

DATA PROCUREMENT DOCUMENT
NO. **XXX** ISSUE **Issue**

NNM12ZPS001N

CONTRACT/RFP

EXHIBIT NUMBER

J-2

ATTACHMENT NUMBER

Advanced Booster Engineering Demonstration and/or Risk Reduction

DATA PROCUREMENT DOCUMENT

Contractor

CONTRACTOR

Date

DATE

National Aeronautics and
Space Administration

National Aeronautics and Space Administration					DATA PROCUREMENT DOCUMENT	
DOCUMENT CHANGE LOG					NO.	ISSUE
					xxx	Issue
INCORPORATED REVISIONS OUTSTANDING REVISIONS				AS OF:		SUPERSEDING: PAGE:
AUTHORITY (DPD Revision)	PORTION AFFECTED - PAGE NO./NO.				REMARKS	
	INTRO	SGR	DRL	DRD		

GENERIC DPD INTRODUCTION/STATEMENT OF GENERAL REQUIREMENTS

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 DRDs 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. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) clause, that clause shall take precedence over the DPD, consistent with clause FAR 52.215-8.

1.2 DPD Description: This DPD consists of a Document Change Log, an Introduction, a Statement of General Requirements, DPD maintenance procedures, a DRL, and the DRDs.

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 DRDs.

1.2.2 Data Requirements List (DRL): Throughout the performance of the contract, the DRL provides a listing by data category of the data requirements of the DPD.

1.2.3 Data Requirements Descriptions (DRDs)

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, DRDs of this DPD are grouped into the following broad functional data categories:

<u>CATEGORY SYMBOL</u>	<u>DESCRIPTION</u>
DE	Design and Development Engineering
MA	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.

1.2.3.4 To facilitate the usage and maintenance of the DPD, the DRDs have been sectionalized in accordance with the above data categories.

1.2.3.5 The DRDs are filed by data category and are in alpha-numeric sequence as listed on the DRL page (or pages) that precedes the DRDs.

1.2.4 Document Change Log (DCL): The Document Change Log chronologically records all revision actions that pertain to the DPD.

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 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.
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- 2* NASA reserves a time-limited right to disapprove in writing any issues and interim changes to those issues. The Contractor shall submit the required data to NASA for review not less than 45 calendar days** prior to its release for use. The Contractor shall clearly identify the release target date in the “submitted for review” transmittal***. If the data is unacceptable, NASA will notify the Contractor within 45 calendar days** from the date of submission, regardless of the intended release date***. The Contractor shall resubmit the information for reevaluation if disapproved. The submittal is considered approved if the Contractor does not receive disapproval or an extension request from NASA within 45 calendar days**.
 - 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 shall satisfy all applicable contractual requirements and be submitted on time.
 - 4 These data are produced or used during performance of the contract and are retained by the Contractor. They shall be delivered only when NASA requests in writing and shall be delivered in accordance with the instructions in the request. The Contractor shall maintain a list of these data and shall furnish copies of the list to NASA 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 formal delivery is not required. However, the Contracting Officer or the Contracting Officer’s Technical Representative (COTR) shall have access to and can inspect this data at its location in the Contractor’s or subcontractor’s facilities, or in an electronic database accessible to the Government.
- * Note: Type 1 and Type 2 data may be placed under NASA configuration management control when designated by NASA. CM control requires the Contractor to submit Type 1 and Type 2 data updates through Engineering Change Proposals (ECPs).
- ** Note: This time limit may be tailored for individual DRDs to meet the requirements of the procuring activity.
- *** Note: If the Contractor does not identify a release target date or if the intended release date is shorter than 45 calendar days from the date of submission, the 45 calendar days review cycle stands (or the tailored Type 2 time limitation for the specific procurement).

2.0 STATEMENT OF GENERAL REQUIREMENTS

- 2.1 Applicable/Reference 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. Applicable documents listed in Item 15.2 of a DRD are applicable only to the preparation of the deliverable documentation described by that DRD.

References to documents other than applicable documents in the data requirements of this DPD may sometimes be utilized, and shall be indicated in 13. Remarks of the DRD. 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 Subcontractor Data Requirements

- 2.2.1 The Contractor shall specify to subcontractors and vendors, if any, the availability source of all data required for the satisfactory accomplishment of its contracts. The Contractor shall validate these requirements for documents when appropriate; where the requirement concerns other Contractor data, the Contractor shall provide his subcontractor or vendor with the necessary documents. All such requests shall be accomplished under the auspices of the Contractor.

2.2.2 Reference to subcontractor data in the Contractor’s responses is permissible, providing the references are adequate and includes such identification elements as title, number, revision, etc., and a copy of the referenced data is supplied with the response document at time of delivery to NASA.

2.3 Data Distribution, Format, Data Restriction Marking, and Transmittal

2.3.1 Distribution: Distribution of required documentation shall be in quantities determined by the Contracting Officer. Recipient names and email (if applicable) addresses shall be noted on a separate distribution list to be furnished by the Contracting Officer. The Contracting Officer’s letter may include other information pertinent to delivery of data, as required.

2.3.2 Format

2.3.2.1 Electronic Format: Electronic submission of data deliverables is required and shall be printable. Data deliverables shall be delivered to NASA in the format specified below unless a specific format is required by a DRD. Data submittals shall consist of a single Adobe Acrobat PDF file and the native format electronic file(s). The preferred native formats include Microsoft Word, Excel, PowerPoint or CAD drawing plot file, as appropriate. Where a single native format file is not possible, multiple files may be integrated into a single ZIP file for submission. The organization of the contents of the integrated ZIP file shall be made readily apparent to the reader, and each file within the integrated product shall be clearly identifiable and traceable within the organization of the integrated product. If files are fragmented, file names shall be labeled logically and contiguously, and the files shall be easily reassembled or merged (e.g. 1 filename, 2 filename, 2a filename, etc.). The software versions shall be confirmed prior to submittals.

2.3.2.2 Hardcopy Format: In addition to the electronic submittal, one hardcopy package of specific data deliverables shall be delivered to the NASA Contracting Officer for the Government contract file. The hardcopy package shall consist of the Contractor’s Transmittal Memo and one copy of the data deliverable.

2.3.3 Data Restriction Marking

2.3.3.1 Data Restriction Determination and Marking Requirements: The Contractor shall determine the data restriction that applies to each data deliverable and mark the data restriction on the data coversheet, or indicate the data restriction in the data transmittal package if the data format precludes identification of data restriction directly in the data. The Contractor shall make a determination for each individual data deliverable item, and shall not apply a default or blanket data restriction marking to all data deliverables (e.g., “data may be export restricted”). If NASA does not agree with the Contractor applied data restriction, the NASA Contracting Officer shall return the data to the Contractor, cancel the markings, or ignore the markings consistent with the procedures set forth in the “data rights” clause(s) contained in the contract.

2.3.3.2 Data Restriction Categories and Marking Statements: The Contractor shall consider the following data restriction categories, as a minimum, and utilize specified marking statements.

If data delivered under this contract is subject to the International Traffic in Arms Regulations (ITAR), the data shall contain an “ITAR Notice” as follows:

<p>International Traffic in Arms Regulations (ITAR) Notice</p> <p>This document contains information which falls under the purview of the U.S. Munitions List (USML), as defined in the International Traffic in Arms Regulations (ITAR), 22 CFR 120-130, and is export controlled. It shall not be transferred to foreign nationals, in the U.S. or abroad, without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the United States Department of State. Violations of these regulations are punishable by fine, imprisonment, or both.</p>

If data delivered under this contract is subject to the Export Administration Regulations (EAR), the data shall contain the “EAR Notice” as follows:

Export Administration Regulations (EAR) Notice

This document contains information within the purview of the Export Administration Regulations (EAR), 15 CFR 730-774, and is export controlled. It may not be transferred to foreign nationals in the U.S. or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exception is obtained/available from the Bureau of Industry and Security, United States Department of Commerce. Violations of these regulations are punishable by fine, imprisonment, or both.

If the contract contains FAR 52.227-14 *Alternate II*, the “Limited Rights Notice” may be applicable to data (other than computer software) delivered under this contract.

If the contract contains FAR 52.227-14 *Alternate III*, the “Restricted Rights Notice” may be applicable to computer software delivered under this contract.

If the contract contains FAR 52.227-20, the “SBIR Rights Notice” may be applicable to SBIR data delivered under this contract.

If the contract contains NFS 1852.237-73, a sensitive information legend may be applicable to information delivered under this contract

In accordance with the applicable data clause (e.g., FAR 52.227-14(c) or FAR 52.227-20(c)), the Contractor may be able to assert a copyright claim in data delivered under this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government.

2.3.4 Transmittal

2.3.4.1 Data shall be transmitted to NASA by entry into the MSFC Repository, email, CD or DVD, hardcopy, or other mechanism agreed to by the Contracting Officer, COTR, and Project representatives who are responsible to receive, index, and store the data deliverables.

2.3.4.2 If email is used to transmit data deliverables, the email size shall be 10 Megabytes or less to ensure receipt by the NASA email servers. Encrypted email format shall be used to transmit data which has been judged sensitive by the Contractor (e.g., export controlled, limited rights data, SBIR, restricted computer software, copyrighted, etc.).

2.3.4.3 Data Transmittal Package: Each data transmittal package shall include:

- a. Transmittal memorandum that specifies the meta-data below for each data transmittal:
 1. Contract number.
 2. Data Requirements Description (DRD) number.
 3. DRD data type (specified in Item 3 on the DRD).
 4. Submission date or milestone being satisfied.
 5. Document number and revision.
 6. Document title.
 7. File names of all files being delivered; file naming convention shall clearly identify the document being delivered.
 8. Distribution (as defined by the Contracting Officer’s letter).
 9. Requested response date.
 10. Contractor assigned data restriction (export controlled, limited rights data, SBIR, restricted computer software, copyrighted, etc.) if not marked on data.
 11. NASA Records Retention Schedule (NRRS) number, if applicable (See NPR 1441.1, NASA Records Retention Schedules).
- b. Printable electronic files or hardcopy data.

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- 2.3.5 When electronic data deliverables are transmitted directly to the MSFC Repository, the Digital Asset Manager web interface shall be utilized. Instructions for electronic data submittals can be found at http://avmcc.msfc.nasa.gov/repository/repository_submittal.php. Document submitters to the Repository must register for a MSFC EDMS (Documentum) user account, through the Identity Management and Account Exchange (idMAX) system. Computer-Aided Design (CAD) drawings shall be submitted in the original native vector, Hewlett-Packard Graphic Language (HPGL), and raster image formats.
- 2.4 **Printing:** All printing, duplicating, or binding shall be in accordance with NFS 1852.208-81, Restrictions on Printing and Duplicating. Printing of formal reports and Type 1 and 2 data in book format shall be in accordance with the following general specifications:
- a. Method of reproduction – offset/xerography.
 - b. Finished size – 8 1/2" X 11".
 - c. Paper – 20-pound opaque bond.
 - d. Cover – Litho cover stock.
 - e. Pages shall be printed on both sides; blank pages shall be avoided when possible.
 - f. Oversize pages shall be avoided when possible, but if necessary shall be folded to 8 1/2" X 11".
 - g. Binding shall be the most economical method commensurate with the size of the report and its intended use.
- 2.5 **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.
- 2.6 **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. For all data types, the document 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. Successive issues or revisions of documents shall be identified in the same manner as the basic issue and shall have appropriate change identification. Drawings and ECP's are excluded from the marking provisions of this paragraph. All Type 1 documentation, excluding configuration management requirements, shall 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.
- 2.7 **Reference to Other Documents and Data Deliverables in Data Submittals:** All referenced documents shall be made readily available to the cognizant NASA organization upon request. The Contractor shall make sure that the references are available to NASA in a manner which does not incur delays in the use of the response document. Reference may be made, within one data submittal, to other data submittals delivered in response to this DPD in those cases where the data required by one DRD may have been delivered by the Contractor in response to another DRD. The reference to previously-submitted data shall include the applicable DRD number, data submittal version date, and location within the referenced document.
- 2.8 **Maintenance of Type 1 Document Submittals**
- 2.8.1 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 2.6 above, with the exception of drawings (which shall be revised in accordance with contract configuration management requirements).
- 2.8.2 Individual page revisions shall be made as deemed necessary by the Contractor or as directed by the Contracting Officer.
- 2.8.3 A Type 1 document shall be completely reissued when, in the opinion of the Contractor and/or NASA, the document has been revised to the extent that it is unusable in its present state, or when directed by the Contracting Officer. When complete reissues are made, the entire contents of the document shall be brought

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up to date and shall incorporate revised pages. All revisions shall be recorded. A revision log shall identify complete reissues except for periodic reports and documents which are complete within themselves as final.

- 2.8.4 Changes of a minor nature to correct obvious typing errors, misspelled words, etc., shall only be made when a technical change is made, unless the accuracy of the document is affected.
- 2.8.5 All revised pages shall be identified by a revision symbol and a new date. Each document shall contain a log of revised pages that identify the revision status of each page with the revision symbol. This list shall follow the table of contents in each document. The line or lines revised on a given page shall be designated by the use of vertical line in the margin of the page, and the change authority shall be indicated adjacent to the change.
- 2.8.6 Contractor Type 1 document shall not be submitted containing pen and ink markups which correct, add to, or change the text, unless schedule problems exist and approval is obtained in writing from the Contracting Officer. Such markups, however, shall not exceed 20 percent of the page content and shall be acceptable provided that the reproduced copies are legible. In addition, hand-drawn schematics, block diagrams, data curves, and similar charts may be used in original reports in lieu of formally prepared art work, as long as legibility of copies is not impaired. Acceptability shall be determined by the Contracting Officer.

3.0 DPD MAINTENANCE PROCEDURES

3.1 NASA-Initiated Change: New and/or revised data requirements shall be incorporated by contract modification to which the new or revised portion of the DPD shall be appended. The Contractor shall notify the Contracting Officer in the event a deliverable data requirement is imposed and is not covered by a DRD, or when a DRD is changed by a contract modification and for which no revision to DPD is appended. In such cases, the Contractor shall submit the requested changes to NASA for approval. See paragraph 3.3.1 for change procedures.

3.2 Contractor-Initiated Change: Contractor-proposed data requirements or proposed changes to existing requirements shall be submitted to NASA for approval.

3.3 DPD Change Procedures

3.3.1 Changes to a contractual issue of this DPD shall be identified by NASA on the Document Change Log.

3.3.2 The date of the DPD shall be entered under the "as of" block of the Document Change Log. The date that was in the "as of" block shall be entered in the "Superseding" block.

3.3.3 The Document Change Log entitled "Incorporated Revisions" shall be changed to indicate the modification number, portions affected, and remarks. All changes to the DPD/DRDs shall be identified in the "Remarks" column.

3.4 DPD Reissues

3.4.1 When conditions warrant, the DPD shall be reissued by NASA for each contract modification that affects the DPD and shall supersede the existing DPD in its entirety. Reissues shall be issued by contractual direction.

3.4.2 All revision dates shall remain in the Date Revised block on all DRDs. The issue symbol, which shall commence with "A" and progress through "Z," shall be entered in the DPD identification block of each DRD page of the DPD.

Advanced Booster Engineering Demonstration and/or Risk Reduction

Data Requirements List

<u>DRD</u>	<u>DATA TYPE</u>	<u>TITLE</u>	<u>OPR</u>
DE – Design Engineering XXXXDE-001	2	Test/Demonstration Plan	XP10
MA – Management XXXXMA-001	3	Monthly Progress Report	XP10
XXXXMA-002	1	Final Management and Technical Report	XP10
XXXXMA-003	3	Program/Project Schedules	XP10
XXXXMA-004	2	Affordability Plan	XP10
SA – Safety XXXXSA-001	2	Off-site Safety, Health, and Environmental (SHE) Plan	AS10/QD12
XXXXSA-002	3	Mishap and Safety Statistics Reports	QD12

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** DE-001
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Test/Demonstration Plan
7. **DESCRIPTION/USE:** To identify objectives, procedures and schedules for each significant test or demonstration.
8. **OPR:**
9. **DM:**
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:** 60 calendar days prior to Test/Demonstration
12. **SUBMISSION FREQUENCY:** Per Test/Demonstration (as agreed to by the CO/COR).
13. **REMARKS:**
14. **INTERRELATIONSHIP:**
15. **DATA PREPARATION INFORMATION:**
 - 15.1 **SCOPE:** The Test/Demonstration Plan describes tests to be performed and their schedules.
 - 15.2 **APPLICABLE DOCUMENTS:**
 - 15.3 **CONTENTS:** The Test/Demonstration Plan, at a minimum, shall include:
 - a. Objectives and schedules relative to program milestones.
 - b. Description of unit under test/demonstration and its configuration.
 - c. Constraints and limitations.
 - d. Instrumentation requirements.
 - e. Pretest analysis predictions.
 - f. Test/demonstration cases.
 - g. Environments.
 - h. Safety and hazard analysis of test/demonstration conduct and conditions.
 - i. Pass/fail criteria.
 - j. Organization responsible for the test/demonstration.
 - k. Hazard Analyses.
 - l. Test/Operational Readiness Review (TRR/ORR) Agenda.
 - 15.4 **FORMAT:** Contractor format is acceptable.
 - 15.5 **MAINTENANCE:** Changes shall be incorporated by complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** MA-001
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Monthly Progress Report
7. **DESCRIPTION/USE:** To provide visibility to Contractor and MSFC project management of actual and potential problems and progress toward meeting the cost, technical and schedule requirements.
8. **OPR:** XP10 9. **DM:**
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:** First calendar month following the end of the first full month after Authority to Proceed (ATP).
12. **SUBMISSION FREQUENCY:** 10 calendar days following the end of each month
13. **REMARKS:**
14. **INTERRELATIONSHIP:** DRD MA-003, Program/Project Schedules
15. **DATA PREPARATION INFORMATION:**
 - 15.1 **SCOPE:** The Monthly Progress Report provides data for the assessment of monthly cost, technical and schedule progress.
 - 15.2 **APPLICABLE DOCUMENTS:**
None
 - 15.3 **CONTENTS:** The Monthly Progress Report shall contain the following:
 - a. Work accomplished for current reporting period, including a report of overall cost, technical and schedule performance.
 - b. Cost plan/forecasts and actuals time-phased by month for the Government Fiscal year (GFY) and reported by labor hours, labor costs, subcontractor costs, materials, and Other Direct Costs (ODCs). Include a total column for cumulative purposes. Include the name of the contract, the provided NASA WBS funding code, and associated WBS task identifier.
 - c. Work planned for next reporting period.
 - d. Current problems/risks which impede performance or impact program schedule or cost, and proposed corrective action.
 - e. Other information that assists the Government in evaluating the Contractor's cost, technical and schedule performance.
 - 15.4 **FORMAT:** Contractor format is acceptable.
 - 15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** MA-002
3. **DATA TYPE:** 1
4. **DATE REVISED:**
5. **PAGE:** 1/2
6. **TITLE:** Final Management and Technical Report
7. **DESCRIPTION/USE:** To provide a summary of the results of the entire contract effort, including recommendations and conclusions based on the experience and results obtained.
8. **OPR:** XP10 9. **DM:**
10. **DISTRIBUTION:** Per Contracting Officer's Letter
11. **INITIAL SUBMISSION:** 30 calendar days after completion of contract.
12. **SUBMISSION FREQUENCY:** One time submittal
13. **REMARKS:**
14. **INTERRELATIONSHIP:** XXXXMA-004, Affordability Plan
15. **DATA PREPARATION INFORMATION:**
 - 15.1 **SCOPE:** The Final Management and Technical Report summarizes the results of the entire contract work.
 - 15.2 **APPLICABLE DOCUMENTS:**

NFS 1852.235-73	<i>Final Scientific and Technical Reports</i>
MPR 2220.1	Scientific and Technical Publications (Current Revision)
NPR 2200.2	<i>Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (Current Revision)</i>
 - 15.3 **CONTENTS:** The Final Management and Technical Report shall meet the requirements of 1852.235-73. The report shall summarize the results of the entire contract, including recommendations and conclusions based on the experience and results obtained. The report shall include tables, graphs, diagrams, curves, sketches, photographs, and drawings in sufficient detail to explain comprehensively the results achieved under the contract. The report shall also include a rough order of magnitude (ROM) life cycle cost estimate and schedule of the Advanced Booster concept which incorporates results achieved under this contract. This estimate shall also include any impacts associated with the deviations or identified modifications of SLS Program requirements that were acceptable to the Offeror's Advanced Booster concept. The report shall also address how the results achieved relate to the affordability of the Advanced Booster concept. The report shall include a completed NASA Form 1676 and Standard Form 298 as the final page, per MPR 2220.1, NPR 2200.2 and NFS 1852.235.73(c).

DRD Continuation Sheet

TITLE: Program/Project Schedules

DRD NO.: MA-002

DATA TYPE: 1

PAGE: 2/2

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

- 15.4 **FORMAT**: The final report shall be of a quality suitable for publication and shall follow the formatting and stylistic guidelines contained in MPR 2220.1 and NPR 2200.2. Electronic formats for submission should be used to maximum extent possible. Information regarding appropriate electronic formats for final reports is available at <http://www.sti.nasa.gov> under "Publish STI – Electronic File Formats". The final page of the report shall be in accordance with NASA Form 1676 and Standard Form 298. The report shall be provided in both hardcopy and electronic versions. Electronic format shall be in accordance with NFS 1852.235-73.
- 15.5 **MAINTENANCE**: None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** MA-003
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/3
6. **TITLE:** Program/Project Schedules
7. **DESCRIPTION/USE:** To provide the Contractor’s time-phased plan, current status, key milestones, task interdependencies, and major development phases necessary to accomplish the total scope of work. This schedule will be used to provide management insight into Contractor status, potential problem areas, and critical path identification, which will serve as the basis for evaluating Contractor performance.
8. **OPR:** XP10 9. **DM:**
10. **DISTRIBUTION:** Per Contracting Officer’s letter
11. **INITIAL SUBMISSION:** With initial proposal submission. Baseline not to exceed 90 days after Authority to Proceed (ATP).
12. **SUBMISSION FREQUENCY:** 10 calendar days following the end of each month.
13. **REMARKS:** The schedule will be baselined at some point after ATP as agreed to by both parties and not to exceed 90 days after ATP. Reference is made to NPR 7120.5 (Current Revision), *NASA Space Flight Program and Project Management Requirements*, NPR 7120.7 (Current Revision), *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements*, NPR 7120.8, (Current Revision), *NASA Research and Technology Program and Project Management Requirements*, and DI-MGMT-81650, Integrated Master Schedule (IMS). These documents shall be used as guides in preparation of the schedules.
14. **INTERRELATIONSHIP:** DRD MA-001, Monthly Progress Report.
15. **DATA PREPARATION INFORMATION:**
 - 15.1 **SCOPE:** The Program/Project Schedules provides data for the assessment of contract schedule and logic network of the tasks to be performed.
 - 15.2 **APPLICABLE DOCUMENTS:** None
 - 15.3 **CONTENTS:** The program/project schedules shall include tasks necessary to accomplish the total scope of work as defined in the work breakdown structure (WBS). The schedule shall also include all logical relationships (interdependencies) between tasks. Schedules shall contain the approved baseline schedule as well as current forecasted dates and shall be traceable to the approved Work Breakdown Structure (WBS). All key milestones shall be clearly identified and logically linked to related tasks. The program/project schedule shall be created and maintained in management software that supports automated time phasing of

DRD Continuation Sheet**TITLE:** Program/Project Schedules**DRD NO.:** MA-003**DATA TYPE:** 3**PAGE:** 2/3**15 DATA PREPARATION INFORMATION (CONTINUED):**

tasks, a logic driven critical path, schedule assessment, and trend analysis capabilities. program/project schedules and the Logic Network shall be reported in four sections. The following deliverables shall be extractions from the automated logic network database. All data contained in the sections shall be consistent, statused monthly and based on the same cutoff date.

- a. Summary Schedule – One page, top level, Gantt-type summary document arranged by WBS that reflects all contract and controlled milestones, major program/project phases (i.e., design, fabrication, integration, assembly, etc.) and all end item deliveries.
- b. Logic Network Database – an automated logic network database consisting of schedule data for all WBS elements. The entire scope of work shall be broken into schedule tasks and milestones at a consistent level of detail to allow discrete progress measurement and visibility into the overall development, fabrication, integration, assembly, test, and delivery phase of each end item deliverable. Additionally, all schedule tasks/milestones shall be integrated with the appropriate sequence relationships to provide a total end-to-end logic network leading to each end-item delivery. This database shall contain all contract and controlled milestones, key subcontractor milestones, end item delivery dates, key data delivery dates, and key Government Furnished Property (GFP) need dates. The database shall contain the appropriate task coding attributes necessary to provide sort, select, and summarization capabilities for, but not limited to, WBS element, program/project phase, and level-of-effort tasks. The logic network database serves as the basis for identification of program/project critical paths as well as critical schedule analysis.
- c. Critical Path Report – This report shall be an extract from the Logic Network Database and include all tasks and milestones with 10 workdays or less of total slack (float). The report shall be submitted in a waterfall format and organized in manner such that the path with the least amount of slack is delineated first and followed by each successive path according to total slack values.
- d. Contractor Schedule Assessment Report – This report shall contain a count of the total number of tasks, milestones and non-detail (e.g., summary, hammock, rollup, etc.) activities contained in the schedule, a count of the number of completed tasks and milestones, a count of the number of tasks and milestones to be completed, a count of the number of tasks and milestones that have no predecessor and/or no successor relationships, a count of the total number of tasks and milestones that have a total float (slack) value greater than 25% of the remaining duration of the total program/project schedule, a count of the total number of non-detail (e.g., summary, hammock, rollup, etc.) activities that have any predecessor or successor logical relationships, a count of the total number of tasks and milestones that have forced or fixed dates. The report shall contain critical path narratives explaining changes and impacts to the critical paths listed in section c above. The report shall contain narrative explanations for contract milestones and significant project milestones that have moved more than 45 calendar days into the future from their baseline dates. Program/project milestones shall be identified and negotiated with the project office. These narratives shall include a proposed work-around schedule detailing how the Contractor plans to recover the lost schedule time.

DRD Continuation Sheet

TITLE: Program/Project Schedules

DRD NO.: MA-003

DATA TYPE: 3

PAGE: 3/3

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

15.4 **FORMAT:** Submission of the deliverables in 15.3 shall be by standard hardcopy and electronic media. Electronic media submittals shall be in native file format utilizing schedule management software approved by the MSFC project office. A legend identifying the Contractor's schedule symbols used and their meaning shall be provided.

15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** MA-004
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/2

6. **TITLE:** Affordability Plan

7. **DESCRIPTION/USE:** To provide the Government a description of Contractor's affordability strategy for its Advanced Booster concept and how considerations of cost will be a principal factor from beginning of development, production, test, operations, and retirement. The affordability plan is envisioned to not only promote executing the SLS Program within the baseline constraints but the affordability plan is also intended to explain how the implementation of the process and culture changes will deliver sustained annual cost reductions.

8. **OPR:** XP10 9. **DM:**

10. **DISTRIBUTION:** Per Contracting Officer's (CO) letter

11. **INITIAL SUBMISSION:** With initial proposal submission. Finalized 30 calendar days after Authority to Proceed (ATP).

12. **SUBMISSION FREQUENCY:** 30 calendar days after completion of contract.

13. **REMARKS:** SLS Program Affordability Plan, SLS-PLAN-023 Baseline dated January 30, 2012, is a recommended reference.

14. **INTERRELATIONSHIP:**

15. **DATA PREPARATION INFORMATION:**

- 15.1 **SCOPE:** The Affordability Plan shall document the Contractor's strategy and commitment to developing an Advanced Booster concept.

- 15.2 **APPLICABLE DOCUMENTS:**
None

- 15.3 **CONTENTS:** The Affordability Plan shall document the Contractor's strategy and commitment to developing an Advanced Booster concept that (1) includes cost reductions strategies from the beginning of development through production, operations and retirement (2) executes the SLS Program within the baseline constraints (3) identifies ground-rules and assumptions pertinent to the Government's understanding of the activity (4) identifies work activities, procedures and processes so that they are compliant with this affordability strategy and (5) identifies adaptations and benefits of risk reduction efforts and their advantages of affordability to the Advanced Booster concept.

DRD Continuation Sheet

TITLE: Affordability Plan

DRD NO.: MA-004

DATA TYPE: 2

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

Advanced Booster concepts that require modification of SLS Program requirements will be considered if significant affordability gains are shown. The Offeror shall submit a detailed description of the proposed SLS Program requirement modification and its affordability improvement to the Offeror's Advanced Booster concept as well as to the overall SLS Program affordability.

The final plan submission shall summarize the results of the contracted effort with respect to affordability including recommendations and conclusions based on the experience and results obtained. The schedule and costs ROMs for the Advanced Booster concept for DDT&E, Production, Operations, and Disposal shall be updated.

15.4 **FORMAT**: Contractor format is acceptable.

15.5 **MAINTENANCE**: Changes shall be incorporated by complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** SA-001
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/8

6. **TITLE:** Off-site Safety, Health, and Environmental (SHE) Plan

7. **DESCRIPTION/USE:** A Contractor generated document that is written specifically by the Contractor for the work that will be conducted off-site over the duration of this contracted effort. The Contractor's SHE plan shall describe the specific approach the Contractor will use to implement its SHE Program while ensuring it is compliant with the Federal, State, Local laws and also any NASA requirements that are identified as specific to the work being conducted under this contracted effort. The Contractor's SHE Plan shall describe how the Contractor will provide a workplace that (1) is incident and injury free by (a) preventing employee fatalities, (b) reducing the number of incidents, and (c) reducing the severity of employee injuries and illnesses, and (2) protects the environment through the ongoing planning, implementation, integration and management control of the Contractor's industrial safety, occupational health, and environmental program in accordance with NFS 1852.223-73.

8. **OPR:** AS10/QD12 **9. DM:** JP

10. **DISTRIBUTION:** Per Contracting Officer's (CO) letter

11. **INITIAL SUBMISSION:** To be provided no later than 30 calendar days after award.

12. **SUBMISSION FREQUENCY:** After Approval, to be updated as required.

13. **REMARKS:** This DRD is tailorable based on the scope of work to be performed. This is primarily based on any potential hazardous operations and any potential for environmental impacts. All deviations and/or tailoring shall be coordinated through the Industrial Safety Branch of the Safety and Mission Assurance Office at Marshall Space Flight Center. The submitted SHE Plan should not exceed 15 pages.

14. **INTERRELATIONSHIP:** (NOTE: Consult with the AS10/QD12 OPR contacts to determine applicability of clauses to specific contract. Clauses that are not applicable to the contract should be deleted.) NFS 1852.223-70, Safety and Health; NFS 1852.223-72, Safety and Health (Short Form); NFS 1852.223-73, Safety and Health Plan; NFS 1823.223-74, Drug-and alcohol-free workforce; FAR 52.204-4, Printed or Copied Double-Sided on Recycled Paper; FAR 52.223-1, Biobased Product Certification; FAR 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts; FAR 52.223-3, Hazardous Material Identification and Material Safety Data; FAR 52.223-4, Recovered Material Certification; FAR 52.223-5, Pollution Prevention and Right-to-Know Information; FAR 52.223-7, Notice of Radioactive Materials; FAR 52.223-9, Estimate of Percentage of Recovered Material Content for EPA Designated Products; FAR 52.223-10, Waste Reduction Program; FAR 52.223-11, Ozone Depleting Substances; FAR 52.223-12, Refrigeration Equipment and Air Conditioners; FAR 52.223-13,

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TITLE: Off-site Safety, Health, and Environmental (SHE) Plan **DRD NO.:** SA-001

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14. **INTERRELATIONSHIP (CONTINUED):**

Certification of Toxic Chemical Release Reporting; FAR 52.223-15, Energy Efficiency in Energy-Consuming Products; FAR 52.223-16, IEEE 1680 Standard for Environmental Assessment of Personal Computer Products; FAR 52.223-17, Affirmative Procurement of EPA-designated Items in Service and Construction Contracts; DRDs STD/SA-MSRoff, Mishap and Safety Statistics Report and STD/SA-PCP, Personnel Certification Plan.

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The Safety, Health, and Environmental (SHE) Plan shall describe the specific methods the Contractor will implement for planning, controlling and enforcing its industrial safety, occupational health, and environmental requirements over the duration of this contracted effort.

15.2 **APPLICABLE DOCUMENTS:** Code of Federal Regulations (CFR) and listed consensus standards are applicable to all contracts to the extent specified or referenced in the contract. NASA and Center documents are applicable to all contracts to extent specified or referenced in the contract.

29 CFR Part 1910	Department of Labor; Occupational Safety and Health Administration Standards for General Industry
29 CFR Part 1926	Department of Labor; Occupational Safety and Health Administration Standards for Construction Industry
CFR Title 40 Parts 1-1068	Protection of Environment

ANSI Standards applicable to the scope of this contract

NFPA Standards	National Fire Codes
Executive Order 13423	Strengthening Federal Environmental, Energy, and Transportation Management
NPR 3792.1	Plan for a Drug-Free Workplace
NPR 8000.4	Agency Risk Management Procedural Requirements
NPR 8621.1	NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping
NPD 8700.1	NASA Policy for Safety and Mission Success
NPR 8715.1	NASA Occupational Safety and Health Programs
NPR 8715.3	NASA General Safety Program Requirements
MWI 8621.1	Mishap and Close Call Reporting and Investigation Program

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15. DATA PREPARATION INFORMATION (CONTINUED):

15.3 CONTENTS:

The Contractor's Safety, Health, and Environmental (SHE) Plan shall be written specifically for the work to be conducted off-site over the duration of this contracted effort. The plan shall provide a clear description of the Contractor's approach for (1) Implementing its SHE Program, (2) Providing a workplace that is incident and injury free by (a) preventing employee fatalities, (b) reducing the number of incidents and (c) reducing the severity of employee injuries and illnesses, (3) Protecting the environment, and (4) The methods for ensuring its SHE Program is maintained compliant with NASA requirements and the documents listed in 15.2 to the extent specified or referenced as applicable to this contracted effort. (NOTE: A Contractor's corporate SHE plan is not considered as being written specifically for the work to be conducted under this contracted effort and shall not be submitted for consideration).

a. CPR 1 - Management Leadership and Employee Involvement:

1. A description of the Contractor's safety, health and environmental policy and its management's commitment to ensure (1) A visible and proactive culture in the workplace that values the safety and health of its employees, (2) A safe and healthful workplace is provided for its employees, customers, and public that is free from incidents and injuries, (3) The safety performance of subcontractors or teammates is evaluated prior to their selection and over the duration of this contracted effort, when applicable, and (4) Property and the environment is protected over the duration of this contracted effort.
2. A description of how the Contractor will ensure its work activities, operations, procedures and processes are conducted in compliance with EPA, OSHA, and NASA requirements listed in 15.2 that contain requirements specified or referenced as applicable to this contracted effort.
3. A description of how the Contractor will ensure employees are encouraged to participate and be involved in its SHE Program (e.g., participate in safety committees, worksite inspections, accident investigations, the development of job hazard analysis, provide suggestion for improvements to its SHE Program and report hazardous working conditions).
4. A description of how the Contractor will ensure managers and employees are (1) Encouraged to take responsibility for its safety and health and that of other employees, (2) Encouraged to make safety a priority in the performance of its work processes, (3) Held accountable to perform their jobs/tasks in a safe and healthful manner while also protecting property and the environment, (4) Fully aware of and understand their roles and responsibilities in its SHE Program, and (5) Proactive in ensuring these responsibilities and accountabilities are flowed-down to subcontractors and teammates over the duration of this contracted effort, when applicable.
5. A description of how the Contractor will ensure monthly SHE meetings and awareness training is provided to employees and documented. (NOTE: Contractors shall maintain documentation of these meetings and provide to the Government, when requested).

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15. DATA PREPARATION INFORMATION (CONTINUED):

6. A description of how the Contractor will conduct self evaluations of its SHE Program in order to determine its effectiveness. Provide the frequency of these self evaluations and how they are documented. (NOTE: Contractors shall maintain documentation of the self-evaluation and provide to the Government, when requested).
 7. A description of how the Contractor will collect feedback from employees to obtain their perception of the effectiveness in its SHE Program. Provide the frequency of when this feedback is collected.
 8. A description of how the Contractor will ensure its SHE plan is maintained current with contract and NASA requirements, and is reviewed and updated as necessary. Provide the frequency of when this review is conducted.
 9. Provide the identification, by title, of the individual assigned by the Contractor to be responsible to implement the Contractor's SHE Program elements and designated to serve as the day-to-day SHE Point of Contact (POC) for this contracted effort.
- b. CPR 2 - Worksite Analysis:
1. A description of how the Contractor will ensure (1) Hazards in the work area or with an operation are identified, assessed, and analyzed to determine their potential to cause (a) injury/illness to or death to personnel or the public, (b) damage to or loss of facilities/equipment, (c) an undesired outcome that could result in a serious adverse impact on mission capability or operability, or (d) detrimental impact to the environment and the surrounding community, (2) Adequate control measures are developed and implemented to eliminate, reduce or control the hazards to a acceptable safe working level and (3) Work areas and operations are reassessed when significant changes are made to verify that the existing control measures are still effective. (NOTE: This also includes the identifying, assessing and analyzing health conditions in order to prevent an occupational disease).
 2. A description of how the Contractor will ensure each supervisor conducts worksite safety inspections, as required by OSHA, to ensure (1) Employees are provided with safe and healthful working environment, (2) Unsafe and unhealthful conditions are corrected within a timely manner when they are discovered and (3) Employees are performing their jobs/tasks/operations in a safe and healthful manner. (NOTE: Contractors shall maintain documentation of these worksite inspections and provide to the Government, when requested).
 3. A description of how the Contractor will ensure employees are encouraged to report, without the fear of reprisal from management, any condition that they feel is hazardous or unsafe and receive a timely response to investigate and correct the condition. Provide a description of how these reports are documented and tracked to closure. (NOTE: Contractors shall provide these reports to the Government, when requested).
 4. A description of how the Contractor will ensure all mishaps and close calls that occurred in support of this contracted effort are reported, documented, and investigated to the extent necessary to determine the proximate or root cause(s) of the mishap or close call.

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TITLE: Off-site Safety, Health, and Environmental (SHE) Plan **DRD NO.:** SA-001

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15. DATA PREPARATION INFORMATION (CONTINUED):

(NOTE: Reference DRD STD/SAMSRoff, Mishap and Safety Statistics Report, NPR 8621.1 and MWI 8621.1).

5. A description of the Contractor's policy for conducting post-mishap drug and alcohol testing when the initial mishap investigation provides reason to believe an employee's actions or failure to perform a required action is reasonably suspected of having caused or contributed to causing the mishap. (NOTE: In the event a mishap results in a fatality or serious injury requiring immediate hospitalization, or substantial damage to property estimated to exceed \$10,000, post-mishap drug and alcohol testing can be required by the Government and the results of these tests shall be provided to the MSFC Contracting Officer. See NPR 3792.1, NPR 8621.1 and MWI 8621.1)
- c. CPR 3 - Hazard Prevention and Control:
1. A description of how the Contractor will ensure a formal risk-informed decision-making process and continuous risk management process are developed, implemented and maintained to formally assess and accept residual risk..
 2. A description of how the Contractor will ensure operating procedures are developed, reviewed, approved, and implemented for operations/processes that are identified as hazardous, safety critical or contain a level of risk where an operating procedure is needed. (NOTE 1: The operating procedures shall contain clear step-by-step instructions that provide sufficient detail to identify residual hazards and the control methods needed so that the operation/process can be performed safely and include caution and warning statements as necessary). (NOTE 2: NASA can request that the NASA Safety Office approve these procedures).
 3. A description of how the Contractor will ensure programs or procedures are developed, reviewed, approved and implemented for operations/processes identified as hazardous or safety critical or contain a high level of risk and are being conducted within close proximity to or directly involve NASA property or equipment (e.g., the use of explosives, propellants, pyrotechnics, radiation producing devices, pressure vessels and systems, lifting devices). (NOTE: NASA can identify additional systems, devices and hazardous materials that require a documented program or procedures).
 4. A description of how the Contractor will ensure operations, processes and tests identified as hazardous or safety critical and new or modified equipment, hardware, and systems receive a level of readiness review that is equivalent to the level of risk that will be encountered during its operation and is approved to startup by the level of management that can accept that level of risk. (NOTE 1: Operational Readiness Inspection (ORI), Safety Readiness Team (SRT), Operational Readiness Review (ORR), and Test Readiness Review (TRR)). (NOTE 2: NASA can request that the NASA Safety Office be involved in the approval of the recommendations of the readiness reviews).

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TITLE: Off-site Safety, Health, and Environmental (SHE) Plan **DRD NO.:** SA-001

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15. DATA PREPARATION INFORMATION (CONTINUED):

5. A description of how the Contractor will ensure they are fully compliant with documented programs that are required by OSHA and/or NASA and Center documents listed in 15.2 that contain requirements specified or referenced as applicable to this contracted effort (e.g., Personal Protective Equipment (PPE), Respiratory Protection, Hazard Communication, Confined Space Entry, Control of Hazardous Energy (Lockout/Tagout), Bloodborne Pathogens). (NOTE: If work is conducted at MAF it shall be compliant with the MSFC documented programs. Contact the MSFC Industrial Safety Office and Environmental Engineering & Occupational Health Office for more information.)
 6. A description of how the Contractor will ensure an emergency management program is implemented at its worksite that will ensure (1) All types of emergencies that can occur during this contracted effort (e.g., fire, chemical spill, accidents, natural disasters) are responded to, (2) All employees are informed and made aware of what they are to do in the event of an emergency, and (3) who employees are to contact in the event an emergency. (NOTE: A list of emergency phone numbers and points-of-contacts is to be posted at the worksite for employee reference).
 7. A description of how the Contractor will ensure safety, health, and environmental services that are applicable to this contracted effort will be provided at the worksite over the duration of this contracted effort (i.e., hazardous waste disposal, industrial hygiene monitoring, emergency medical support, hearing conservation program, respiratory protection, and hazard communication, etc.).
 8. A description of how the Contractor will ensure fall protection is provided to employees when they are on walking/working surfaces with unprotected sides or edges and the potential exists for them to fall to the next lower level. (NOTE: In cases where it can be demonstrated that the use of conventional fall protection systems are infeasible or greater hazards can be created by using conventional fall protection system an additional "Site Specific Fall Protection Procedure" is required and shall be submitted for Government approval. See 29 CFR Part 1926.501, 29 CFR Part 1926.502, and 29 CFR Part 1910.23).
- d. CPR 4 - Safety, Health and Environmental Training:
1. A description of how the Contractor will ensure each Contractor employee is informed, trained, and knowledgeable (1) to recognize hazardous conditions in the workplace, (2) to recognize signs and symptoms of workplace-related illnesses, and (3) to understand the safe work practices and procedures used in the workplace. (NOTE: Contractors shall maintain a record of this training and provide to the Government, when requested).
 2. A description of how the Contractor will ensure each Contractor employee is informed and trained to fully understand they are empowered and authorized to "stop or halt" any activity when they have reason to suspect that the activity is being conducted in an unsafe or unhealthy manner. (NOTE: When an activity is "stopped or halted" the activity cannot resume until the unsafe condition has been corrected).
 3. A description of how the Contractor will ensure the Contractor's disciplinary policy/program is equitably enforced and clearly communicated to employees, so that each employee is trained and fully understands (1) The Contractor's disciplinary policy/program, (2) The actions that can be taken by the Contractor when an employee is discovered not following

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TITLE: Off-site Safety, Health, and Environmental (SHE) Plan **DRD NO.:** SA-001

DATA TYPE: 2

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15. DATA PREPARATION INFORMATION (CONTINUED):

safety, health, and environmental policies, procedures and rules, and disciplinary actions are warranted, and (3) How the Contractor's disciplinary policy/program is flowed-down to subcontractors or teammates over the duration of this contracted effort, when applicable. (NOTE: Contractors shall maintain a record of this training and provide to the Government, when requested).

4. A description of how the Contractor will ensure that (1) each operation/job is evaluated to identify the specific training required for employees to safely perform the operation/job in support of this contracted effort and (2) employees are provided the specific training prior to performing the operation/job. (NOTE 1: At a minimum the training shall include an emphasis of the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the operation/job). (NOTE 2: Contractors shall maintain a record of this training and provide to the Government, when requested).
5. A description of how the Contractor will ensure employees receive an operator's certification when required by OSHA or NASA (1) to operate specific equipment, machinery or system, or (2) to perform specific or hazardous operations/processes/jobs in support of this contracted, when applicable. (NOTE 1: The certification program, at as minimum, shall include training (classroom and on-the-job), a written examination, a proficiency test, when identified as necessary, periodic refresher training and a recertification period not to exceed a 4 year interval). (NOTE 2: Contractors shall maintain a record of this training and certification, and provide to the Government, when requested)..
- e. CPR 5 - Environmental Management System: A description of how the Contractor will ensure compliance with Federal, State and Local environmental laws and regulations, CFR Title 40 Parts 1-1068, Executive Orders 13423 and 13514 for:
 1. Reporting and management of chemicals.
 2. Implementing and reporting green procurements.
 3. Reducing, reusing, and recycling of hazardous and toxic substances prior to disposal.
 4. Managing storm water pollution.
 5. Ensuring equipment and processes are permitted by applicable Clean Air Act Title V permit.
 6. Managing solid and hazardous waste as permitted by applicable laws.
 7. Managing wastewater discharges.

15.4 **FORMAT:** The Contractor's SHE plan is to be written in a format that follows the order of the SHE CPRs as they are shown in 15.3 or the Contractor is to provide a Matrix that clearly links where each SHE CPR sub-element is adequately addressed in the Contractor's SHE Plan. The Contractor's SHE plan that is submitted in accordance with this DRD shall be written specifically for the work being performed by the Contractor in support of this contracted effort. The submitted SHE Plan should not exceed 15 pages.

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TITLE: Off-site Safety, Health, and Environmental (SHE) Plan **DRD NO.:** SA-001

DATA TYPE: 2 **PAGE:** 8/8

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

15.5 **MAINTENANCE**: Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXXX **ISSUE:** Draft
2. **DRD NO.:** SA-002
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/3
6. **TITLE:** Off-site Mishap and Safety Statistics Reports
7. **DESCRIPTION/USE:** To provide initial and follow-up reporting of mishaps, close calls, serious non-occupational injuries or illnesses, and Contractor quarterly safety metrics to the Government for Contractors that are physically located Off-site or at another NASA Center.
8. **OPR:** QD12 9. **DM:**
10. **DISTRIBUTION:** Per Contracting Officer's letter
11. **INITIAL SUBMISSION:**
 - a. **Safety Statistics** shall be submitted by the end of the first quarter (calendar year) after Authority to Proceed (ATP) or contract award and submitted quarterly thereafter by the 10th day of the month following the end of the quarter. The safety statistics shall be for the Contractor's previous quarter's work.
 1. Safety statistics shall be reported using MSFC Form 4371 or an equivalent electronic notification system that includes all of the information listed in 11.a.2.
 2. Safety statistics reports shall include: contract number, subcontractors, NAISC codes and the following for the reporting period: number of employees, number of supervisors, hours worked, and number of injuries including days away from work and/or first-aid cases, number of incidents involving NASA related equipment or property damage.
 - b. **Initial reporting for Type A, Type B, Type C that involves a lost time injury or illness, and any High-Mishaps and Visibility Close Calls:** The initial reporting shall be as soon as possible after initiating emergency response, but **no later than 1 hour** of occurrence or awareness. For these types of mishaps and close calls the initial notification can be made by calling the MSFC Safety Hotline (256) 544-0046.
 1. Initial reporting can also be accomplished by direct input into the NASA Incident Reporting Information System (IRIS) by the Contractor designated IRIS representative. Access to the IRIS database can be obtained from the MSFC S&MA IRIS Administrator or the MSFC Mishap Investigation Program Manager after contract award.
 2. If a Contractor employee has any type mishap while visiting a MSFC controlled site, they shall report immediately to its site sponsor in addition to other reporting requirements.
 - c. **Initial reporting for Type C that does not involve a lost time injury or illness, and D and Low-Visibility Mishaps and Close Calls** shall be reported via the Safety Statistics Report submitted monthly.
 - d. **Initial reports for all mishaps and Close Calls** shall provide as much information as possible, but at a minimum include the following: location and time of incident, number of fatalities, number hospitalized, type of damage, estimated cost, brief description, and contact person's name and phone number in accordance with MWI 8621.1 and NPR 8621.1.
 - e. **Initial Reporting of a non-work-related fatality or serious injury or illnesses that occur to Contractor employee while working on-site shall be within 24 hours** of occurrence or awareness of injury by:
 1. Notifying the Contracting Officer. If the work is being conducted on another NASA Center also notify that Center's Safety Office within the same timeline.

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TITLE: Off-site Mishap and Safety Statistics Reports

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11. **INITIAL SUBMISSION (CONTINUED):**

f. **Follow-up reporting:**

1. **All Mishaps (Type A, Type B, Type C and Type D) and Close Calls:** A follow-up report or update into IRIS **within 24 hours** after the initial notification by the Contractor designated IRIS representative. If the work is being conducted on another NASA Center also notify that Center's Safety Office within the same timeline.
2. **Type A, B, and High-Visibility Mishaps and Close Calls with a Mishap Investigation Board Report:** submitted after completion of investigation. Corrective Action Plan submitted within the timeline specified by the Investigation Appointing Official upon Endorsing Official approval.
3. **All Mishaps:** Follow-up Corrective Action Plan/Status 30 days after appointment of the Mishap Investigation Board.

g. **Safety Concerns, Hazards, and non-reportable mishaps** for Contractors working on another NASA Center shall be reported to that Center's Safety Office in accordance with the Center's reporting requirements.

12. **SUBMISSION FREQUENCY:** Safety Statistics (MSFC Form 4371 or equivalent format, IRIS entry, or an equivalent electronic submittal) - By the end of the first quarter (calendar year) after Authority to Proceed (ATP) or contract award and submitted quarterly thereafter. A copy can also be sent to the Center's Safety Office if requested. **All Mishaps:** Monthly Follow-up Corrective Action Plan/Status until corrective actions implemented and closure received by updating the mishap record in IRIS data base (preferred) when work is conducted on another NASA Center, if requested.

13. **REMARKS:** Data type 3 applies to Mishap and Safety Statistics. Government approval/endorsement of Mishap Investigations reports is conducted in accordance with NPR 8621.1 or MWI 8621.1 when requested.

14. **INTERRELATIONSHIP:** DRD XXXXSA-001, *Off-site Safety, Health, and Environmental (SHE) Plan.*

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** For the Government to be notified by the Contractor of all Contractor mishaps, close calls, and serious non-occupational injuries or illnesses as required in NPR 8621.1 and MWI 8621.1.

15.2 **APPLICABLE DOCUMENTS:**

NPR 8621.1 *NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping*

MWI 8621.1 *Mishap and Close Call Reporting and Investigation Program*

15.3 **CONTENTS:** Initial and follow-up mishap reports shall contain all information required by NPR 8621.1 and MWI 8621.1. Mishap and Safety Statistics Reports shall contain the information listed in 11.a.2 and on the MSFC Form 4371 or equivalent electronic format.

15.4 **FORMAT:** The following formats or electronic equivalent shall be submitted:

- a. MSFC Form 4371, "MSFC Contractor Accident and Safety Statistics" or an equivalent electronic notification system that provides all necessary information listed in 11.a.2.
- b. Mishap Investigation Board Report using the format provided in NPR 8621.1.
- c. Additional Information Submittal per MWI 8621.1.

15.5 **MAINTENANCE:** None required

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TITLE: Off-site Mishap and Safety Statistics Reports

DRD NO.: SA-002

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

- 15.6 **DEFINITIONS:** NASA Mishap. An unplanned event that results in at least one of the following:
- a. Injury to non-NASA personnel, caused by NASA operations.
 - b. Damage to public or private property (including foreign property), caused by NASA operations or NASA-funded development or research projects.
 - c. Occupational injury or occupational illness to NASA personnel.
 - d. NASA mission failure before the scheduled completion of the planned primary mission.
 - e. Destruction of, or damage to, NASA property except for a malfunction or failure of component parts that are normally subject to fair wear and tear and have a fixed useful life that is less than the fixed useful life of the complete system or unit of equipment, provided that the following are true:
 - 1) there was adequate preventative maintenance; and 2) the malfunction or failure was the only damage and the sole action is to replace or repair that component.

Close Call. An event in which there is no injury or only minor injury requiring first aid and/or no equipment/ property damage or minor equipment/property damage (less than \$1000), but which possesses a potential to cause a mishap.

High Visibility (Mishaps or Close Calls). Those particular mishaps or close calls, regardless of the amount of property damage or personnel injury, that the Administrator, Chief/OSMA, CD, AA/OIA, or the Center SMA director judges to possess a high degree of programmatic impact or public, media, or political interest including, but not limited to, mishaps and close calls that impact flight hardware, flight software, or completion of critical mission milestones.

Type A Mishap. A mishap resulting in one or more of the following: (1) an occupational injury or illness resulting in a fatality, a permanent total disability, or the hospitalization for inpatient care of 3 or more people within 30 workdays of the mishap; (2) a total direct cost of mission failure and property damage of \$2 million or more; (3) a crewed aircraft hull loss; (4) an occurrence of an unexpected aircraft departure from controlled flight (except high performance jet/test aircraft such as F-15, F-16, F/A-18, T-38, OV-10, and T-34, when engaged in flight test activities).

Type B Mishap. A mishap that caused an occupational injury or illness that resulted in a permanent partial disability, the hospitalization for inpatient care of 1-2 people within 30 workdays of the mishap, or a total direct cost of mission failure and property damage of at least \$500,000 but less than \$2,000,000.

Type C Mishap. A mishap resulting in a nonfatal occupational injury or illness that caused any days away from work, restricted duty, or transfer to another job beyond the day or shift on which it occurred, or a total direct cost of mission failure and property damage of at least \$50,000 but less than \$500,000.

Type D Mishap. A mishap that caused any nonfatal OSHA recordable occupational injury and/or illness that does not meet the definition of a Type C mishap, or a total direct cost of mission failure and property damage of at least \$1,000 but less than \$50,000.

Off-site. Work is physically located at a facility or on property that is **not owned or controlled by MSFC**. This is normally considered as a Contractor owned facility or property or other NASA Center.

On-site. Work is physically located at MSFC, MAF or on property that is **owned or controlled by MSFC**.