

NNM04057306R

CONTRACT/RFP

EXHIBIT NUMBER

J-2

ATTACHMENT NUMBER

**Development of an Early Flight Fission – Test
Facilities (EFF-TF) Liquid Metal Purification Loop**

PROJECT/SYSTEM

DATA PROCUREMENT DOCUMENT

Contractor

CONTRACTOR

May 27, 2004

DATE

National Aeronautics and
Space Administration

National Aeronautics and Space Administration				DATA PROCUREMENT DOC.		
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	INTRO	SGR	DRL	DRD		

National Aeronautics and Space Administration			DATA PROCUREMENT DOC.		
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MSFC - Form 3461-2 (Rev August 1970)

1.0 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 MSFC in accordance with the requirements set forth within this DPD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DPD, per FAR 52.215-8.

1.2 Data Requirements Descriptions (DRD's): Each data requirement listed on the DRL is given complete definition by a DRD. The DRD prescribes content, format, maintenance instructions, and submittal requirements. For the purpose of classification and control, DRD's of this DPD are grouped into the following broad functional data categories:

<u>CATEGORY SYMBOL</u>	<u>DESCRIPTION</u>
CD	Contractual Data
LS	Logistics Management
MA	Management

The symbols representing these data categories form part of the prefix of the DRD identification number. The first numerical characters reflect the DPD number.

1.3 Data Types for Contractual Efforts: The types of data and their contractually applicable requirements for approval and delivery are:

<u>TYPE</u>	<u>DESCRIPTION</u>
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- 1 All issues and interim changes to those issues require written approval from the requiring organization before formal release for use or implementation.
- 2 MSFC 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 MSFC approval. However, to be a satisfactory delivery, the data must satisfy all applicable contractual requirements.

2.0 STATEMENT OF GENERAL REQUIREMENTS

2.1 Applicable Documents: Documents included as applicable documents in this DPD are the issue specified in the Statement of Work, and form a part of the DPD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DPD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

2.2 Printing: All printing, duplicating, or binding shall be in accordance with NFS 1852.208-81, Restrictions on Printing and Duplicating.

2.3 Distribution

2.3.1 Distribution of required documentation shall be in quantities determined by and to the addresses noted on a separate distribution list to be furnished by the Contracting Officer.

2.3.2 Electronic submission of data deliverables is preferred. The preferred formats include Microsoft Word, Excel, PowerPoint, or Adobe Acrobat PDF as appropriate. The software versions shall be confirmed prior to submittals

2.4 Contractor's Internal Documents: The contractor's internal documents shall be used to meet the data requirements of this DPD unless a specific format is required by the applicable DRD.

2.5 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 MSFC by the contractor and, if applicable, as approved by MSFC. This number, change legend, date, and title constitute the minimum identification of the specific document and shall appear on the cover and title page. The contract number shall also appear on the cover and title page as separate markings. The originator and organization shall be included on the title page. The document number, change legend, and date shall appear on each page of the document. In the front matter of each document, identify the DPD number and applicable DRD number(s) required for document preparation. Drawings and ECP's are excluded from the marking provisions of this paragraph. All Type 1 documentation, excluding configuration management requirements, will be marked "PRELIMINARY PENDING MSFC APPROVAL," and once approved shall be reissued with "APPROVED BY MSFC" and the date and approval authority annotated on the cover.

2.6 Reference to Other Documents in Data Submittals: All referenced documents shall be made readily available to the cognizant MSFC organization upon request. The contractor should make sure that the references are available to MSFC in a manner which does not incur delays in the use of the response document.

2.7 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. Individual page revisions shall be made as deemed necessary by the contractor or as directed by the Contracting Officer. When complete reissues are made, the entire contents of the document shall be brought up to date and shall incorporate revised pages.

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 placing a heavy vertical line in the right-hand margin extending the entire length of the change. In addition, the numerical control number of the contractual direction authorizing the change shall be placed adjacent to the vertical revision line. These revision identifiers shall be used to reflect the current revision only; any previous symbols on a page will be deleted by the current revision.
- 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. All revision symbols (vertical lines and contractual direction control numbers) will be removed from all pages; revision dates shall remain in the Date Revised block on DRD's that have been revised. The issue symbol, which will commence with "A" and progress through "Z," will be entered in the DPD identification block of each DRD page of the DPD.

Development of an Early Flight Fission - Test Facilities (EEF-TF) Liquid Metal Purification Loop

Data Requirements List

<u>DRD</u>	<u>DATA TYPE</u>	<u>TITLE</u>	<u>OPR</u>
CD - Contractual Data			
1048CD-001	2	Information Technology Security Plan	AD34
1048CD-002	3	Technology Reports	CD30
LS - Logistics Management			
1048LS-001	2	Government Property Management Plan	AD41
MA - Management			
1048MA-002	2	Task Reports	TD40
1048MA-001	3	Final Report	RS40

DATA REQUIREMENTS DESCRIPTION (DRD)

- | | |
|--|--|
| <p>1. DPD NO.: 1048</p> <p>3. DATA TYPE: 2</p> | <p>ISSUE: RFP</p> <p>2. DRD NO.: 1048CD-001</p> <p>4. DATE REVISED:</p> <p>5. PAGE: 1/1</p> |
|--|--|
6. **TITLE:** Information Technology Security Plan
7. **DESCRIPTION/USE:** To document information technology security risk management and safeguards for protection of unclassified NASA electronic information and data processed by Federal general support computer systems and major software applications.
8. **OPR:** AD34 9. **DM:** TD40
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:** 45 days after contract award
12. **SUBMISSION FREQUENCY:** Revise as required
13. **REMARKS:** The information technology security plan must be consistent with and further detail the approach contained in the offeror's proposal or sealed bid that resulted in the award of this contract and in compliance with the requirements stated in NFS 1852.204-76.
14. **INTERRELATIONSHIP:** SOW paragraph 4.0
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** Information Technology Security Plan shall document the safeguards necessary to ensure sufficient availability, integrity, and confidentiality of that information accessed or managed within the systems and/or applications, based on the contractor's assessment of risks.
- 15.2 **APPLICABLE DOCUMENTS:**
- | | |
|-----------------|--|
| NPR 2810.1 | <i>Security of Information Technology</i> |
| NFS 1804.470-3 | <i>Security Plan for unclassified Federal Information Technology systems</i> |
| NFS 1852.204-76 | <i>Security Requirements for Unclassified Information Technology Resources</i> |
- 15.3 **CONTENTS:** The Information Technology Security Plan shall meet the requirements of the applicable documents in 15.2 and document how the contractor and subcontractor personnel will utilize, in a secure manner commensurate with the sensitivity of the information involved, those Federal computer systems and software applications managed by others. The plan shall describe the contractor's processes for implementing information security including personnel background screening, personnel awareness and training, information protection, and security incident response.
- 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.:** 1048 **ISSUE:** RFP
2. **DRD NO.:** **1048CD-002**
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/3
6. **TITLE:** Technology Reports
7. **DESCRIPTION/USE:** Provides NASA with technical information concerning any invention, discovery, improvement, or innovation made by a contractor in the performance of work under this contract for the purpose of disseminating this information to obtain increased use. Also, to provide NASA with data to review for possible patentable items.
8. **OPR:** CD30 9. **DM:** TD40
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:**
Technology Reporting Plan: Upon Contracting Officer's request.
Disclosure of Invention and New Technology (NASA Form 1679): Within 2 months of identification of reportable item.
Interim NASA-MSFC Technology Report (NASA Form c3041 or c3042): 12 months from the date of the contract.
12. **SUBMISSION FREQUENCY:**
Technology Reporting Plan: Upon Contracting Officer's request.
Disclosure of Invention and New Technology (NASA Form 1679): For each reportable item.
Interim NASA-MSFC Technology Report (NASA Form c3041 or c3042): Every 12 months.
Final NASA-MSFC Technology Report (NASA Form c3041 or c3042): Three months after completion of contracted work.
13. **REMARKS:** Copies of NASA Forms 1679, c3041 and c3042 may be obtained at: <http://technology.grc.nasa.gov/forms/msfc/msfc.htm>. These forms may also be obtained from the New Technology Representative (<mailto:Susan.L.Whitfield@nasa.gov>). NASA Form 1679 may be filled out electronically at: <http://invention.nasa.gov/>.
14. **INTERRELATIONSHIP:** SOW paragraph 4.0
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The Technology Reports include technical detail as is necessary to identify and fully describe a "Reportable Item". Per NFS 1852.227-70, "Reportable Item" means any invention, discovery, improvement, or innovation of the contractor, whether or not the same is or may be patentable or otherwise protectable under Title 35 of the United States Code, conceived or first actually reduced to practice in the performance of any work under this contract or in the performance of any work that is reimbursable under any clause in this contract providing for reimbursement of costs incurred prior to the effective date of this contract.
- 15.2 **APPLICABLE DOCUMENTS**
NFS 1852.227-70 New Technology Clause

DRD Continuation Sheet

TITLE: Technology Reports

DRD NO.: 1048CD-002

DATA TYPE: 3

PAGE: 2/3

15. **DATA PREPARATION INFORMATION (CONTINUED):**

15.3 **CONTENTS:** The Technology Reports consist of:

- a. Disclosure of Invention and New Technology (Including Software): In accordance with NFS 1852.227-70 (e)(2), the disclosure to the agency shall be in the form of a written report and shall identify the contract under which the reportable item was made and the inventor(s) or innovator(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the reportable item. The disclosure shall also identify any publication, on sale, or public use of any subject invention and whether a manuscript describing such invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Contractor will promptly notify the agency of the acceptance of any manuscript describing a subject invention for publication or of any on sale or public use planned by the Contractor for such invention. This reporting requirement may be met by completing NASA Form 1679 (July 2000) in hardcopy or online at: <http://invention.nasa.gov/>. Use of this form or the online system is preferred; however, if the form is not used the following information should be provided in order to meet the reporting requirement:
 1. Descriptive title.
 2. Innovator(s) name(s), title(s), phone number(s), and home address(es).
 3. Employer when innovation made (name and division).
 4. Address (place of performance).
 5. Employer status (e.g., Government, college or university, non-profit organization, small business firm, large entity).
 6. Origin (e.g., NASA grant number, NASA prime contract number, subcontractor, joint effort, multiple contractor contribution, other).
 7. NASA Contracting Officer's Technical Representative (COTR).
 8. Contractor/grantee New Technology Representative.
 9. Brief abstract providing a general description of the innovation:
 - (a) Description of the problem or objective that motivated the innovation's development.
 - (b) Technically complete and easily understandable description of innovation developed to solve or meet the objective.
 - (c) Unique or novel features of the innovation and the results or benefits of its application.
 - (d) Speculation regarding potential commercial applications and points of contact (including names of companies producing or using similar products).
 10. Additional documentation.
 11. Degree of technological significance (e.g., modification of existing technology, substantial advancement in the art, major breakthrough).
 12. State of development (e.g., concept only, design, prototype, modification, production model, used in current work).
 13. Patent status.
 14. Dates or approximate time period during which this innovation was developed.
 15. Previous or contemplated publication or public disclosure including dates.
 16. Answers to the following questions (for software only):
 - (a) Using outsiders to beta-test code? If yes, done under beta-test agreement?
 - (b) Modifications to this software continue by civil servant and/or contractual agreement?

DRD Continuation Sheet

TITLE: Technology Reports

DRD NO.: **1048CD-002**

DATA TYPE: 3

PAGE: 3/3

15. **DATA PREPARATION INFORMATION (CONTINUED):**

- (c) Previously copyrighted (if so, by whom)?
- (d) Were prior versions distributed (if yes, supply NASA or Contractor contract)?
- (e) Contains or is based on code owned by a non-federal entity (if yes, has a license for use been obtained)?
- (f) Has the latest version been distributed without restrictions as to use or disclosure for more than one year (if yes, supply date of disclosure)?

17. Name(s) and signature(s) of innovator(s).

- b. Interim NASA-MSFC Technology Report: This report shall consist of a listing of reportable items for the reporting period or certification that there are none. This report shall also contain a list of subcontracts containing a patent rights clause or certification that there were no such subcontracts. Completion of NASA Form c3041 or c3042 (whichever is applicable) will satisfy this reporting requirement. Use of the form is preferred; however an alternate format is acceptable provided all required information is provided.
- c. Final NASA-MSFC Technology Report: This report shall consist of a comprehensive list of all reportable items for the contract duration or certification that there are none. This report shall also contain a list of subcontracts containing a patent rights clause or certification that there were no such subcontracts. Completion of NASA Form c3041 or c3042 (whichever is applicable) will satisfy this reporting requirement. Use of the form is preferred; however an alternate format is acceptable provided all required information is provided.
- d. Subcontracts: The contractor shall provide copies of subcontracts containing a patent rights clause upon Contracting Officer's request.

15.4 **FORMAT:**

The Disclosure of Invention and New Technology (Including Software) report may use NASA Form 1679 (July 2000) or the online system at: <http://invention.nasa.gov/>, or provide sufficient information to meet the reporting requirement.

The interim and final NASA-MSFC Technology Reports may use NASA Form c3041 or c3042 (whichever is applicable) or provide sufficient information to meet the reporting requirement.

15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 1048 **ISSUE:** RFP
2. **DRD NO.:** **1048LS-001**
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Government Property Management Plan
7. **DESCRIPTION/USE:** To describe the method of controlling and managing Government property.
8. **OPR:** AD41 9. **DM:** TD40
10. **DISTRIBUTION:** Cognizant property administrator
11. **INITIAL SUBMISSION:** Preliminary three months after Authority To Proceed (ATP)
12. **SUBMISSION FREQUENCY:** Final one year after ATP, revise as required
13. **REMARKS:** This document shall be the official contract requirements document for the control and identification of all Government property.
14. **INTERRELATIONSHIP:** SOW paragraph 4.0
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The Government Property Management Plan defines the contractor's methods of care, accounting, and control of Government property.
- 15.2 **APPLICABLE DOCUMENTS**

FAR	<i>Federal Acquisition Regulation, Part 45</i>
NPR 5100.4B	<i>Federal Acquisition Regulation Supplement, (NASA/FAR Supplement) Part 18-45 and latest revisions thereto</i>
- 15.3 **CONTENTS:** This plan shall satisfy the requirements of the documents listed in 15.2, and the contract. This plan shall consist of those procedures which constitute the contractor's property management system and shall include the following categories:

a. Property management.	i. Reports.
b. Acquisition.	j. Consumption.
c. Receiving.	k. Utilization.
d. Identification.	l. Maintenance.
e. Records.	m. Subcontractor control.
f. Movement.	n. Disposition.
g. Storage.	o. Contract close-out.
h. Physical inventories.	
- 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.: 1048 | 2. DRD NO.: 1048MA-001 |
| 3. DATA TYPE: 2 | 4. DATE REVISED: |
| | 5. PAGE: 1/2 |
6. **TITLE:** Task Reports
7. **DESCRIPTION/USE:** To provide reports for contract tasks performed.
8. **OPR:** TD40 9. **DM:** TD40
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:** Task 1 - Two (2) months from Authority to Proceed (ATP)
12. **SUBMISSION FREQUENCY:** Task 2: Within Two (2) months from ATP. Task 3: 6 months from ATP. Task 4: 18 months from ATP. Task 5: No later than 15 months from ATP. Task 6: No later than 18 months from ATP.
13. **REMARKS:**
14. **INTERRELATIONSHIP:** SOW paragraph 2.0
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** Task Reports summarize task progress and results.
- 15.2 **APPLICABLE DOCUMENTS:** None
- 15.3 **CONTENTS:** The Task Reports shall contain:
- a. Task 1: Results of theoretical analysis.
 - b. Task 2: Engineering design, parts list, and calculations showing that the design shall meet the purification levels.
 - c. Task 3: Document liquid metal purification system after purification loop fabrication and checkout are completed.
 - d. Task 4: Deliver required material with documentation relating to purification levels. Following acceptance by Marshall Space Flight Center (MSFC) of delivered samples, contractor shall deliver purification loop to MSFC.
 - e. Task 5:
 1. Reports documenting the engineering design (with options), performance (with options), and component/parts breakdown (with options).
 2. Reports documenting fabrication drawings and a description of the system (including a fabrication, assembly, and operations sequence).
- 15.4 **FORMAT:** Contractor format is acceptable.
- 15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

- | | |
|-------------------------|--------------------------------------|
| 1. DPD NO.: 1048 | 2. DRD NO.: 1048MA-002 |
| 3. DATA TYPE: 3 | 4. DATE REVISED: |
| | 5. PAGE: 1/2 |
6. **TITLE:** Final Report
7. **DESCRIPTION/USE:** To provide a summary of the results of the entire contract effort, including recommendations and conclusions.
8. **OPR:** RS40 9. **DM:** TD40
10. **DISTRIBUTION:** Per Contracting Officer's letter. In addition to the final report submitted to the Contracting Officer, the contractor shall concurrently provide to the Center STI/Publication Manager and the NASA Center for AeroSpace Information (CASI) a copy of the letter transmitting the final report to the Contracting Officer. The copy of the letter shall be submitted to CASI at the following address:
Center for AeroSpace Information (CASI)
Attn: Acquisitions Collections Development Specialist
7121 Standard Drive
Hanover, Maryland 21076-1320
11. **INITIAL SUBMISSION:**
12. **SUBMISSION FREQUENCY:** 30 days after completion of contract
13. **REMARKS:**
14. **INTERRELATIONSHIP:** SOW paragraph 2.0
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The Final Report shall summarize the results of the entire contract work.
- 15.2 **APPLICABLE DOCUMENTS**
NFS 1852.235-73 *Center for AeroSpace Information – Final Scientific and Technical Reports*
- 15.3 **CONTENTS:** The Final Report shall include, but not limited to:
- a. Description of the liquid metal system used on the SNAP-10A system.
 - b. Description of all the testing related to the liquid metal systems used on the SNAP-10A program.
 - c. Lessons learned from the testing including identification of strength and weakness of the system.
 - d. Identification of how the lessons learned, where applicable, is used to the design and fabrication of the liquid metal purification loop in Task 2.
- The Final Report shall be prepared and submitted in accordance with NFS 1852.235-73. The final report shall include a completed report documentation page (Standard Form 298) as the final page, per NFS 1852.235-73(c).
- 15.4 **FORMAT:** Contractor format is acceptable for the text of the report. The final page of the report shall be in accordance with Standard Form 298.
- 15.5 **MAINTENANCE:** None required