988)
1852.242-72	Observance of Legal Holidays (Aug 1992) -- Alternate I (Sep 1989) -- Alternate II (Sep 1989)
1852.242-74	NASA Contractor Financial Management Reporting (Apr 1994)
1852.245-70	Acquisition of Centrally Reportable Equipment (Mar 1989)
1852.245-71	Installation-Provided Government Property (Mar 1989)

I.2 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS INCORPORATED BY REFERENCE
(MSFC 52.252-91) (AUG 1988)

The Representations, Certifications, and Other Statements of Offerors or Quoters (Section K of the solicitation document) as completed by the Contractor are hereby incorporated in their entirety by reference, with the same force and effect as if they were given in full text.

(End of clause)

I.3 FULL TEXT CLAUSES ATTACHED

<u>Clause No.</u>	<u>Title</u>
52.203-9	Requirement for Certificate of Procurement Integrity -- Modification (Sep 1995)
52.215-42	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data -- Modifications (Oct 1995)
52.223-3	Hazardous Material Identification and Material Safety Data (Nov 1991) -- Alternate I (Jul 1995)
52.237-3	Continuity of Services (Jan 1991)
52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (Jan 1986) (Deviation) (Jul 1995)

(End of clause)

(END OF SECTION)

52.203-9 REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY -- MODIFICATION (SEP 1995)

(a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.

(b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the Contracting Officer in connection with the execution of any modification of this contract.

(c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification. The certification in paragraph (c)(2) of this clause is not required for a modification which procures commercial items.

CERTIFICATE OF PROCUREMENT INTEGRITY -- MODIFICATION (NOV 1990)

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

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of [Name of Offeror] _____ who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

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

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

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

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

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

(End of certification)

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

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

(End of clause)

52.215-42 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION
OTHER THAN COST OR PRICING DATA -- MODIFICATIONS
(OCT 1995)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.804-2(a)(1) on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable --

(i) Information relative to an exception granted for prior or repetitive acquisitions.

(ii) Catalog price information as follows:

(A) Attach a copy of or identify the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which this proposal is being made.

(B) Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, and reseller.

(C) Additionally, for each catalog item that exceeds \$ 10,000.00 * (extended value not unit price), provide evidence of substantial sales to the general public. This may include sales order, contract, shipment, invoice, actual recorded sales or other records that are verifiable. In addition, if the basis of the price proposal is sales of essentially the same commercial item by affiliates, other manufacturers or vendors, those sales may be included. The offeror shall explain the basis of each offered price and its relationship to the established catalog price. When substantial general public sales have also been made at prices other than catalog or price list prices, the offeror shall indicate how the proposed price relates to the price of such recent sales in quantities similar to the proposed quantities.

(iii) Market price information. Include the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. The nature of the market should be described. The supply or service being purchased should be the same as or similar to the market price supply or service. Data supporting substantial sales to the general public is also required.

(iv) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(v) Information on modifications of contracts or subcontracts for commercial items.

(A) If (1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition, catalog or market prices of commercial items, or prices set by law or regulation; and (2) the modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor may provide information on prices at which the same item or similar items have been sold in the commercial market.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. Access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(3) By submitting information to qualify for an exception, an offeror is not representing that this is the only exception that may apply.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data on Standard Form (SF) 1411. Contract Pricing Proposal Cover Sheet (Cost or Pricing Data Required), with supporting attachments prepared in accordance with Table 15-2 of FAR 15.804-6(b)(2).

(2) As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.804-4.

(End of clause)

52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (NOV 1991) -- ALTERNATE I (JUL 1995)

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

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

Material (If none, insert "None")	Identification No.
NONE	

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

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

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

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

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and

local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

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

(1) To use, duplicate, and disclose any data to which this clause is applicable. The purposes of this right are to --

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

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

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

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

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

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

(End of clause)

(a) The Contractor recognizes that the services under this contract are vital to the Government and must be continued without interruption and that, upon contract expiration, a successor, either the Government or another Contractor, may continue them. The Contractor agrees to (1) furnish phase-in training and (2) exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor.

(b) The Contractor shall, upon the Contracting Officer's written notice, (1) furnish phase-in, phase-out services for up to 90 days after this contract expires and (2) negotiate in good faith a plan with a successor to determine the nature and extent of phase-in, phase-out services required. The plan shall specify a training program and a date for transferring responsibilities for each division of work described in the plan, and shall be subject to the Contracting Officer's approval. The Contractor shall provide sufficient experienced personnel during the phase-in, phase-out period to ensure that the services called for by this contract are maintained at the required level of proficiency.

(c) The Contractor shall allow as many personnel as practicable to remain on the job to help the successor maintain the continuity and consistency of the services required by this contract. The Contractor also shall disclose necessary personnel records and allow the successor to conduct onsite interviews with these employees. If selected employees are agreeable to the change, the Contractor shall release them at a mutually agreeable date and negotiate transfer of their earned fringe benefits to the successor.

(d) The Contractor shall be reimbursed for all reasonable phase-in, phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract.

(End of clause)

52.245-5 GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (JAN 1986)
(DEVIATION) (JUL 1995)

(a) Government-furnished property.

(1) The term "Contractor's managerial personnel," as used in paragraph (g) of this clause, means any of the Contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of --

(i) All or substantially all of the Contractor's business;

(ii) All or substantially all of the Contractor's operation at any one plant, or separate location at which the contract is being performed; or

(iii) A separate and complete major industrial operation connected with performing this contract.

(2) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications, together with such related data and information as the Contractor may request and as may be reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(3) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.

(4) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either effect repairs or modification or return or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(5) If Government-furnished property is not delivered to the Contractor by the required time or times, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice, (i) decrease the Government-furnished property provided or to be provided under this contract or (ii) substitute other Government-furnished property for the property to be provided by the Government or to be acquired by the Contractor for the Government under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by this notice.

(2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make such property available for performing this contract and there is any --

(i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or

(ii) Withdrawal of authority to use property, if provided under any other contract or lease.

(c) Title.

(1) The Government shall retain title to all Government-furnished property.

(2) Title to all property purchased by the Contractor for which the Contractor is entitled to be reimbursed as a direct item of cost under this contract shall pass to and vest in the Government upon the vendor's delivery of such property.

(3) Title to all other property, the cost of which is reimbursable to the Contractor, shall pass to and vest in the Government upon --

(i) Issuance of the property for use in contract performance;

(ii) Commencement of processing of the property or use in contract performance; or

(iii) Reimbursement of the cost of the property by the Government, whichever occurs first.

(4) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.

(d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

(1) The Contractor shall be responsible and accountable for all Government property provided under the contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

(2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound business practice and the applicable provisions of FAR Subpart 45.5.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government

is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) Limited risk of loss.

(1) The Contractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this contract or for expenses incidental to such loss, destruction, or damage, except as provided in subparagraphs (2) and (3) below.

(2) The Contractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this contract (including expenses incidental to such loss, destruction, or damage) --

(i) That results from a risk expressly required to be insured under this contract, but only to the extent of the insurance required to be purchased and maintained or to the extent of insurance actually purchased and maintained, whichever is greater;

(ii) That results from a risk that is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

(iii) For which the Contractor is otherwise responsible under the express terms of this contract;

(iv) That results from willful misconduct or lack of good faith on the part of the Contractor's managerial personnel; or

(v) That results from a failure on the part of the Contractor, due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this clause.

(3) (i) If the Contractor fails to act as provided by subdivision (g)(2)(v) above, after being notified (by certified mail addressed to one of the Contractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or nonacceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel.

(ii) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the Contractor can establish by clear and convincing evidence that such loss, destruction, or damage --

(A) Did not result from the Contractor's failure to maintain an approved program or system; or

(B) Occurred while an approved program or system was maintained by the Contractor.

(4) If the Contractor transfers Government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the Contractor for loss or destruction of, or damage to, the property as set forth above. However, the Contractor shall require the subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the subcontractor's possession or control, except to the extent that the subcontract, with the advance approval of the Contracting Officer, relieves the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the prime contract.

(5) The Contractor shall notify the Contracting Officer upon loss or destruction of, or damage to, Government property provided under this contract, with the exception of low value property for which loss, damage, or destruction is reported at contract termination, completion, or when needed for continued contract performance. The Contractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to the Contracting Officer a statement of --

- (i) The lost, destroyed, or damaged Government property;
- (ii) The time and origin of the loss, destruction, or damage;
- (iii) All known interests in commingled property of which the Government property is a part; and
- (iv) The insurance, if any, covering any part of or interest in such commingled property.

(6) The Contractor shall repair, renovate, and take such other action with respect to damaged Government property as the Contracting Officer directs. If the Government property is destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the Contractor's) that separation is impractical, the Contractor may, with the approval of and subject to any conditions imposed by the Contracting Officer, sell such property for the account of the Government. Such sales may be made in order to minimize the loss to the Government, to permit the resumption of business, or to accomplish a similar purpose. The Contractor shall be entitled to an equitable adjustment in the contract price for the expenditures made in performing the obligations under this subparagraph (g)(6) in accordance with paragraph (h) of this clause. However, the Government may directly reimburse the loss and salvage organization for any of their charges. The Contracting Officer shall give due regard to the Contractor's liability under this paragraph (g) when making any such equitable adjustment.

(7) The Contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance or of any reserve covering risk of loss or destruction of, or damage to, Government property, except to the extent that the Government

may have expressly required the Contractor to carry such insurance under another provision of this contract.

(8) In the event the Contractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the Contractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to, or equitably reimburse, the Government, as directed by the Contracting Officer.

(9) The Contractor shall do nothing to prejudice the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of the Contracting Officer, the Contractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the Contractor shall enforce for the benefit of the Government the liability of the subcontractor for such loss, destruction, or damage.

(h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for --

- (1) Any delay in delivery of Government-furnished property;
- (2) Delivery of Government-furnished property in a condition not suitable for its intended use;
- (3) A decrease in or substitution of Government-furnished property; or
- (4) Failure to repair or replace Government property for which the Government is responsible.

(i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in performing this contract or delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the cost of the work covered by this contract or paid to the Government as directed by the Contracting Officer. The foregoing provisions shall apply to scrap from Government property; provided, however, that the Contracting Officer may authorize or direct the Contractor to omit from such inventory schedules any scrap consisting of faulty castings or forgings or of cutting and processing waste, such as chips, cuttings, borings, turnings,

short ends, circles, trimmings, clippings, and remnants, and to dispose of such scrap in accordance with the Contractor's normal practice and account for it as a part of general overhead or other reimbursable costs in accordance with the Contractor's established accounting procedures.

(j) Abandonment and restoration of Contractor premises.

Unless otherwise provided herein, the Government --

(1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and

(2) Has no obligation to restore or rehabilitate the Contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

(k) Communications. All communications under this clause shall be in writing.

(1) Overseas contracts. If this contract is to be performed outside the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

(End of clause)

SECTION J

LIST OF ATTACHMENTS

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ATTACHMENT J-1

STATEMENT OF WORK

INTRODUCTION

This Statement of Work (SOW) defines the requirements for science and engineering support services to the Science and Engineering (S&E) Directorate of the NASA Marshall Space Flight Center (MSFC). At MSFC, the S&E Directorate is charged with assuring the technical excellence of MSFC managed projects, MSFC in-house projects, and technology development and application. S&E provides engineering expertise in response to specific project requirements, some of which require oversight functions, tests, and analyses to back up the activity of its contractors or in some cases, in series with its contractors. S&E also performs projects and scientific investigations both in-house and in conjunction with universities and industry. These activities require an organization which is proficient in engineering and scientific disciplines and has a great deal of flexibility. The purpose of this SOW is to define requirements for professional engineering and scientific services in support of S&E to meet its objectives. The specific work description is constructed in accordance with the Level 3 Work Breakdown Structure (WBS) provided at Attachment J-4.

1.0 SCOPE

Engineering and scientific support to the MSFC S&E Directorate under this contract will be within the broad parameters of this SOW, with specific tasks defined by the issuance of Task Directives approved by the Contracting Officer (CO) or the Contracting Officer's Technical Representative (COTR). This procedure is more specifically described in Clause G.4 of this solicitation. The Contractor shall comply with NASA/MSFC regulations, policies, and standards when developing and testing flight hardware, software, and related ground support equipment. Where applicable, Continuous Improvement/Total Quality Management (CI/TQM) principles shall be followed in implementation of the work defined in this SOW.

SPECIFIC WORK DESCRIPTION

1.1 Management

The Contractor shall provide the planning, coordination, technical direction, and surveillance of overall activities necessary to assure disciplined performance of work and timely application of resources for the accomplishment of all Task Directives (TDs) issued under the contract. The Contractor shall be responsible for maintaining communication with each functional area of support and alerting the COTR immediately of any problems which would prevent meeting established priorities.

1.1.1 Financial Reporting

The Contractor shall establish, implement, and maintain a financial reporting system in accordance with the NASA FAR Supplement (NFS) 18-52.204-71 and NASA Handbook (NHB) 9501.2B. The Contractor shall submit Financial Management Reports in accordance with DRD 798MA-004.

1.1.2 Planning and Control

The Contractor shall provide the overall management effort required to integrate technical and programmatic functions necessary for achievement of the objectives of the contract.

The Contractor shall establish, implement, and maintain management control systems required to plan, organize, direct, and control contract activities. The management control system shall track the status of each TD from planning to completion and record projected and actual cost data for each TD. The management control systems shall account for all resources (funding, personnel, materials, facilities, etc.) and be compatible with the Contractor's organizational structure and the established WBS. The Contractor shall submit monthly Activity Reports in accordance with DRD 798MA-005.

The Contractor shall provide support necessary to effectively administer the prime contract and any subcontracts issued under it. The Contractor shall insure that all subcontracts are awarded in accordance with the applicable FAR and NFS clauses. Subcontracts shall be closely monitored to insure effective and efficient performance.

The Contractor shall establish, implement, and maintain technical management and oversight of all work performed under paragraphs 1.2 through 1.7 of this SOW. The Contractor shall assure the technical excellence, cost effectiveness, and timeliness of all required work and deliverable products.

The Contractor shall establish, implement, and maintain an inventory control system to track and control all Government-furnished and contractor-acquired property. The Contractor shall comply with the Government property clauses specified elsewhere in the contract. The Contractor shall submit a Government Property Management Plan in accordance with DRD 798LS-003.

The Contractor shall provide a listing of all contracted personnel working on-site at MSFC in accordance with DRD 798CD-002.

The Contractor shall establish, implement, and maintain a safety and health program in compliance with the Government safety and health clauses specified elsewhere in the contract. The Contractor shall submit a Safety and Health Plan in accordance with DRD 798SA-007.

The Contractor shall establish, implement, and maintain a comprehensive security plan for personnel and facility security; safeguarding proprietary and privacy act data; and maintaining the integrity of automated information systems. The plan shall comply with all applicable DoD, NASA, and MSFC policies and procedures. The Contractor shall submit an Automated Information Systems Security Plan in accordance with DRD 798CD-001.

1.1.3 Facilities

Work shall be performed both on-site (in MSFC-provided facilities) and in contractor provided facilities. Those parts of the SOW to be performed on-site are identified in Attachment J-8. The Contractor shall provide a facility(s) in the Huntsville, Alabama area for the performance of the remainder of the work required by this contract. There are currently no requirements for the Contractor facility to provide secure areas for handling of classified information.

1.2 Systems Analysis and Integration

The Contractor shall provide support for the systems engineering, analysis, and integration required to establish systems requirements for performance, mission integration, verification, flight mechanics, and system testing of complex aerospace hardware/systems. Technical assessment of the above relative to satisfying requirements, error budgets, verification of requirements, and planning shall be provided by the Contractor.

1.2.1 Systems Integration

The Contractor shall provide support for systems tasks necessary to ensure total systems integration, verification and design compatibility including interface definition, configuration layouts, weight budgets, integrated data bases, integrated plans, integrated systems documentation, verification requirements, verification planning, verification requirements compliance, and requirements definition, ground operations planning and requirements definition, ground support equipment requirements, and mission evaluation. The support shall include: (1) development and maintenance of interface requirements and control documentation to ensure design compatibility of all interface elements; (2) establishment and maintenance of weight engineering programs including performance and weight control and mass properties data; (3) providing technical integration including development of integrated schematics required to assess and ensure total system compatibility; (4) develop or assess verification requirements matrices, systems verification plans, verification requirements, and verification requirements compliance documents to ensure maximum probability of mission accomplishment; (5) analytical integration of experiments and payloads with carriers; and (6) ground transportation analysis and requirements.

1.2.2 Systems Definition

The Contractor shall provide the support necessary to accomplish systems analyses, trade studies, and design and performance requirement definition for vehicle systems,

payloads, and experiments. The Contractor shall support development of concepts and criteria to assure cost effective allocation of discipline requirements. The support shall include: (1) development of system engineering concepts and models including alternate approaches to satisfy mission objectives; (2) performance of system analysis and trade studies including systems requirements definition; (3) trajectory and navigation analyses necessary for performance prediction of launch vehicles, upper stages, and spacecraft; (4) definition of systems requirements and analyses for spacecraft/experiment mechanical, electrical, instrumentation, communications, data management, software elements, and avionics systems utilizing government-owned tools, Communication Link Analysis Simulation System (CLASS), Data System Dynamics Simulator (DSDS), and the Signal Analysis Modeling System (SAMS); (5) natural space and terrestrial environments analyses, modeling, and requirements definition; and (6) electromagnetic compatibility analysis, requirements definition, and control plan preparation.

1.2.3 Systems Testing

The Contractor shall provide support for the planning, development, and implementation of development, qualification, and acceptance tests of flight hardware at the piece part, component, subassembly, system, and integrated levels. The Contractor shall provide similar support for technology test beds, environmental testing, and Neutral Buoyancy Simulator (NBS) testing. The support includes preparing test plans, procedures and other documentation, performing tests utilizing the procedures, and preparing the final test reports.

1.2.4 X-Ray Calibration Systems Testing

The Contractor shall provide support for planning, scheduling, conducting, performing, analyzing, testing, and reporting of test results in the X-Ray Calibration Facility. This support includes preparing schedules, test plans, procedures and other documentation, performing tests utilizing the procedures, and preparing the final test reports.

1.3 Propulsion

The Contractor shall provide support for the analysis, design, evaluation, and testing of components and systems for launch vehicles and spacecraft propulsion systems. This support shall include component/subsystem/system design, development, integration, and verification of propulsion as well as spacecraft mechanical and ground support equipment. The Contractor shall support the definition of requirements for fabrication of and testing of components and subsystems.

1.3.1 Motor Systems

The Contractor shall provide support for the analysis, design, and development of liquid rocket engines and solid and hybrid rocket motors. The Contractor shall perform analytical and experimental studies for engines and motors. The design and analysis of solid and hybrid rocket motor propulsion systems, including regenerative, ablative, and radiative motor cases, nozzle, propellant, liner, insulation, ignition, and thrust termination components shall be supported

by the Contractor. Support for analytical assessments, test planning, design analysis, and expert systems are of special interest.

1.3.2 Propulsion Systems

The Contractor shall provide support for the analysis, design, and development of liquid rocket propulsion systems, hybrid rocket propulsion systems, reaction and attitude control systems and space propulsion systems including vehicle integration and performance verification. The Contractor shall perform analytical and experimental studies for development of propulsion systems and studies to establish fluid system design criteria for space environments. Cryogenic, high performance insulation, thermodynamic and fluid management system design shall also be supported. Analytical assessments of costs, reliability, and operability are of special interest.

1.3.3 Component Development

The Contractor shall provide support for the design and development of propulsion components and subsystems such as turbomachinery, combustion devices, thrust chambers, preburners, gas generators, bearings, auxiliary power units, attitude control hardware, actuators, and controls and sensing devices. This support shall include analysis, test planning, integration, and verification of requirements for components, design and development for thrust vector controls, gimbal controls, and propellant control actuators, and the mechanical design of components and control mechanisms.

1.3.4 Mechanical Systems

The Contractor shall provide support for the design and development of mechanical components and subsystems such as propulsion feedlines, valves, and environmental control and life support hardware. This support shall include analysis, integration, and verification requirements for mechanical subsystems and components, design and development for berthing, docking, latching and deployment devices, as well as sealing, leak detection and measurement systems, and the mechanical design of airborne/ground support equipment.

1.3.5 Propulsion Test

The Contractor shall provide support for the advanced experimental and development testing of propulsion systems, subsystems and components including the planning, coordinating, scheduling, testing, data acquisition, data evaluation, and reporting of test results. The Contractor shall also provide support for the development of requirements and specifications for the propulsion test facilities.

1.4 Astrionics

The Contractor shall provide support for avionics-oriented systems design, development and analyses in electrical power, electrical networks, guidance, navigation and control systems, robotics, sensors, instrumentation, and optical systems. The support shall also include design,

development, and analysis of computers, communications systems, software, and data management for space vehicles, payloads, and ground support equipment. The Contractor shall also provide support for design, development and analysis of artificial intelligence and expert systems.

1.4.1 Electrical Systems

The Contractor shall provide support for design, development, testing, analysis, and evaluation of space vehicle electrical systems and subsystems, and the manufacturing processes associated with all aspects of the electrical systems.

1.4.2 Instrumentation and Control

The Contractor shall provide support for design, development, analysis, testing, and evaluation of flight instrumentation, signal conditioning, guidance, navigation, and control hardware components and subsystems. This includes measuring sensors, gyroscopes, star trackers, inertial measuring units, momentum devices, motors, control electronics, and servo systems.

1.4.3 Computers and Data Management

The Contractor shall provide support for design, development and analysis of computer systems, automatic checkout equipment, control and data management equipment, engine controllers, and audio communications equipment for launch vehicles and other flight applications.

1.4.4 Software and Data Management

The Contractor shall provide support for software system engineering functions, detailed software requirements definition, design, implementation, verification and validation, and sustaining engineering of software systems and applications for flight and ground computer systems. The Contractor shall support the establishment of guidelines, standards, and policies for the development of flight and ground software.

1.4.5 Optical and Radio Frequency Systems

The Contractor shall provide support for design, development, analysis, prototyping, and testing of components and systems in the field of optics, electro-optics, lasers, imagery, detectors, and radio frequency communications.

1.4.6 Avionics Simulation Systems

The Contractor shall provide support for design, development, and testing of hardware and software systems in the areas of real-time, hardware-in-the-loop, avionics simulations and robotics.

1.4.7 Electrical Power

The Contractor shall provide support for design, development, testing, and evaluation of space vehicle electrical power systems and subsystems, and the manufacturing processes associated with all aspects of the electrical power systems.

1.5 Materials and Processes

The Contractor shall provide support for investigation of materials and processes used on space vehicles and related ground facilities, test articles, and ground support equipment. This support shall include evaluation of proposed materials and/or processes applications. Performance of tests to determine basic materials characteristics as a means of accurately predicting material performance in both benign and severe space environments will be required. The Contractor shall provide support for the investigation of new materials and/or processes, including design of test fixtures, equipment and tooling.

1.5.1 Engineering Physics

The Contractor shall provide support in engineering physics disciplines, such as space environmental effects on basic materials properties. These effects may be caused by singular as well as synergistic exposure to atomic oxygen, protons, electrons, vacuum UV radiation, etc. The Contractor shall provide support for the investigation of nondestructive evaluation techniques, lubrication systems, and materials with improved friction and wear properties. The Contractor shall also provide support for the study of the effects of particulate and molecular contamination on optics and optical systems.

1.5.2 Metallic Materials and Processes

The Contractor shall support the investigation of materials for turbine blade and cryogenic turbopump bearing applications, and materials using innovative manufacturing techniques, such as powder metallurgy and vacuum plasma spraying.

The Contractor shall provide additional support in metallics including materials engineering and testing in the areas of electroplating, electroforming, coatings, corrosion testing, and evaluation. In addition, the Contractor shall: support development of material processing techniques and materials processing in space techniques, conduct feasibility studies in manufacturing techniques, support designers with manufacturing trade studies, and develop manufacturing plans, cost estimates, and schedules for metallic materials processes.

1.5.3 Nonmetallic Materials and Processes

The Contractor shall provide support in areas of nonmetallic materials such as evaluation of ceramics, carbon/carbon, and composites. This support shall include development of test methods for complex composite materials, as well as development of test techniques for

plastic and rubber flight hardware items and evaluation of seals and adhesive systems. Contractor shall also support the establishment and operation of an environmental chemistry facility to conduct contamination chemistry and environmental analyses to be performed in accordance with the U. S. EPA and Alabama Department of Environmental Management (ADEM).

In addition, the Contractor shall: support development of material processing techniques and materials processing in space techniques, conduct feasibility studies in manufacturing techniques, support designers with manufacturing trade studies, and develop manufacturing plans, cost estimates, and schedules for nonmetallic materials processes.

1.5.4 Project and Environmental Engineering

The Contractor shall provide support for materials selection and evaluation, the development/enhancement of computer data bases, and evaluation of basic flammability characteristics of materials. In addition, the Contractor shall support studies of the influence of various energy transfer mechanisms to determine the effects of fuels and oxidizers on materials properties as well as determining the effects of the containment materials.

1.5.5 Fabrication Services

The Contractor shall provide support for engineering design and analytical tasks involving the development of special test and equipment fixtures. The support shall include the design and analysis of structural, dynamic, thermal vacuum, propulsion, and transportation/handling equipment which is required for test within S&E. In addition, the Contractor shall support development of tooling concepts.

1.6 Structures and Dynamics

The Contractor shall provide support for the design, development, and verification of launch vehicles, spacecraft, propulsion systems, ground support equipment and facilities, and payload systems in the areas of control systems, structural dynamics analyses, structural analyses, aerodynamics and fluid dynamics, structural design, thermal engineering, environmental control and life support, and structural test.

1.6.1 Control Systems

The Contractor shall provide support for the design and development that results in the establishment of systems, component and performance requirements for fine pointing control of spacecraft, control of launch vehicles, reentry vehicles, engines and turbomachinery rotordynamics.

1.6.2 Structural Analysis

The Contractor shall provide support for the analytical modeling and analysis of complex structural systems. Aspects to be supported by the Contractor include stress, fracture,

structural dynamic analysis, loads analysis, and wear and vibration in vehicles, subsystems and payloads.

1.6.3 Fluid Dynamics

The Contractor shall provide support for the design and development of launch vehicles, spacecraft and liquid/solid propulsion systems in the areas of analytical and experimental aerodynamics, aerothermodynamics, acoustics, jet-plume-induced environments, and internal fluid dynamics.

1.6.4 Structural Design

The Contractor shall provide support to perform layouts, detail design, and design support of advanced vehicles, spacecraft, payloads, experiments, development test hardware, and support equipment hardware. The Contractor shall also provide support of design integration and assembly engineering design of structural and mechanical subsystems.

1.6.5 Thermal and Life Support

The Contractor shall provide support to plan, analyze, design, and evaluate (including testing) thermal protection and thermal control for space systems that include spacecraft, payloads, launch vehicle structures, components and mechanisms, propulsion system components, electronic black boxes, and life support systems for manned spacecraft. The Contractor shall provide support for systems engineering requirements, design, integration, and analyses for thermal protection/control systems and environmental control and life support systems.

1.6.6 Structural Test

The Contractor shall provide testing support consisting of technical documentation and technical operations. The technical documentation area shall include development and revision of plans, procedures, reports, and capability overviews. The technical operations area shall include design, development, and validation of test support hardware and menu driven software tools, review of measurement acquisition software modules, and capabilities configuration schemes.

1.7 Space Science

The Contractor shall provide support for the design, development, and analysis of components, sub-systems, experiments, and scientific data systems associated with experimental laboratory research facilities and with sub-orbital and orbital flight experiments. The support shall include engineering and scientific analysis tasks associated with the flight experiments and laboratory research programs.

1.7.1 Earth System Science

The Contractor shall provide support for the development of earth science payloads including remote sensors for active and passive detection of microwave, infrared, visible, ultraviolet, and radio wavelength radiation. This will include the development of ground-based, aircraft-based, and space-based payloads and flight experiments. The Contractor shall also support the development and application of natural environment information for the design and operation of aerospace vehicles and payloads.

1.7.2 Physics and Astronomy

The Contractor shall support: (1) the development of optical components and systems, optical benches, photometric, spectroscopic and interferometric instruments, and focal plane array detectors; (2) the development of charged particle optical components and systems, test devices, mass spectrometric instruments, and low energy particle detectors and associated electronics; (3) the development of x-ray, gamma ray, and cosmic ray detectors and related electronics.

1.7.3 Microgravity Science and Applications

The Contractor shall support the development of ground-based instruments and flight experiments in the areas of biotechnology, polymer chemistry, high-temperature superconducting materials, electronic materials, glasses and ceramics, fluid dynamics, optics, high-temperature furnace experiments, and embedded control systems for experiments.

1.7.4 Science Systems

The Contractor shall support the development of specialized instrumentation and control systems, network data systems, and integration functions required for laboratory research facilities and flight experiments. The Contractor shall also support analyses and trade studies related to achieving the optimum balance between scientific requirements and engineering feasibility for scientific projects and programs.

NAS8-40836

CONTRACT/RFP

J-2

EXHIBIT NUMBER

J-2-1

ATTACHMENT NUMBER

Science and Engineering Services

PROJECT/SYSTEM

DATA PROCUREMENT DOCUMENT

Sverdrup Technology, Inc.

CONTRACTOR

FEB 26 1996

DATE

NASA

National Aeronautics and
Space Administration

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					DATA PROCUREMENT DOC.		
DOCUMENT CHANGE LOG					NO. 798 ISSUE		
INCORPORATED REVISIONS				AS OF:		SUPERSEDING:	PAGE
OUTSTANDING REVISIONS							
AUTHORITY	PORTION AFFECTED - PG NO./NO.				REMARKS		
	INTRO	SGR	DRL	DRD			

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1.0 INTRODUCTION

- 1.1 **Scope:** Subject to the Rights in Data clause, this Data Procurement Document (DPD) sets forth the data requirements in each Data Requirements Description (DRD) and shall govern that data required by the DPD for the contract. The contractor shall furnish data defined by the DRD's listed on the Data Requirements List (DRL) by category of data, attached hereto, and made a part of this DPD. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DPD. The Contractor shall also submit other special and nonrecurring reports as may be required by the NASA Contracting Office or his representative. NASA reserves the right to reasonably defer the dates of the delivery of any or all data required to be submitted. 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.
- 1.2 **DPD Description:** This DPD consists of a Document Change Log, a Page Revision Log, a Table of Contents, an Introduction, a Statement of General Requirements, DPD maintenance procedures, a summary DRL, and the DRD's.
- 1.2.1 **General Requirements:** The general requirements, as specified in paragraph 2.0 of this DPD, prescribe those requirements applicable to the preparation, maintenance, and delivery of data that are better defined in aggregate than in the individual DRD's.
- 1.2.2 **Data Requirements List (DRL):** Throughout the performance of the contract, the summary DRL provides a listing by data category of the data requirements of the DPD. To the extent that data required to be furnished by other provisions of the contract are also identified and described in the DRL, compliance with the DRL shall be accepted as compliance with such other provisions. Nothing contained in this data requirements provision shall relieve the contractor from furnishing data called for by, or under authority of, other provisions of the contract which are not identified and described herein.
- 1.2.3 **Data Requirements Descriptions (DRD's)**
- 1.2.3.1 Each data requirement listed on the DRL is given complete definition by a DRD. The DRD prescribes content, format, maintenance instructions, and submittal requirements.
- 1.2.3.2 For the purpose of classification and control, DRD's of this DPD are grouped into the following broad functional data categories and used in the DPD as required :

<u>CATEGORY SYMBOL</u>	<u>DESCRIPTION</u>
CD	Contractual Data
LS	Logistics/Support
MA	Program Management
SA	Safety

- 1.2.3.3 The symbols representing these data categories form part of the prefix of the DRD identification number. The first numerical characters reflect the DPD number. The DRD's are filed by data category and are in alpha-numeric sequence as listed on the Summary DRL page (or pages) that precedes the DRD's.

- 1.2.4 Document Change Log (DCL) and Page Revision Log (PRL): The Document Change Log chronologically records all revision actions that pertain to the DPD. The Page Revision Log describes the current revision status of each page of the DPD and thus, at all times, provides its exact configuration. Detailed procedures for preparing and maintaining these forms can be obtained from the Center Data Requirements Manager.
- 1.2.5 DPD Maintenance Procedures: Maintenance procedures define the detailed methods to be employed in maintaining the DPD. Detailed maintenance procedures are specified in paragraph 3.0 of this DPD.
- 1.3 Data Types : The type of data codes and their defined contractually applicable requirements are as follows:

TYPEDESCRIPTION

- 1 All issues and interim changes to those issues require written approval from the requiring organization before formal release for use or implementation.
- 2 NASA reserves a time-limited right to disapprove in writing any issues and interim changes to those issues. Data shall be submitted to the procuring activity for review not less than 45 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not been notified of any disapproval prior to the release target date, the data shall be considered approved. To be an acceptable delivery, disapproved data shall be revised to remove causes for the disapproval before its release.
- 3 These data shall be delivered by the contractor as required by the contract and do not require NASA approval. However, to be a satisfactory delivery, the data must satisfy all applicable contractual requirements.
- 4 These data are produced or used during performance of the contract and are retained by the contractor. They shall be delivered when the government requests it according to instructions in the request. The contractor shall maintain a list of these data and shall furnish copies of the list to the Government when requested to do so.
- 5 These data are incidental to contract performance and are retained by the contractor in those cases where contracting parties have agreed that delivery is not required. However, the Contracting Officer or the Contracting Officer's Representative shall have access to and can inspect this data at its location in the contractor's or subcontractor's facilities.

2.0 STATEMENT OF GENERAL REQUIREMENTS

- 2.1 Applicable Documents: Documents included as applicable documents in this DPD are the issue in effect at the time of request for proposal, unless otherwise specified, and form a part of the DPD to the extent specified herein. The applicable documents apply in total, except in those cases where specific exhibits or sections are stated on the individual DRD.

- 2.2 Distribution: Distribution requirements of required documentation are set forth in paragraph 10 of each Data Requirement. Any changes to the original distribution requirements will be provided by the Contracting Officer in writing. Electronic submittal of the Data Requirement is encouraged and shall be coordinated with the Contracting Officer before implementation.
- 2.3 Contractor's Internal Documents: Insofar as practical, the contractor's internal documents shall be used to meet the data requirements of this DPD.
- 2.4 Document Identification: Type 1 and 2 documents published by the contractor and submitted in response to the data requirements of this DPD shall be identified within an organized identification numbering system prescribed to NASA by the contractor and, if applicable, as approved by NASA. All Type 1 and Type 2 documentation, excluding configuration management requirements, will be marked "PRELIMINARY PENDING NASA APPROVAL," and once approved shall be reissued with "APPROVED BY NASA" and the date and approval authority annotated on the cover.
- 2.5 Reference to Other Documents in Data Submittals: All referenced documents shall be made readily available to the cognizant NASA organization upon request. The contractor should make sure that the references are available to NASA in a manner which does not incur delays in the use of the response document.
- 2.6 Maintenance of Type 1 Document Submittals: Revisions of Type 1 documentation may be accomplished either by individual page revision or by a complete reissue of the document identified in accordance with requirements of 2.4 above, with the exception of drawings (which shall be revised in accordance with contract configuration management requirements).
- 2.7 Data Format Using Automated Data Processes: Selection of automated data processes for the format of data item presentation shall be made at the option of the contractor unless specified otherwise in this DPD.
- 3.0 DPD MAINTENANCE PROCEDURES
- 3.1 MSFC-Initiated Change: New and/or revised data requirements will be incorporated by contract modification to which the new or revised portion of the DPD will be appended.
- 3.2 Contractor-Initiated Change: Contractor-proposed data requirements, or proposed changes to existing requirements shall be submitted to MSFC for approval.
- 3.3 DPD Change Procedures: Changes to a contractual issue of this DPD will be identified by MSFC on the Document Change Log and Page Revision Log.
- 3.4 DPD Reissues: When conditions warrant, the DPD will be reissued by MSFC and will supersede the existing DPD in its entirety. Reissues will be issued by contractual direction.

SUMMARY OF DATA REQUIREMENTS

	<u>DRD</u>	<u>DATA TYPE</u>	<u>TITLE</u>	<u>OPR</u>
CD -	Contractual Data			
	798CD-001	1	Automated Information Security Plan	AI31
	798CD-002	3	On-Site Employee Location Listing	GP01
LS -	Logistics/Support			
	798LS-003	2	Government Property Management Plan	CN41
MA -	Program Management			
	798MA-004	3	Financial Management Report (533M)	BD01
	798MA-005	3	Activity Report	BD01
SA -	Safety			
	798SA-007	2	Safety and Health Program Plan	CR20

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 798 **ISSUE:**
2. **DRD NO.:** 798CD-001
3. **DATA TYPE:** 1
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Automated Information Security Plan
7. **DESCRIPTION/USE:** A plan which describes the policies and procedures for ensuring the protection of NASA Automated Information resources.
8. **OPR:** AI31 **ODM:**
9. **CDRM:** EL32
10. a. **DISTRIBUTION:** 3 cys - GP22 b. **ELECTRONIC SUBMITTAL:** Acceptable
11. **INITIAL SUBMISSION:** No later than 30 days after receipt of the Contracting Officer's written request.
12. **SUBMISSION FREQUENCY:** Revisions as required
13. **REMARKS:**
14. **INTERRELATIONSHIP:** See contract clause section H of RFP
15. **DATA PREPARATION INFORMATION:**
 - 15.1 **SCOPE:** The Automated Information Security (AIS) Plan shall fully implement protection measures for critical program activities and establish guidance on the management and control of technical data.
 - 15.2 **APPLICABLE DOCUMENTS:**
NHB 2410.9, *NASA Automated Security Information Handbook*
NMI 2410.7C, *Assuring the Security and Integrity of NASA Automated Information Resources*
Public Law 100-235, *Computer Security Act of 1987*
MMI 2410.10A, *Assuring the Security and Integrity of MSFC Automated Resources*
MMI 2410.9A, *Computer Asset Protection*
MSFC Automated Information Security Plan, Dated October 1993
 - 15.3 **CONTENTS:** This plan shall address the security measures and program safeguards which will ensure that all information systems and resources acquired and utilized in the performance of the contract by contractor and subcontractor personnel are in accordance with NFS 18-52.204-77.
 - 15.4 **FORMAT:** Contractor format is acceptable. An existing corporate security plan may be used following approval by appropriate MSFC personnel.
 - 15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 798 **ISSUE:**
2. **DRD NO.:** 798CD-002
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** On-Site Employee Location Listing
7. **DESCRIPTION/USE:** To assist NASA in conducting contractor floor checks.
8. **OPR:** GP01 **ODM:**
9. **CDRM:** EL32
10. a. **DISTRIBUTION:** 1 cy - GP22 b. **ELECTRONIC SUBMITTAL:** Acceptable
1 cy - EA01
11. **INITIAL SUBMISSION:** 60 days after contract award
12. **SUBMISSION FREQUENCY:** Update quarterly. If deemed necessary by the Contracting Officer, the contractor shall submit the list at times other than stated.
13. **REMARKS:** Reference is made to FAR 52.215-2, *Federal Acquisition Regulation Clause: Audit - Negotiation.*
14. **INTERRELATIONSHIP:**
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The On-Site Employee Location Listing shall provide NASA with a list of all on-site contractor employees working under this contract and their designated locations.
- 15.2 **APPLICABLE DOCUMENTS:** None
- 15.3 **CONTENTS:** The list shall include the following information for each employee: employee's name, position, location (building/room number), shift assignment, supervisor's name, and supervisor's location (building/room number).
- 15.4 **FORMAT:** Contractor format is acceptable.
- 15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 798 **ISSUE:**
2. **DRD NO.:** 798LS-003
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Government Property Management Plan
7. **DESCRIPTION/USE:** Provides the Contractor's policies for controlling and managing Government property.
8. **OPR:** CN41 **ODM:**
9. **CDRM:** EL32
10. a. **DISTRIBUTION:** 3 cys - GP22
- b. **ELECTRONIC SUBMITTAL:** Acceptable
11. **INITIAL SUBMISSION:** Preliminary three (3) months after contract award
12. **SUBMISSION FREQUENCY:** Final one year after contract award, revisions as required
13. **REMARKS:** This document shall be the official contract requirements document for the control and identification of all Government property.
14. **INTERRELATIONSHIP:**
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The Government Property Management Plan defines the contractor's methods of acquiring, receiving, controlling, and maintaining Government furnished property.
- 15.2 **APPLICABLE DOCUMENTS:**

Federal Acquisition Regulation (FAR), Part 45
NHB 5100.4A *Federal Acquisition Regulation Supplement, (NASA/FAR Supplement)*
Part 18-45 and latest revisions thereto
- 15.3 **CONTENTS:** This plan shall satisfy the requirements for the FAR Part 45, the NASA/FAR Supplement Part 18-45 of NHB 5100.4, and the contractual requirements. This plan shall consist of those procedures which constitute the contractor's Property Management Manual and shall include the following categories:
 - a. Property management.
 - b. Acquisition.
 - c. Receiving.
 - d. Identification.
 - e. Records.
 - f. Movement.
 - g. Storage.
 - h. Physical Inventories.
 - i. Reports.
 - j. Consumption.
 - k. Utilization.
 - l. Maintenance.
 - m. Subcontractor control.
 - n. Disposition.
 - o. Contract close-out.
- 15.4 **FORMAT:** Contractor format is acceptable.
- 15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 798 **ISSUE:**
2. **DRD NO.:** 798MA-004
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Financial Management Report (533M)
7. **DESCRIPTION/USE:** To monitor program costs and manpower through monthly financial reports.
8. **OPR:** BD01 **ODM:**
9. **CDRM:** EL32
10. **a. DISTRIBUTION:** 1 cy - EM11 1 cy - BF52 **b. ELECTRONIC SUBMITTAL:** Acceptable
 1 cy - EA01
 1 cy - GP22
11. **INITIAL SUBMISSION:** 45 days after contract award
12. **SUBMISSION FREQUENCY:** 533M Monthly: Submit 15 days following end of the accounting month.
13. **REMARKS:**
14. **INTERRELATIONSHIP:**
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The Financial Management Reports provides actual and projected labor hours and costs at the total contract level.
- 15.2 **APPLICABLE DOCUMENTS**

NFS 18-52.204-71	NASA Contractor Financial Management Reporting
NHB 9501.2	Procedures for Contractor Reporting of Correlated Cost and Performance Data
NMI 9501.1	NASA Contractor Financial Management Reporting System
- 15.3 **CONTENTS:** The elements of cost for the total contract financial reporting shall generally cover labor hours and dollars by burden centers, subcontracts, materials, interdivisional work, other direct cost, overhead, fringe, general and administrative, cost of money and fee. A precise list of elements and format shall be established by mutual agreement between the Contractor and Contracting Officer Technical Representative (COTR) prior to issuance of the initial report. The 533M Monthly Report shall include:
 - a. Manpower and cost actuals and projections at the total contract level.
 - b. Task Directive status.
 - c. Contract Funding Analysis Report.
- 15.4 **FORMAT:** The 533M shall be prepared per NHB 9501.2, NMI 9501.1, and NFS 18-52.204-71. The supplement data requested in 15.3.a, b, and c shall be formatted per COTR guidance.
- 15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. DPD NO.: 798 ISSUE:
2. DRD NO.: **798MA-005**
3. DATA TYPE: 3
4. DATE REVISED:
5. PAGE: 1/1
6. TITLE: Activity Report
7. DESCRIPTION/USE: To allow assessment of contract progress by providing a summary report of activities completed, potential problems, and progress toward meeting the requirements of the contract.
8. OPR: BD01 ODM:
9. CDRM: EL32
10. a. DISTRIBUTION: 3 cys - EA01 b. ELECTRONIC SUBMITTAL: Acceptable
 1 cy - GP22
11. INITIAL SUBMISSION: 60 days after contract award.
12. SUBMISSION FREQUENCY: Monthly - submit 15 days following the end of each contract month.
13. REMARKS:
14. INTERRELATIONSHIP:
15. DATA PREPARATION INFORMATION:
 - 15.1 SCOPE: This description defines the requirements for reporting the technical and administrative progress and status in accomplishing the contractual tasks.
 - 15.2 APPLICABLE DOCUMENTS: None
 - 15.3 CONTENTS: The activity report shall include summary reports of activities, accomplishments, status, schedules, milestones, travels, problems and corrective actions. The report shall be of sufficient depth and clarity to permit a thorough understanding of both progress and impediments thereto. Supporting data may be included in the form of graphs, charts, etc.
 - 15.4 FORMAT:
 - a. The Activity Report shall be in presentation chart format.
 - b. Submittal shall be standard hard copy or other media as directed by the Contracting Officer.
 - 15.5 MAINTENANCE: None required.

DRD Continuation Sheet

TITLE: Safety and Health Program Plan

DRD NO.: 798SA-007

DATA TYPE: 2

PAGE: 2/2

15.4 **FORMAT:**

Safety and Health Program Plan - Contractor's Format
Mishap Reports - Per MMI 1711.2

- 15.5 **MAINTENANCE:** Update as necessary to comply with regulations and operating changes. Changes shall be incorporated by change page or complete reissue.

ATTACHMENT J-3

CPAF EVALUATION PLAN

A synopsis of the evaluation criteria and other features of the CPAF Evaluation Plan are provided below. The Government retains the unilateral right to amend the plan any time prior to the start of the evaluation period.

1. EVALUATION CRITERIA

a. Technical Performance

b. Cost Control (**Note:** This criterion will represent at least 25 percent of the total potential award fee for each evaluation period. In addition, an average score of at least 80 must be attained for each of the other criteria before any award fee can be earned for cost underruns during an evaluation period.)

c. Project Management

d. Schedule

Performance will be evaluated by criteria and ratings will be combined, based upon relative weights by the Performance Evaluation Board. Individual weights for each of the four evaluation criteria will be provided to the contractor by the Award Fee Coordinator prior to the start of the evaluation period.

All evaluation criteria will be evaluated by the Award Fee Coordinator based on reports from monitors assigned from appropriate MSFC personnel.

2. CPAF ORGANIZATION

The CPAF organizational chart is shown in Figure 1. The following designations apply.

Fee Determination Official (FDO) - MSFC Deputy Director

Performance Evaluation Board - Appointed by MSFC Center Director

Award Fee Coordinator - Appointed by Contracting Officer

Technical Performance Monitor - Designated by COTR

Cost Control Monitor - Designated by COTR

Project Management Monitor - Designated by COTR

Schedule Monitor - Designated by COTR

3. EVALUATION MECHANICS

Adjective ratings and their definitions are shown on Table 1, "Definition of Ratings." These adjective ratings are correlated to the Efficiency Rating scale of zero to one hundred on Table 2. The Efficiency Rating also provides the amount of Fee Pool to which the Contractor is entitled.

4. EVALUATION FREQUENCY

Fee determination normally will be made at 6-month intervals from the date of contract award.

TABLE 1

DEFINITIONS OF RATINGS

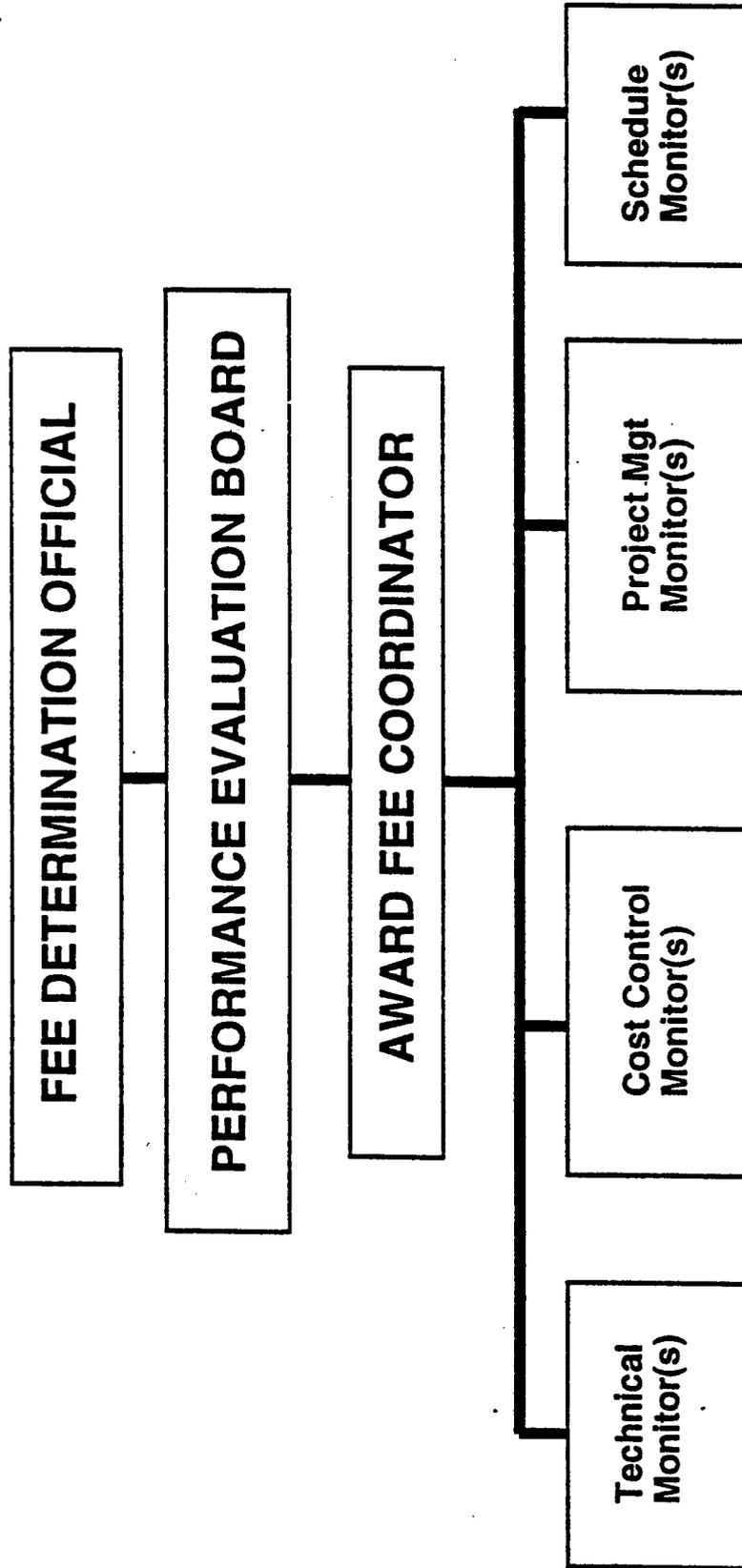
<u>Excellent</u>	Of exceptional merit; exemplary performance in a timely, efficient, and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
<u>Very Good</u>	Very effective performance, fully responsive to contract requirements accomplished in a timely, efficient, and economical manner for the most part. Only minor deficiencies.
<u>Good</u>	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
<u>Satisfactory</u>	Meets or slightly exceeds minimum acceptable standards; adequate results. Reportable deficiencies with identifiable, but not substantial, effects on overall performance.
<u>Poor/Unsatisfactory</u>	Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas which adversely affect overall performance.

TABLE 2
EFFICIENCY RATINGS

<u>Specific Adjective Ratings</u>	<u>Numerical Rating</u>	<u>Award Fee Percent</u>
Excellent	91 - 100	91 - 100
Very Good	81 - 90	81 - 90
Good	71 - 80	71 - 80
Satisfactory	61 - 70	61 - 70
Poor/Unsatisfactory	0 - 60	-0-

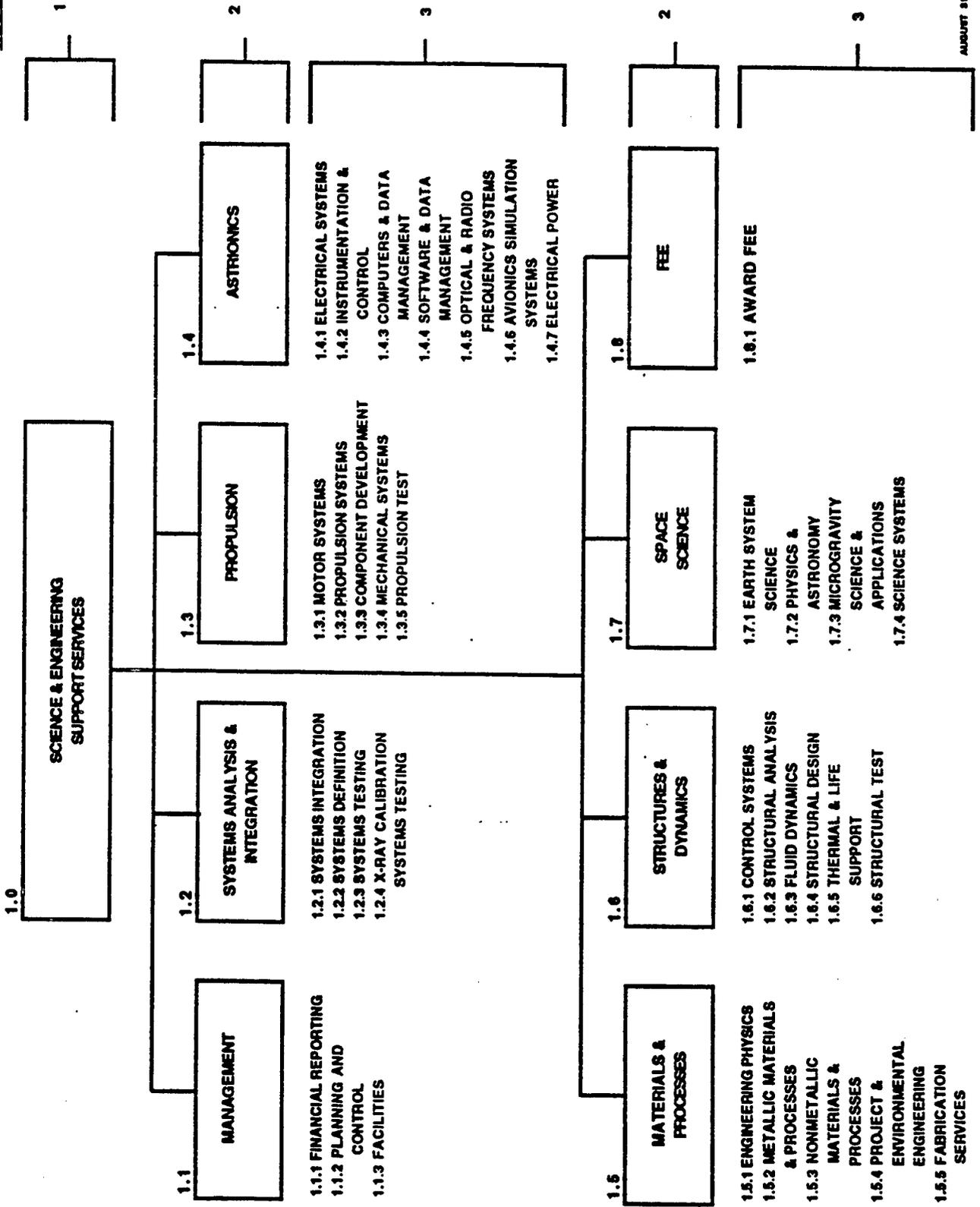
Figure 1

CPAF ORGANIZATIONAL CHART



WORK BREAKDOWN STRUCTURE

WBS LEVEL



ATTACHMENT J-4

AUGUST 21, 1964

ATTACHMENT J-5

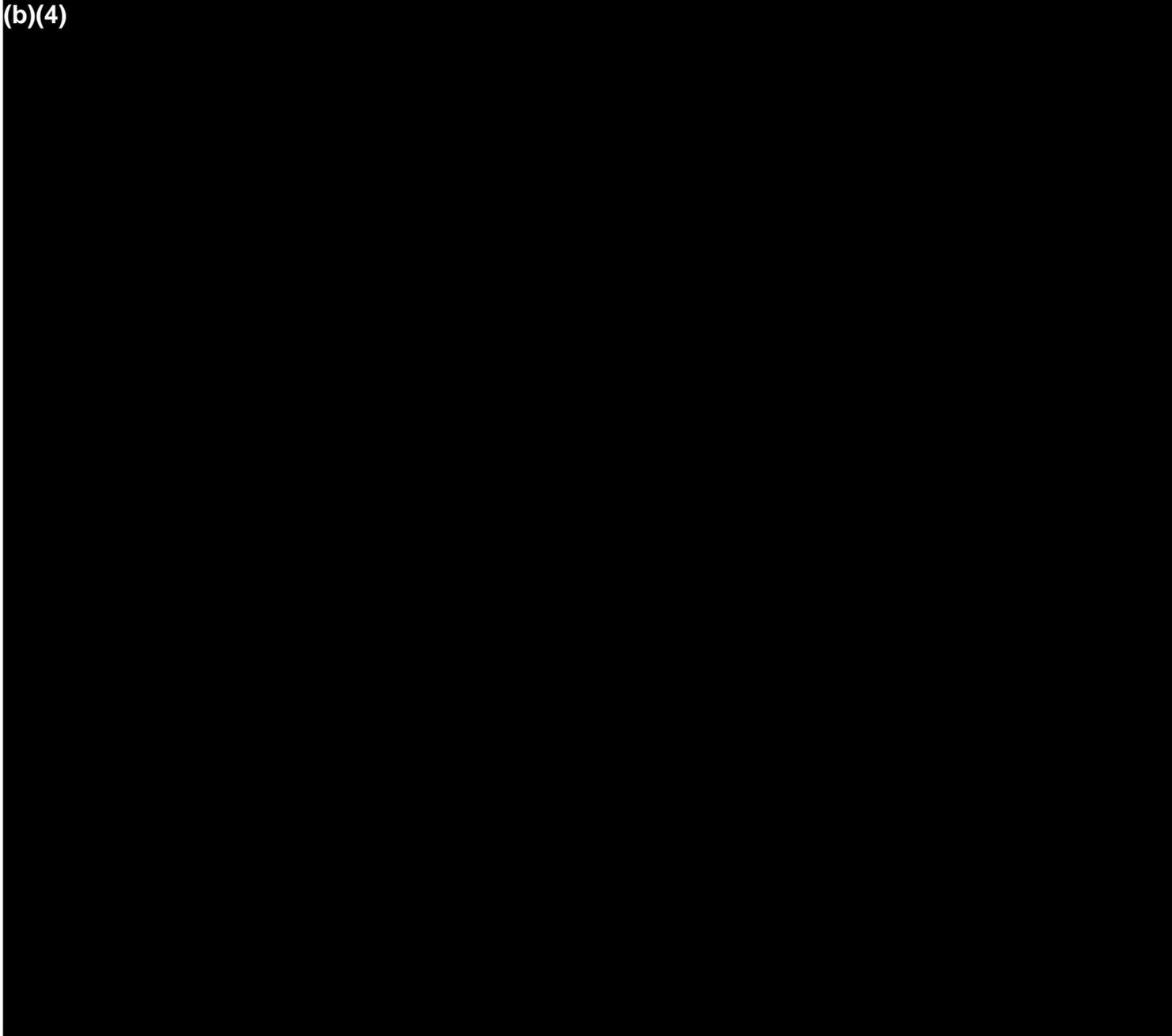
MAKE-OR-BUY PLAN

Work Effort	Make	Buy	Make -or- Buy	Selected Subcontractor
WBS 1.2 Systems Analysis and Integration			●	Micro Craft, Inc. MEVATEC Corp.
WBS 1.3 Propulsion			●	Micro Craft, Inc. MEVATEC Corp.
WBS 1.4 Astrionics			●	Micro Craft, Inc. MEVATEC Corp.
WBS 1.5 Materials and Processes			●	Micro Craft, Inc. MEVATEC Corp.
WBS 1.6 Structures and Dynamics			●	Micro Craft, Inc. MEVATEC Corp.
WBS 1.7 Science			●	Hughes STX Corp. MEVATEC Corp.

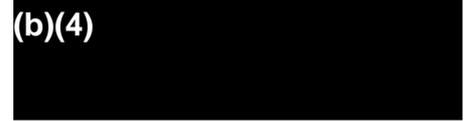
ATTACHMENT J-6

SMALL, SMALL DISADVANTAGED AND
WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN

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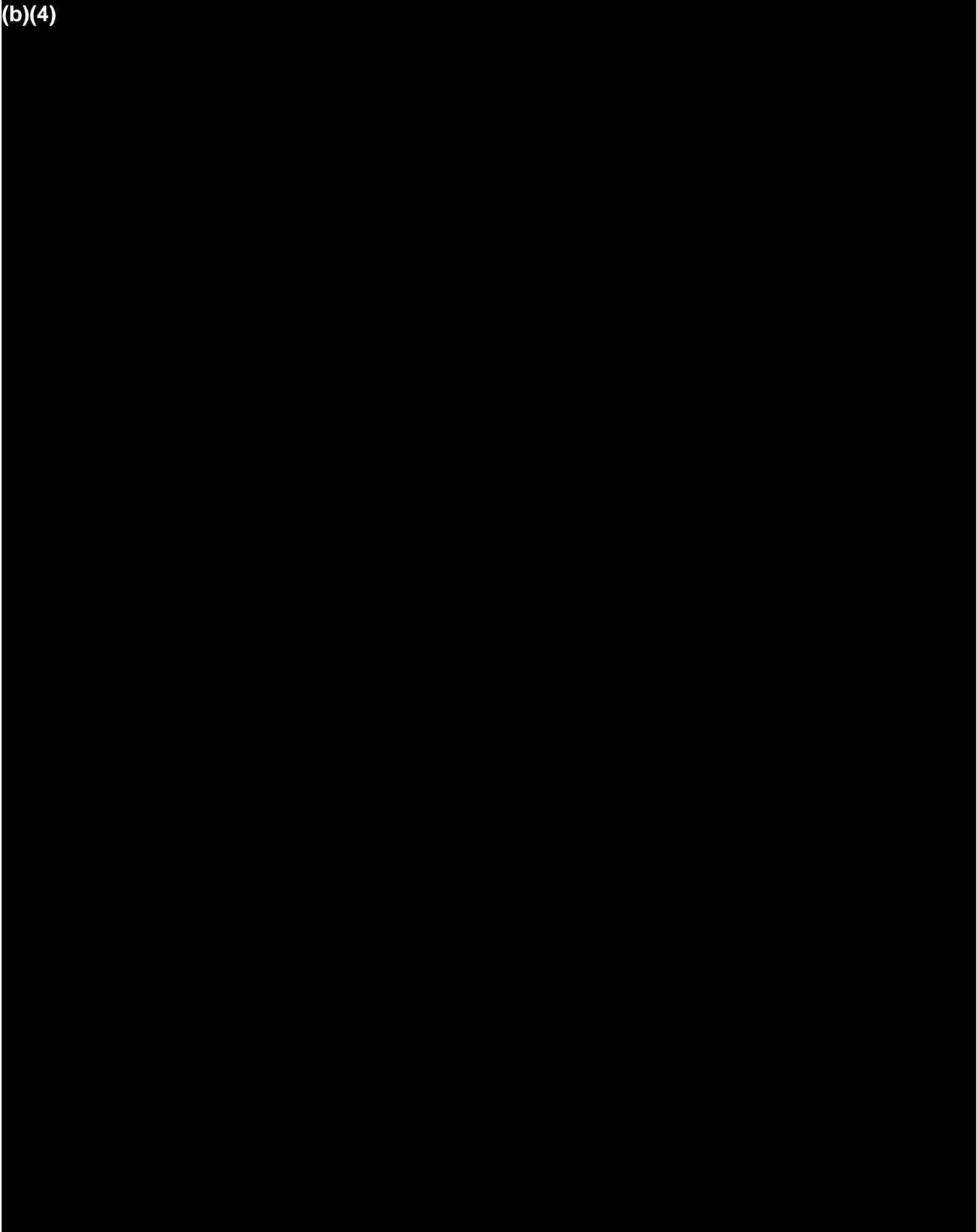
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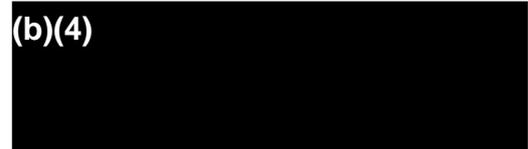
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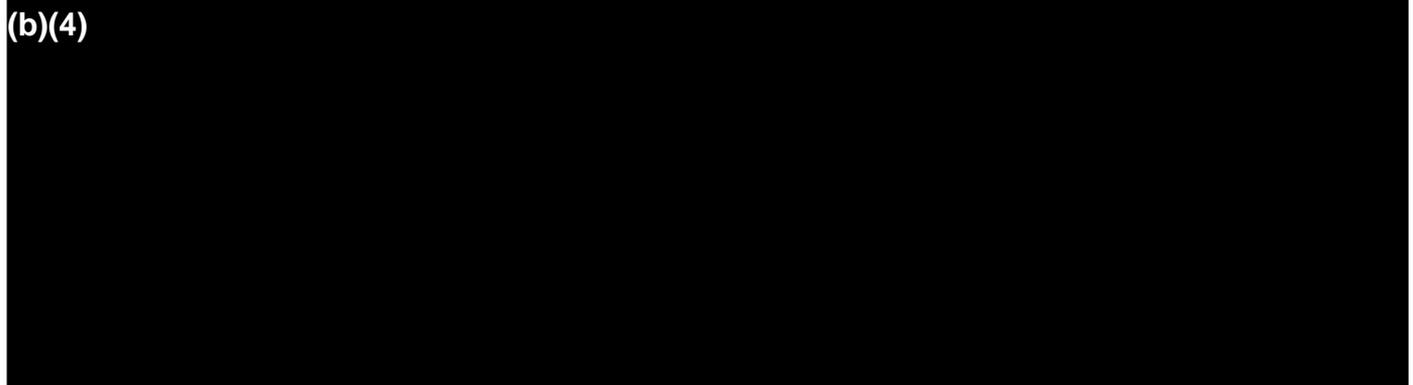
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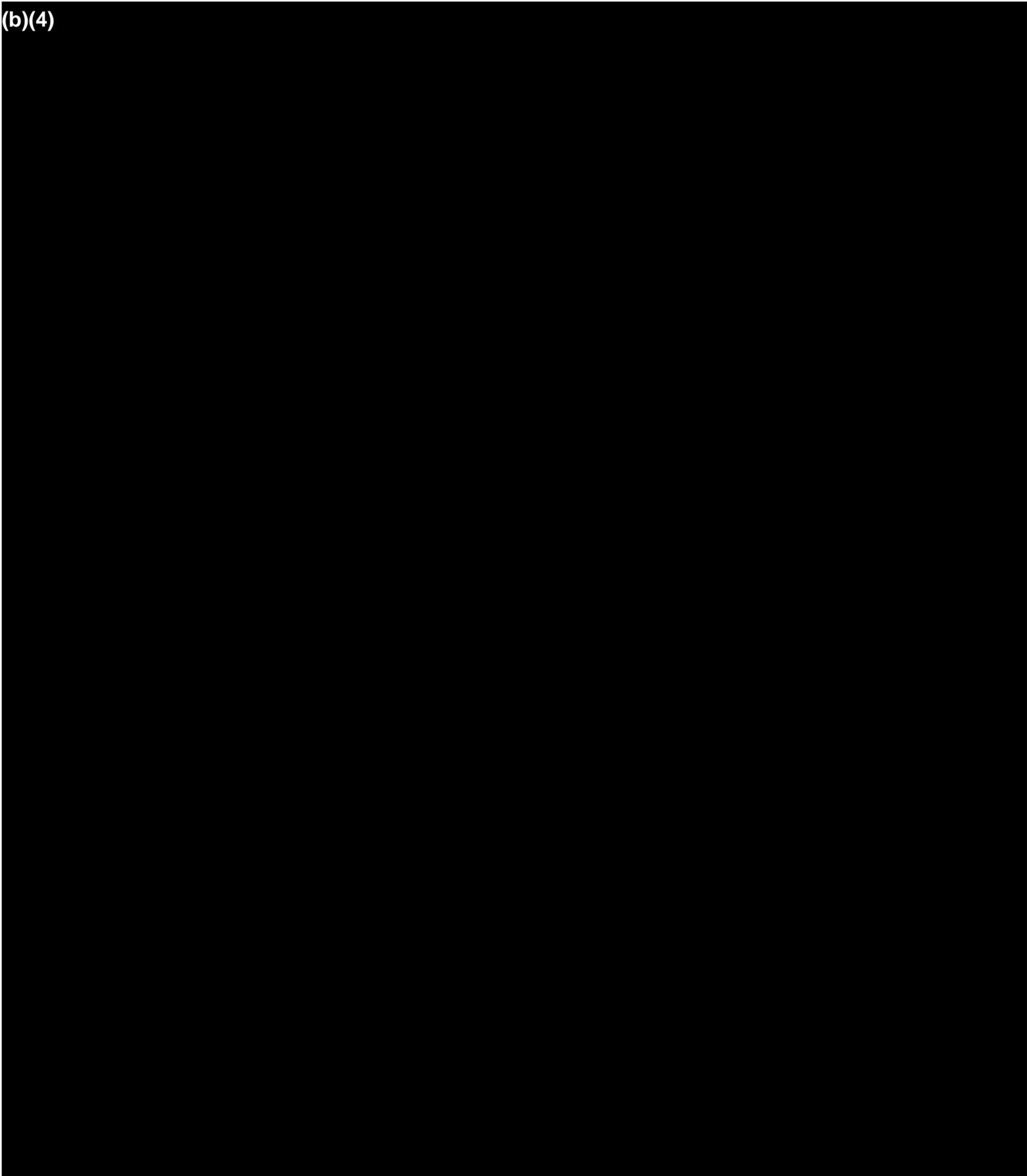
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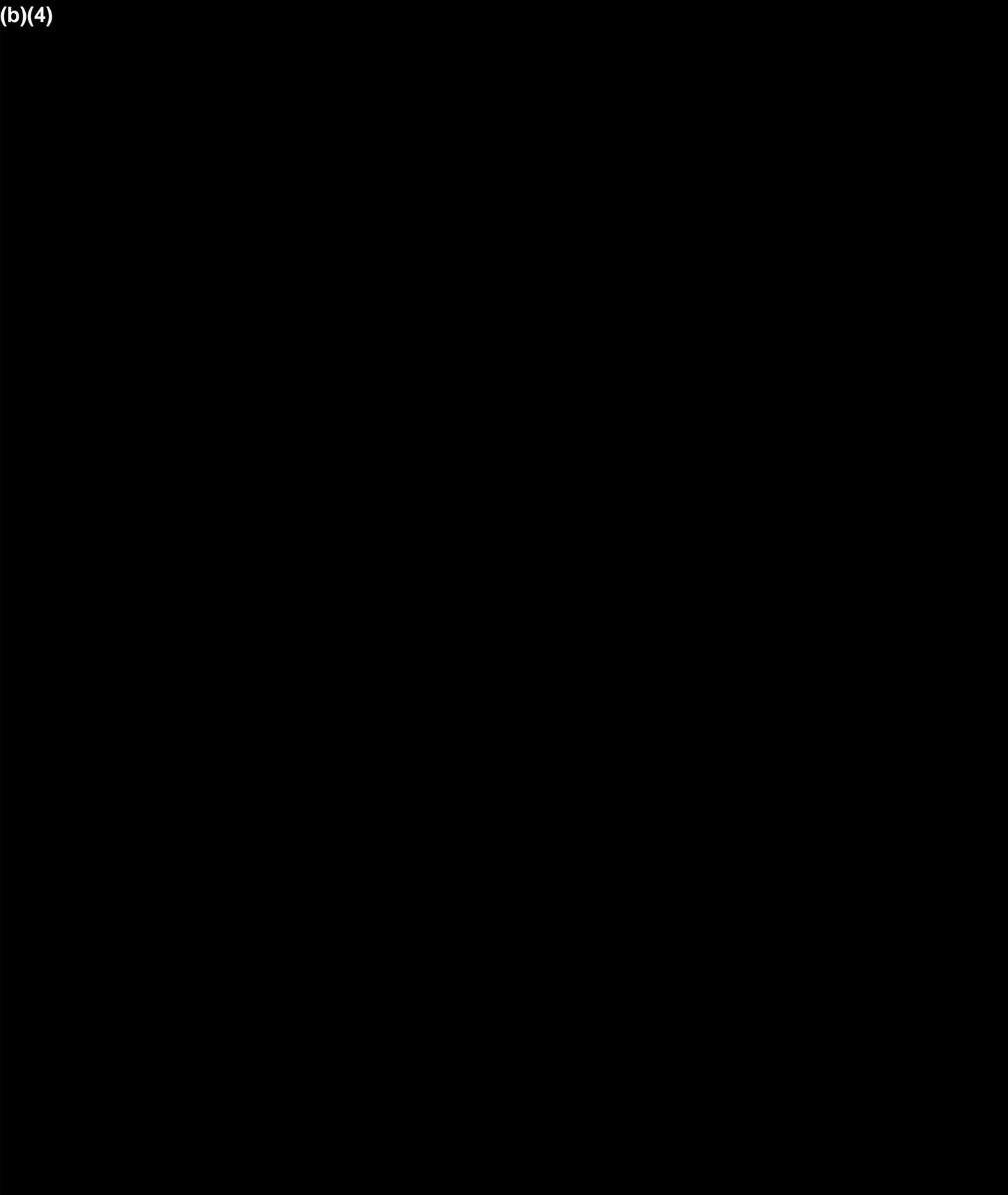


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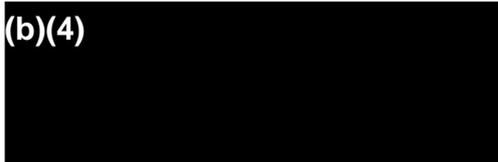
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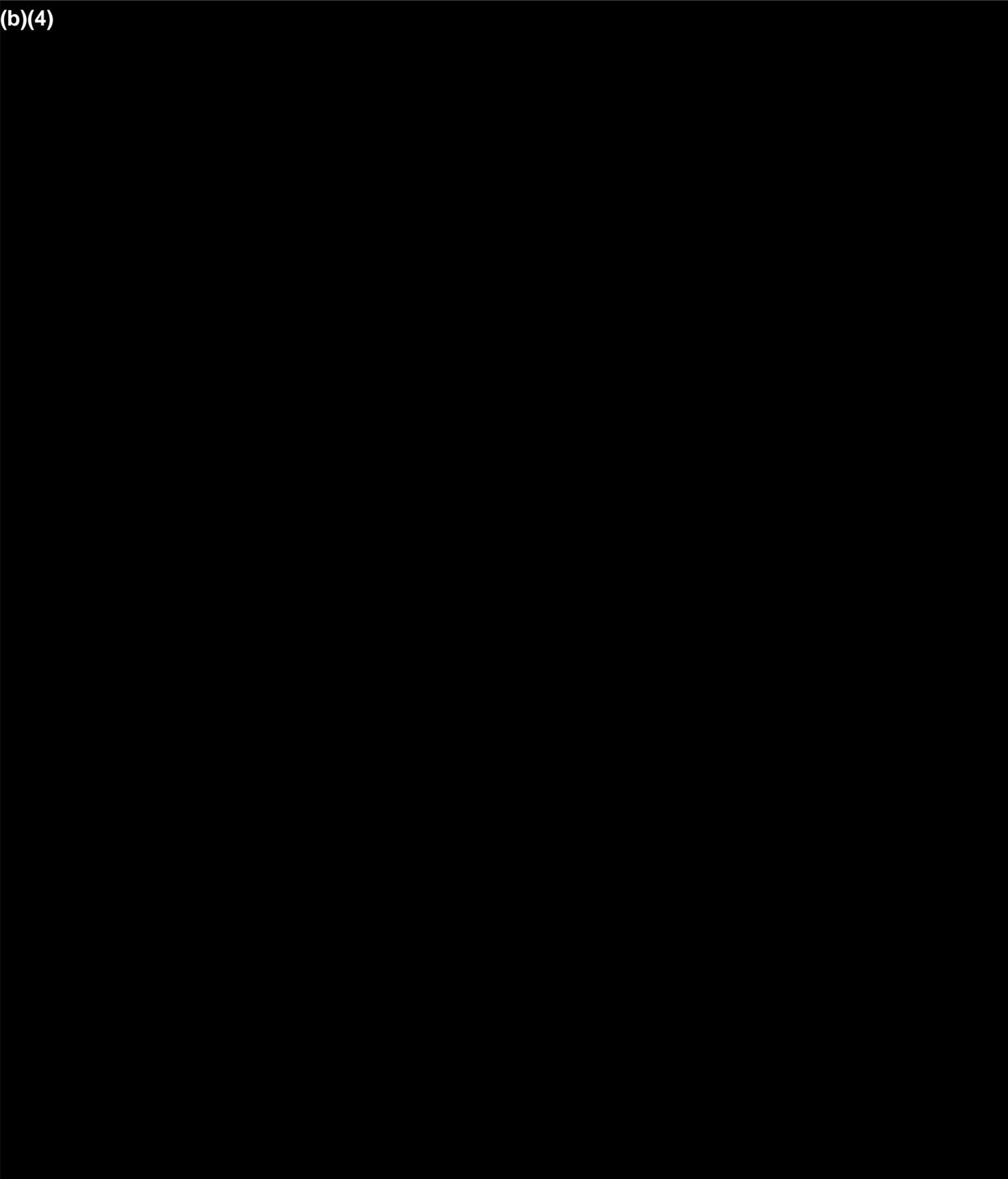
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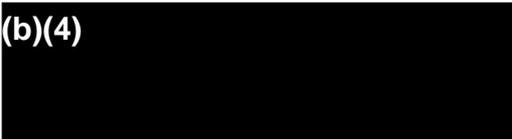
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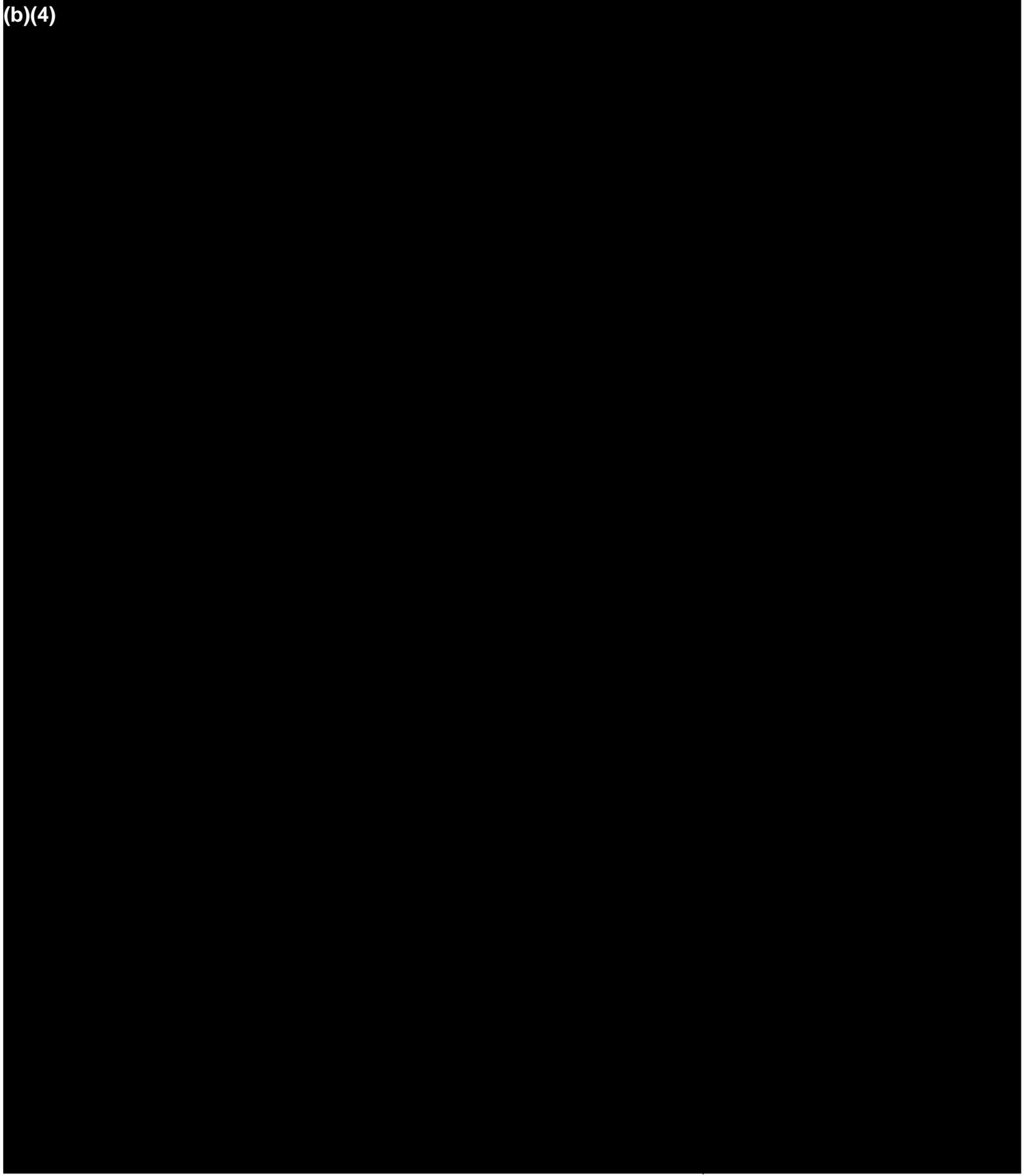
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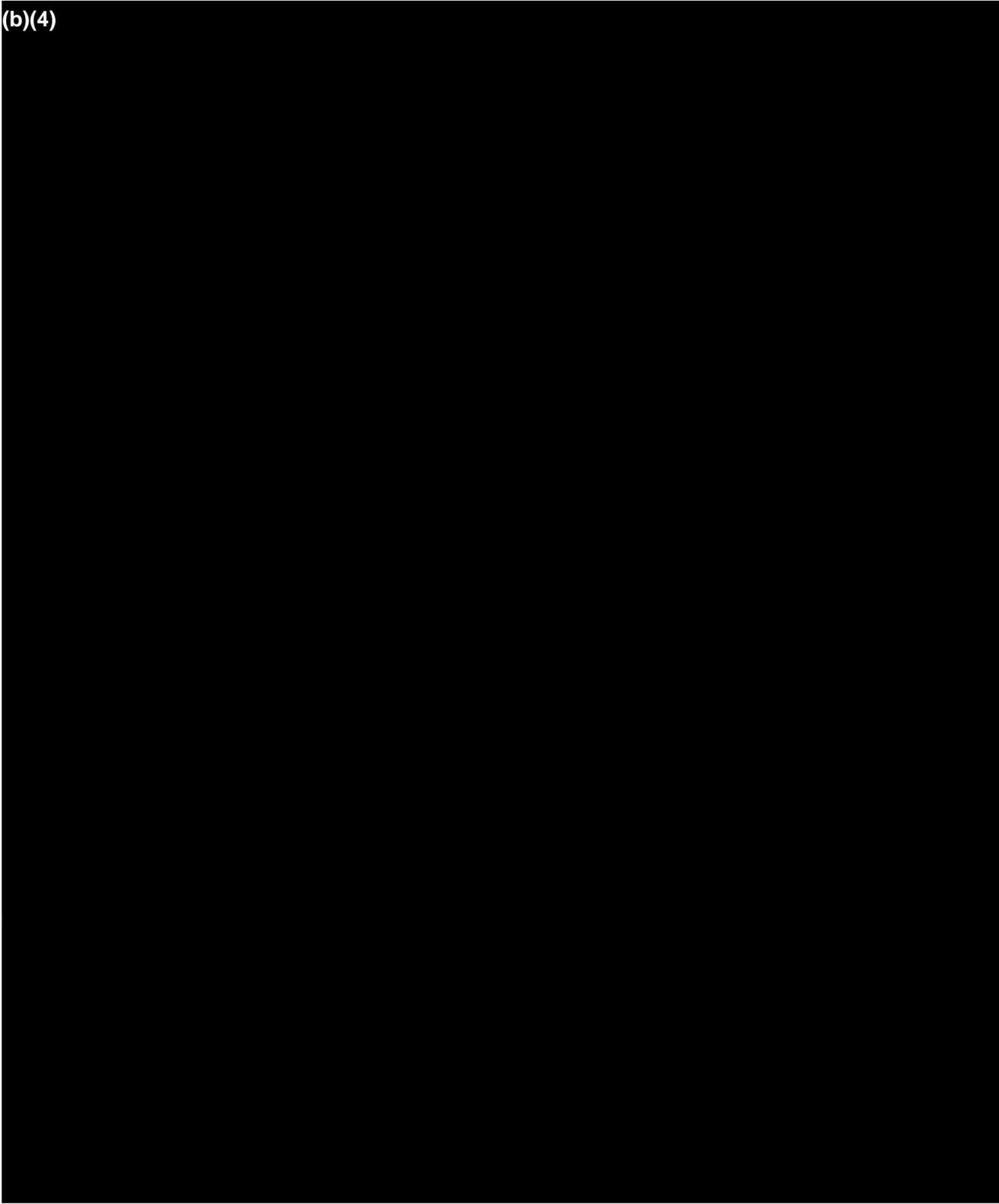


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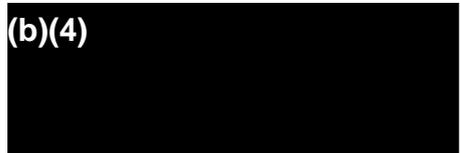


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J-6-14

(b)(4)

ATTACHMENT J-7

GOVERNMENT-FURNISHED PROPERTY AND SERVICES

- The Government will provide all host computer and allied services as required to perform the contract technical requirements. Computers required for the Contractor's internal operations, such as accounting, are not provided by the Government. Primary host computers currently operational at MSFC which are available to the S&E Support Services contractor include several Digital Equipment Corporation VAX systems, an Engineering IBM 3090, and the Engineering Analysis and Data System II (EADS II). EADS II includes a Vector Processor Compute System (CRAY Y-MP8I), a Virtual Memory Compute System (Silicon Graphics (SG) 4D/480S), and an Image Processing system (SG 4D/480 hub and two SG 4D/310's). Access to these host computers will be coordinated by the appropriate S&E Laboratory monitor as required to support Task Directives.
- The Government will provide use of application software running on the host computers listed above. The applications on the Virtual Memory Compute System include the following: FORTRAN 77, Power FORTRAN, C, PASCAL, EMACS editor, GL, Explorer, CASEVision, IMSL, NAG, GRAPHPAK GKS, FIGARO+PHIGS, DISSPLA, DI3000, PLOT10, TGRAF, ORACLE, SQL, Sinda 87, NASPAT (NASTRAN-to-PATRAN Translator), TRASYS. The applications on the Vector Processor Compute System include the following: FORTRAN, EMACS editor, Explorer, IMSL, NAG, GRAPHPAK GKS, FIGARO+PHIGS, NASTRAN, ANSYS, Sinda 85, EAL, NASPAT. Leased or purchased software for use on personal computers or workstations at the Contractor's facility is not provided by the Government.
- The Government will provide all communications services required to connect the S&E Support Services contractor to the MSFC computer network within 60 days after contract award. Contractor site services (instruments, wiring, key systems, PABX, Local Area Networks (LAN), terminals, workstations, peripherals, etc.) are the responsibility of the Contractor. LAN's installed at the Contractor site which require connectivity with the MSFC network must comply with standards outlined in the IEEE 802.3 document. A Transmission Control Protocol/Internet Protocol (TCP/IP) Ethernet LAN will provide maximum connectivity to MSFC computer resources. Terminal emulators and TCP/IP terminal servers required to interface terminals through the Contractor LAN to the MSFC network are the responsibility of the Contractor.

ATTACHMENT J-8

INSTALLATION-PROVIDED PROPERTY AND SERVICES

As stated in Clause G.8(b)(1), office space furnished with general purpose office furniture, ADPE, software, communication and reproduction equipment shall be provided for use under this contract as follows:

- To accommodate on-site personnel supporting WBS 1.4
- To accommodate all personnel supporting WBS 1.7

On-site personnel supporting WBS 1.4.5, will be located in MSFC Building 4487. On-site personnel supporting WBS 1.7.2, 1.7.3, and 1.7.4, will be located in MSFC Building 4481. Personnel supporting WBS 1.7.1, are also considered on-site and will be located in MSFC facilities at the University of Alabama in Huntsville, Research Park West, 977 Explorer Blvd., Huntsville, Alabama.

ATTACHMENT J-10

ACRONYMS AND ABBREVIATIONS

Acronyms

ACO	Administrative Contracting Officer
ADEM	Alabama Department of Environmental Management
AI	Artificial Intelligence
AIIM	Association for Information and Image Management
AIS	Automated Information Security
ANSI	American National Standard Instructions
ATP	Authority to Proceed
BAFO	Best and Final Offer
BS	Bachelor of Science
BFS	Basis for Selection
CAD/CAM	Computer Aided Design/Computer Aided Manufacturing
CAS	Cost Accounting Standards
CB	Competitive Bid
CD	Contractual Data (Relative to Data Requirement Identification)
CDMS	Command and Data Management System
CDRM	Center Data Requirements Manager
CFR	Code Federal Regulations
CI	Continuous Improvement
CLASS	Communication Link Analysis Simulation System
CMIS	Computer Management Information System
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
CPAF	Cost-Plus-Award-Fee
CY	Contract Year
DCL	Document Change Log
DOD	Department of Defense
DODISS	DOD Index of Specifications and Standards
DPAS	Defense Priorities and Allocation System
DPD	Data Procurement Document
DR	Data Requirement
DRD	Data Requirements Description
DRL	Data Requirements List
DSDS	Data System Dynamics Simulator
EADS	Engineering Analysis and Data Systems
EEE	Electrical, Electronic, and Electromechanical
EEO	Equal Employment Opportunity
EMC/EMI	Electromagnetic Compatibility/Electromagnetic Interference
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulation
FDO	Fee Determination Official

FFP	Firm Fixed Price
FICA	Federal Insurance Contribution Act
FIRMR	Federal Information Resources Management Regulations
FLSA	Fair Labor Standards Act
FOB	Free on Board
FTE	Full Time Equivalent
FUI/SUI	Federal/State Unemployment Insurance
FY	Fiscal Year
G&A	General and Administrative
G&C	Guidance and Control
GBL	Government Bill of Lading
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GPO	Government Printing Office
GSA	General Services Administration
GSBCA	General Services Administration Board of Contract Appeals
ID	Identification Number
IEEE	International Electrical, Electronic, and Electromechanical
IGDS	Interactive Graphics Design Systems
LAN	Local Area Network
LOE	Level of Effort
LS	Logistics Support (Relative to Data Requirement Identification)
LSA	Labor Surplus Area
MA	Program Management (Relative to Data Requirement Identification)
MH	Man-hours
MM	Marshall Manual
MMI	Marshall Management Instructions
MS	Master of Science
MSFC	Marshall Space Flight Center
NAC	National Agency Check
NASA	National Aeronautics and Space Administration
NBS	Neutral Buoyancy Simulator
NEMS	NASA Equipment Management System
NFS	NASA FAR Supplement
NHB	NASA Handbook
NLRB	National Labor Relations Board
NMI	NASA Management Instructions
NSA	National Security Agency
NSS	NASA Safety Standards
ODC	Other Direct Costs
ODM	Organization Data Manager
OMB	Office of Management and Budget
OPR	Office of Primary Responsibility
OSI	Open Systems Interconnection
PEB	Performance Evaluation Board
Ph.D	Doctor of Philosophy
PL	Public Law

PRB	Postretirement Benefits
PRL	Page Revision Log
RFP	Request for Proposal
SA	Safety (Relative to Data Requirement Identification)
SAMS	Signal Analysis Modeling System
S&E	Science and Engineering
SBA	Small Business Administration
SDB	Small Disadvantaged Business
SEC	Source Evaluation Committee
SF	Standard Form
SGR	Statement of General Requirements
SIC	Standard Industrial Classification
SOW	Statement of Work
SS	Sole Source
SSO	Source Selection Official
STE	Special Test Equipment
TD	Task Directive
TCP/IP	Transmission Control Protocol/Internet Protocol
TIN	Taxpayer Identification Number
TQM	Total Quality Management
UPN	Unique Program Number
VLF	Very Low Frequency
WAR	Work Authorization Request
WBS	Work Breakdown Structure

Abbreviations

COMM	Communication
COMP	Components
COMPUT	Computers
ELEC	Electric
ENG	Engineering
EST	Estimated
EVIRON	Environment
INTEG	Integration
MGMT	Management
NO.	Number
OPT	Optimum
SUBSYS	Subsystem
YRS	Years