NATIONAL SECURITY SPACE LAUNCH (NSSL)
PHASE 3 LANE 2 LAUNCH SERVICE PROCUREMENT
FA8811-23-R-0002

EXHIBIT A
CONTRACT DATA REQUIREMENTS LIST (CDRLs)

dRFP #2: 13 July 2023

United States Space Force
Space Systems Command
Assured Access to Space (AATS)
Los Angeles Air Force Base, California

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CDRL General Instructions
CDRL Address List
CDRL Distribution List
CDRLs

CDRL GENERAL INSTRUCTIONS

CONTRACT DATA REQUIREMENTS LIST (CDRL)
A list of data requirements authorized for this specific procurement and made a part of this contract. The contractual method is the use of Department of Defense Form (DD Form) 1423s, Contract Data Requirement List (CDRL), which specifies the data which is required to be delivered to the Government. For the purpose of this agreement, the "contract" applies for each Launch Vehicle Service order.

DATA ITEM NUMBER
The Contractor shall use a double numeric scheme after the CDRL number to designate the mission to match the task order. Mission task order FA8811-XX-F-0001 will use mission designator F-0001 and Mission task order FA8811-XX-F-0002 will use mission designator F-0002. The mission designator will run sequentially over the entire contract ordering period. For example, the naming convention for CDRL A022 will be A022-01 for Mission 1 and A022-02 for Mission 2.

DATA ITEM DESCRIPTIONS (DIDs)
The DID is a specification for the preparation of data. The DIDs listed on the CDRLs were selected from the Department of Defense (DoD) Index of Specifications and Standards (DoDISS) listed on the Acquisition Streamlining and Standardization Information System (ASSIST).

DID TAILORING
DID tailoring is made to either relax format requirements or to tailor the DID to be in consonance with the source document tailoring contained in the Performance Work Statement (PWS). Since contract data requirements are normally a by-product of some contract task, if the requirements of the DID are in conflict with the tailored application of the source document as reflected in the PWS, the latter takes precedence.

DATA DELIVERY DATES
For Soft Copies, delivery of data is to be construed as the date data is available in the contractor's data management system and electronic notification is sent to addressees.

For Hard Copies, delivery of data is to be construed as "On Dock" dates at destination. Provision of a 3-day postage handling period from postmark at contractor's facility to "On-Dock" delivery at destination meets this requirement, unless otherwise stated in CDRL. The date of government signature at destination, if courier service is used, is to be construed as the "On Dock" date. It shall be the contractor's responsibility to ensure data delivery prior to end of business on the due date if a courier service is used in lieu of the U.S. Postal Service.

If due date falls on weekend or government holiday, data shall be due on the next scheduled government workday.

DD FORM 250 REQUIREMENTS
Block 7 of the CDRL will indicate whether inspection and acceptance of the data by DD Form 250 is required. "Draft" copies submitted for advance approval and "Preliminary" copies submitted are exempt from the DD Form 250 requirements.

ADDITIONS TO DISTRIBUTION
If an addressee is added to distribution, or distribution quantities have been increased to an existing addressee, initial submittal to new addressee shall include the basic document and revisions as appropriate.

COMMUNICATIONS
Any correspondence related to requests for data delivery deviations, amendments, additions, or deletions shall be addressed to the Procuring Contracting Office (PCO) with an information copy to the government Data Management Officer (DMO). For those data items where "LT" (Letter of Transmittal) is indicated in Block 7 of the CDRL, the Contractor shall utilize a Letter of Transmittal (LOT). Each copy submitted shall have a LOT attached. In addition, the contractor shall furnish one copy of each LOT (without data) to the government DMO. Change pages shall indicate updates by a bar in the margin adjacent to the change and encompassing all changed portions.

CDRL ADDRESS LIST AND DATA DISTRIBUTION LIST
The Address List provides the complete mailing address for each addressee and a mailing code.

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The Data Distribution List provides information regarding quantities for shipment (normally in Blocks 14 and 15 of the CDRL) to each mailing code. Quantity of Hard deliverables and Soft deliverables will be indicated to the left and right of the "/", respectively. See CDRL for possible additional format or delivery instructions. CDRL deliverables should be accessible via the Contractor's IDE as defined in the PWS.

DATA APPROVALS

While all data are subject to government approval, selected data will require advanced approval. The letter "A" appearing in Block 8 of the CDRL designates such data. Approval will be required on every submittal (e.g., the Preliminary, Draft, Finals that incorporate government comments, and revisions or change pages, if applicable). The approving authority shall be the PCO. Delivery of the Final data shall be submitted within 30 CD after receipt of government approval of Draft unless otherwise stated on CDRL.

CODES USED ON THE CDRL

The following codes may be used as described below.

a. Block 7: DD Form 250 requirements

CODE	WHEN USED
LT	Letter of Transmittal only

b. Block 8: Approval code

CODE	WHEN USED
A	Approval is required by government on all submittals.
N/A	Approval is not required.

c. Block 9: Distribution Statement Required

D = Distribution authorized to the Department of Defense and U.S. DoD contractors only (ref. DoDD 5230.24) d.

d. Block 10: Frequency

CODE (Limit to five characters)

DAILY	Daily	WEKLY	Weekly
BI-WE	Each 2 weeks	MTHLY	Monthly
BI-MO	Each 2 months	QRTLY	Quarterly
ANNLY	Annually	SEMIA	Each 6 months
OTIME	One time	ONE/R	One time, & revisions
R/ASR	Revisions as required	*ASREQ	As required
DFDEL	Deferred delivery	DFORD	Deferred ordering
ONE/P	1-time preliminary draft	2TIME	Two separate submittals

*When ASREQ is used in items 10, 11, 12 or 13, an explanation of the requirement must be entered in item 16.

d. Blocks 12 and 13: Date of 1st and Subsequent Submissions

SDA = Government APPROVAL
CA = Contract Award
CO = Change Order
SA = Supplemental Agreement
SRR = System Requirements Review
SDR = System Design Review
PDR = Preliminary Design Review
EOC = End of Contract
ILC = Initial Launch Capability
CDR = Critical Design Review
IPR = In Process Review
FCA = Functional Configuration Audit
PCA = Physical Configuration Audit
FLT = Flight Test Review
CD = Calendar Days
WD = Working Days
ATP = Authority to Proceed
DACA = Days After Contract Award

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ELECTRONIC DISTRIBUTION

CDRLs shall be delivered on the contractor's data management system(s). The contractor shall enable remote access to these systems by Government personnel (Space Force, Aerospace, Systems Engineering and Integration [SE&I], and Systems Engineering and Technical Assistance [SETA]) subject to applicable terms on this contract. An index of addressees to be allowed access to or to be notified of CDRL availability will be provided by Government DMO via e-mail notification for contractor's implementation. Access Lists will be updated, as required, without modification to the contract. The contractor shall use an acceptable electronic format that is compatible with existing Government systems, unless a precise format is specified in the CDRL.

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CDRL ADDRESS LIST

1. HQ Space Systems Command (USSF) — **SSC/AA**
   Assured Access to Space
   Attn: SSC/AA Data Management Office
   483 North Aviation Blvd.
   Los Angeles AFB
   El Segundo, CA 90245-2808
   ssc.le.cmdm@us.af.mil

2. HQ Space Systems Command (USSF) — **SAF/SL**
   Attn: SAF/SL, Bldg. A5
   483 North Aviation Blvd.
   Los Angeles AFB
   El Segundo, CA 90245-2808

3. Space Launch Delta 30 Operations — **SLD 30 Ops**
   Attn: Data Desk
   806 13th St, Room 285
   Bldg. 7015
   Vandenberg Space Force Base (VSFB), CA 92437-5221

4. Space Launch Delta 45 Operations and 5 SLS — **SLD 45 Ops**
   Attn: Data Library
   15270 Samuel C. Phillips Parkway (CCSFS) Building 1645
   Patrick AFB, FL 32925-2009

5. Defense Cost and Resource Center (DCARC) — **DCARC**
   201 12th Street South
   Suite 220
   Arlington, VA 22202
   (703) 601-4850

6. DCMA Lockheed Martin Denver — **DCMA**
   Nicole.Higgins@dcma.mil
   William.Buemi@dcma.mil

7. NRO Operations Squadron — **NOPS**
   401 Discoverer Ave. Ste 32
   Schriever SFB, CO 80912
   NOPS_Launch@us.af.mil

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CDRL DISTRIBUTION LIST

CDRL	TITLE	OFFICE SYMBOL	QTY Hard/Soft
A001	Data Accession List (DAL)	SSC/AA	0/1
A002	Software Products - Database Design Description	SSC/AA	0/1
A003	Cost and Hour Report (Flexfile)/Legacy	SSC/AA OSD CAPE	0/1 0/1
A004	Technical Data Reporting	SSC/AA OSD CAPE	0/1 0/1
A005	Contractor Business Data Report (DD Form 1921-3)	SSC/AA OSD CAPE	0/1 0/1
A006	Quantity Data Report	SSC/AA OSD CAPE	0/1 0/1
A007	Small Business Utilization Report	SSC/AA	0/1
A008	Integrated Program Management Report (IPMR) - Integrated Master Schedule (IMS)	SSC/AA OSD CAPE	0/1 0/1
A009	Reserved	SSC/AA	0/1
A010	Reserved	SSC/AA	0/1
A011	Program Protection Implementation Plan (PPIP)	SSC/AA	0/1
A012	System Safety Program Plan (SSPP)	SSC/AA	0/1
A013	Hazardous Materials Management Program (HMMP) Plan	SSC/AA	0/1
A014	Missile System Prelaunch Safety Package (MSPSP)	SSC/AA	0/1
A015	Anti-Terrorism Program	SSC/AA	0/1
A016	Environmental Impact	SSC/AA	0/1
A017	Facility Requirements Documents	SAF/SL	0/1
A018	Training Materials - Launch Vehicle Familiarization Training	SSC/AA SAF/SL SLD 30 Ops SLD 45 Ops	0/1
A019	Contractor's Standard Operating Procedures – Compliance Document Tailoring	SSC/AA	0/1
A020	As-Built Configuration List (ABCL) for Fleet Insight	SSC/AA	0/1
A021	Design Data and Calculations – Performance Capabilities Guide	SSC/AA	0/1
A022	Technical Report – Launch Slot/Date Recommendation	SSC/AA	0/1
A023	Mission Integration Management and Operations Plan (MIMOP)	SSC/AA	0/1
A024	Test Procedure - Flight Hardware Interface Checks	SSC/AA	0/1
A025	System/Segment Interface Control Specification – Mission Interface Control Document (ICD)	SSC/AA	0/1
A026	MRA to ICD Traceability Matrix	SSC/AA	0/1
A027	Specification Requirement Verification Matrix – Verification Planning Matrix (VPM)	SSC/AA	0/1

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CDRL	TITLE	OFFICE SYMBOL	QTY Hard/Soft
A028	Specification Requirement Verification Matrix – Verification Evidence Record (VER)	SSC/AA	0/1
A029	Safety Assessment Report (SAR)	SSC/AA	0/1
A030	Reserved	SSC/AA SAF/SL	0/1 0/1
A031	Design Data and Calculations – Prelaunch Data and Documentation Supporting Launch Operations	SSC/AA NOPS	0/1 0/1
A032	Reserved	SLD 30 Ops SLD 45 Ops	0/1 0/1
A033	As Designed Configuration List (ADCL) – Launch Vehicle Configuration	SSC/AA	0/1
A034	As-Built Configuration List (ABCL)	SSC/AA	0/1
A035	Critical Items List – Flight Critical Items List (FCIL) and Ground Critical Items List (GCIL)	SSC/AA	0/1
A036	Reserved	SSC/AA	0/1
A037	Test Plan – Launch Vehicle Test and Verification Plan (LVTVP)	SSC/AA	0/1
A038	Non-Recurring Design Validation	SSC/AA	0/1
A039	Design Data and Calculations – Mission Assurance Independent Assessment Data	SSC/AA	0/1
A040	Design Data and Calculations – Space Safety Collision Avoidance Data	SSC/AA	0/1
A041	Design Data and Calculations – Radio Frequency Power Impingement Data	SSC/AA	0/1
A042	Master Launch Operations Schedule	SSC/AA SLD 30 Ops SLD 45 Ops	0/1 0/1 0/1
A043	Reserved	SSC/AA	0/1
A044	Test/Inspection Report – Post-Flight Assessment Report	SSC/AA	0/1
A045	Technical Report – LOE Study/Service	SSC/AA	0/1
A046	Technical Report – Fixed Price Study/Service	SSC/AA	0/1
A047	Technical Report – EIS Technical Analysis Report	SSC/AA	0/1
A048	Reserved	SSC/AA	0/1
A049	Business Management Review	SSC/AA	0/1

^ For Launches from Vandenberg Space Force Base (VSFB)
^^ For Launches from Cape Canaveral Space Force Station (CCSFS) or Kennedy Space Center (KSC)

NOTE: The contractor shall provide electronic access of CDRLs, and notification via e-mail to select addressees, when requested, in accordance with government-provided Access List index. Addressees (for notification purposes only) not listed above may include, for example, Aerospace, Defense Contract Management Agency (DCMA), Patrick Space Force Base (SFB), Vandenberg SFB, SE&I, and SETA contractors. It is not the responsibility of the Contractor to make actual distribution of either electronic or hard copy CDRLs to these unnamed addressees. Draft documents delivered electronically must be marked "draft." Notifications for Revisions to required CDRL deliveries shall be provided to all POCs.

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 Series	A	TDP	TM	OTHER	X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	Data Accession List (DAL)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81453B/T	Performance Work Statement, Para 3.1.4.5	SSC/AA DMO

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	MTHLY	30 DACA

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):
   a. Data Accession List (DAL) is cumulative.
   b. The DAL listing should not include data generated by other CDRLs on contract.
   c. The DAL must contain pointers (links) to the contractor's electronic data systems file names or document location in the online database.
2. (BLK 13): Technical data must be added to the online dataset within 10 working days (WD) after release.
3. (BLK 10) DAL listing, not provided on demand via IDE or equivalent, must be provided in monthly submittal. The Government will review submission and provide feedback within 30 calendar days (CD) to the maximum extent possible.
4. The Contractor shall provide CDRL notification signed encrypted email with ECA certification if Controlled Unclassified Information (CUI) is contained in the email.
5. The DAL must contain pointers (links that work from US Government network computers)

14. DISTRIBUTION

15. a. ADDRESSEE	b. COPIES		
	Draft	FINAL	
		Reg	Repro
See Distribution List			
15. TOTAL			

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 Series	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A002	Software Products	Database Design Description

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-IPSC-81437A	Performance Work Statement, Para 3.1.4.3, 3.1.4.4.1	SSC/AAE

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4) Section 3: Contractor format is acceptable.
   a. Identify any software and/or license that USG would require to access IDE from USG location. Identify any customization to COTS products that would be necessary for IDE access.
   b. Provide a snapshot of hierarchy and/or structure so that the USG can navigate the IDE to review required data.
2. (BLKs 10, 12, 13):
   a. IDE Draft Database Design Description (DBDD) shall be submitted 90 DACA.
   b. Final IDE Database Design Description shall be submitted 30 CD after receipt of Government comments to the Draft Database Design Description.
   c. Updates shall be submitted as significant revisions are made or by PCO direction.
   d. The Contractor shall provide CDRL notification via signed encrypted email with ECA certification if Controlled Unclassified Information is included in the email.
   e. The Government and the Contractor will identify any banned software within 5 CDs of contract award. If Integrated Data Environment (IDE) contains DoD banned software, Contractor will provide alternative method that is not banned. Contractor shall notify the USG Team of any security incidents or malware infection affecting the IDE system no later than 1 CD after discovery.

14. DISTRIBUTION

15. a. ADDRESSEE	15. b. COPIES		
		FINAL	
	Draft	Reg	Repro
See Distribution List			
15. TOTAL			

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP	TM	OTHER
CLIN 2000 (Series)	A			X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A003	Cost Report Flexfile/Legacy	Contractor Cost Data Reporting (CCDR)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
SEE BLK 16	Performance Work Statement, Para 3.1.6	OSD CAPE; SSC/AAF

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	BLK 16	BLK 16

16. REMARKS

Blocks 10 - 13:

Contractors can choose either the FlexFile format or the Legacy 1921s format.
If contractor chooses FlexFile, follow steps 1 below, otherwise, please go to step 2.

1a-Prepare the Cost and Hour Report (FlexFile) in accordance with DI-FNCL-82162 and the OSD CAPE Deputy Director, Cost Assessment (DDCA)-approved contract CSDR Plan. The DID, DI-FNCL-82162, is available from the Cost Assessment Data Enterprise (CADE) website at https://cade.osd.mil/policy/dids. The CSDR Plan is included as a contract attachment.

1b-The following tailoring of the DID is acceptable:

1c-Data Group B - Item 4 - Additional Data Fields #1-#12. Not required.

1d-Contractors shall be required to submit the Cost and Hour Report (FlexFile) at frequencies specified in the CAPE-approved CSDR plan. The contract CSDR plan uses the event field as the driver for the submission of the reports, not the "as of date." If the event slips, the contractor must notify the Government Program Office that a date change is needed. It is the responsibility of the Government Program Office to submit a request for change in the event-driven date for reporting through the CADE website for CAPE approval before relief is given for the date reflected in the CAPE-approved CSDR Plan.

1e-The FlexFile shall be delivered in either a) MS Excel (.xlsx) or comma separated values (.csv) in the contractor's format of choosing, so long as it fulfills the requirements of the DD FORM 2794 and is in accordance with the FlexFile DID or b) JavaScript Object Notation (JSON) as described in the FlexFile File Format Specification (FFS) and Data Exchange Instructions (DEI) referenced in the FlexFile DID Requirements Section 2. (Go to Step 3)
If contractor chooses legacy format, follow steps 2 below:

2a-Prepare the Cost Data Summary Report (CDSR/1921) in accordance with DI-FNCL-81565C; prepare the Functional Cost Hour Report (FCHR/1921-1) in accordance with DI-FNCL-81566C, and prepare the Contractor Work Breakdown Structure in accordance with DI-FNCL-81334D/C (or the most recently approved version) and the OSD Deputy Director, Cost Assessment (DDCA)-approved contract CSDR Plan. The DIDs are available from the Defense Cost and Resource Center (DCARC) website at http://cade.osd.mil/csdr/FormsReporting.aspx#DIDs. The CSDR Plan is included as a contract attachment.

14. DISTRIBUTION	15. a. ADDRESSEE	b. COPIES		
		Draft	FINAL	
			Reg	Repro
	See Distribution List			
	15. TOTAL			

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 (Series)	A	TDP	TM	OTHER	X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

Blocks 10 – 13 (Cont'd):

2b-Contractors shall be required to submit the reports in step 2a at frequencies specified in the OSD DDCA-approved CSDR plan and in the contract. The contract CSDR plan uses the event field as the driver for the submission of the reports, not the "as of date." If the event slips, the contractor must notify the Government Program Office that a date change is needed. It is the responsibility of the Government Program Office to submit a request for change in the event-driven date for reporting through the CSDR Submit-Review system for DCARC approval before the date reflected in the OSD DDCA-approved CSDR Plan.

All files shall be submitted electronically using the CADE website. Data submitters must register through the CADE website and possess a DoD-approved ECA digital certificate or DoD-issued CAC to obtain a CADE Portal account and be authorized to upload CSDR content. Users can obtain access by submitting user information about themselves and their organizations to the CADE Portal and requesting a CSDR submitter user role. After the registration information has been verified, CAPE shall authorize the user account and requested roles. All CADE Portal accounts need to be renewed at least annually.
Subcontractor Reporting: Prime contractors shall ensure CSDR requirements contained in their prime contracts are flowed down to all subcontractors who meet the reporting thresholds specified in the DoDI 5000.73, or as required by the cost working integrated product team (CWIPT). This includes requiring subcontractors to electronically report directly to CAPE using the CSDR Submit-Review System.

The prime contractor shall be required to work with the CWIPT and all appropriate subcontractors to prepare separate subcontract CSDR plans for submission to the CAPE for approval.

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COST AND SOFTWARE DATA REPORTING PLAN

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.

1a. PROGRAM NAME

NSSL - National Security Space Launch

1b. PHASE/MILESTONE *(check all that apply)*

- [ ] Pre-A
- [ ] A
- [ ] B
- [ ] C-LRIP
- [X] C-FRP
- [ ] O&S

1c. PRIME MISSION PRODUCT

NSSL Phase 3 Lane X Launch Service / Launch Service Support (If Applicable)

1d. ACQUISITION CATEGORY (ACAT)

- [ ] Pre-ACAT
- [X] ACAT I (MDAP)
- [ ] ACAT IA (MAIS)
- [ ] ACAT II
- [ ] ACAT III
- [ ] Other

2. COMMODITY TYPE

Launch Vehicle System

3. PLAN ITERATION TYPE

- [X] INITIAL
- [ ] REVISION

4. CURRENT SUBMISSION DATE *(YYYYMMDD)*

20230125

5. LAST APPROVED PLAN DATE *(YYYYMMDD)*

6a. GOVERNMENT PLAN POINT OF CONTACT (POC) NAME *(Last, First, M.)*

SSC/AAF

6b. ADDRESS *(Include ZIP Code)*

483 N. Aviation Blvd
Los Angeles AFB
El Segundo, CA 90245

6c. TELEPHONE NUMBER *(Include Area Code)*

310-653-2538

6d. E-MAIL ADDRESS

suong.ly@spaceforce.mil

7. PLAN TYPE

- [ ] GOVERNMENT
- [X] CONTRACT (PRIME)
- [ ] CONTRACT (SUB)

8. PLAN GOVERNMENT PREPARING ORGANIZATION

SSC/AAF

9a. CONTRACTOR NAME/ADDRESS

i. REPORTING ORGANIZATION NAME

TBD

ii. DIVISION NAME

iii. LOCATION

iv. CONTRACTOR BUSINESS DATA REPORT (CBDR 1921-3) REQUIREMENT:

- [X] CBDR REQUIRED FOR THIS ORGANIZATION

9b. CONTRACT NUMBER *(List all that apply, separated by commas)*

TBD - [AF-15-K-C18]

9c. APPROPRIATION *(check all that apply)*

- [ ] RDT&E
- [X] PROCUREMENT
- [ ] O&M
- [ ] FMS
- [ ] WCF
- [ ] OTHER

10a. APPROVED PLAN NUMBER

AF-15-K-C18

10b. APPROVED PLAN REVISION NUMBER

0

10c. APPROVED PLAN REQUIREMENTS

- [X] AT COMPLETION COSTS FOR STANDARD FUNCTIONAL CATEGORIES (FlexFile or Legacy)
- [X] AT COMPLETION COSTS FOR RECURRING/NONRECURRING (FlexFile only)
- [X] TECHNICAL DATA REQUIRED

10d. COST REPORT TYPE

- [X] FLEXFILE
- [ ] LEGACY DD 1921 SERIES

DRAFT DD FORM 2794 (PAGE 1), METADATA, JANUARY 2019 PREVIOUS EDITION IS OBSOLETE

COST AND SOFTWARE DATA REPORTING PLAN

11. WORK BREAKDOWN STRUCTURE (WBS)			12. COST					13. TECHNICAL DATA			
								a. QUANTITY			
a. WBS CODE	b. WBS LEVEL	c. WBS ELEMENT NAME	a. ACTUALS TO DATE (ATD)	b. LEGACY 1921-1	c. LEGACY 1921-2	d. LEGACY 1921-5	e. EAC/FAC (See item 10d)	i. QUANTITY DATA	ii. GFE QUANTITY	b. SRDR FORMATS	c. MAINT. & REPAIR PARTS
1.0	1	NSSL Phase 3 Lane *X* Launch Service / Launch Service Support (If Applicable)									
1.1	2	System Engineering, Integration, Test, Program Management (SEIT/PM)									
1.1.1	3	System Engineering	X				X				
1.1.2	3	Integration & Test	X				X				
1.1.3	3	Program Management	X				X				
1.1.4	3	Production (Factory) Support	X				X				
1.2	2	Mission Integration									
1.2.1	3	Mission Standard Integration	X				X				
1.2.2	3	Mission Unique Integration	X				X				
1.3	2	Mission Assurance	X				X				
1.4	2	Transportation	X				X				
1.5	2	Launch Operations									
1.5.1	3	Launch Vehicle Processing	X				X				
1.5.2	3	Payload Processing	X				X				
1.5.3	3	Launch Operations System Engineering/Program Management (SEPM)	X				X				
1.5.4	3	Launch Site Maintenance	X				X				
1.5.5	3	Base Support Services	X				X				
1.5.6	3	Range Operations Services	X				X				
1.5.7	3	Propellants (Launch Vehicle)	X				X				
1.5.8	3	Post Launch									
1.5.8.1	4	Recovery Operations	X				X				
1.5.8.2	4	Launch Site Refurbishment	X				X				
1.6	2	Launch Vehicle									
1.6.1	3	System Engineering, Integration, Test, Program Management (SEIT/PM)									
1.6.1.1	4	System Engineering	X				X				
1.6.1.2	4	Integration, Assembly, Test & Checkout (IAT&C)	X				X				
1.6.1.3	4	Program Management	X				X				
1.6.2	3	Launch Vehicle Stage 1..n (specify)									
1.6.2.1	4	Launch Vehicle Stage 1									
1.6.2.1.1	5	Propulsion									
1.6.2.1.1.1	6	Primary Engine(s) and Motor(s)									
1.6.2.1.1.1.1	7	New Primary Engine(s) & Motor(s)	X				X				
1.6.2.1.1.1.2	7	Reused/Refurbished Primary Engine(s) & Motor(s)	X				X				
1.6.2.1.1.2	6	Solid Rocket Boosters	X				X				
1.6.2.1.2	5	Stage Structures									
1.6.2.1.2.1	6	New Stage Structure	X				X				
1.6.2.1.2.2	6	Reused/Refurbished Stage Structure	X				X				
1.6.2.1.2.3	6	New Interstage Adapter (up-stack)	X				X				
1.6.2.1.2.4	6	Reused/Refurbished Interstage Adapter (up-stack)	X				X				
1.6.2.1.3	5	Guidance and Control System (Avionics)									
1.6.2.1.3.1	6	New Guidance and Control System (Avionics)	X				X				
1.6.2.1.3.2	6	Reused/Refurbished Guidance and Control System (Avionics)	X				X				
1.6.2.1.4	5	Recovery System									
1.6.2.1.4.1	6	New Recovery System	X				X				
1.6.2.1.4.2	6	Reused/Refurbished Recovery System	X				X				
1.6.2.2	4	Launch Vehicle Stage 2									
1.6.2.2.1	5	Propulsion									
1.6.2.2.1.1	6	Primary Engine(s) and Motor(s)									
1.6.2.2.1.1.1	7	New Primary Engine(s) & Motor(s)	X				X				
1.6.2.2.1.1.2	7	Reused/Refurbished Primary Engine(s) & Motor(s)	X				X				
1.6.2.2.1.2	6	Solid Rocket Boosters	X				X				
1.6.2.2.2	5	Stage Structures									
1.6.2.2.2.1	6	New Stage Structure	X				X				
1.6.2.2.2.2	6	Reused/Refurbished Stage Structure	X				X				
1.6.2.2.2.3	6	New Interstage Adapter (up-stack)	X				X				
1.6.2.2.2.4	6	Reused/Refurbished Interstage Adapter (up-stack)	X				X				
1.6.2.2.3	5	Guidance and Control System (Avionics)									
1.6.2.2.3.1	6	New Guidance and Control System (Avionics)	X				X				
1.6.2.2.3.2	6	Reused/Refurbished Guidance and Control System (Avionics)	X				X				
1.6.2.2.4	5	Recovery System									
1.6.2.2.4.1	6	New Recovery System	X				X				
1.6.2.2.4.2	6	Reused/Refurbished Recovery System	X				X				
1.6.3	3	Payload Accommodations									
1.6.3.1	4	Payload Fairing									
1.6.3.1.1	5	New Payload Fairing	X				X				
1.6.3.1.2	5	Reused/Refurbished Payload Fairing	X				X				
1.6.3.1.3	5	Fairing Recovery System									
1.6.3.1.3.1	6	New Fairing Recovery System	X				X				
1.6.3.1.3.2	6	Reused/Refurbished Fairing Recovery System	X				X				
1.6.3.2	4	Payload Attach Fitting(s) (Adapters)	X				X				
1.6.3.3	4	Mission Unique Flight Hardware/Software	X				X				
1.6.4	3	Vehicle Flight Software	X				X				
1.7	2	Other 1...n (specify)									
1.7.1	3	Quick Reaction / Anomaly Resolution / Studies	X				X				
1.7.1.1	4	QRAR (Quick Reaction/Anomaly Resolution) Mission Specific 1...n (Specificy)	X				X				
1.7.1.2	4	QRAR (Quick Reaction/Anomaly Resolution) Non-Mission Specific	X				X				
1.7.2	3	Mission Acceleration	X				X				
1.7.3	3	Early Integration Studies 1...n (Specify) / Special Studies	X				X				
1.7.4	3	Cumulative Mission Success Incentive	X				X				
1.7.5	3	Mission Unique R&D	X				X				
1.7.6	3	Data	X				X				
1.7.7	3	Award Fee	X				X				
1.7.8	3	Fleet Surveilance	X				X				
1.7.9	3	Postponement Fee	X				X				
1.7.10	3	Other CLINs	X				X				
		Subtotal Cost	X				X				
		Reporting Contractor G&A	X				X				
		Reporting Contractor Undistributed Budget	X				X				
		Reporting Contractor Management Reserve	X				X				
		Reporting Contractor FCCM	X				X				
		Total Cost	X				X				
		Reporting Contractor Profit/Loss or Fee	X				X				
		Total Price	X				X				

DRAFT DD FORM 2794 (PAGE 2), REPORTING, JANUARY 2019

COST AND SOFTWARE DATA REPORTING PLAN

14. CSDR SUBMISSION EVENTS

a. EVENT ID	b. DATA REPORT(S)	c. SUBMISSION EVENT NAME	d. REPORT CYCLE	e. AS OF DATE (YYYYMMDD)	f. DUE DATE (YYYYMMDD)
1	Cost and Hour Report (FlexFile), Quantity Data Report	Contract Award - FlexFile	Initial	Contract Award	Contract Award + 60 Days
2	Technical Data Report	Contract Award - TDR	Initial	Contract Award	Contract Award + 60 Days
3	Cost and Hour Report (FlexFile), Quantity Data Report	Annual Report 1...n - FlexFile	Interim	Contract Award + 12 Months	Contract Award + 14 Months
4	Technical Data Report	Annual Report 1...n - TDR	Interim	Contract Award + 12 Months	Contract Award + 14 Months
5	Cost and Hour Report (FlexFile), Quantity Data Report	Contract Completion (60 days from completion) - FlexFile	Final	Contract Completion - 60 days	Contract Completion
6	Technical Data Report	Contract Completion (60 days from completion) - TDR	Final	Contract Completion - 60 days	Contract Completion

DRAFT DD FORM 2794 (PAGE 3), SUBMISSION EVENTS, JANUARY 2019 PREVIOUS EDITION IS OBSOLETE

15. REMARKS

The contractor must report costs on all CLINs associated with the (Insert contract name) contract including Over and Above, Advance Procurement, Long Lead Materials, Multiyear Procurement, Inter-Division or Inter-Company Work Orders (IWOs), Foreign Military Sales (FMS), Warranty, etc. Costs should not be omitted based on contract CLIN structure or definition.

INITIAL REPORT

Submission events associated with this CSDR Plan are classified as either "Initial", "Interim", or "Final" submissions as identified in block 14.d of this CSDR plan.

i. Submission events marked "Initial" shall report the Contractor's total anticipated contract cost and resulting price using the maximum allowable contractor quantities, hours, or options (as applicable). For sealed bid contracts (i.e., contracts awarded under FAR Part 14) the reported FAC/EAC shall equal the value of the Contractor's sealed bid (using the maximum allowable contractor quantities, hours, or options (as applicable)). For negotiated contracts (i.e., contracts award under FAR Part 15) the reported FAC/EAC shall be equal in overall value to the Contractor's best and final offer (and consistent in distribution with any supporting cost and pricing data (e.g., basis of estimates, engineering build-ups) (using the maximum allowable contractor quantities, hours, or options (as applicable)). For all other contracts, the reported FAC/EAC shall be equal in overall value to the Contractor's final proposal and consistent in distribution with any supporting data provided to substantiate the contract's value, reasonableness, and/or realism (e.g., basis of estimates, engineering build-ups) (using the maximum allowable contractor quantities, hours, or options (as applicable)). No ATD costs are anticipated to reported on an "Initial" submission except for any certified precontract costs incurred prior to or on the date of contract award.

ii. Interim" report submissions are any report that is not either an "Initial" or "Final" report. Reported ATD, EAC/FAC, and quantities on "Interim" submissions shall be prepared reflecting only the value of work, quantities, hours, or options (as applicable) awarded on the report's "As Of Date" (do not include costs for anticipated but not awarded scopes of work, quantities, hours, or options).

iii. Reported ATD, EAC/FAC, and quantities on "Final" submissions shall be prepared reflecting the value of work, quantities, hours, and options (as applicable) anticipated to be awarded on a contract and meet the conditions listed in block 15.c.i.4.

COVID-19 Remarks:

The Reporting Entity shall provide a description of the type and timing of all impacts to program schedule, incurred actual costs, forecasted at complete costs, in process quantities, and delivered quantities, which are directly attributable to the COVID-19 pandemic.
Per the DIDs, note any relevant information that could be used in the interpretation of the data. Provide general or, if available, quantifiable contract impacts within the Summary Remarks. Provide impacts to specific WBS Elements or Functional Elements within the Remarks by DD FORM 2794 WBS Element. Provide impacts to the business unit within the Remarks of each 1921-3 submission. Organize impacts under a heading in the remarks that refers to "COVID-19 impacts", or similar language, that segments this information from the rest of the remarks.
If applicable, the Reporting Entity shall provide an explanation of any new charge codes, work packages, control accounts, pricing categories, or other methods explicitly utilized to capture impacts of COVID-19.
If there are no impacts to report, then report there are no impacts in the Summary Remarks of each FlexFile and the Remarks of each 1921-3 submission.

Additional Data Fields #1-#12 (FlexFile): If applicable, the Reporting Entity shall utilize a "Tag" or the "Additional Data Field" referenced in Section B of the FlexFile DID (DI-FNCL-82162) to identify COVID-19 related data.

FAC vs EAC

The checkmarks for EAC/FAC in column 12e at the WBS level shall be reported as "Forecast at Completion" (FAC). The Forecast At Completion (FAC) required here is not subject to the standards established in ANSI/EIA-748 guideline #27 (Estimate at Complete); therefore, the FAC does not need to be, but may be, derived from Industry Earned Value Management (EVM) processes.

NON-RECURRING/RECURRING DEFINITIONS

Recurring and Non-Recurring Costs required for all levels:

Recurring costs. Repetitive elements of development, investment or sustainment costs that may vary with the quantity being produced or maintained, irrespective of system life cycle phase and appropriation. Recurring cost categories include procurement, and production and maintenance activities; acceptance testing; maintenance and support equipment, training, and data; test articles built to an operational configuration; and certain elements of systems engineering and program management.

Examples of Prime Mission Product activities include repetitive costs incurred when building prototype, test systems, or production units to an operational configuration. Examples of Prime Mission Product Hardware activities include Fabrication and assembly of partial/full prototype, test, or production units whether for customer or contractor use; Raw material, purchased parts, equipment associated with the fabrication and assembly of partial/full prototype or test units whether for customer or contractor use; Touch labor, integration and assembly, installation and check out; Engineering support for production unit fabrication, assembly and check out.

Examples of Prime Mission Product Software activities include Procurement of stand-alone or bundled COTS software licenses used in an operational system and installation and checkout of developed software into production units. Examples of Systems Engineering activities include Sustaining engineering, logistics support, planning, organizing, monitoring and reporting activities, document maintenance. Examples of Program Management activities include programmatic, financial, contractual, schedule, planning, organizing, and monitoring (quality information assurance, configuration management) activities in support of production unit fabrication, assembly and check out; meetings & efforts in support of supplier, manufacturing & production activities.

Nonrecurring costs. Non-repetitive elements of development, investment or sustainment costs that generally do not vary with the quantity being produced or maintained, irrespective of system life cycle phase and the appropriation. Nonrecurring cost categories include product design and development (PD&D) activities, including those for modifications; system test and evaluation (ST&E) including ST&E for modifications; tooling; pre-production or pre-maintenance activities; design and development of support equipment, training, and data; and certain elements of systems engineering and program management.

Examples of Prime Mission Product PD&D activities are: Requirements definition, engineering design, analysis & development; Redesign, rework & retest due to design flaws & first time corrective actions; test articles built for testing purposes only (i.e., units that are not production-representative) such as wind tunnel models, and bench and coupon test articles; structural development, static, fatigue, software, and ballistics testing; stress analysis; flight, ground, or sea testing of system properties; redesign as a result of testing; and retesting efforts; All configuration, quality, and data management efforts supporting release activity for first article configuration, delivery & certification; System safety plan, manuals, tech services, & maintenance manual development in support of first article delivery.

Examples of hardware design and development activities include material, purchased parts and labor associated with engineering models, operational models, bench, lab articles or partially built units (i.e. units that are not production representative), tooling, and ground support equipment for qualification, structural, static, fatigue or stress testing, and refurbishment of test units; and engineering support including manufacturing engineering, quality engineering, and tool engineering for development unit fabrication, assembly & tests.

Examples of software design and development activities include design and development of all software; delivered operational software and software developed to correct deficiencies and add capabilities; Initial integration of COTS and GOTS products into operational configuration; Support for HW-SW integration and test, system level testing; initial integration of COTS and GOTS products into operational configuration; and commercial software licenses for development facilities. System Engineering, Program Management, and Data activities occur throughout the system life cycle and are supportive in nature; as such, these costs take on the characteristics of the underlying activities being performed.

Examples of Systems Engineering activities include installation plans or quality inspection plans; requirements definition, allocation and flow-down; creation of specification and Interface Control Documents (ICDs); design and implementation of system security; top level design trade-offs; analyses, studies, and simulations for system performance and effectiveness, reliability, availability, maintainability or survivability; internal & external design review, IPT coordination & integration meetings; Certification & Control documentation; and supplier selection & coordination. Examples of Program Management activities include programmatic, financial, contractual, schedule, planning, organizing, and monitoring (quality information assurance, configuration management) activities in support of development, design & testing efforts.

Examples of System Test and Evaluation activities include development of test plans/procedures; subsystem and system level test and integration for developmental articles; test equipment in support of development including for static & fatigue testing, test stands, wind tunnel models, stress analysis, ballistics testing, flight, ground or sea testing of system, redesign from testing, retesting; System/Software Integration Laboratory (SIL) development; and analysis to support verification, validation & certification. Examples of Training activity include initial courseware development and simulator development. Examples of Initial Spares and Repair Parts activity include spare parts and material in support of the nonrecurring subsystem/system level articles.

Examples of Support Equipment activity include initial equipment design and test efforts, and test program sets development. Examples of Tooling activity include special test equipment, special tooling, procurement of initial & rate tooling, tool replacement (with the exact same tool) & tool modification (to accommodate product configuration changes). Examples of Operational/Site Activation activity include site planning efforts.

IRAD EFFORT

The contractor should list any major relevant IRAD projects in support of this contract, provide a brief description of the cost of the projects, and provide/attach any more detailed actual cost information at the level available."

The government is requesting cost data for any IRAD projects similar to past emergent NSSL requirements, e.g. vertical payload integration, extended fairing, vented honey-combed fairing, etc. If none, "N/A" is acceptable.

WBS INDEX AND DICTIONARY

The WBS Dictionary is a living document and must match the technical content, cost content, and work content of each end item (see Block 17) for all WBS elements for each Cost and Hour (FlexFile) submission. The dictionary shall contain a disclosure statement detailing any differences between the CSDR reporting methodology and the reporting entity's Cost Accounting Standards. The dictionary shall include a section detailing how parts are procured under this contract and any limitations of the parts procurement cost data or allocation of cost data for the WBS element.

The reporting entity must maintain and update the WBS Dictionary throughout the life of the contract, IAW DI-FNCL-82162, if changes to the WBS occur, the reporting entity shall annotate and track changes by adding the "As of Date" of the submitted FlexFile report and indicate the changes to the WBS Index and Dictionary Definitions.

For WBS elements identified in block 11 of the CSDR plan that is not within the contract's scope of work, the reporting entity shall report in the dictionary that "This CSDR WBS element is not associated with this contract's scope of work", and zero costs will be associated for ATD and FAC for these WBS elements.

The WBS elements and level of reporting may be tailored upon mutual agreement.

COST ACCOUNTING STANDARDS (CAS) DISCLOSURE STATEMENT DIFFERENCES

Describe significant accounting changes from previous accounting period in the Remarks section of the reports, if applicable.

1921-3 CONTRACTOR BUSINESS DATA REPORT

a. The Contractor Business Data Report is prepared by and for the business entity (e.g., business unit, segment, or site) responsible for submitting the Forward Pricing Rate Proposal (FPRP) representing the basis for Forward Pricing Rate Agreement (FPRA) negotiations with the government.

b. Reports are submitted annually at the end of the contractor's fiscal year.

c. Data for Future Years should be reflective of the number of years contained in the most current document, i.e., the FPRP or the FPRA. If the document applies to more than three future years, attach additional future year sheets as required. In the absence of these documents, estimates should be provided for three future years.

d. The existing 1921-3 requires strictly formatted data and necessitates mappings to a government standard, the new DRAFT 1921-3 may be submitted in the contractor's own format and according to the contractor's own rate structure, so long as it meets the data requirements in the DRAFT 1921-3 Data Item Description DI-FNCL-81765.

e. "An alternate to completing 1921-3 complete Blocks 1 through 11, on Page 1 (sections A – F are not required), and REMARKS section must include "Headcount by Department" on a monthly basis.

END ITEMS/ORDER LOTS SCOPE IDIQ

Block 16 Orders/Lots is meant to capture the discrete Delivery Orders/Task Orders exercised on the contract. If a Delivery Order/Task Order is exercised on the contract and the CSDR plan has not been updated, it is the Reporting Entity's responsibility to still submit the dollars and hours in the FlexFile tagged to the appropriate Delivery Orders/Task Orders. The CSDR plan will be revised accordingly to include all exercised Delivery Orders/Task Orders.

COST AND HOUR REPORT UNIT/SUBLOT REPORTING

The Reporting Entity is required to provide unit or sublot (specify) reporting for any given Order/Lot and End Item as outlined in block 18 of the DD Form 2794. If Unit Reporting is selected in item 18c (Unit Reporting), it is expected that all touch labor costs and hours that are associated with the discrete units or sublots be tagged as Touch Manufacturing or Touch Maintenance as defined in Data Group E, Item 7.

QUANTITY REPORTING

a. If the quantity for a given element differs from the quantity reported for the full system, provide a comment in the WBS Element Remarks section.

b. The Reporting Entity shall provide meaningful quantity information lower than the summary level in the remarks for WBS elements Peculiar Support Equipment, Common Support Equipment, and Initial Spares and Repair Parts, if applicable.

FINAL COST REPORT

Final Cost Report to be submitted when final end item has been delivered and accepted by the government (e.g., as evidenced by a completed DD 250) and 95% or more of total costs for each Order/Lot (see Block 16) and each End Item (see Block 17) has been incurred.

CSDR READINESS REVIEW (CSDR-RR) also known as Post Award Conference (PAC)

The Reporting Entity shall attend and participate in a CSDR Readiness Review meeting (also known as the Post award CSDR conference) which will be held with the Cost Working Group Integrated Product Team (CWIPT) IAW DFARS 242.503-2(b) and DoDM 5000.04 (CSDR Manual). During this meeting, the CWIPT and contractor will review the Reporting Entity's process for data collection and reporting to ensure it satisfies the guidelines outlined in the DoDM 5000.04, CSDR Manual, the approved CSDR plan reporting requirement, and the Resource Distribution Table. The Reporting Entity shall demonstrate how costs will be based, to the maximum extent possible, upon actual cost transactions and not cost allocations; describe how recurring vs. nonrecurring costs will be segregated; demonstrate how the data from its accounting system will be mapped into the reporting categories in the approved CSDR plan. The Reporting Entity shall present the methodologies used for mapping internal cost accounts to the agreed upon WBS, specifically illustrating how individual WBS elements and standard functional categories in the FlexFile (functional data elements in the 1921 series) codes will be populated. The review shall include any reporting issue corrections and identify proposed changes to the approved CSDR Plan as necessary.

PERIOD OF PERFORMANCE (POP)

If contract Period of Performance is extended, the contractor shall submit an additional cost report for each additional year of extension. The final report will be moved to the revised end of the Period of Performance.

COST AND SOFTWARE DATA REPORTING PLAN

INTRA-CONTRACT SCOPE REPORTING DEFINITION

16. ORDERS/LOTS

a. ID	b. NAME	c. PHASE/MILESTONE
L1	Launch 1	C-FRP
L2	Launch 2..n	C-FRP
LSS_23	Launch Service Support Year 2023 (If Applicable)	C-FRP
LSS_24	Launch Service Support Year 2024..n (If Applicable)	C-FRP

17. END ITEMS

a. ID	b. NAME
RV1	Rocket Variant 1
RV2	Rocket Variant 2..n
CMN	Common

18. UNIT/SUBLOT REPORTING AND UNIT SEQUENCING REQUIREMENTS

a. ORDER/LOT ID	b. END ITEM ID	c. UNIT/SUBLOT REPORTING *(X if applicable)*	d. UNIT SEQUENCING *(X if applicable)*

DRAFT DD FORM 2794 (PAGE 5), INTRA-CONTRACT SCOPE, JANUARY 2019

COST AND SOFTWARE DATA REPORTING PLAN - TECHNICAL PARAMETER REQUIREMENTS

TECHNICAL PARAMETER REQUIREMENTS

26. WBS ELEMENT CODE	27. WBS ELEMENT NAME	28. ITEM TYPE	29. TECHNICAL PARAMETER				
			a. PARAMETER NAME	b. UNIT OF MEASURE	c. UNIT OF MEASURE QUALIFIER	d. REPEATABLE	e. REMARKS
1.1.1	System Engineering	SysEng	Headcount	FTEs			
1.1.1	System Engineering	SysEng	Work Performed Location	Description			
1.1.2	Integration & Test	I&T	Payload(s) Qty	Qty			
1.1.2	Integration & Test	I&T	Rideshare Payloads	Qty			
1.1.2	Integration & Test	I&T	Payload Total Mass	lbm			
1.1.3	Program Management	ProgMgmt	Headcount	FTEs			
1.1.3	Program Management	ProgMgmt	Work Performed Location	Description			
1.1.4	Production (Factory) Support	ProdSupport	Headcount	FTEs			
1.1.4	Production (Factory) Support	ProgMgmt	Work Performed Location	Description			
1.2.1	Mission Standard Integration	MissionSupport	Orbital Regime	Description			
1.2.1	Mission Standard Integration	MissionSupport	# of Engine Starts	Qty			
1.2.1	Mission Standard Integration	MissionSupport	Mission Integration Type	Description			
1.2.2	Mission Unique Integration	MissionSupport	Cat C	(Y/N)			
1.2.2	Mission Unique Integration	MissionSupport	Multi-Mission Type	Description			
1.2.2	Mission Unique Integration	MissionSupport	Wet Dress Rehearsals	Qty			
1.3	Mission Assurance	MissionSupport	Headcount	FTEs			
1.3	Mission Assurance	MissionSupport	Work Performed Location	Description			
1.4	Transportation	Trans	# of Transportation Types	Qty			
1.5.3	Launch Operations System Engineering/Program Management (SEPM)	SysEng/ProgMgmt	Headcount	FTEs			
1.5.3	Launch Operations System Engineering/Program Management (SEPM)	SysEng/ProgMgmt	Work Performed Location	Description			
1.5.6	Range Operations Services	Services	# of Launch Scrubs	Qty			
1.5.7	Propellants (Launch Vehicle)	PhysicalElec	# of Tank fills	Qty			
1.5.8.1	Recovery Operations	RecoveryOperations	LV Recovery Type	Description			
1.6.1.1	System Engineering	SysEng	Headcount	FTEs			
1.6.1.1	System Engineering	SysEng	Work Performed Location	Description			
1.6.1.3	Program Management	ProgMgmt	Headcount	FTEs			
1.6.1.3	Program Management	ProgMgmt	Work Performed Location	Description			
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	# of New Primary Engines and Motors	Qty	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	ISP, vacuum	seconds	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Thrust	lbf	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Weight	lbm	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Design Life	# of missions	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Upper Stage	(Y/N)	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Throttle %	%	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	% manually fabricated	%	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	gimballed?	y / n	Stage 1		
1.6.2.1.1.1.2	Reused/Refurbished Primary Engine(s) & Motor(s)	PhysicalElec	# of Reused/Refurbished Primary Engines and Motors	Qty	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	# of Solid Rocket Boosters	Qty	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	ISP, vacuum	seconds	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Total Impulse	lbf-s	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Segmented	(Y/N)	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Total weight	lb	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Propellant weight	lb	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	gimballed	(Y/N)	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	case material	description	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	volume	ft^3	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	material	ex., stainless steel, aluminum-lithium alloy	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	weight	lbs	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	Hydrogen	(Y/N)	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	material type	aluminum, carbon composite	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	volume	ft^3	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	staging mechanism	description	Stage 1		
1.6.2.1.3.1	New Guidance and Control System (Avionics)	PhysicalElec	weight	lb	Stage 1		
1.6.2.1.3.1	New Guidance and Control System (Avionics)	PhysicalElec	Gyro type	Description	Stage 1		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	# of New Primary Engines and Motors	Qty	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	ISP, vacuum	seconds	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Thrust	lbf	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Weight	lbm	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Design Life	# of missions	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Upper Stage	(Y/N)	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Throttle %	%	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	% manually fabricated	%	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	gimballed?	y / n	Stage 2		
1.6.2.2.1.1.2	Reused/Refurbished Primary Engine(s) & Motor(s)	PhysicalElec	# of Reused/Refurbished Primary Engines and Motors	Qty	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	# of Solid Rocket Boosters	Qty	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	ISP, vacuum	seconds	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Total Impulse	lbf-s	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Segmented	(Y/N)	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Total weight	lb	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Propellant weight	lb	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	gimballed	(Y/N)	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	case material	description	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	volume	ft^3	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	material	ex., stainless steel, aluminum-lithium alloy	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	weight	lbs	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	Hydrogen	(Y/N)	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	material type	aluminum, carbon composite	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	volume	ft^3	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	staging mechanism	description	Stage 2		
1.6.2.2.3.1	New Guidance and Control System (Avionics)	PhysicalElec	weight	lb	Stage 2		
1.6.2.2.3.1	New Guidance and Control System (Avionics)	PhysicalElec	Gyro type	Description	Stage 2		
1.6.3.1.1	New Payload Fairing	PhysicalElec	volume	ft^3			
1.6.3.1.1	New Payload Fairing	PhysicalElec	parachute	(Y/N)			
1.6.3.1.1	New Payload Fairing	PhysicalElec	integrated to Upper Stage	(Y/N)			
1.6.3.3	Mission Unique Flight Hardware/Software	PhysicalElec	# of Mission Unique Flight Hardware/Software	Qty			
1.6.3.3	Mission Unique Flight Hardware/Software	SoftwareNonSRDR	ESLOC	#			
1.6.4	Vehicle Flight Software	SoftwareNonSRDR	ESLOC	#			
1.7.3	Early Integration Studies 1...n (Specify) / Special Studies	Studies	EIS Type	Description			

COST AND SOFTWARE DATA REPORTING PLAN - TECHNICAL PARAMETER REQUIREMENTS							
TECHNICAL PARAMETER REQUIREMENTS (Definitions)							
26. WBS ELEMENT CODE	27. WBS ELEMENT NAME	29. TECHNICAL PARAMETER		TECHNICAL PARAMETER (Definintions and Choice List)			
		a. PARAMETER NAME	b. UNIT OF MEASURE	DEFINITION	List Item #1	List Item #2	List Item #n
1.1.1	System Engineering	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.1.1	System Engineering	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.1.2	Integration & Test	Payload(s) Qty	Qty	Number of payloads integrated on mission			
1.1.2	Integration & Test	Rideshare Payloads	Qty	Number of rideshare payloads			
1.1.2	Integration & Test	Payload Total Mass	lbm	Total payload mass in pounds			
1.1.3	Program Management	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.1.3	Program Management	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.1.4	Production (Factory) Support	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.1.4	Production (Factory) Support	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.2.1	Mission Standard Integration	Orbital Regime	Description	LEO, MEO Transfer, MEO Direct Inject, GTO, Direct Inject GEO			
1.2.1	Mission Standard Integration	# of Engine Starts	Qty	Number of planned engine starts			
1.2.1	Mission Standard Integration	Mission Integration Type	Description	Highest level of Mission Int type: Reflight, Basic, or Unique			
1.2.2	Mission Unique Integration	Cat C	(Y/N)	Is this a Category C mission			
1.2.2	Mission Unique Integration	Multi-Mission Type	Description	MMC Type (ESPA Ring, Propulsive ESPA, Aft-mounted canister, etc)			
1.2.2	Mission Unique Integration	Wet Dress Rehearsals	Qty	# of Wet Dress Rehearsals			
1.3	Mission Assurance	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.3	Mission Assurance	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.4	Transportation	# of Transportation Types	Qty	# of Transportation Types per Mission (Truck, Boat, Plane)			
1.5.3	Launch Operations System Engineering/Program Management	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.5.3	Launch Operations System Engineering/Program Management	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.5.6	Range Operations Services	# of Launch Scrubs	Qty	Number of launch attempts that engaged the Range			
1.5.7	Propellants (Launch Vehicle)	# of Tank fills	Qty	Number of times propellant tanks were filled (counting scrubs and re-tankings)			
1.5.8.1	Recovery Operations	LV Recovery Type	Description	Return-to-Launch-Site propulsive landing, RTLS non-propulsive landing, Ocean vessel landing			
1.6	Launch Vehicle	# of Launch Vehicles	Qty	How many launch vehicles are being developed?			
1.6.1.1	System Engineering	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.6.1.1	System Engineering	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.6.1.3	Program Management	Headcount	FTEs	Full Time Equivalent employees who worked the mission / annual support			
1.6.1.3	Program Management	Work Performed Location	Description	City, State location of the SEITPM FTEs			
1.6.2.1	Launch Vehicle Stage 1	# of Launch Vehicle Stage 1	Qty				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	# of New Primary Engines and Motors	Qty				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	ISP, vacuum	seconds				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	Thrust	lbf				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	Weight	lbm				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	Design Life	# of missions	How many flights was the engine designed for?			
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	Upper Stage	(Y/N)				
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	Throttle %	%	% of Full throttle that engine can attain before combustion instability			
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	% manually fabricated	%	% of engine parts fabriacated by manual processes vice automated (ex., 3D-printed or machine-welded)			
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	gimballed?	y / n				
1.6.2.1.1.1.2	Reused/Refurbished Primary Engine(s) & Motor(s)	# of Reused/Refurbished Primary Engines and Motors	Qty				
1.6.2.1.1.2	Solid Rocket Boosters	# of Solid Rocket Boosters	Qty				
1.6.2.1.1.2	Solid Rocket Boosters	ISP, vacuum	seconds				
1.6.2.1.1.2	Solid Rocket Boosters	Total Impulse	lbf-s				
1.6.2.1.1.2	Solid Rocket Boosters	Segmented	(Y/N)				
1.6.2.1.1.2	Solid Rocket Boosters	Total weight	lb				
1.6.2.1.1.2	Solid Rocket Boosters	Propellant weight	lb				
1.6.2.1.1.2	Solid Rocket Boosters	gimballed	(Y/N)				
1.6.2.1.1.2	Solid Rocket Boosters	case material	description	Stainless steel, carbon composite fiber			
1.6.2.1.2.1	New Stage Structure	# of New Stage Structure	Qty				
1.6.2.1.2.1	New Stage Structure	volume	ft^3				
1.6.2.1.2.1	New Stage Structure	material	ex., stainless steel, aluminum-lithium alloy				
1.6.2.1.2.1	New Stage Structure	weight	lbs				
1.6.2.1.2.1	New Stage Structure	Hydrogen	(Y/N)	Is the structure designed to hold liquid hydrogen?			
1.6.2.1.2.2	Reused/Refurbished Stage Structure	# of Reused/Refurbished Stage Structure	Qty				
1.6.2.1.2.3	New Interstage Adapter (up-stack)	# of New Interstage Adapter (up-stack)	Qty				
1.6.2.1.2.3	New Interstage Adapter (up-stack)	material type	aluminum, carbon composite				
1.6.2.1.2.3	New Interstage Adapter (up-stack)	volume	ft^3				
1.6.2.1.2.3	New Interstage Adapter (up-stack)	staging mechanism	description	ex., push-rod separator, retro rockets			
1.6.2.1.2.4	Reused/Refurbished Interstage Adapter (up-stack)	# of Reused/Refurbished Interstage Adapter (up-stack)	Qty				
1.6.2.1.3.1	New Guidance and Control System (Avionics)	# of New Guidance and Control System (Avionics)	Qty				
1.6.2.1.3.1	New Guidance and Control System (Avionics)	weight	lb				
1.6.2.1.3.1	New Guidance and Control System (Avionics)	Gyro type	Description	mechanical gyros or laser ring?			
1.6.2.1.3.2	Reused/Refurbished Guidance and Control System (Avionics)	# of Reused/Refurbished Guidance and Control System (Avio	Qty				
1.6.2.2	Launch Vehicle Stage 1	# of Launch Vehicle Stage 1	Qty				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	# of New Primary Engines and Motors	Qty				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	ISP, vacuum	seconds				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	Thrust	lbf				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	Weight	lbm				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	Design Life	# of missions	How many flights was the engine designed for?			
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	Upper Stage	(Y/N)				
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	Throttle %	%	% of Full throttle that engine can attain before combustion instability			
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	% manually fabricated	%	% of engine parts fabriacated by manual processes vice automated (ex., 3D-printed or machine-welded)			
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	gimballed?	y / n				
1.6.2.2.1.1.2	Reused/Refurbished Primary Engine(s) & Motor(s)	# of Reused/Refurbished Primary Engines and Motors	Qty				
1.6.2.2.1.2	Solid Rocket Boosters	# of Solid Rocket Boosters	Qty				
1.6.2.2.1.2	Solid Rocket Boosters	ISP, vacuum	seconds				
1.6.2.2.1.2	Solid Rocket Boosters	Total Impulse	lbf-s				
1.6.2.2.1.2	Solid Rocket Boosters	Segmented	(Y/N)				
1.6.2.2.1.2	Solid Rocket Boosters	Total weight	lb				
1.6.2.2.1.2	Solid Rocket Boosters	Propellant weight	lb				
1.6.2.2.1.2	Solid Rocket Boosters	gimballed	(Y/N)				
1.6.2.2.1.2	Solid Rocket Boosters	case material	description	Stainless steel, carbon composite fiber			
1.6.2.2.2.1	New Stage Structure	# of New Stage Structure	Qty				
1.6.2.2.2.1	New Stage Structure	volume	ft^3				
1.6.2.2.2.1	New Stage Structure	material	ex., stainless steel, aluminum-lithium alloy				
1.6.2.2.2.1	New Stage Structure	weight	lbs				
1.6.2.2.2.1	New Stage Structure	Hydrogen	(Y/N)	Is the structure designed to hold liquid hydrogen?			
1.6.2.2.2.2	Reused/Refurbished Stage Structure	# of Reused/Refurbished Stage Structure	Qty				
1.6.2.2.2.3	New Interstage Adapter (up-stack)	# of New Interstage Adapter (up-stack)	Qty				
1.6.2.2.2.3	New Interstage Adapter (up-stack)	material type	aluminum, carbon composite				
1.6.2.2.2.3	New Interstage Adapter (up-stack)	volume	ft^3				
1.6.2.2.2.3	New Interstage Adapter (up-stack)	staging mechanism	description	ex., push-rod separator, retro rockets			
1.6.2.2.2.4	Reused/Refurbished Interstage Adapter (up-stack)	# of Reused/Refurbished Interstage Adapter (up-stack)	Qty				
1.6.2.2.3.1	New Guidance and Control System (Avionics)	# of New Guidance and Control System (Avionics)	Qty				
1.6.2.2.3.1	New Guidance and Control System (Avionics)	weight	lb				
1.6.2.2.3.1	New Guidance and Control System (Avionics)	Gyro type	Description	mechanical gyros or laser ring?			
1.6.2.2.3.2	Reused/Refurbished Guidance and Control System (Avionics)	# of Reused/Refurbished Guidance and Control System (Avio	Qty				
1.6.2.2.4.1	New Recovery System	# of New Recovery Systems	Qty				
1.6.2.2.4.2	Reused/Refurbished Recovery System	# of Reused/Refurbished Recovery Systems	Qty				
1.6.3.1.1	New Payload Fairing	# of New Payload Fairings	Qty				
1.6.3.1.1	New Payload Fairing	volume	ft^3				
1.6.3.1.1	New Payload Fairing	parachute	(Y/N)				
1.6.3.1.1	New Payload Fairing	integrated to Upper Stage	(Y/N)				
1.6.3.1.2	Reused/Refurbished Payload Fairing	# of Reused/Refurbished Payload Fairing	Qty				
1.6.3.2	Payload Attach Fittings(s) (Adapters)	# of Payload Attach Fitting(s) (Adapters)	Qty				
1.6.3.3	Mission Unique Flight Hardware/Software	# of Mission Unique Flight Hardware/Software	Qty				
1.6.3.3	Mission Unique Flight Hardware/Software	ESLOC	#				
1.6.4	Vehicle Flight Software	ESLOC	#				
1.7.3	Early Integration Studies 1...n (Specify) / Special Studies	EIS Type	Description	Reflight, Basic, or Complex EIS			

COST AND SOFTWARE DATA REPORTING PLAN

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.

1a. PROGRAM NAME

NSSL - National Security Space Launch

1b. PHASE/MILESTONE *(check all that apply)*
- [ ] Pre-A
- [ ] A
- [ ] B
- [ ] C-LRIP
- [X] C-FRP
- [ ] O&S

1c. PRIME MISSION PRODUCT

NSSL Phase 3 Lane X Launch Service / Launch Service Support (If Applicable)

1d. ACQUISITION CATEGORY (ACAT)
- [ ] Pre-ACAT
- [X] ACAT I (MDAP)
- [ ] ACAT IA (MAIS)
- [ ] ACAT II
- [ ] ACAT III
- [ ] Other

2. COMMODITY TYPE

Launch Vehicle System

3. PLAN ITERATION TYPE
- [X] INITIAL
- [ ] REVISION

4. CURRENT SUBMISSION DATE *(YYYYMMDD)*

20230125

5. LAST APPROVED PLAN DATE *(YYYYMMDD)*

6a. GOVERNMENT PLAN POINT OF CONTACT (POC) NAME *(Last, First, M.)*

SSC/AAF

6b. ADDRESS *(Include ZIP Code)*
483 N. Aviation Blvd
Los Angeles AFB
El Segundo, CA 90245

6c. TELEPHONE NUMBER *(Include Area Code)*

310-653-2538

6d. E-MAIL ADDRESS

suong.ly@spaceforce.mil

7. PLAN TYPE
- [ ] GOVERNMENT
- [X] CONTRACT (PRIME)
- [ ] CONTRACT (SUB)

8. PLAN GOVERNMENT PREPARING ORGANIZATION

SSC/AAF

9a. CONTRACTOR NAME/ADDRESS
i. REPORTING ORGANIZATION NAME

TBD

ii. DIVISION NAME

iii. LOCATION

iv. CONTRACTOR BUSINESS DATA REPORT (CBDR 1921-3) REQUIREMENT:
- [X] CBDR REQUIRED FOR THIS ORGANIZATION

9b. CONTRACT NUMBER *(List all that apply, separated by commas)*

TBD - [AF-15-K-C18]

9c. APPROPRIATION *(check all that apply)*
- [ ] RDT&E
- [X] PROCUREMENT
- [ ] O&M
- [ ] FMS
- [ ] WCF
- [ ] OTHER

10a. APPROVED PLAN NUMBER

AF-15-K-C18

10b. APPROVED PLAN REVISION NUMBER

0

10c. APPROVED PLAN REQUIREMENTS
- [X] AT COMPLETION COSTS FOR STANDARD FUNCTIONAL CATEGORIES (FlexFile or Legacy)
- [ ] AT COMPLETION COSTS FOR RECURRING/NONRECURRING (FlexFile only)
- [X] TECHNICAL DATA REQUIRED

10d. COST REPORT TYPE
- [ ] FLEXFILE
- [X] LEGACY DD 1921 SERIES

DRAFT DD FORM 2794 (PAGE 1), METADATA, JANUARY 2019 PREVIOUS EDITION IS OBSOLETE

COST AND SOFTWARE DATA REPORTING PLAN

11. WORK BREAKDOWN STRUCTURE (WBS)			12. COST					13. TECHNICAL DATA			
								a. QUANTITY			
a. WBS CODE	b. WBS LEVEL	c. WBS ELEMENT NAME	a. ACTUALS TO DATE (ATD)	b. LEGACY 1921-1	c. LEGACY 1921-2	d. LEGACY 1921-5	e. EAC/FAC (See item 10d)	i. QUANTITY DATA	ii. GFE QUANTITY	b. SRDR FORMATS	c. MAINT. & REPAIR PARTS
1.0	1	NSSL Phase 3 Lane X Launch Service / Launch Service Support (If Applicable)	X				X				
1.1	2	System Engineering, Integration, Test, Program Management (SEIT/PM)	X				X				
1.1.1	3	System Engineering	X	X			X				
1.1.2	3	Integration & Test	X	X			X				
1.1.3	3	Program Management	X	X			X				
1.1.4	3	Production (Factory) Support	X	X			X				
1.2	2	Mission Integration	X				X				
1.2.1	3	Mission Standard Integration	X	X			X				
1.2.2	3	Mission Unique Integration	X	X			X				
1.3	2	Mission Assurance	X	X			X				
1.4	2	Transportation	X	X			X				
1.5	2	Launch Operations	X				X				
1.5.1	3	Launch Vehicle Processing	X	X			X				
1.5.2	3	Payload Processing	X	X			X				
1.5.3	3	Launch Operations System Engineering/Program Management (SEPM)	X	X			X				
1.5.4	3	Launch Site Maintenance	X	X			X				
1.5.5	3	Base Support Services	X	X			X				
1.5.6	3	Range Operations Services	X	X			X				
1.5.7	3	Propellants (Launch Vehicle)	X	X			X				
1.5.8	3	Post Launch	X				X				
1.5.8.1	4	Recovery Operations	X	X			X				
1.5.8.2	4	Launch Site Refurbishment	X	X			X				
1.6	2	Launch Vehicle	X				X				
1.6.1	3	System Engineering, Integration, Test, Program Management (SEIT/PM)	X				X				
1.6.1.1	4	System Engineering	X	X			X				
1.6.1.2	4	Integration, Assembly, Test & Checkout (IAT&C)	X	X			X				
1.6.1.3	4	Program Management	X	X			X				
1.6.2	3	Launch Vehicle Stage 1..n (specify)	X				X				
1.6.2.1	4	Launch Vehicle Stage 1	X				X				
1.6.2.1.1	5	Propulsion	X				X				
1.6.2.1.1.1	6	Primary Engine(s) and Motor(s)	X				X				
1.6.2.1.1.1.1	7	New Primary Engine(s) & Motor(s)	X	X			X				
1.6.2.1.1.1.2	7	Reused/Refurbished Primary Engine(s) & Motor(s)	X	X			X				
1.6.2.1.1.2	6	Solid Rocket Boosters	X	X			X				
1.6.2.1.2	5	Stage Structures	X				X				
1.6.2.1.2.1	6	New Stage Structure	X	X			X				
1.6.2.1.2.2	6	Reused/Refurbished Stage Structure	X	X			X				
1.6.2.1.2.3	6	New Interstage Adapter (up-stack)	X	X			X				
1.6.2.1.2.4	6	Reused/Refurbished Interstage Adapter (up-stack)	X	X			X				
1.6.2.1.3	5	Guidance and Control System (Avionics)	X				X				
1.6.2.1.3.1	6	New Guidance and Control System (Avionics)	X	X			X				
1.6.2.1.3.2	6	Reused/Refurbished Guidance and Control System (Avionics)	X	X			X				
1.6.2.1.4	5	Recovery System	X				X				
1.6.2.1.4.1	6	New Recovery System	X	X			X				
1.6.2.1.4.2	6	Reused/Refurbished Recovery System	X	X			X				
1.6.2.2	4	Launch Vehicle Stage 2	X				X				
1.6.2.2.1	5	Propulsion	X				X				
1.6.2.2.1.1	6	Primary Engine(s) and Motor(s)	X				X				
1.6.2.2.1.1.1	7	New Primary Engine(s) & Motor(s)	X	X			X				
1.6.2.2.1.1.2	7	Reused/Refurbished Primary Engine(s) & Motor(s)	X	X			X				
1.6.2.2.1.2	6	Solid Rocket Boosters	X	X			X				
1.6.2.2.2	5	Stage Structures	X				X				
1.6.2.2.2.1	6	New Stage Structure	X	X			X				
1.6.2.2.2.2	6	Reused/Refurbished Stage Structure	X	X			X				
1.6.2.2.2.3	6	New Interstage Adapter (up-stack)	X	X			X				
1.6.2.2.2.4	6	Reused/Refurbished Interstage Adapter (up-stack)	X	X			X				
1.6.2.2.3	5	Guidance and Control System (Avionics)	X				X				
1.6.2.2.3.1	6	New Guidance and Control System (Avionics)	X	X			X				
1.6.2.2.3.2	6	Reused/Refurbished Guidance and Control System (Avionics)	X	X			X				
1.6.2.2.4	5	Recovery System	X				X				
1.6.2.2.4.1	6	New Recovery System	X	X			X				
1.6.2.2.4.2	6	Reused/Refurbished Recovery System	X	X			X				
1.6.3	3	Payload Accommodations	X				X				
1.6.3.1	4	Payload Fairing	X				X				
1.6.3.1.1	5	New Payload Fairing	X	X			X				
1.6.3.1.2	5	Reused/Refurbished Payload Fairing	X	X			X				
1.6.3.1.3	5	Fairing Recovery System	X				X				
1.6.3.1.3.1	6	New Fairing Recovery System	X	X			X				
1.6.3.1.3.2	6	Reused/Refurbished Fairing Recovery System	X	X			X				
1.6.3.2	4	Payload Attach Fitting(s) (Adapters)	X	X			X				
1.6.3.3	4	Mission Unique Flight Hardware/Software	X	X			X				
1.6.4	3	Vehicle Flight Software	X	X			X				
1.7	2	Other 1...n (specify)	X				X				
1.7.1	3	Quick Reaction / Anomaly Resolution / Studies	X				X				
1.7.1.1	4	QRAR (Quick Reaction/Anomaly Resolution) Mission Specific 1...n (Specificy)	X				X				
1.7.1.2	4	QRAR (Quick Reaction/Anomaly Resolution) Non-Mission Specific	X				X				
1.7.2	3	Mission Acceleration	X				X				
1.7.3	3	Early Integration Studies 1...n (Specify) / Special Studies	X				X				
1.7.4	3	Cumulative Mission Success Incentive	X				X				
1.7.5	3	Mission Unique R&D	X				X				
1.7.6	3	Data	X				X				
1.7.7	3	Award Fee	X				X				
1.7.8	3	Fleet Surveillance	X				X				
1.7.9	3	Postponement Fee	X				X				
1.7.10	3	Other CLINs	X				X				
		Subtotal Cost	X				X				
		Reporting Contractor G&A	X				X				
		Reporting Contractor Undistributed Budget	X				X				
		Reporting Contractor Management Reserve	X				X				
		Reporting Contractor FCCM	X				X				
		Total Cost	X				X				
		Reporting Contractor Profit/Loss or Fee	X				X				
		Total Price	X				X				

DRAFT DD FORM 2794 (PAGE 2), REPORTING, JANUARY 2019

COST AND SOFTWARE DATA REPORTING PLAN

14. CSDR SUBMISSION EVENTS

a. EVENT ID	b. DATA REPORT(S)	c. SUBMISSION EVENT NAME	d. REPORT CYCLE	e. AS OF DATE (YYYYMMDD)	f. DUE DATE (YYYYMMDD)
1	CWBS Dictionary	Initial CWBS Dictionary (Launch 1)	Initial		
2	1921, 1921-1	Launch 1 Initial Cost Report	Initial		
3	1921, 1921-1	Launch 1 Final Cost Report	Final		
4	Technical Data Report	Launch 1 TDR	Final		
5	CWBS Dictionary	CWBS Submission (LSS)	Initial		
6	1921, 1921-1	Initial Cost Report (LSS)	Initial		
7	1921, 1921-1	Annual Cost Report #1	Interim		
8	CWBS Dictionary	Initial CWBS Dictionary (Launch 2)	Initial		
9	1921, 1921-1	Launch 2..n Initial Cost Report	Initial		
10	1921, 1921-1	Launch 2..n Final Cost Report	Final		
11	Technical Data Report	Launch 2..n TDR	Final		
12	1921, 1921-1	Annual Cost Report #2	Interim		
13	1921, 1921-1	Final Cost Report (LSS)	Final		
14	CWBS Dictionary	Final CWBS Dictionary (LSS)	Final		
15	CWBS Dictionary	Final CWBS Dictionary	Final		

DRAFT DD FORM 2794 (PAGE 3), SUBMISSION EVENTS, JANUARY 2019 PREVIOUS EDITION IS OBSOLETE

COST AND SOFTWARE DATA REPORTING PLAN

15. REMARKS

The contractor must report costs on all CLINs associated with the (Insert contract name) contract including Over and Above, Advance Procurement, Long Lead Materials, Multiyear Procurement, Inter-Division or Inter-Company Work Orders (IWOs), Foreign Military Sales (FMS), Warranty, etc. Costs should not be omitted based on contract CLIN structure or definition.

FAC vs EAC

The checkmarks for EAC/FAC in column 12e at the WBS level shall be reported as "Forecast at Completion" (FAC). The Forecast At Completion (FAC) required here is not subject to the standards established in ANSI/EIA-748 guideline #27 (Estimate at Complete); therefore, the FAC does not need to be, but may be, derived from Industry Earned Value Management (EVM) processes.

NON-RECURRING/RECURRING DEFINITIONS

Recurring and Non-Recurring Costs required for all levels:

Recurring costs. Repetitive elements of development, investment or sustainment costs that may vary with the quantity being produced or maintained, irrespective of system life cycle phase and appropriation. Recurring cost categories include procurement, and production and maintenance activities; acceptance testing; maintenance and support equipment, training, and data; test articles built to an operational configuration; and certain elements of systems engineering and program management.

Examples of Prime Mission Product activities include repetitive costs incurred when building prototype, test systems, or production units to an operational configuration. Examples of Prime Mission Product Hardware activities include Fabrication and assembly of partial/full prototype, test, or production units whether for customer or contractor use; Raw material, purchased parts, equipment associated with the fabrication and assembly of partial/full prototype or test units whether for customer or contractor use; Touch labor, integration and assembly, installation and check out; Engineering support for production unit fabrication, assembly and check out.

Examples of Prime Mission Product Software activities include Procurement of stand-alone or bundled COTS software licenses used in an operational system and installation and checkout of developed software into production units. Examples of Systems Engineering activities include Sustaining engineering, logistics support, planning, organizing, monitoring and reporting activities, document maintenance. Examples of Program Management activities include programmatic, financial, contractual, schedule, planning, organizing, and monitoring (quality information assurance, configuration management) activities in support of production unit fabrication, assembly and check out; meetings & efforts in support of supplier, manufacturing & production activities.

Examples of Prime Mission Product PD&D activities are: Requirements definition, engineering design, analysis & development; Redesign, rework & retest due to design flaws & first time corrective actions; test articles built for testing purposes only (i.e., units that are not production-representative) such as wind tunnel models, and bench and coupon test articles; structural development, static, fatigue, software, and ballistics testing; stress analysis; flight, ground, or sea testing of system properties; redesign as a result of testing; and retesting efforts; All configuration, quality, and data management efforts supporting release activity for first article configuration, delivery & certification; System safety plan, manuals, tech services, & maintenance manual development in support of first article delivery.

Examples of hardware design and development activities include material, purchased parts and labor associated with engineering models, operational models, bench, lab articles or partially built units (i.e. units that are not production representative), tooling, and ground support equipment for qualification, structural, static, fatigue or stress testing, and refurbishment of test units; and engineering support including manufacturing engineering, quality engineering, and tool engineering for development unit fabrication, assembly & tests.

Examples of software design and development activities include design and development of all software; delivered operational software and software developed to correct deficiencies and add capabilities; Initial integration of COTS and GOTS products into operational configuration; Support for HW-SW integration and test, system level testing; initial integration of COTS and GOTS products into operational configuration; and commercial software licenses for development facilities. System Engineering, Program Management, and Data activities occur throughout the system life cycle and are supportive in nature; as such, these costs take on the characteristics of the underlying activities being performed.

Examples of Systems Engineering activities include installation plans or quality inspection plans; requirements definition, allocation and flow-down; creation of specification and Interface Control Documents (ICDs); design and implementation of system security; top level design trade-offs; analyses, studies, and simulations for system performance and effectiveness, reliability, availability, maintainability or survivability; internal & external design review, IPT coordination & integration meetings; Certification & Control documentation; and supplier selection & coordination. Examples of Program Management activities include programmatic, financial, contractual, schedule, planning, organizing, and monitoring (quality information assurance, configuration management) activities in support of development, design & testing efforts.

Examples of System Test and Evaluation activities include development of test plans/procedures; subsystem and system level test and integration for developmental articles; test equipment in support of development including for static & fatigue testing, test stands, wind tunnel models, stress analysis, ballistics testing, flight, ground or sea testing of system, redesign from testing, retesting; System/Software Integration Laboratory (SIL) development; and analysis to support verification, validation & certification. Examples of Training activity include initial courseware development and simulator development. Examples of Initial Spares and Repair Parts activity include spare parts and material in support of the nonrecurring subsystem/system level articles.

Examples of Support Equipment activity include initial equipment design and test efforts, and test program sets development. Examples of Tooling activity include special test equipment, special tooling, procurement of initial & rate tooling, tool replacement (with the exact same tool) & tool modification (to accommodate product configuration changes). Examples of Operational/Site Activation activity include site planning efforts.

IRAD EFFORT

"The contractor should list any major relevant IRAD projects in support of this contract, provide a brief description of the cost of the projects, and provide/attach any more detailed actual cost information at the level available.""

The government is requesting cost data for any IRAD projects similar to past emergent NSSL requirements, e.g. vertical payload integration, extended fairing, vented honey-combed fairing, etc. If none, ""N/A"" is acceptable."

WBS INDEX AND DICTIONARY

The WBS Dictionary is a living document and must match the technical content, cost content, and work content of each end item (see Block 17) for all WBS elements for each Cost and Hour (FlexFile) submission. The dictionary shall contain a disclosure statement detailing any differences between the CSDR reporting methodology and the reporting entity's Cost Accounting Standards. The dictionary shall include a section detailing how parts are procured under this contract and any limitations of the parts procurement cost data or allocation of cost data for the WBS element.

The reporting entity must maintain and update the WBS Dictionary throughout the life of the contract, IAW DI-FNCL-82162, if changes to the WBS occur, the reporting entity shall annotate and track changes by adding the "As of Date" of the submitted FlexFile report and indicate the changes to the WBS Index and Dictionary Definitions.

For WBS elements identified in block 11 of the CSDR plan that is not within the contract's scope of work, the reporting entity shall report in the dictionary that "This CSDR WBS element is not associated with this contract's scope of work", and zero costs will be associated for ATD and FAC for these WBS elements.

The WBS elements and level of reporting may be tailored upon mutual agreement.

COST ACCOUNTING STANDARDS (CAS) DISCLOSURE STATEMENT DIFFERENCES

Describe significant accounting changes from previous accounting period in the Remarks section of the reports, if applicable.

1921-3 CONTRACTOR BUSINESS DATA REPORT

"a. The Contractor Business Data Report is prepared by and for the business entity (e.g., business unit, segment, or site) responsible for submitting the Forward Pricing Rate Proposal (FPRP) representing the basis for Forward Pricing Rate Agreement (FPRA) negotiations with the government.

b. Reports are submitted annually at the end of the contractor's fiscal year.

c. Data for Future Years should be reflective of the number of years contained in the most current document, i.e., the FPRP or the FPRA. If the document applies to more than three future years, attach additional future year sheets as required. In the absence of these documents, estimates should be provided for three future years.

d. The existing 1921-3 requires strictly formatted data and necessitates mappings to a government standard, the new DRAFT 1921-3 may be submitted in the contractor's own format and according to the contractor's own rate structure, so long as it meets the data requirements in the DRAFT 1921-3 Data Item Description DI-FNCL-81765.

e. "An alternate to completing 1921-3 complete Blocks 1 through 11, on Page 1 (sections A – F are not required), and REMARKS section must include "Headcount by Department" on a monthly basis."

END ITEMS/ORDER LOTS SCOPE IDIQ

Block 16 Orders/Lots is meant to capture the discrete Delivery Orders/Task Orders exercised on the contract. If a Delivery Order/Task Order is exercised on the contract and the CSDR plan has not been updated, it is the Reporting Entity's responsibility to still submit the dollars and hours in the FlexFile tagged to the appropriate Delivery Orders/Task Orders. The CSDR plan will be revised accordingly to include all exercised Delivery Orders/Task Orders.

COST AND HOUR REPORT UNIT/SUBLOT REPORTING

The Reporting Entity is required to provide unit or sublot (specify) reporting for any given Order/Lot and End Item as outlined in block 18 of the DD Form 2794. If Unit Reporting is selected in item 18c (Unit Reporting), it is expected that all touch labor costs and hours that are associated with the discrete units or sublots be tagged as Touch Manufacturing or Touch Maintenance as defined in Data Group E, Item 7.

QUANTITY REPORTING

"a. If the quantity for a given element differs from the quantity reported for the full system, provide a comment in the WBS Element Remarks section.

b. The Reporting Entity shall provide meaningful quantity information lower than the summary level in the remarks for WBS elements Peculiar Support Equipment, Common Support Equipment, and Initial Spares and Repair Parts, if applicable."

FINAL COST REPORT

Final Cost Report to be submitted when final end item has been delivered and accepted by the government (e.g., as evidenced by a completed DD 250) and 95% or more of total costs for each Order/Lot (see Block 16) and each End Item (see Block 17) has been incurred.

CSDR READINESS REVIEW (CSDR-RR) also known as Post Award Conference (PAC)

The Reporting Entity shall attend and participate in a CSDR Readiness Review meeting (also known as the Post award CSDR conference) which will be held with the Cost Working Group Integrated Product Team (CWIPT) IAW DFARS 242.503-2(b) and DoDM 5000.04 (CSDR Manual). During this meeting, the CWIPT and contractor will review the Reporting Entity's process for data collection and reporting to ensure it satisfies the guidelines outlined in the DoDM 5000.04, CSDR Manual, the approved CSDR plan reporting requirement, and the Resource Distribution Table. The Reporting Entity shall demonstrate how costs will be based, to the maximum extent possible, upon actual cost transactions and not cost allocations; describe how recurring vs. nonrecurring costs will be segregated; demonstrate how the data from its accounting system will be mapped into the reporting categories in the approved CSDR plan. The Reporting Entity shall present the methodologies used for mapping internal cost accounts to the agreed upon WBS, specifically illustrating how individual WBS elements and standard functional categories in the FlexFile (functional data elements in the 1921 series) codes will be populated. The review shall include any reporting issue corrections and identify proposed changes to the approved CSDR Plan as necessary.

PERIOD OF PERFORMANCE (POP)

If contract Period of Performance is extended, the contractor shall submit an additional cost report for each additional year of extension. The final report will be moved to the revised end of the Period of Performance.

COST AND SOFTWARE DATA REPORTING PLAN

INTRA-CONTRACT SCOPE REPORTING DEFINITION

16. ORDERS/LOTS

a. ID	b. NAME	c. PHASE/MILESTONE

17. END ITEMS

a. ID	b. NAME

18. UNIT/SUBLOT REPORTING AND UNIT SEQUENCING REQUIREMENTS

a. ORDER/LOT ID	b. END ITEM ID	c. UNIT/SUBLOT REPORTING *(X if applicable)*	d. UNIT SEQUENCING *(X if applicable)*

DRAFT DD FORM 2794 (PAGE 5), INTRA-CONTRACT SCOPE, JANUARY 2019

COST AND SOFTWARE DATA REPORTING PLAN - TECHNICAL PARAMETER REQUIREMENTS

TECHNICAL PARAMETER REQUIREMENTS

26. WBS ELEMENT CODE	27. WBS ELEMENT NAME	28. ITEM TYPE	29. TECHNICAL PARAMETER				
			a. PARAMETER NAME	b. UNIT OF MEASURE	c. UNIT OF MEASURE QUALIFIER	d. REPEATABLE	e. REMARKS
1.1.1	System Engineering	SysEng	Headcount	FTEs			
1.1.1	System Engineering	SysEng	Work Performed Location	Description			
1.1.2	Integration & Test	I&T	Payload(s) Qty	Qty			
1.1.2	Integration & Test	I&T	Rideshare Payloads	Qty			
1.1.2	Integration & Test	I&T	Payload Total Mass	lbm			
1.1.3	Program Management	ProgMgmt	Headcount	FTEs			
1.1.3	Program Management	ProgMgmt	Work Performed Location	Description			
1.1.4	Production (Factory) Support	ProdSupport	Headcount	FTEs			
1.1.4	Production (Factory) Support	ProgMgmt	Work Performed Location	Description			
1.2.1	Mission Standard Integration	MissionSupport	Orbital Regime	Description			
1.2.1	Mission Standard Integration	MissionSupport	# of Engine Starts	Qty			
1.2.1	Mission Standard Integration	MissionSupport	Mission Integration Type	Description			
1.2.2	Mission Unique Integration	MissionSupport	Cat C	(Y/N)			
1.2.2	Mission Unique Integration	MissionSupport	Multi-Mission Type	Description			
1.2.2	Mission Unique Integration	MissionSupport	Wet Dress Rehearsals	Qty			
1.3	Mission Assurance	MissionSupport	Headcount	FTEs			
1.3	Mission Assurance	MissionSupport	Work Performed Location	Description			
1.4	Transportation	Trans	# of Transportation Types	Qty			
1.5.3	Launch Operations System Engineering/Program Management (SEPM)	SysEng/ProgMgmt	Headcount	FTEs			
1.5.3	Launch Operations System Engineering/Program Management (SEPM)	SysEng/ProgMgmt	Work Performed Location	Description			
1.5.6	Range Operations Services	Services	# of Launch Scrubs	Qty			
1.5.7	Propellants (Launch Vehicle)	PhysicalElec	# of Tank fills	Qty			
1.5.8.1	Recovery Operations	RecoveryOperations	LV Recovery Type	Description			
1.6.1.1	System Engineering	SysEng	Headcount	FTEs			
1.6.1.1	System Engineering	SysEng	Work Performed Location	Description			
1.6.1.3	Program Management	ProgMgmt	Headcount	FTEs			
1.6.1.3	Program Management	ProgMgmt	Work Performed Location	Description			
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	ISP, vacuum	seconds	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Thrust	lbf	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Weight	lbm	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Design Life	# of missions	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Upper Stage	(Y/N)	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Throttle %	%	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	% manually fabricated	%	Stage 1		
1.6.2.1.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	gimballed?	y / n	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	ISP, vacuum	seconds	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Total Impulse	lbf-s	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Segmented	(Y/N)	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Total weight	lb	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	Propellant weight	lb	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	gimballed	(Y/N)	Stage 1		
1.6.2.1.1.2	Solid Rocket Boosters	PhysicalElec	case material	description	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	volume	ft^3	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	material	ex., stainless steel, aluminum-lithium alloy	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	weight	lbs	Stage 1		
1.6.2.1.2.1	New Stage Structure	PhysicalElec	Hydrogen	(Y/N)	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	material type	aluminum, carbon composite	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	volume	ft^3	Stage 1		
1.6.2.1.2.3	New Interstage Adapter (up-stack)	PhysicalElec	staging mechanism	description	Stage 1		
1.6.2.1.3.1	New Guidance and Control System (Avionics)	PhysicalElec	weight	lb	Stage 1		
1.6.2.1.3.1	New Guidance and Control System (Avionics)	PhysicalElec	Gyro type	Description	Stage 1		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	ISP, vacuum	seconds	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Thrust	lbf	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Weight	lbm	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Design Life	# of missions	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Upper Stage	(Y/N)	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	Throttle %	%	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	% manually fabricated	%	Stage 2		
1.6.2.2.1.1.1	New Primary Engine(s) & Motor(s)	PhysicalElec	gimballed?	y / n	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	ISP, vacuum	seconds	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Total Impulse	lbf-s	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Segmented	(Y/N)	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Total weight	lb	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	Propellant weight	lb	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	gimballed	(Y/N)	Stage 2		
1.6.2.2.1.2	Solid Rocket Boosters	PhysicalElec	case material	description	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	volume	ft^3	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	material	ex., stainless steel, aluminum-lithium alloy	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	weight	lbs	Stage 2		
1.6.2.2.2.1	New Stage Structure	PhysicalElec	Hydrogen	(Y/N)	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	material type	aluminum, carbon composite	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	volume	ft^3	Stage 2		
1.6.2.2.2.3	New Interstage Adapter (up-stack)	PhysicalElec	staging mechanism	description	Stage 2		
1.6.2.2.3.1	New Guidance and Control System (Avionics)	PhysicalElec	weight	lb	Stage 2		
1.6.2.2.3.1	New Guidance and Control System (Avionics)	PhysicalElec	Gyro type	Description	Stage 2		
1.6.3.1.1	New Payload Fairing	PhysicalElec	volume	ft^3			
1.6.3.1.1	New Payload Fairing	PhysicalElec	parachute	(Y/N)			
1.6.3.1.1	New Payload Fairing	PhysicalElec	integrated to Upper Stage	(Y/N)			
1.6.3.3	Mission Unique Flight Hardware/Software	SoftwareNonSRDR	ESLOC	#			
1.6.4	Vehicle Flight Software	SoftwareNonSRDR	ESLOC	#			
1.7.3	Early Integration Studies 1...n (Specify) / Special Studies	Studies	EIS Type	Description			

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A004	Technical Data Reporting	Technical Data Reporting

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-82165	Performance Work Statement, Para 3.1.6	OSD CAPE; SSC/AAF

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
N/A		BLK 16	BLK 16	

15. a. ADDRESSEE	b. COPIES		
	Draft	FINAL	
		Reg	Repro
See Distribution List			
15. TOTAL			

16. REMARKS

Blocks 10 - 13: Prepare the Technical Data Report (TDR) in accordance with DI-MGMT-82165 (or the most recently approved version) and the OSD Deputy Director, Cost Assessment (DDCA)-approved contract CSDR Plan. The DID, DI-MGMT-82165, is available from the Cost Assessment Data Enterprise (CADE) website at https://CADE.OSD.MIL/Policy/DIDs. The CSDR Plan is included as a contract attachment.

Contractors shall be required to submit Technical Data Reports at frequencies specified in the OSD DDCA-approved CSDR plan and in the contract. The "As of Dates" and "Due Dates" are notional and subject to change. The CSDR plan uses the submission event names as the driving mechanism for the submittal of the cost reports, not the "as of date." In the event of a programmatic schedule slip, the Reporting Entity shall notify the Government Program Office that a date change is needed. It is the responsibility of the Government Program Office to submit a date change request with supporting documentation in the CADE system for the event-driven submission for CAPE approval. CAPE will not issue an updated OSD DDCA-approved contract CSDR plan for revisions based solely on date changes.

Any alternative CDRL identified through the CWIPT process that meets the requirements for technical parameter reporting should be submitted using the CADE CSDR Submit-Review System along with the TDR for each required submission event. Alternative CDRLs can be uploaded as "Other" file types.

All Technical Data Reports shall be submitted electronically using the CADE CSDR Submit-Review System. Only unclassified technical data may be uploaded to the CADE Portal. All Technical Data must be reviewed by the contractor prior to submission to submission for CADE to ensure that aggregation of the technical data does not warrant a higher classification level.

The required file format for each Technical Data Report is specified in its Data Item Description (DID), unless the DDCA-approved CSDR plan specifies another format. Data submitters must register through the CADE website (https://cade.osd.mil) and possess a DoD-approved ECA digital certificate or a DoD-issued CAC to obtain a CADE Portal account and be authorized to upload CSDR content. Users can obtain access by submitting user information about themselves and their organizations to the CADE Portal and requesting a CSDR submitter user role. After the registration information has been verified, CAPE shall authorize the user account and requested role. All CADE Portal accounts need to be renewed at least annually.

Subcontractor Reporting: Prime contractors are responsible for flowing down CSDR requirements contained in their prime contracts to all subcontractors who meet the reporting thresholds specified in the DoDI 5000.73, or as required by the CWIPT. This includes requiring subcontractors to electronically report directly to CADE Portal using the CSDR Submit-Review System.

The prime contractor shall be required to work with the CWIPT and all appropriate subcontractors to prepare separate subcontract CSDR plans for submission to the DCARC for approval.

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A005	Contractor Business Data Report (DD Form 1921-3)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-FNCL-81765/T	Performance Work Statement, Para 3.1.6	OSD CAPE; SSC/AAF

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		BLK 16	BLK 16

16. REMARKS

Contractors shall be required to submit 1921-3 Contractor Business Data Report on an annual basis within 60 calendar days subsequent to the end of the contractor's fiscal year for the life of the contract in accordance with DI-FNCL-81765 (or most recently approved version). Only one report is required to be completed and submitted by each FPR (Forward Pricing Rate) unit (e.g., plant, site, business unit) per year, independent of the number of contracts within the FPR unit which contain this CDRL item. The Contractor Business Data Report is to be prepared by and for the business entity (e.g., plant, site, or business unit) responsible for submitting the Forward Pricing Rate Proposal (FPRP) representing the basis for Forward Pricing Rate Agreement (FPRA) negotiations with the government. In the absence of a FPR requirement, the term "FPR unit" should be interpreted for reporting purposes as "business unit" as defined in the FAR. The Headcount by Department must be submitted on a monthly basis.

Reports are to be submitted annually, as of the end of the business entity's fiscal year. The reports are due 60 calendar days subsequent to the end of the contractor's fiscal year.

The Defense Cost and Resource Center (DCARC) is responsible for administration of this requirement. The DCARC website is located at http://cade.osd.mil/csdr.

All 1921-3 reports shall be submitted electronically using the 1921-3 & FPR Submit-Review System. The required form and file type for each 1921-3 report is specified in its Data Item Description (DID). Data submitters must register through the DCARC website and possess a DoD-approved ECA digital certificate or DoD-issued CAC to obtain a DCARC Portal account and be authorized to upload CSDR content. Users can obtain access by submitting user information about themselves and their organizations to the DCARC Portal and requesting a CSDR submitter user role. After the registration information has been verified, the DCARC shall authorize the user account and requested roles. All DCARC Portal accounts need to be renewed at least annually.

An alternate to completing 1921-3 complete Blocks 1 through 11, on Page 1 (sections A – F are not required) and REMARKS section must include "Headcount by Department" on a monthly basis.

14. DISTRIBUTION			
15. a. ADDRESSEE	b. COPIES		
	Draft	FINAL Reg	FINAL Repro
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CONTRACT DATA REQUIREMENTS LIST

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CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A006	Quantity Data Report	Contractor Cost Data Reporting (CCDR)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-82164	Performance Work Statement, Para 3.1.6	OSD CAPE; SSC/AAF

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
N/A		BLK 16	BLK 16	

16. REMARKS

Blocks 10 - 13: Prepare the Quantity Data Report in accordance with DI-MGMT-82164 and the OSD CAPE Deputy Director, Cost Assessment (DDCA)-approved contract CSDR Plan. The DID, DI-MGMT-82164, is available from the Cost Assessment Data Enterprise (CADE) website at https://cade.osd.mil/policy/dids. The CSDR Plan is included as a contract attachment.

The following tailoring of the DID is acceptable:
N/A

Contractors shall be required to submit the Quantity Data Report at frequencies specified in the CAPE-approved CSDR plan. The contract CSDR plan uses the event field as the driver for the submission of the reports, not the "as of date." If the event slips, the contractor must notify the Government Program Office that a date change is needed. It is the responsibility of the Government Program Office to submit a request for change in the event-driven date for reporting through the CADE website for CAPE approval before relief is given for the date reflected in the CAPE-approved CSDR Plan.

The Quantity Date Report shall be delivered in either a) MS Excel (.xlsx) or comma separated values (.csv) in the contractor's format of choosing, so long as it fulfills the requirements of the DD FORM 2794 and is in accordance with the Quantity Data Report DID or b) JavaScript Object Notation (JSON) as described in the Quantity Data Report Format Specification (FFS) and Data Exchange Instructions (DEI) referenced in the Quantity Data Report DID Requirements Section 2.

All files shall be submitted electronically using the CADE website. Data submitters must register through the CADE website and possess a DoD-approved ECA digital certificate or DoD-issued CAC to obtain a CADE Portal account and be authorized to upload CSDR content. Users can obtain access by submitting user information about themselves and their organizations to the CADE Portal and requesting a CSDR submitter user role. After the registration information has been verified, CAPE shall authorize the user account and requested roles. All CADE Portal accounts need to be renewed at least annually.

Subcontractor Reporting: Prime contractors shall ensure CSDR requirements contained in their prime contracts are flowed down to all subcontractors who meet the reporting thresholds specified in the DoDI 5000.73, or as required by the cost working integrated product team (CWIPT). This includes requiring subcontractors to electronically report directly to CAPE using the CSDR Submit-Review System.

The prime contractor shall be required to work with the CWIPT and all appropriate subcontractors to prepare separate subcontract CSDR plans for submission to the CAPE for approval.

15. a. ADDRESSEE	15. b. COPIES Draft	FINAL Reg	FINAL Repro
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 Series	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A007	Small Business Utilization Report	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-82041	Performance Work Statement, Para 3.1.6	SSC/AA; SSC/SB

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ANNLY	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

16. REMARKS

1. (BLK 4): Contractor format is acceptable.
   a. Draft reports shall be coordinated with SSC/SB at least 5 working days (WD) prior to the due date (October 30) to allow subsequent turn-around time for the contractor to resubmit (if applicable) after government's acceptability determination has been issued.
   b. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.
   c. Small Business Utilization Report shall be in contractor format or as specified in the contract, and briefly describe the subcontractor(s) efforts performed.
   d. The contractor shall report actual achievements relative to proposed small business utilization in performance of the contract (including subcontracting dollars/percentages relative to total launch service price (CLINs 0001, 0002, and 0003) / total subcontracting), and the results of efforts to:
      1) Expand the pool of qualified small businesses through increased competition for acquisition of components, parts (includes hardware and software), and/or to perform sustainability or support services.
      2) Engage small businesses to serve as alternative sources in order to mitigate the risks of single point failures in the supply chain and increase the quality of supplies or services.
   e. Under no circumstances shall technical data or computer software to be delivered under or in conjunction with this CDRL, be marked "Proprietary" (or similar Nonconforming marking(s)).
   f. (BLK 9): Distribution Statement E: Distribution authorized to DoD Components only (Proprietary Information). Other requests shall be referred to SSC/SB.
2. (BLKs 12, 13): The annual report shall be submitted for the twelve months ending September 30.
   a. Submittal due 30 calendar days after the close of each reporting period and within 30 calendar days of contract completion.
   b. For initial submittal, a draft report is due 30 DACA for Government comment (No Government approval required).
   c. Government will review and provide feedback within 30 CD to the maximum extent possible.

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	Draft	FINAL	
		Reg	Repro
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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

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CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A008	Integrated Program Management Report (IPMR)	Integrated Master Schedule (IMS)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
A008 BLK 16	Performance Work Statement, Para 3.1.6, 3.1.6.1, and 3.4.2.3	SSC/AAF; SSC/AAMI

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	MTHLY	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	BLK 16	BLK 16

14. DISTRIBUTION			
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	Draft	FINAL	
		Reg	Repro
See Distribution List			

16. REMARKS

The purpose of the Integrated Master Schedule Data Item Description is to identify and explain requirements and compliance directives pertaining to each monthly CDRL submitted to the United States Government. The Data Item Description includes detailed enhancements to the capabilities of the IMS to validate critical and driving paths, subcontractor reporting requirements, instructions to accurately forecast key events and milestones dates, etc. The direction within the document will ensure the United States Government has a reliable Integrated Master Schedule to make informed decisions based on its contents.

1.0 Reporting Requirements

1.1 - Electronic Submission: The contractor will submit an electronic copy to the designated approved repository/share-point

1.1.1 - Deliverable: the monthly electronic submission shall consist of the following 3 deliverables:

a. Integrated Master Schedule (IMS) as defined in Sections 2.0 and 3.0

b. Contractor Analysis as defined in Section 4.0

c. Schedule Dictionary as defined in Section 5.0 (first time, then only when changes are made, include change log page)

1.2 - Submission Requirements: The IMS shall be submitted to the procuring activity no later than 10 federal working days (WD) after contractor's month-end close. The prime contractor shall include with the IMS CDRL submittal any major subcontractor schedules.

1.2.1 - The Government will review each submission and provide feedback within 10 Federal Working Days to the maximum extent possible.

1.2.2 - (BLK 11) The Contractor's Accounting month-end close.

1.2.3 - (BLK 12) First submission of the initial draft shall be 30 DACA for Government review. Contractor shall submit updated IMS for each launch task order for Government acceptance.

1.3 - Integrated Master Schedule Format: Integrated Master Schedule shall be delivered in Standard Microsoft Project. Integrated Master Schedule will indicate task linkages, constraint types, calendars, and other standard schedule MS Project features.

2.0 - IMS Contents

2.1 - Prime Contractor IMS Content Requirement: The Contractor shall provide and maintain an Integrated Master Schedule (IMS) for each mission that begins at Authority to Proceed (ATP) and ends after conclusion of the Government Post-Flight Review at approximately Launch plus 60 CDs (L+60). The IMS shall include the following: LV Production & transportation, launch operations, systems engineering, independent Government mission assurance support, flight worthiness & pedigree support, and mission integration. All IMS tasks shall be logically linked horizontally and vertically, to include all interdependencies from ATP to End of Contract.

2.2 - Major Subcontractor Flow-down: Major Subcontractor IMS submittals are required to be delivered to the prime contractor and United States Government and integrated into prime contractor IMS.

2.3 - Launch Vehicle Reporting Level: The Launch Vehicle Production section of the IMS shall include all tasks/activities down to the appropriate level to present major sub-assemblies and their

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components, parts, and material. The minimal detail required is the lowest level stated in the CWBS. In some cases, it may be necessary to provide further detail for certain tasks/activities. Final determination of the level will be made by the designated SPO.

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2.4 - Mission Integration Reporting Level: The Mission Integration Section of the (IMS) shall include all tasks, mission analyses, reviews, working groups, meetings, and milestones required to accomplish the mission integration process to meet the mission Initial Launch Capability (ILC) as stated in the Mission Integration Management Plan.

3.0 IMS Requirements

3.1 - IMS Status: The IMS shall be statused according to the contractor's accounting month end date. The prime contractor shall submit major subcontractor's schedules to United States Government and integrate this schedule data into the prime contractor's IMS monthly. The prime subcontractor shall ensure delivery of the subcontractor IMS in adequate time to integrate the data.

3.2 - Production Contract IMS: Production contracts utilizing a Manufacturing Requirements Planning (MRP) or an Enterprise Requirements Planning (ERP) system shall include a representation of the discrete effort contained in the MRP/ERP in the contract IMS. The MRP/ERP information in the IMS shall be at a sufficient level of detail to ensure that the contract IMS status reflects the status of manufacturing progress in MRP/ERP system. Vertical traceability shall be maintained between the IMS and MRP/ERP system.

3.3 IMS Content Elements

3.3.1 - The IMS shall contain the contract milestones, accomplishments, criteria, discrete tasks/activities, work packages and planning packages, as applicable, from contract award to contract completion.

3.3.2 - The IMS shall be an integrated, logically driven network-based schedule that is vertically and horizontally traceable.

3.3.3 - The IMS shall have traceability to Performance Work Statement.

3.3.4 - The IMS shall contain contractual milestones and detailed descriptions and shall display high, intermediate, and detailed level summary schedules.

3.3.5 - The IMS shall include fields and data that enable access to the information Performance Work Statement elements.

3.3.6 - The IMS shall contain all calendars that define working and nonworking time periods or other information that may impact the schedule.

3.4 - Contract Milestones: Key programmatic events which represent progress and completion of the contract must be supported and linked to detailed predecessor tasks.

3.5 - Schedule Format: The IMS shall be configured to allow sorting and filtering by key events and for various views. These include top level summary view, mid-level summary view, primary, secondary, and tertiary critical path for each mission, and a complete detail view.

3.6 - Summary Master Schedule. A top-level schedule of key tasks/activities, milestones, summary level, WBS/PWS can be sorted and filtered. It shall be a vertically integrated roll up of the intermediate and detailed levels within the IMS.

3.7 - Intermediate Schedules. Mid-level contract schedules that include key tasks/activities, milestones, and all associated accomplishments as shown in the summary master schedule. The PWS elements are traceable to display work performed at the intermediate level of summarization. There may be several intermediate schedules that depict varying levels of detail. They shall be vertically integrated roll ups of the detailed level schedules.

3.8 - Detailed Schedules. The lowest level of contract tasks/activities that form the network. The detailed schedules shall contain horizontal and vertical integration, as a minimum, at the work package and planning package level. The detailed schedules shall include all discrete tasks/activities, work packages and planning packages necessary to create a networked schedule capable of identifying a valid critical path.

3.9 - Level of Effort (LOE) Identification. If LOE control accounts, work packages, or planning packages are included in the IMS, they shall be clearly identified as such. LOE shall not drive discrete work in the IMS and must be logically linked.

3.10 - Scope Planning. Planning packages and work packages shall be planned to their logical technical scope conclusion. Shorter-term work packages (ideally equal in length to the statusing interval) are preferred because they provide more accurate and reliable measures of work accomplished. Planning packages shall be detailed and planned into discrete work packages or apportioned tasks (as appropriate) no later than one accounting period prior to the schedule start of the planning package. Planning package plans shall reflect the manner in which the work is to be performed. Planning packages within the IMS shall be labeled within the detailed description as a planning package and/or flagged in an IMS field to identify the task as a planning package. IMS field shall be identified in the Schedule Dictionary.

3.11 - IMS Detailed Elements: The IMS, at a minimum, shall include the following

3.11.1 - Milestone: A specific definable accomplishment in the contract network, recognizable at a particular point in time. Milestones have zero duration, do not consume resources, and must be supported by and linked to discrete preceding tasks.

3.11.2 - Duration: The length of time estimated or realized to accomplish a task/activity. All discrete task durations must be measured in day(s) and be at least one day long and no longer than 44 days (Refer

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to DCMA 14 Point Assessment). LOE tasks shall be the only exception to the 44 day limitation and measured in days.

3.11.3 - Schedule Percent Complete: Schedule percent complete is a time-based status calculated by the schedule tool without regard to task scope accomplishment.

3.11.4 - Task/Activity and Milestone Descriptions: These are descriptive titles that are concise, complete, and clearly identify the work effort being accomplished. The task/activity title shall reflect the scope, its output (i.e., deliverable) and its place within the IMS architecture so that the content can be understood without the subproject task structure, if applicable. Abbreviations may be used to shorten the descriptive titles. The title for each task shall be unique in respect to other titles in the same IMS.

3.11.5 - Relationships/Dependencies: Identify how predecessor and successor tasks/activities and milestones are logically linked. All discrete tasks/activities/milestones, except the start and end of the contract or interim delivery, shall have at least one predecessor and successor. Preponderance of relationships should be Finish to Start. All LOE tasks/activities shall have at least one predecessor and successor.

3.11.6 - Total Float/Slack: The amount of time a task/activity or milestone forecast finish date can slip before delaying contract completion or deadline date. If negative float is present in the IMS the cause must be identified and a mitigation plan must be stated in contractor monthly analysis.

3.11.7 - Free Float/Slack: The amount of time a task/activity or milestone can slip before it delays any of its successor tasks/ activities or milestones.

3.12 - Constraint Utilization: The use of hard constraints is restricted. All constraints in IMS should be soft constraints. Excessive constraints and incomplete, incorrect, or overly constrained logic shall be eliminated from the IMS due to potential distortions to the critical path. The contractor shall take every effort to limit these constraints to be zero. Limiting the use of constraints will enhance the capabilities of the Scheduling tool to forecast date and allow management to confidently incorporate forecasting results into management plan.

3.13 - Current Schedule: The IMS should not contain invalid dates. The IMS shall reflect status and forecast discrete activities. Forecast start and forecast finish dates shall not be earlier than the accounting month end status date. The contractor shall perform all necessary adjustments to the IMS before submitting it to United States Government. Reporting thresholds shall be consistent with the most recent Defense Contract Management Agency DCMA 14 Point Assessment metrics.

3.14 - Baseline Schedule: The IMS shall have baseline dates and durations for all tasks and milestones within the IMS. These baseline dates shall be consistent with the initial forecast start and finish dates established subsequent to ATP. The contractor shall utilize the built-in baseline tool within the scheduling software. Re-phasing tasks shall be identified for United States Government with a justification to be included in the contractor monthly analysis and stated in the Schedule Dictionary.

3.15 - Schedule Progress: The IMS shall reflect actual progress and maintain accurate start and finish dates for all tasks/activities and milestones. The requirements for reflecting schedule progress to time now are as follows:

3.15.1 - Actual start and finish dates shall be recorded in the actual start and finish fields within the IMS. The actual start and finish dates must be entered accurately for historical data preservation. Entering a percentage in the percentage field is not acceptable. The actual start and finish dates shall not be later than time now.

3.15.2 - The progress line is the date on which the schedule is statused, also known as “time-now,” “data date,” or “status date.” All tasks/activities shall be progressed to at least the current submittal’s accounting month end date.

3.15.3 - Forecast start and forecast finish dates shall not be earlier than the status date.

3.16 - External Dependencies: As agreed to by the Government and contractor, the IMS shall identify significant external dependencies, if applicable, that involve a relationship or interface with external organizations, including Government-furnished items (e.g., decisions, facilities, equipment, information, data, product hand-offs, subcontractor deliverables, etc.). External dependencies shall be logically linked in the IMS to the appropriate tasks/milestones and shall include forecast and baseline dates. External dependencies network shall be reflected in the IMS from the lower level of tasks/activities up to the summary level schedule activities and milestones. The determination of external significant and critical interfaces to be identified within the Integrated Master Schedule (IMS) requires agreement among the contractor(s) and Government. External dependencies / Giver/ Receiver tasks shall be clearly marked in a field and identified in the Schedule Dictionary.

3.17 - Task/Milestone Categories: Individual Fields and task/milestone names shall contain notations identifying certain categories of tasks/milestones. The individual field and task/milestone name notations shall have a three-letter code entered into the field and added to the task/milestone name. Description and purpose of the three-letter code shall be contained in the Schedule Dictionary. Required individual field and task/milestone categories are listed:

3.17.1 - Work Package: Identify effort associated with the work package or control account.

3.17.2 - Subcontractor: Identify the tasks that are unique to the scope of a major supplier, if any.

3.17.3 - Justification of Lags and Soft Constraints: Leads are not acceptable in this IMS. The quantity of Lags must comply with the DCMA 14 Point Assessment threshold and valid justification shall be notated in a text field in addition to the instruction above.

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3.17.4 - Risk Tasks: Mission risk will be notated in an individual field, if any.

3.17.5 - Critical Path and Driving Paths - The Critical Path and Driving Path shall be identified and notated.

3.17.6 - Schedule Margin: Schedule Margin tasks shall be identified in a field.

3.17.7 - Level of Effort: Identify the tasks that are Level of Effort task, if any.

3.18 - Schedule Margin: The contractor shall maintain a margin task before ILC, at a minimum. Schedule margin is a technique used for insight and management of schedule risks. Schedule margin is represented by a task or tasks within the IMS with no assigned resources and is established as part of the baseline and forecast. Schedule margin shall be under the control of the contractor's program manager. Schedule margin shall only be placed as the last task before key contractual events, significant logical integration/test milestones, end item deliverables, or contract completion. Schedule margin is associated with schedule risk as part of a formal risk management plan. Schedule margin may be directly or indirectly connected to discrete predecessor and successor activities and fall on critical paths. All schedule margin tasks shall be clearly and consistently identifiable. Significant changes to the status of schedule margin tasks and impacts to the program's primary critical path, shall be contained in the Monthly IMS Assessment.

3.19 - Baseline Schedule Changes: Any movement of contractual milestones in the baseline schedule shall be derived from either an authorized contract change or by SPO approval. The Contractor shall adhere to current month freeze period. No repurposing of tasks within the IMS are acceptable. All tasks/milestones baselined shall be notated in the Schedule Dictionary. Changes to the baseline schedule shall be made in accordance with the Change Management process below.

3.19.1 - Tasks/Milestones Additions: If it becomes necessary to add tasks to the IMS, the forecast start/finish dates shall be used to establish the baseline dates.

3.19.2 - Tasks/Milestones Deletions: If it becomes necessary to delete a task in the IMS, notate the Schedule Dictionary and explain why it was removed from the baseline or mention what task/milestone replaced it and describe changes to logic because of deleting tasks.

3.19.3 - Tasks/Milestone Re-Plan: The contractor can re-plan a small or large group of tasks/milestones and update the baseline. The designated SPO Office must be notified and concur with the contractor Re-Baseline plan.

3.20 - Retention of Historical Performance. Historical performance on completed tasks/activities shall be maintained electronically for analytical use. Historical performance shall be maintained at the time of key contract events for all tasks/activities. Data to be retained includes logic, actual and baseline durations, actual and baseline start and finish dates. When a new baseline is required to be established, only tasks from time now through contract completion should be re-baselined. All baseline tasks before time now shall be retained for historical performance.

4.0 Monthly Contractor Analysis

4.1 - Contractor Assessment: Contractor must provide an assessment of current activities. This assessment will include a Mission Summary Schedule, Schedule Margin Burndown Chart, Primary/Secondary/Tertiary Critical Path, Baseline Changes log, Baseline Change Notice if required, DCMA 14 Point Assessment current status and 14 points. The analysis shall include discussion of the trends of total float and mitigations that have been applied in the current period.

4.2 - Driving Path: The longest sequence of discrete tasks/activities from time-now to a selected interim contract milestone. Discrete tasks/activities on the driving path have the least amount of total float/slack to the interim contract milestone. If a task on a driving path slips, the interim contract milestone will slip. Driving path may not be part of the contract critical path. The Government may specify which driving path is currently reportable. Without Government direction, the contractor reports the driving path to the next major event, at a minimum.

4.3 - Critical Path: The contractor shall provide a primary, secondary, and tertiary critical path monthly. At the mission level, the critical path follows the standard definition, (The critical path is the longest contiguous path through the network with the least amount of total float). The critical path shall flow from mission ATP, launch, and mission closeout providing a clear network of logic through all tasks along the critical path. The critical path calculation is based on relationships, lag times, durations, constraints, and current status. The critical path shall be created utilizing Microsoft Project scheduling software except for the Risk/Developmental/Delivery Challenged/Historical critical path.

4.4 - Risk Driven Critical Path: If a critical path is not calculated based on the longest path, but based on potential risk, developmental, delivery challenges, and/or program historical data, this path shall be identified as such separately. This risk driven critical path will be in addition to the schedule logic driven primary, secondary, and tertiary critical path when required.

4.5 - Health Analysis: The contractor shall use the DCMA 14 Point Assessment tool or an equivalent. The latest version of the DCMA 14 Point Assessment Thresholds must be adhered to with the exception of hard constraints. The use of hard constraints is restricted. All constraints in IMS should be soft constraints. 14 Point Criteria table below:

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14 Point Criteria		Goal		Unfavorable		Quantities
1	Missing Logic	≤	5%	≤	20%	
2	Have Leads (Negative Lags)	=	0%	>	0%	
3	Have Lags	≤	5%	≥	20%	
4	Finish to Start Relationships	≤	10%	≥	20%	
5	Constraints	≤	5%	≥	20%	
6	High Float	≤	5%	≥	20%	
7	Negative Float	=	0%	>	0%	
8	High Duration	≤	5%	≥	20%	
9i	Invalid Forecast Dates	=	0%	>	0%	
9ii	Invalid Actual Dates	=	0%	>	0%	
10	No Assigned Resources	=	0%	>	0%	
11	Missed Tasks	≤	5%	≥	20%	
12	Critical Path		Pass/Fail			
13	Critical Path Length Index	≥	1.00	<	0.95	
14	Baseline Execution Index	≥	1.00	<	0.95	

5.0 - Schedule Dictionary

5.1 - Task/Activity Codes and Data Dictionary. This is a list of all contractor defined fields, definitions, and code Structures in the IMS. This list shall define all of the required fields in the IMS Schedule Dictionary.

5.2 - Data dictionary shall be provided to the procuring activity upon initial submission of the IMS and any subsequent change to the dictionary.

5.3 - Coding Dictionary, and Filter Code.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 Series	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A011	Program Protection Implementation Plan (PPIP)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-ADMN-81306	Performance Work Statement, Para 3.1.15.2, 3.1.15.3, and 3.1.15.4	SSC/AA Chief of Security

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ASREQ	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

16. REMARKS

1. (BLK 4):10.1 Content Requirements
   a. 10.1.a Replace with "Description detailing how the Program Protection Implementation Plan (PPIP) aligns with the Government Program Protection Plan (PPP) methodology and the defined Program Protection schedule activities/events. Description shall also address implementation of Government Program Protection contractual direction (Performance Work Statement)."
   b. Add "10.1.d Definitions of contractor Criticality Analysis methods to further define Government PPP Critical Components (CC) detail. CC detail must be provided down to the point where the contractor loses configuration management control of the CC internal components (e.g., COTS hardware). Criticality Analysis results should be provided as modifications/additions to Government PPP content."
   c. Add "10.1.e Definition of contractor-identified vulnerabilities and Program Protection incidents and how/when they are reported to the Government."
   d. Add "10.1.f Definition of contractor-identified vulnerabilities and Program Protection incidents and how/when they are reported to the Government. Also, describe methods to ensure accountability of all Critical Program Information (CPI) handled by the contractor."
   e. Add "10.1.g For Supply Chain Risk Management countermeasures aspects, provide a detailed set of supplier information for all CCs and components that handle CPI. A supplier can either be a Manufacturer (e.g., Original Equipment Manufacturer) or a Vendor (sells Manufacturer components). If CCs are purchased from a Vendor, the Manufacturer information must also be provided. Required supplier details include CC supplied, company name, address, website, type (Manufacturer or Vendor), and CAGE code. These details should be specific to where the component being acquired/manufactured."
2. (BLK 10, 12, 13):
   a. Draft PPIP shall be submitted 30 CD after receipt of the Evolved Expendable Launch Program (EELV) Program Protection Plan (PPP) or National Security Space Launch (NSSL) Program Protection Plan (PPP) with the contractor-specific annex.
   b. Final PPIP shall be submitted 30 CD after receipt of Government comments to the Draft PPIP.
   c. Updates shall be submitted as significant revision to the PPP are made or the Procurement Contracting Officer may require an update if the PPP is significantly revised. Request for updates will be limited to no more than annually.
   d. The Contractor shall provide evidence of compliance with National Institute of Standards and Technology Special Publication (NIST SP) 800-171 for development, manufacturing and business systems, derived from activities performed to establish and maintain compliance upon Government request.
   e. The Contractor shall provide evidence of compliance with security controls in accordance with DoDI 8510.01, for mission operations systems (ground and launch vehicle systems), derived from activities performed to establish and maintain compliance upon Government request.
   f. Evidence shall include initial and annual audit reports, Contractor-developed compliance documentation, such as plans, procedures, and reports, plan of action and milestones, and requests for waivers.
   g. The Contractor shall notify the Government of cyber security audits and coordinate schedules to ensure Government participation

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CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A012	System Safety Program Plan (SSPP)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-SAFT-81626	Performance Work Statement, Para 3.1.10.1	SSC/AA System Safety Manager

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	90 DACA

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4)

   a. Modify paragraph 2.3.b with the following per CDRL A019:

      Describe the risk assessment procedures. The hazard severity categories, hazard probability levels, and the system safety precedence to be followed in satisfying safety requirements shall be in accordance with MIL-STD-882E.

   b. Replace paragraph 2.4.a with the following:

      The analysis technique and format that will be used in qualitative and quantitative analysis to identify hazards, their causes and effects, and recommended corrective action, to include hazards resulting from software critical functions.

2. (BLKs 10, 13)

   a. Draft SSPP shall be submitted 90 DACA.

   b. Final SSPP shall be submitted 60 CD after receipt of Government comments to the Draft SSPP. If there are no Government comments, the Draft shall be considered the final submittal.

   c. Updates shall be submitted 30 CD after revision to the System Safety Program are made, an update is requested as a result of a new task order, or by Procurement Contacting Office (PCO) direction.

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D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A013	Hazardous Materials Management Program (HMMP) Plan	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81398C	Performance Work Statement, Para 3.1.21	SSC/AA System Safety Manager

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	30 DACA
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		N/A	BLK 16

16. REMARKS

1. (BLK 10, 13): Updates shall be submitted 30 CD after revisions to the plan are made, an update is requested as a result of a new task order, or by Procurement Contracting Office (PCO) direction.

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0002	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A014	Missile System Prelaunch Safety Package (MSPSP)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
BLK 16	Performance Work Statement, Para 3.4.11	SSC/AA System Safety Manager

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION			
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N/A		N/A	BLK 16			Reg	Repro

16. REMARKS

1. (BLK 4):
   a. For each mission, the Contractor shall capture mission unique hardware, processing, and hazards, including SV team inputs and reports for SV identified hazardous items, in the Missile System Prelaunch Safety Package (MSPSP). MSPSP can be either as an update to the MSPSP for previous missions or as a mission unique MSPSP.
2. (BLKs 10, 12, 13)
   a. Submit copy of MSPSP to Government. No Government Approval required.

15. a. ADDRESSEE	Draft	FINAL Reg	FINAL Repro
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CLIN 2000 Series	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A015	Anti-Terrorism Program	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-80033A/T	Performance Work Statement, Para 3.1.17, 3.1.17.2, and 3.1.17.5	SSC/AAE

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ANNLY	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

   Replace section 4.0: "The Contractor shall perform an in-house Annual Review of AT program, which shall be documented in accordance with the host Wing ATO checklist."

2. (BLKs 10, 12, 13)

   a. Submit completed host Wing ATO checklist prior to Annual Anti-Terrorism program review.

   b. Completed RAMs shall be documented in a format prescribed by SSC/AA and reported quarterly to the host base Anti-Terrorism Office.

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CLIN 2000 Series	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A016	Environmental Impact	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-80033A/T	Performance Work Statement, Para 3.1.20.3	SSC/AAE

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4): Replace section 4: "The Contractors will provide any modification and/or construction data for the launch facilities to allow SSC/AA to prepare the Environmental Impact Analysis Process in accordance with National Environmental Policy Act and Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, dated 4 January 1979."
2. (BLKs 12, 13): Provide copy of documentation 30 CD after provided to Range.

14. DISTRIBUTION			
15. a. ADDRESSEE	b. COPIES		
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0003	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A017	Facility Requirements Documents	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-FACR-80810A	Performance Work Statement, Para 3.4.12.2.2	SAF/SL

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
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8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
N/A		N/A	BLK 16	

16. REMARKS

1. (BLK 4)

   a. Replace section 3.1 with "The FRD identifies all of the Contractor's constraints and requirements for the use of the Payload Encapsulation Facility. These requirements describe the facilities and services necessary to perform Payload Fairing (PLF) offload, PLF cleaning, pre-mate preparations, spacecraft mate to Payload Attach System (PAS), encapsulation, and post-encapsulation preparations for transport to the launch pad by the Contractor. The requirements do not address facilities related to spacecraft processing."

   b. Delete section 7.2 and 7.3.

   c. Replace section 10. with:

   "10.2 Content. The document shall include the following information:

   10.2.1 General requirements to include any requirements for administrative areas as well as any communications requirement needed by the Contractor in order to operate in the PPF.

   10.2.2 Hardware Arrival – Description of the general overview of operations and the required facility and service requirements

   10.2.3 Flight Hardware Processing Prior to Encapsulation – Description of the general overview of operations and the required facility and service requirements

   10.2.4 Integrated Operations and Encapsulation – Description of the general overview of operations and the required facility and service requirements

   10.2.5 Transportation Preparation – Description of the general overview of operations and the required facility and service requirements"

2.(BLKs 10, 12, 13)

   a. Submit initial draft by L-18 months.

   b. Submit final by L-12 months.

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D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A018	Training Materials	Launch Vehicle Familiarization Training

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-ILSS-80872/T	Performance Work Statement, Para 3.1.14	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	60 DACA

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

a. Replace 10.1 with "10.1 Format. The material provided shall be in the contractor's own format. The material shall be printable on standard size paper (e.g., 8 ½ x 11 or A4); foldouts are allowed."

b. Delete 10.1.1.

c. Replace 10.2 with "10.2 Contents. The Launch Vehicle Familiarization training materials shall consist of text, supplemental written and audio-visual material used to support the Launch Vehicle Familiarization class."

d. Replace 10.2.1 with

"10.2.1 The Launch Vehicle hardware, software and ground interface sections shall include the following elements:

1. Overall review of hardware or software element function and construction
2. Basic performance requirements and interfaces
3. Qualification approach
4. Fault tolerance
5. Test questions for the student
6. Change summary showing changes to the material between versions."

e. Delete 10.2.1.1 – 10.2.1.7.

f. Replace 10.2.2 with

"10.2.2 Required Material. The Launch Vehicle Familiarization training materials shall address the following elements (as appropriate for the Launch Service provided) outlined below:

1. Launch Vehicle Hardware and Software
   a. Booster
      i. Structure
         1. Propellant Tanks
         2. Primary Transition Structure
         3. Heat Shields

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D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

4. Propellant Feed Subsystems
5. Avionics Structure
6. Fairings

ii. Booster Systems

1. Booster Tank Pressurization
2. Propellant Level Control Systems
3. Propellant Utilization System
4. Propellant Depletion System
5. Retro-Rockets
6. Separation and Ordnance Systems

iii. Booster Propulsion

1. Main engine
2. Main engine hydraulics

iv. SRB Propulsion (if applicable)

1. Solid Rocket Booster
2. Strap-On Attach Hardware
3. SRB Umbilicals

b. Upper Stage

i. Structure

1. Tanks
2. Avionics Panels

ii. Upper Stage System

1. Propellant Level System
2. Propellant Utilization System
3. Pressurization and Venting System
4. Helium System
5. Reaction Control Thrusters

iii. Upper Stage Engine

c. Payload Fairings and Payload Adapters

d. Avionics and Electrical Systems

i. Electrical Power Subsystem (EPS)

ii. Guidance, Navigation, and Control (GNC) Subsystem

1. Navigation Unit
2. Flight Software
3. Remote Command and Control Units

iii. Ordnance Control Units

iv. Batteries

v. Data Acquisition System (DAS) Telemetry Data Transmission System (TDTS)

vi. Tracking System

vii. Flight Termination System (FTS)

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(1 Data Item)

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D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

2. Ground Systems
   a. Ground Command, Control Communications
   b. Launch Mount and Umbilical System
   c. Range Interface
   d. Facility systems and capabilities
   e. Launch site critical ground mechanical, structural and fluid/has systems
   f. Ground electrical systems
3. Launch Vehicle Processing
   a. Manufacturing Facility
   b. Factory Checkout and Test
   c. Transportation
   d. Receive and Inspection, Checkout and Test
   e. Integrated Systems Test
   f. Payload processing and Integration
   g. Launch Vehicle and Facility Walkdown process
   h. Launch Countdown and Launch
4. Launch Vehicle System and Systems Engineering
   a. Mission Profiles and Vehicle Capability
   b. Requirements and Verification
   c. Standard analyses performed by all disciplines during each mission integration cycle
      i. Analysis Scope
      ii. Tools Utilized
   d. Risk Identification, Tracking, and Resolution criteria/process
   e. Types of Contractor Work Authorization Documents
5. Contractor organizational structure, roles and responsibilities"

2. (BLKs 13): Initial submittal (draft) training materials will be delivered no later than 60 DACA. The initial submittal will include the level of detail covered by the Familiarization (FAM) Course training material provided by the Contractor and approved by the Government prior to conducting the FAM course. Final training material shall be delivered 15 CD following receipt of Government comments. All FAM Course training material shall be finalized and approved by the Government prior to the FAM Course.

3. (BLKs 13) Updates to the training shall be submitted to reflect the latest United States Government certified/approved launch system configuration.
   a. (BLKs 10, 12, 13): Contractor to provide the USG Team an instructor-led Launch System Familiarization (FAM) Course three times a calendar year to provide training to the Government team supporting NSS missions with the launch service provider: once at the SSC/AA's facility, and once at each launch base facility.
   b. The Government will review each submission and provide feedback within 30 CD to the maximum extent possible.
   c. On-demand courses may also be offered in addition to this requirement.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 2000 Series	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A019	Contractor's Standard Operating Procedures	Compliance Document Tailoring

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81580/T	Performance Work Statement, Para 2.1, 3.1.1, 3.1.2, 3.1.3, 3.1.10.1, 3.1.11, 3.1.11.1, 3.1.11.2, 3.2.3.1, 3.2.3.2, 3.2.3.6, 3.2.4.1, 3.2.8, 3.2.9, 3.5.2.1, 3.6, 3.6.6, and Tables C-5 through C-18	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	90 DACA

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	BLK 16	BLK 16

16. REMARKS

1. (BLK 4): Replace with: "3. Content:
   a. For standards listed in PWS Appendix C Tables C-5 through C-18,
      i. The Contractor shall map its command media and processes to show compliance with either:
         1) The specified standard.
         2) An approved tailored version of the standard. Tailoring takes the form of a redlined document, a listing of tailored items, and rationale for each change. Approval shall be based on evidence demonstrating that the tailored version of the standard and resulting products are equivalent in rigor and effectiveness to the specified standard and show an acceptable level of risk as defined in the LE-P-023 (NSSL Technical Issue Resolution Process (TIRP) Operating Instruction (OI) or AFPHAM 63-128 (Integrated Life Cycle Management). The Contractor can provide additional information as part of the submittal in support of the USG risk assessment.
         3) A substitute of the standard which can be an existing company standard, documented and configuration controlled company processes, NASA standard, other industry standard, or international standard. The Contractor must provide evidence demonstrating to SSC/AA that the substituted standard or company process and resulting products are equivalent in rigor and effectiveness to the specified standard and show an acceptable level of risk using the TIRP or 5x5 risk matrix (AFPHAM 63-128) as the basis for assessment.
      ii. The Contractor may provide applicable document mapping or tailoring that USG approved via prior EELV or NSSL contracts or certification as evidence of compliance. However, PWS Appendix C Tables C-5 through C-18 standards and associated requirements take precedence over prior contract and certification agreements.
      iii. The mapping must reference detailed requirements of the standard (specified, tailored, or substituted) to specific sections of the command media documentation.
   b. For AFSPCMAN 91-710 Range Safety User Requirements (or EWR 127-1 if approved by the Range), RCC 319 Flight Termination Systems Commonality Standard, and RCC 324 Global Positioning and Inertial Measurements Range Safety Systems' Commonality Standard, the Contractor shall submit the Range-approved tailoring.

2. (BLKs 10, 11, 12, 13)
   a. Submit initial draft 90 DACA for Government review and comment.
   b. Submit final tailoring/command media for Government approval 30 CD after receipt of Government comments.
   c. If Contractor makes changes to command media elements that are mapped to compliance document requirements, then the Contractor shall submit an update within 30 CD. Command media updates provided on demand via IDE or equivalent are not necessary to be provided in formal submittal.
   d. Any revisions made by the Contractor to previously accepted documents by the USG shall be explicitly noted (e.g., identified in a change summary or other tracking method).

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
0002	A	TDP	TM	OTHER X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A020	As-Built Configuration List (ABCL) for Fleet Insight	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-81516/T	Performance Work Statement, Para 3.2.4.3.5	SSC/AA Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	ASREQ

16. REMARKS

1. (BLK 4):

   a. Replace 1.0 with the following: "As-Built Configuration List (ABCL) for Fleet Insight."

   b. Replace 3.1 with the following:

   "For applicable Non-NSS Missions, the list shows the as-built launch vehicle configuration for critical flight and critical ground support equipment specific to the launch system families (to include the test stands/static fire/transport processes) intended to be used on this contract."

   c. Replace 3.2 with the following:

   "This ABCL will be used to monitor configuration changes to the launch vehicle design as part of fleet insight for the Government's fleet surveillance process."

   d. Replace 10.2.1 with the following:

   "10.2.1 Part name, part number and revision, next-higher assembly part number, subassembly, part or component as designed in the launch vehicle configuration."

2. (BLKs 10, 12, 13): Contractor to provide As-Launched configurations for non-NSS missions at L+2 months for the respective mission. As-Launch configuration lists for non-NSS missions not provided on demand via IDE or equivalent, must be provided in formal submittal.

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CLIN 2000 Series	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A021	Design Data and Calculations	Performance Capabilities Guide

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement, Para 3.2.7	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	SEMIA	BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		N/A	SEMIA

16. REMARKS

1. (BLK 4):

   a. Contractor format is acceptable.

   b. Delete 10.2, Replace with the following:

      i. For each reference orbit mission listed in the Systems Performance Requirements Document (SPRD) and for representative Contractor's United States Government certified/approved launch vehicle configurations, a report will be submitted describing the launch vehicles' mass properties, performance capability and compliance with the associated SPRD mass-to-orbit performance, performance margin, and flight performance reserve requirements.

      ii. All performance threats, liens, and ground rules and assumptions used for these calculations will be included.

   c. Delete 10.3.

2. (BLK 12): Submission shall occur twice per year, end of March and end of September; second semiannual submission not required if capabilities remain unchanged.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
0001	A	TDP	TM	OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A022	Technical Report	Launch Slot/Date Recommendation

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80508B/T	Performance Work Statement, Para 3.1.9.3	SSC/AAMI Chief of Integration

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	BLK 16	BLK 16

16. REMARKS

1. (BLK 4):
   - a. Replace Section 2 with: Contractor Format.
   - b. Replace Section 3 with:
     - i. The Contractor shall provide a Launch Slot Recommendation (LSR) for each launch order identifying the following:
       1. A Launch Slot within the previously assigned Launch Period
       2. Additional supplemental hardware or capability when required
       3. A decision date for Government concurrence. If not specified, need date is fifteen (15) CD after Government receipt of LSR.
     - ii. The Contractor shall provide a Launch Date Recommendation (LDR) for each launch order identifying the following:
       1. Specific Launch Date within the previously authorized Launch Slot
       2. Assigned launch site
       3. Deadline for Government provided payload/spacecraft ready for Launch Vehicle mate
       4. Decision date for Government concurrence. If not specified, need date is fifteen (15) CD after Government receipt of LDR.
2. (BLKs 10, 11, 12, 13)
   - a. Submittal of LSR/LSD will be provided to the Government for each Launch Task Order.
   - b. The Contractor shall provide the LSR no later than 405 CDs (approximately 13.5 months) prior to the beginning of the Launch Period.
     - i. With a Government accelerated schedule, provide LSR no later than 30 CDs after task order.
   - c. The Contractor shall provide the LDR no later than 225 CDs (approximately 7.5 months) prior to the beginning of the Launch Slot.
   - d. For missions accelerated by 9 months, the contractor shall provide the LSR no later than L-12 months.
   - e. For missions accelerated by 12 months, the contractor shall provide the LSR no later than L-10 months, and the LDR no later than L-6 months.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP	X	TM	OTHER
0002	A				

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A023	Mission Integration Management and Operations Plan (MIMOP)	Integration and Operations Plan

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81911/T	Performance Work Statement, Para 3.4.6.1 and 3.8.11.1	SSC/AA GMIM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

a. Replace 3 with: "The Integration and Operations Plan shall address, at a minimum, the following sections:

1) For the initial submittal:
   a. Description of new or modified facilities and equipment necessary to accomplish integration capability for the contracted mission
   b. Development and Activation schedule for the contracted mission
   c. Identification of Long Lead Items for the contracted mission
   d. Process plans for the contracted mission
   e. Procedural documents for operations and satellite vehicle processing for the contracted mission after encapsulation within the payload fairing (i.e., encapsulated assembly is prepared to depart the payload processing facility)
   f. Explanation of how the capability meets the requirements for NSSL payloads
   g. Evidence of work progress being on schedule towards completion of a Critical Design Review level design for the contracted mission not later than (NLT) Launch – 15 months
   h. Construction plans for the contracted mission

2) For the final submittal:
   a. Proof of execution of a previous integration processing operation for an NSSL-class mission via pathfinder or launch operations consistent with the integration processing operation for the contracted mission. Evidence to be provided shall include the following as a minimum:
      i. Pre-Ship review packages prior to the flight hardware arrival at the launch site
      ii. As-Run operational processing and maintenance procedures
      iii. Operational readiness review package
      iv. Post-Flight review package
      v. Range Safety compliance documents
      vi. Payload and Facility User's Guides

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0003	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

vii. Approved process plans or procedures that govern non-conformance handling, launch vehicles and ground systems anomalies, risk management, configuration and data management, change management, operational processing and maintenance procedure development and deviation, issues, actions items, lessons learned, and operational readiness reviews.

viii. Tabular listing of the following items that may have been encountered during operations processing:

a. Significant non-conformances, anomalies, and corrective action.

b. Significant changes or improvements implemented.

c. Signiant issues or action items generated.

d. Lessons learned.

2. (BLKs 12, 13):

a. Submit initial 30 calendar days after Launch Task Order for Government review and comment; if the Contractor has accomplished a SIS Rev C-compliant processing operation by 30 days after Launch Task Order then only the final submittal is required.

b. Submit updates no later than (NLT) 180 calendar days after Launch Task Order.

c. Submit final for Government approval NLT Launch -12 months after completion of an integration processing operation for an NSSL-class mission via pathfinder consistent with the integration processing operation for the contracted mission. If the Contractor has accomplished an NSSL-class mission launch operation within 12 months of Launch Task Order, no submittal is required.

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0002	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A024	Test Procedure	Flight Hardware Interface Checks

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80603A/T	Performance Work Statement, Para 3.4.9	SSC/AAMI Product Line GMM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

a. Replace 2 with: "2. Format. The test procedure shall be in an electronic format and printable on standard size paper (e.g., 8 ½ x 11 or A4)."

b. Replace 3.2.5 with: "3.2.5 Safety Requirement Checklist. A safety requirement checklist shall be included to document hazardous conditions that will exist during the test activity."

2. (BLKs 10, 12, 13):

a. Submit initial Flight Hardware Interface Checks (FHIC) test procedure 90 CD prior to each Fit Check.

b. Submit final FHIC test procedure 30 CD prior to each Fit Check test.

c. Submit the As-run procedures 14 CD after completion of each Fit Check test.

3. The Government will review each submission and provide feedback within 30 CD to the maximum extent possible.

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0003	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A025	System/Segment Interface Control Specification	Mission Interface Control Document (ICD)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-SESS-81314A/T	Performance Work Statement, Para 3.4.4, 3.4.4.1, 3.4.8.1, 3.8.2.2.5, 3.8.2.2.9.3, and 3.9.2.4	SSC/AA GMIM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

16. REMARKS

1. (BLK 4): Update DI-SESS-81314 as follows:

   a. 2. Format: Replace first two sentences with "The interface specification shall be prepared in an electronic format and printable on 8 ½ x 11" paper (metric size A4). It may be a multi-part electronic document."

   b. Replace 2.1.1 with "2.1.1 Document number. The document number shall appear on the title page."

   c. Replace 2.1.2 with "2.1.2 Date. The document issue data (Baseline/Revision Number and Issue Date) shall appear on the title page."

   d. Replace 2.1.3 with "2.1.3 Title. The document title shall appear on the title page stating the nomenclature of the interfacing items."

   e. Delete 2.1.4.

   f. Delete 2.2.1.

   g. Replace 2.4 with:

   "Section 3.0, Requirements. This section provides the detailed description of the interface requirements. Each interface shall be separately covered in its own subsection, and include:

   1) Launch Vehicle Configuration
   2) Space Vehicle Configuration (For USSF Missions)
   3) Mission Parameters
   4) Space Vehicle/Launch Vehicle Interface Requirements
   5) Space Vehicle Handing and Processing Requirements

   Include mission-specific payload systems weight capability for the mission and PLF selected and specific mission design constraints."

   h. Replace 2.5 with:

   "Section 4.0, Quality assurance. This section shall identify and define the following:

   1) Philosophy of Verification
   2) Verification Methods

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0002	B	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

i. Replace 2.6 with: "Section 5.0, Notes. This section shall include Definitions, Abbreviations, Acronyms and Symbols."

j. Delete Figure 1 Replace 3. With "Appendix A – This appendix shall include the Electrical Interfaces. Appendix B – This appendix shall include the Mechanical Interfaces."

k. Delete 3.1 – 3.3.

l. The Government will allow a format in alignment with the Contractor's standard ICD template and/or command media as long as it is mutually agreed to by the SVC/LSIC, GMIM, and SV SPO.

2. (BLK 8): Signatures by 4-Party Technical Team

a. For USSF Missions: LV Contractor, LV Government Program Office, SV Contractor/LSIC, and SV Customer Program Office, at a minimum, constitutes Government approval of the Mission ICD.

3. (BLKs 10, 12, 13):

a. Submittal of ICD will be provided to the Government for each Launch task order.

b. Submit first draft of the Baseline Mission ICD no later than (NLT) Authority to Proceed (ATP) +3 Months. No Government approval required.

c. Submit second draft NLT Launch – 12 months for Government approval.

i. For missions accelerated by 9 months, the Contractor shall submit the second draft NLT L-8 months.

ii. For missions accelerated by 12 months, the Contractor shall provide the traceability matrix NLT L-6 months.

d. Submit Final 30 CD after 4-Party Technical Team signature to be formalized by bi-lateral contract modification.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
0003	B	X TDP	TM	OTHE

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A026	MRA to ICD Traceability Matrix	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-SESS-81314A/T	Performance Work Statement, Para 3.4.4.1, 3.4.8, and 3.8.2.2.5	SSC/AA GMIM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

2. The Contractor shall generate an MRA to mission ICD traceability matrix that documents where each MRA requirement is captured in the mission ICD.

3. (BLKs12, 13)

   a. Submittal will be provided to the Government for each Launch task order.

   b. Submit no later than (NLT) Launch – 18 months.

      i. For missions accelerated by 9 months, the contractor shall provide the traceability matrix no later than L-12 months.

      ii. For missions accelerated by 12 months, the contractor shall provide the traceability matrix no later than L-10 months.

14. DISTRIBUTION

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0002	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A027	Specification Requirement Verification Matrix	Verification Planning Matrix (VPM)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-81283/T	Performance Work Statement, Para 3.4.8, 3.4.8.1, 3.8.2.2.9.2, and 3.8.2.2.9.3	SSC/AA GMIM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0003	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A028	Specification Requirement Verification Matrix	Verification Evidence Record (VER)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-81283/T	Performance Work Statement, Para 3.4.8, 3.8.2.2.9.2, and 3.8.2.2.9.3	SSC/AA GMIM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
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16. REMARKS	15. a. ADDRESSEE	15. b. COPIES		
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1. (BLK 4):	See Distribution List			
a. Replace 10.1 with "10.1 Format. The Verification Evidence Record (VER), along with the evidence of verification closure, shall be in electronic format(s) compatible to Microsoft Office products or .PDF. Electronic access on a Government accessible database satisfies the requirements of delivery."				
b. Delete 10.1.1–10.1.5.				
c. Replace 10.2 with:				
"10.2 Content. The VER shall include, but not be limited to:				
a. The Requirement				
b. Verification method(s)				
c. Identification of Launch Vehicle Contractor (LVC) assigned responsible engineers				
d. Dates verification(s) completed				
e. Evidence of verification supporting LVC's closure rationale, including, but not limited to, analyses, procedures, test documents, drawings, inspections, and as-built/as-run data."				
d. Delete 10.2.1–10.2.8.				
e. Delete Figure 1.				
2. (BLK 7) The contractor shall document (electronic Interoffice Memorandum acceptable) and notify the Requiring Office when delivery occurs identifying the location of the data. Copies of this notification shall be maintained on the Government accessible database.				
3. (BLKs 10, 12, 13): Submittal of VER will be provided to the Government for each Launch task order.				
4. Submit individual records upon closure of each verification.				
5. (BLKs 10, 12, 13): Contractor shall submit LV Verification Evidence in accordance with the approved Verification Planning Schedule.				
a. USG will provide comments on verifications deemed to be inadequate or incorrect within 30 calendar days to the maximum extent possible.				
	15. TOTAL			

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
CLIN 2000 Series	A	TDP	TM	OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A029	Safety Assessment Report (SAR)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-SAFT-80102C/T	Performance Work Statement, Para 3.1.10.1	SSC/AA System Safety Manager

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	CA	BLK 16

16. REMARKS

1. (BLK 4):
   a. Delete paragraph 3.2b.
   b. Modify Paragraph 3.2c as "A brief description of the system and its major subsystems and components. Software and its roles shall be included in this description.
   c. Modify 3.3 to include "This section may be developed by referencing other programs documentation."
   d. Replace 3.4 with "3.4 System Safety Engineering. This section may be developed by referencing other program document and shall include the following:
   e. The specific Severity categories matrix, Probability level matric and risk assessment matrix used to classify hardware/software/human system integration hazards.
   f. The results of analyses and test performed to identify hazards, assess risk, and verify/validate effectiveness of mitigation measures.
   g. All Hazard Tracking System (HTS) data (to include, but not limited to, heritage, new and/or modified systems).
   h. A summary of risks for each identified hazard.
   i. Replace 3.5 with "3.5 Elevated Risks."
   j. Identify any residual risks classified as High or serious in accordance with MIL-STD-882E Risk Index."
   k. Modify paragraph 3.6 as "Reference. List all pertinent referenced including (but not limited to) test and analysis reports, standard and regulations, drawings, Qual test reports, specifications and requirement documents, operating manual, and maintenance manuals."
2. (BLK 12): Initial submittal to be provided 60 calendar days (CD) after Launch Task Order
3. (BLK 13): Updates will be submitted 30 CD after revision made, an update is requested as a result of a new task order, or by Procurement Contacting Office (PCO) direction.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A031	Design Data and Calculations	Prelaunch Data and Documentation Supporting Launch Operations

4. AUTHORITY *(Data Acquisition Document No.)*	5 CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement Para 3.5.2.10.4.3 and 3.5.3.14.1.3	SSC/AA, NOPS

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	BLK 16	BLK 16	15. a. ADDRESSEE / b. COPIES
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	
N/A		N/A	BLK 16	

16. REMARKS

1. (BLK 4):

a. 10.2 Replace with the following: "10.2 Content. The Prelaunch Data and Documentation Supporting Launch Operations shall include the following:

1) Preflight Trajectories. Electronic copies of the preflight trajectories for each mission in Range standard format. The data will cover the period through the launch vehicle end of mission, including telemetry antenna switching and format switching information, and encompass mission variability across the launch window and launch period (for NOPS telemetry planning use).

2) Telemetry Composition. Provide the following definitions, formats, and calibrations for each mission:

i. Launch Systems telemetry measure and definition and telemetry format and conversion calibration updates necessary to support telemetry processing and display.

ii. Mark events and mark event logic and mission-unique calculations required for mark event or orbit parameter processing.

3) Telemetry Data/Memorandum. Provide the following data once per mission, with updates required if changes occur in the telemetry stream/frame structure:

i. Raw telemetry data generated from an Integration Lab trajectory simulation. The data shall be Digital Linear Tape (DLT), a computer-compatible binary file, or IRIG 106 Chapter 10 compatible.

ii. Companion processed telemetry documentation (i.e., truth memo for verifying telemetry processing and product generation capabilities). The processed telemetry documentation shall include, at a minimum, mark event times generated using the logic supplied with the Telemetry Composition and state vectors (J2000 or Earth-Fixed reference frame and corresponding orbit parameters) following each orbital burn and for spacecraft separation.

4) Vehicle Link. Provide the following data once for each launch vehicle (LV) type to define the LV telemetry systems:

i. Vehicle Body Axis Definition for all LV stages/provide event marker with MET time for each coordinate system change.

ii. Angular Locations of antenna(s) relative to body axes coordinates, including a graphic figure.

15. a. ADDRESSEE	b. COPIES: Draft	FINAL: Reg	FINAL: Repro
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0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

iii. Antenna gain pattern(s) in accordance with IRIG Standard 253-93 entitled "Missile Antenna Pattern Coordinate System and Data Formats"

iv. Antenna Pattern plots/charts detailing maximum and minimum gains

v. Antenna polarization (RHCP, LHCP, Linear Polarization [H or V])

vi. Transmitter Power, minimum specification levels (Watts, dBw, dBm)

vii. Internal RF cabling losses (dB), including losses from RF lines, spilt, and switches

viii. TLM Carrier Frequencies (MHz) and subcarrier frequency, if applicable

ix. TLM Modulation details – Types and Modulation indices (Radians $\pm$ %)

x. RSS Modulation losses (Ranging Modulation Loss, MLprn [dB], Carrier Modulation Loss, MLc [dB])

xi. TLM Modulation losses MLTLM (dB)

xii. TLM Forward Error Correcting (FEC) or convolutional encoding details

xiii. TLM Link Characteristics and compute sample link budget for all transmitting RF systems.

xiv. Other Link gains or losses including estimated Axial Ratio Losses (dB)

xv. TLM link margin for a Eb/N0 (dB) for 10^{-5} BER Bit error probability, PB

xvi. TLM Data Rates (Kb/s) and symbol rates (if encoded)

xvii. Identify any changes to the above characteristics for any of the BV or US types"

b. Delete 10.3.

2. (BLKs 10, 12, 13) Submittal of data provided per task order as follows:

a. Preflight Trajectories

1) Deliver preliminary trajectory at Launch -180 CD (for re-flight missions, the final delivery from the previous flight of that missing satisfied this requirement).

2) Deliver updated telemetry planning trajectory to reflect current mission's profile as changes are published.

3) Deliver updates telemetry planning trajectory at Launch-60 CD.

b. Telemetry Composition

1) Submit Launch - 30 CD.

2) If updated after Launch - 30 CD, submit within 72 hours of published change, notify regarding pending change as soon as possible.

3) If updated within 96 hours of launch, submit as soon as available.

4) For re-flight missions, deliveries will not be required unless there are changes to the content.

c. Telemetry Data/Memorandum

1) Raw telemetry data, submit Launch - 30 CD.

2) Companion processed telemetry data, submit Launch - 23 CD.

3) If updated after l-23 CD, notify regarding potential change as soon as possible, deliver as soon as available, but no later than 24 hours after update is available.

d. Vehicle Link

1) Submittal of current generic Program Requirement Documents will satisfy the initial submittal.

2) Submit subsequent updates as soon as they are available.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP	TM	OTHER
CLIN 2000 Series	A			X

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A033	As Designed Configuration List (ADCL)	Launch Vehicle Configuration

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-81516/T	Performance Work Statement, Para 3.2.4.2.1, 3.6.6, and Appendix F	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ASREQ	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	ASREQ	

16. REMARKS

1. (BLK 4):

   a. Replace 1.0 with the following: "As Designed Configuration List (ADCL)."

   b. Replace 10.2.1 with the following:

   "The list shows the as-designed launch vehicle configuration and critical ground support equipment specific to the launch service delivered under the contract."

   c. Replace 3.2 with the following:

   "The ADCL will be used by the Government to monitor configuration changes to the launch vehicle baseline prior to the construction of hardware for the launch vehicle."

   d. Replace 10.2.1 with the following:

   "10.2.1 Part name, part number and revision, next-higher assembly, subassembly, part or component as designed in the launch vehicle configuration. The initial ADCL submitted 60 DACA shall reflect the as-proposed launch vehicles configuration with any configuration changes that occurred to the launch vehicle design following Authority to Proceed (ATP). The initial ADCL submission shall establish the format for the ADCL to ensure that all required elements are included and established the as-designed configuration of the vehicle expected to be flown. Changes from as-proposed launch vehicle configuration shall be identified in the initial ADCL.

2. (BLK 12): Submittal of ADCL will be provided to the Government for each Launch task order, NLT 60 calendar days (CD) after issue of task order.

   a. With a Government accelerated schedule of 12 months or less, provide list of changes from as proposed launch vehicle configuration no later than 60 CDs after task order for Government Approval.

3. (BLK 13): Revisions to the ADCL for the launch vehicle configuration to be flown shall be formally submitted to the Government Updates to be provided upon implementation of changes.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A034	As-Built Configuration List (ABCL)	Launch Vehicle Configuration

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-81516/T	Performance Work Statement, Para 3.2.4.2.2, and Appendix F	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	L-12 months

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

   a. Replace 3.1 with the following:

   "The list shows the launch vehicle configuration to the launch service delivered under the contract."

   b. Replace 10.2.1 with the following:

   "10.2.1 Part name, part number and revision, serial number, lot number, manufacturer, next-higher manufacturing assembly part number, end item and unit number, installation document, part/drawing number and revision as applicable for each critical serial-number-controlled assembly, subassembly, part or component built and installed (or planned to be installed) in the launch vehicle."

2. (BLK 10, 13): Submittal of ABCL will be provided to the Government for each Launch task order.

   a. Initial As-Built Configuration List (ABCL) will be submitted at Launch (L)-12 months.

   b. Updates formally submitted to the Government at L-6 months, L-3 months, and at L-2 months.

   c. Submit the final as-flown configuration list at L+2 months to reflect any changes that occurred between the final ABCL and the flown launch vehicle configuration.

   d. The Government will review each submission and provide feedback within 30 CD to the maximum extent possible.

14. DISTRIBUTION	15.	b. COPIES		
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	TM	OTHER	X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A035	Critical Items List	Flight Critical Items List (FCIL) and Ground Critical Items List (GCIL)

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-RELI-80685/T	Performance Work Statement, Para 3.2.4.2.3, 3.2.4.2.4, and 3.6.6	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ONE/R	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	ASREQ

16. REMARKS

1. (BLK 4):

a. Contractor's format acceptable

b. Replace 10.2 with the following:

"10.2 Content. The Flight Critical Item List and Ground Critical Items List shall contain the hardware baseline for the conduct of independent hardware reviews. It shall identify:

i) Supplier

ii) Part Number

iii) System

iv) Part Name

v) Review Type

vi) Applicable configuration item

vii) Review Title

viii) Review Location"

10.2.1. Ground Critical Items include the following:

1. Ground Systems, Ground Support Equipment, and software Required to process Flight Hardware and provide Launch Capability. Includes all systems that interface with the LV/SV or are used to process the LV/SV.

10.2.2. Flight Critical Item Criteria Descriptions. Criteria for what constitutes flight critical hardware includes the following:

1. Single Point Failure (active): Refers to active launch vehicle components, which if faulty or failed, would result in a complete loss of mission. Loss of mission includes insertion of a payload into an unusable and unrecoverable orbit. This category does not include primary structures or other passive components, or components whose potential failure would result in degraded mission performance.

2. Separation Event: Refers to hardware that is directly involved in the initiation or the execution of a flight separation event. This includes electrical, mechanical and ordnance components that (a) initiate and transmit separation commands, (b) transfer energy and execute pyrotechnic events, (c) apply impulses or forces necessary to execute the separation, and (d) maintain interface integrity prior to separation initiation. Flight separation events include all separation events occurring after flight commit, to include (but not limited to) lift off, umbilical release, and SRM, Strap-on, Stage I/II, PLF, and space vehicle separation.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

3. Reliability Driver: Refers to components or subsystems that are known to be significant contributors to a launch vehicle's design reliability. These items are determined from review of the contractor's reliability reports and Aerospace reliability assessments. The historical flight reliability of the systems/components should be folded into the overall reliability assessments.

4. Supplier with Production/Quality Concerns: Refers to suppliers who have historically had significant production problems as demonstrated by high numbers of non-conformances and escapements. Suppliers who have historically had schedule problems are also included since schedule pressures can drive production shortcuts and quality escapements. This assessment is based on industrial and cross-program knowledge, not strictly based on NSSL experience.

5. Critical Components and Single Point Failures (Passive): Refers to launch vehicle components, which if faulty or failed, would result in significantly degraded mission performance. Degraded performance is defined as insertion into an orbit that reduces the effectiveness of the payload to execute its mission, including degradation of mission life. This category also refers to primary structures or other passive components that would otherwise be defined as single point failures.

2. (BLK 13):

a. Submittal of FCIL and GCIL will be provided to the Government for each Launch task order. Submit initial no later than (NLT) 30 calendar days after task order for Government review and comment.

b. Submit updates NLT 180 calendar days after task order for Government approval. Revisions shall be ASREQ for subsequent submission when a change occurs through mutual agreement.

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CONTRACT DATA REQUIREMENTS LIST

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	X TDP TM OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A037	Test Plan	Launch Vehicle Test and Verification Plan

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80566A	Performance Work Statement, Para 3.2.5 and 3.2.5.1	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	90 DACA

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

a. Replace 2 with "2. General. The test plan shall document in detail the contractor's plan for conducting tests and analyzing the test results to show how the system, when fielded, will satisfy the requirements of the applicable design specification and compliance documents. Component, Subsystem and System testing philosophy shall ensure all components or integrated systems are tested under worst case or flight like conditions prior to lift off. Exceptions shall be identified as test like you fly (TLYF) exceptions and submitted to the Government for approval. The Contractor shall execute testing and verification in accordance with this plan."

b. Replace 3 with "3. Format. The plan shall be in the contractor's format. The plan format is flexible provided all the required inputs are identified with titles matching the CDRL description shall be printable on standard size paper (e.g., 8 ½ x 11 or A4)."

c. Replace first paragraph of 4.9 with "4.9 Master test list. Lists all launch vehicle and ground support tests to be accomplished in the order they are to be performed including, but not limited to, the following:

1. Flight critical component qualification (test or analysis) based on USG approved FCIL, unit acceptance test and lot acceptance test environment test requirements including duration, magnitude and tolerance, and trace to requirement origin for all applicable launch vehicle and ground support equipment configurations;
2. Flight critical component failure free minimum retest requirements;
3. Factory, test site & launch site sub-system and system level test and verification requirements;
   a) System-level retest matrix for flight critical component failures;
4. Flight software test requirements, trace to requirement origin, and verification plan;
5. Test bed, analysis, or modeling/simulation tools to be used for each phase of test, their verification and rationale for credible use in this effort;
   a) Test Articles – identify the actual number of all test articles, including key support equipment and technical information required for testing in each phase. Specifically identify when prototype, engineering development, pre-production, or production models will be used.
   b) Analysis/Simulation. List all models and simulations to be used for each phase of test and verification; explain the rationale for their credible use, and their verification and validation effort.
   c) Special Requirements – discuss requirements for any significant capabilities and resources such as: special data processing/database, unique mapping/charting products, extreme physical environment conditions or restricted/special use air/sea/landscapes.

14. DISTRIBUTION

15. a. ADDRESSEE	b. COPIES: Draft	FINAL: Reg	FINAL: Repro
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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	X	TDP	TM	OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

6. Details on how the contractor will document and perform component and system requirements, test procedures, requirements verification, test readiness review, post-test critique documentation and execution requirements, as well as USG team access and participation in noted documentation or reviews.

7. Ground system test requirements and verification plan.

A separate listing for each location shall be provided. Each listing shall include the following:"

d. Replace last paragraph of 4.9 with "Validation procedure. An overview of the procedures that the contractor will use to validate the test results, including details on how the contractor will document and perform component and system requirements, test procedures, requirements verification, test readiness review, post-test critique documentation and execution requirements as well as USG team access and participation in noted documentation or reviews."

2. The Government will provide the Contractors with the ability to satisfy this requirement in their native format within the IDE. If a Launch Vehicle has already been certified, the approved LVTVP can be delivered via the IDE.

3. (BLKs 10, 13)

a. Submit initial test plan for Government review and comment 90 DACA.

b. Submit revisions to the Government-approved test plan to reflect the latest launch vehicle configuration, as required, to incorporate changes to the document or upon Procurement Contracting Office (PCO) direction. The updated submission shall include baseline qualifications test requirements (such as levels, durations, and margins) and initial acceptance test requirements (such as levels, durations, and margins).

c. Contractor shall submit final mission specific LTV&VP 60 calendar days (CD) prior to testing launch vehicle components or 60 CD prior to Launch (L)-12 months, whichever is earlier. The final submission shall include updated baseline qualification test requirements (such as levels, durations, and margins) and baseline acceptance test requirements (such as levels, durations, and margins). The LVT&VP shall be approved by the Government prior to the testing of any launch vehicle components for the mission. Any updates to approved LVT&VP submissions shall be submitted no later than 14 CD prior to qualification testing or acceptance testing of launch vehicle components for this mission.

4. Where exceptions to compliance documents requirements exist as part of the program baseline, adequate mitigation rationale shall be provided and require approval by the Government.

5. Environmental test and performance requirement shall be based on detailed analysis or flight data and shall be supplied upon request.

6. Component and System testing philosophy shall ensure all components or integrated systems are tested under worst case or flight like conditions prior to lift off. Exceptions shall be identified as test like you fly (TLYF) exceptions and submitted to the government for approval.

7. The Government will review each submission and provide feedback within 30 CD to the maximum extent possible.

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A038	Non-Recurring Design Validation	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81911/T	Performance Work Statement Para 3.6	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ASREQ	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

16. REMARKS

1. (BLK 4):

   a. Replace 1 with "1. Format. The plan shall be in the contractor's format. The plan shall be printable on standard size paper (e.g., 8 ½ x 11 or A4)."

   b. Replace 3 with "The Plan describes all the contractor's open NRE work for the as-proposed launch vehicle configuration and launch pad, and the closure plans for and schedule to complete all such items. The Plan shall contain the following sections:

   1.0 Introduction

   2.0 Launch Service Provider SFW NRE Work Closure Plan Management

   2.1 Contractor's SFW NRE Work Closure Plan. Provide an overview of all open NRE work for the as-proposed launch vehicle configuration and launch pad being used to supply the launch service, citing applicable Performance Work Statement (PWS) or other New Entrant certification agreement paragraphs (if applicable) for reference.

   2.2 Contractor's SFW NRE Work Closure Schedule. Provide the contractor's schedule to completion with a chronological listing of all processes/tasks for closing all open NRE work for the as-proposed launch vehicle configuration and launch pad being used to supply the launch service.

   2.3 Action Items: Provide a list of action items tied to the SFW NRE work closure schedule, the associated status of each action item (e.g., open, closed), and whether the Government has approved closure or not.

   Appendix A: Entry/Exit Criteria for all contractor's SFW NRE work tasks

   Appendices as needed for Definitions, Terms, Abbreviations and Acronyms"

   c. Delete 5. Media Requirements.

2. (BLKs 10, 12, 13):

   a. a. Submit initial draft 30 calendar days (CD) after contract award for Government review and comment. No Government approval is required.

   b. Submit baseline plan for Government approval 10 calendar days (CD) after receipt of Government comments.

   c. Submit updates quarterly for Government review and comment to incorporate changes to the document, unless mutually agreed upon otherwise.

   d. Submit final for Government approval upon completing all SFW NRDV work tasks for the assigned mission; to be submitted at L-12 months unless mutually agreed upon otherwise.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A039	Design Data and Calculations	Mission Assurance Independent Assessment Data

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement, Para 3.4.5, 3.5.3.14.6, 3.6.1, 3.6.4, 3.8.1.1, and Appendix F	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):
   a. Replace 10.1 with the following: "10.1 Format. The Mission Assurance Independent Assessment Data shall be in contractor's format unless specified otherwise in 10.2. Electronic access on a Government accessible database satisfies the requirements of delivery as long as all parts of the document are accessible."
   b. Replace 10.2 with Attachment 1.
   c. Delete 10.3.
2. (BLK 7) The contractor shall document (electronic Interoffice Memorandum acceptable) and notify the Requiring Office when delivery occurs. Copies of this notification shall be maintained on the Government accessible database.
3. (BLKs 10, 12, 13)
   a. Data explicitly identified with a specific NLT-/+ date are required for each mission.
   b. Contractor shall provide and maintain a roadmap/burndown schedule NLT 60 calendar days (CD) after Launch Task Order of all deliverables to meet the required deadlines.
   c. Contractor shall identify any anticipated risk of not being able to provide certain data by the required deadline along with the mitigation steps NLT 60 calendar days (CD) after Launch Task Order.
   d. Contractor shall start coordinating with USG Team on all deliverables NLT 60 calendar days (CD) prior to each deadline at the appropriate working group meetings.
   e. For other data:
      i. Initial submission is or has been satisfied by launch system certification.
      ii. Subsequent submission is required to reflect the latest USG certified/approved launch system configuration and upon implementation of any changes in these data/products.

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ATTACHMENT 1 to CDRL A039 – Mission Assurance Independent Assessment Data

10.2 Format. Data requested in this Contract Data Requirements List (CDRL) shall be provided in a detailed report format or accompanied by a detailed report. The term "report" shall be defined as a detailed narrative document in Microsoft Word or equivalent format. The report shall discuss methodology (including equations and numerical methods used, as appropriate), input data, tools/simulations, truth sources, assumptions, results, limitations, publication date, references to related analyses/reports, launch vehicle configuration as applicable, and point of contact; and list all of the technical disciplines and how they have contributed to the detailed report. Also to be included is a discussion of any discrepancies or issues associated with meeting mission requirements and how they were resolved, where applicable. The report shall also include clear instructions (i.e., file path or links) to get access to applicable data that are stored on electronic systems. Data must be approved/released engineering products. The report shall contain reviewer signatures from the contractor's Integrated Team of Approvers to include leads or technical authority from avionics; propulsion; structures; Guidance, Navigation, and Control Subsystem; dynamics/loads; thermal; and flight software. The U.S. Government reserves the right to request copies of referenced materials. A hyperlink to the electronic data is not acceptable without an accompanied report. If the data requested is available in an existing analysis report, then it shall be accompanied with a narrative summary document to identify the specific page containing the items requested in the detailed report.

10.2 Content. The content of this CDRL is data required to support the Government's Independent Mission Assurance process.

I. Flight Mechanics, Guidance and Navigation

A. Flight Mechanics - Mission Design

1. Published trajectory outputs for:
    a. Preliminary Unguided Three Degrees of Freedom (3DOF) [no later than [NLT] Launch [L]-12 months]
    b. Intermediate Unguided 3DOF [NLT L-6 months]
    c. Final Unguided 3DOF [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
    d. For items a.–c., outputs will include:
        i. Associated memos
        ii. An output file from the contractor's trajectory simulation code
        iii. A file of high frequency trajectory variables (to be specified by government) output at a minimum of every second during stage main engine propulsive flight and at a minimum of every 4 seconds during coast phases.
        iv. Optimization output that includes a listing of final variable, constraint, and objective function values
2. Trajectory inputs and ground rules for:
    a. Preliminary Unguided 3DOF [NLT L-12 months]
    b. Intermediate Unguided 3DOF [NLT L-6 months]
    c. Final Unguided 3DOF [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
    d. For items a.–c., inputs will include:
        i. Associated memos with references to data sources
        ii. Event sequence/phase criteria and inputs
        iii. A listing of optimization variables, with bounds, constraints, and objective function
        iv. Propellant reserve/performance formulations
        v. Mission-specific inputs/assumptions for: mass properties (mass, Center of Gravity [CG], Moment of Inertia [MOI], and Products of Inertia [POI]), steering, atmosphere, telemetry tracking, aerodynamics, propulsion, attitude control, planet data, etc.
        vi. Mission-specific launch vehicle configuration summary that describes all differences between the baseline launch vehicle configuration and the mission-specific vehicle configuration
        vii. Summary descriptions of trajectory input and ground rule changes since the prior submittal
3. Simulation data book [As necessary to reflect all modeling changes, up to Quarterly]
    a. This document will describe the generic vehicle, its properties, and how these are included in the trajectory simulation with ground rules and modeling assumptions.
    b. This data will provide modeling information for, but not be limited to, the following areas: stage properties, propulsion characteristics, aerodynamics, winds, vehicle heating models, steering assumptions, post-spacecraft injection maneuvers, general vehicle trajectory constraints, and atmospheric and geographical assumptions.
4. Mass properties, aerodynamics, and propulsion updates
    a. Notification and description of updates to these areas will be delivered as soon as published by the affected discipline and will include an effectivity.
    b. Delivery may coincide with items in [I.A.2], as appropriate.
5. Contamination and Collision Avoidance Maneuver (CCAM)/Disposal
    a. Description of post-spacecraft injection sequence and evidence/memo of precluding spacecraft contact [NLT L-6 months]
    b. Trajectory data will be included with delivery of trajectories identified in [I.A.1] and [I.B.1]: Inputs and modeling (as described in I.A.2-I.A.4) for CCAM, disposal (including disposal burns), and propellant safing [NLT L-12 months, NLT L-6 months, NLT L-60 CD, respectively]

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6. Launch window analysis/memo [NLT L-30 CD]
7. Re-entry data package, if applicable [NLT L-150 CD]; Data package to include impact points, impact ellipse boundaries, and casualty expectation

B. Flight Mechanics – Performance and Guidance and Navigation

1. Published trajectory outputs for the closed-loop guided trajectory
    a. Preliminary Guided Six Degrees of Freedom (6DOF) [NLT L-90 CD]
    b. Intermediate Guided 6DOF [NLT L-75 CD if Target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
    c. Final Pre-Launch Guided 6DOF [NLT L-30 CD]
    d. Updated Final Prelaunch Trajectory 6DOF [NLT L-10 CD]
    e. For items a.–c., outputs will include:
        i. Associated memos
        ii. Window open, middle, and close trajectory data for time-varying trajectories
        iii. An output file from the contractor's trajectory simulation code
        iv. A file of trajectory variables output at a minimum of every second
2. Trajectory inputs and ground rules
    a. Preliminary Guided 6DOF [NLT L-90 CD]
    b. Intermediate Guided 6DOF [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
    c. Final Pre-Launch Guided 6DOF [NLT L-30 CD]
    d. Updated Final Prelaunch Trajectory [NLT L-10 CD]
    e. For items a.–c., inputs will include:
        i. Associated memos with references to data sources
        ii. Event sequence/phase criteria and inputs
        iii. Propellant reserve/performance formulations
        iv. Mission-specific inputs/assumptions for mass properties (mass, CG, MOI, and POI), steering, atmosphere, telemetry tracking, aerodynamics, winds, propulsion, attitude control, planet data, etc.
3. Simulation Book [As necessary to reflect all modeling changes, up to Quarterly]
    a. This document will describe the generic vehicle, its properties, and how these are included in the trajectory simulation with ground rules and modeling assumptions.
    b. This data will provide modeling information for, but not be limited to, the following areas: stage properties, propulsion characteristics, aerodynamics, vehicle heating models, steering assumptions, post-spacecraft injection maneuvers, general vehicle trajectory constraints, and atmospheric and geographical assumptions.
4. Mass properties, aerodynamics, and propulsion updates
    a. Notification and description of updates to these areas will be delivered as soon as published by the affected discipline and will include an effectivity.
    b. Delivery may coincide with items in [I.B.2] as appropriate.
5. Propellant Utilization (PU)
    a. System(s) descriptive documentation (if applicable) [updates in quarterly Simulation Book]: Venting and Pressurization models and documentation
    b. Mission-specific inputs to be delivered with trajectory data
6. Propellant properties [NLT L-6 months]
    a. Flight Performance Reserve analysis documentation and results
    b. Fuel biasing analysis documentation and results, if applicable
7. Documentation that shows performance reserve sufficient to provide three sigma (99.865 percent) performance margin capabilities. [NLT L-6 months]

C. Flight Mechanics - Guidance and Navigation

1. Guidance and navigation algorithm development reports that provide ground rules and assumptions and derivations of the guidance and navigation algorithms [As necessary to reflect all modeling changes, up to quarterly]
2. Guidance algorithm/mode definitions, including Guidance constants and coordinate frame usage/definitions [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
3. Description of Right Ascension of the Ascending Node (RAAN) control methodology and associated analysis [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
4. Sequence of events descriptions and timing analyses [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]

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5. Flight software requirements documents [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
6. Simplified control system models and definitions [NLT L-120 CD]
7. Flight software source code and parameters (mission constants, firing tables, Inertial Navigation Unit/Subsystem (INU) calibration constants)
    a. Preliminary deliverables due NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD
    b. If applicable, deliver updates NLT L-30 CD
    c. Final deliverables due NLT L-14 CD
8. Navigation error analysis descriptive documentation, either embedded in trajectory deliverables or as a stand-alone deliverable, including mission-specific error models and error budget [NLT L-75 CD if target spec delivered at NLT L-120 CD, otherwise NLT L-60 CD]
9. Flight computer and INU-descriptive documentation including sensor, locations, and orientations [NLT L-120 CD]
10. Data file(s) of all pre-launch communication with the flight computers. These files should also contain the commands (auto sequences) that the ground sends to the computer and its responses. Provide external data of optical azimuth alignment measurements, which are used to verify vehicle alignment prior to launch (if applicable) [Test completion +1 day; Final alignment results by NLT L-1 day].
11. On-Pad alignment process and algorithms [NLT L-120 CD]
12. Navigation Redundancy Management methodology and analysis [NLT L-60 CD]
13. For each mission, following each space vehicle (SV) separation, provide orbital insertion data including epoch time and orbital elements, valid at the time the separation discrete is issued. [L+10 CD]
14. Prelaunch mission orbital accuracy analysis [NLT L-60 CD]
    a. Monte Carlo results
    b. List of all dispersions applied for this analysis
    c. Individual dispersed trajectory simulation results for primary error source contributors to orbit errors, performance dispersions, flight environments (i.e., those constrained by Interface Control Document [ICD]), and range safety dispersions as requested
15. Prelaunch navigation covariance-based analysis, or Monte Carlo analysis with navigation sensor error modeling to include input and output files used in analysis [NLT L-45 CD]
16. Re-entry data
    a. Trajectory dispersions used for upper stage re-entry disposal missions [NLT L-60 CD]
    b. Re-entry breakup assumptions and re-entry impact ellipse locations [NLT L-60 CD]
    c. Re-entry impact ellipses for re-entry disposal burn missions [NLT L-45 CD]
17. Other Flight Mechanics, Guidance and Navigation Data [NLT L-35 CD]
    a. Dry bearing mass memo and Excel workbook or other model used to derive dry bearing mass data for the memo. Dry bearing weight and inclusion factor (0.1) to multiply the fluid weight for each of the DOL critical stations and the spacecraft, plus data to verify total bearing mass modeling.
    b. List of critical stations for loads monitoring, including the longitudinal station coordinate, type of load (tension, compression, shear), and station description. Alternatively, a copy of the DOL loads model inputs containing the critical station data above may be provided.
    c. Vehicle mass distribution memo for the flight vehicle, or previous flight vehicle of the same configuration. Such a document would describe the vehicle's mass distribution modeling, including the mass values and at least the longitudinal station of dry masses and fluid masses at liftoff. Fluid masses include propellants in tanks and propellant feed lines, tank ullage pressurization gasses, gases and hydraulic fluids in onboard storage bottles, Composite Overwrapped Pressure Vessels (COPV), and external ice that is not shaken off or ablated prior to liftoff.
    d. For each major launch vehicle section (Payload Fairing, Payload Attach Fitting, Upper Stage, First Stage, Interstage) for which mass properties were measured, provide as a minimum the dry mass and longitudinal center of mass of the vehicle section in its flight configuration, based on weight and CG measurements, adjustments for overages (non-flight hardware), shortages (missing flight hardware), local gravity, buoyancy, etc.
    e. Final pre-launch Mass Properties report or memo for the mission that provides at a minimum a final dry mass summary, including payload and adapters, and a wet vehicle mass summary.

D. Flight Operations

1. Trajectory data in support of link margin analysis [NLT L-60 CD] to include identifications and locations of ground stations used (tracking, flight termination, telemetry)
2. Launch vehicle (LV) data to support Preliminary and Final Range Flight Plan Approval. [As soon as available]
    a. 3-sigma dispersed trajectory data
    b. Jettisoned body impact data
    c. Documentation of methodologies used

II. Flight Controls

A. Descriptive documentation of control system design and requirements [NLT L-90 CD]

1. Booster and upper stage autopilot gains and filter definitions

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2. Reaction/Attitude control system (RCS/ACS) switch-line and filter definitions
3. Flight Control System software parameters description and verification evidence
4. Sensor usage definitions (rate gyro, accelerometers, IMU, GPS, etc.)
5. Linear and nonlinear Thrust Vector Control (TVC) actuator models
6. Propellant sloshing models (design descriptions) and assumptions
7. Test reports/descriptions and data
8. Aerodynamic models
9. Structural dynamics assumptions

B. Descriptive documentation of frequency domain analysis tools [L-90 CD]

C. Descriptive documentation of time domain analysis tools [L-90 CD]

D. Controls tools input data [NLT L-90 CD]

1. Mass properties, aerodynamics including rigid body and aero-elastic effects, coupled vehicle/spacecraft bending modes for IMU, GPS, and rate gyro to actuator transfer functions, engine thrust models, dynamic disturbance models, and references to data sources
2. Sensor model data inputs
3. Boost phase flight controllability data and analysis (Monte Carlo data, wind data, launch placards, engine data)
4. Mission autopilot flight software parameters
5. Propellants slosh model data
6. Launch pad model used for launch drift analysis (launch pad structure/vehicle geometry for clearance calculations) [NLT L90 CD]
7. Controls related sequence of events
8. RCS/ACS thruster duty cycle design specifications/requirements
9. Dispersion model data assumptions

E. Controls analysis outputs [NLT L-90 CD]

1. Stability analysis reports including stability margin tables and frequency response plots and associated data
2. Time domain simulation plots and associated data where applicable for other analyses
3. Pad/Launch drift analysis output results and associated data [NLT L-90 CD]
4. On-pad stability output results and associated data [NLT L-90 CD]
5. Limit cycle analysis output results and associated data
6. Flight control system consumables (RCS/ACS propellants, etc.) usage
    a. Upper stage coast RCS/ACS propellant utilization
    b. Upper stage coast duty cycle utilization
7. Booster/upper stage separation (1-2 Sep) analysis output results and associated data
8. Pre-separation pointing error and attitude rates, and separation clearance analysis for each SV
9. Upper stage coast controllability analysis output results and associated data
10. Controllability analysis output results and associated data
    a. Booster-powered flight
    b. Upper-stage-powered flight
11. Dispersion analyses results and documentation

III. Dynamics/Loads

A. Dynamics/Loads – Coupled Loads Analyses (CLA) (Reference: see SMC-S-004 for guidance regarding the loads analysis process for AF programs)

1. Modeling Data (Final Design Load Cycle submission NLT Authority to Proceed [ATP] + 8 months; Verification Load Cycle submission NLT L-8 months)
    a. All relevant mode survey or frequency identification test-configured dynamic finite element models, including test article, mass simulators, fixtures, or test stands, which were used to correlate the dynamic finite element models with test data.
    b. Detailed description of special modeling procedures used in launch vehicle finite element models and associated computing code implementation (e.g., hydroelastic model of propellant tanks, pressure stiffening).
    c. Launch pad and tower models, if applicable, and cantilevered lift-off configuration model data or residual flexibility and any other model data that are required for lift-off/abort analyses.

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d. Coupled sub-system and system model data for all applicable loads events. For sub-systems, Hurty/Craig-Bampton model data (reduced structural dynamic mass and stiffness matrices, and degrees of freedom table) and information on connection to other subsystems. For coupled systems, free generalized mass, damping, stiffness, and mode shape matrices; transformation matrices for subsystems; and degree-of-freedom tables. The mode shape matrices should include data sufficient for all forcing functions as well as all response recovery.

e. Details of launch vehicle damping exceptions, including tables of launch vehicle damping exceptions, and description of the method used in generating the coupled system damping matrix.

f. Mode-shaped plots of selected system modes (e.g., from rigid body modes up to second axial and torsional modes) for all applicable loads events.

g. Launch vehicle and space vehicle output transformation matrix data used for loads and response recovery, along with any necessary intermediate coupling transformation data and definition of rows and columns.

h. Description of recovery transforms and instrumentation locations used in post-flight assessments.

i. Mass property reports corresponding to the mass modeling of the vehicle dynamic model.

j. All documents and reports that discuss modeling modifications or refinements as a result of all pertinent post-flight analyses.

k. Finite element model bulk data used to develop all loads analysis models.

l. Details of LV section cuts data recovery used to support Day of Launch (DOL) (Loads Indicators).

2. Forcing Functions and Related Data [Final Design Load Cycle submission NLT ATP + 8 months; Verification Load Cycle submission NLT L-8 months]

a. Loads analysis forcing functions and generalized force transformation matrices for each event analyzed, and associated documentation or description on force application points and coordinates.

b. All applicable ignition overpressure pulse (IOP) data used in the derivation of the IOP forcing functions, and associated documentation or description, including details of analyses used to derive IOP forcing functions.

c. Ground winds test or simulation data relevant for lift-off/abort forcing function development.

d. All applicable engine or motor hot fire (or pre-flight) test or flight data used in forcing function derivation, and associated documentation or description.

e. Digitized time history data files of pertinent buffet wind tunnel test data used in the development of the buffet forcing functions, and associated documentation or description.

f. Aerodynamic data used in the derivation of aerodynamic coefficients, and associated documentation or description on application points and coordinates.

g. Flight measured data from previous missions that have been used for forcing function assessment and refinements. Data should include all engine/motor performance, vehicle loads, dynamic response and pressure measurements, and associated documentation or descriptions.

h. Post-flight data review reports of all pertinent previous flights.

i. All other applicable test and flight data (e.g., separation rocket motor) used in forcing function development, and associated documentation or descriptions.

3. Analysis Methodology and Documentation [Final Design Load Cycle submission NLT ATP + 8 months; Verification Load Cycle submission NLT L-8 months]

a. All analysis input data (e.g., gust wavelengths and frequencies, vehicle velocity, dynamic pressure, timing differences between multiple engines) for all loads events

b. Loads analysis report for all coupled loads events

c. Other related documentation or data detailing specific inputs, assumptions, and load combination equations for each flight event, and documentation showing the implementation of analysis methodologies (e.g., dispersion analysis, lack-of-wind persistence analysis)

d. Documents describing autopilot and autopilot data used in all applicable load events analyses

e. Wind pair data used in persistence calculation, all output data from applicable persistence/trajectory simulations (e.g., Q-alpha, Q-beta, angular accelerations), and all corresponding mean and dispersed envelope data of persistence delta Q-alpha and delta Q-beta

f. Documents describing DOL procedures, analysis codes, and corresponding input data

g. Documentation describing the Liftoff simulation code that include details of the pad release dynamics, loading, and logic

4. Analysis Results (Analysis results are required to be delivered incrementally as CLA loading events finish, beginning no later than 1 month after PL model delivery and continuing monthly until all events are complete. All events should be delivered no later than L-8 months. This applies to verification loads cycle [VLC].)

a. All LV and PL output transformation matrix and results (e.g., loads, accelerations, displacement, and pressure outputs) for each of the events analyzed in the CLA. Each component results (e.g., static-aeroelastic [STEL], buffet, and gust), as well as combined results, are required for loads events in which component responses are combined. Associated documentation or description of results.

b. Compartment pressures and resultant loads due to venting for airloads times of flight.

c. List of uncertainty factors used in analysis results and equations that show how the uncertainty factors are used.

d. Historical LV/Payload (PL) interface acceleration data for time domain analyses, and power spectral density (PSD) or spectra for frequency domain analyses, for all events analyzed in the CLA. Each component result (e.g., STEL, buffet, and gust), as well as combined results, are required for loads events in which component responses are combined.

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e. Launch pad interface force time histories (and initial conditions) for lift-off and abort analyses, if applicable.

f. Engine gimbal angle time history data of each analysis case for all loads events involving the autopilot (e.g., gust) in the CLA.

g. Core Booster radii information to calculate LV centerline equivalent loads.

5. Miscellaneous [Final Design Load Cycle submission NLT ATP + 8 months; Verification Load Cycle submission NLT L-8 months]

a. Vehicle element engineering drawings and specifications including changes and waivers

b. Test reports describing test plans, test procedures, and post-test analysis for the development, qualification, and proof tests

c. Material characterization

d. Flight data for all accelerations, strains, pressures, etc. used in CLA post-flight assessment

e. Loads post-flight review including comparisons of CLA predictions to flight data-derived responses at all accelerometer locations (standard and special flight instrumentation) and the LV/PL interface centerline in axial, pitch, yaw and roll directions for all events; comparisons shall include data to a minimum of 20 hertz (Hz), but should include data up to 50 Hz [L+7 CD]

f. Documents providing requirements flow-down to vehicle element specifications

g. Stress analysis and design margin predictions

h. Propellant pump inlet pressures and temperatures and mixture ratio (MR) burn profile needed to characterize cavitation and thrust oscillations that can potentially impact coupled loads and pogo stability.

i. Mechanical Analysis – Loss of Clearance analyses for hoist and flight, identifying all critical locations [NLT L-8 months]

B. Separation [NLT L-5 months]

1. Descriptive documentation of separation analyses, force and moment modeling assumptions, analysis methodology process, and supporting documentation

2. System and component test reports/descriptions and associated test data

3. Mass properties data (nominal and dispersed) pertinent to separation analyses (e.g., total mass and inertia plus propellant residuals at separation times of flight) with reference to data sources

4. Engineering drawings and relevant CAD models

a. Assembly drawings showing attached configuration, attachment locations, and overall vehicle dimensions

b. Detail and assembly drawings for attach and separation hardware

c. Separation thruster attach locations and orientation

d. Thrust vector control gimbal points, range of nozzle axis orientation, and fixed nozzle axis orientation

e. Hardware geometry (including primary/secondary structure and any wiring/tubing) for use in clearance analysis

5. Forcing profiles (from analysis or test)

a. Detail discussion of derivation of all forcing functions

b. Separation force profile (e.g., thrusters, actuators, springs) (nominal and dispersed) forcing profiles

c. Main Engine thrust profile and residual thrust (with dispersion)

d. Resistive forces (e.g., electrical disconnects, guide pins, etc.)

e. Other forces (e.g., venting) whether modeled or not.

6. Aerodynamics (from analysis or test)

a. Aero coefficient data and reference frame definition

b. Angle of attack

c. Dynamic pressure

7. Appropriate documentation describing vehicle trajectory relevant to extract velocities and rates initial conditions

8. Plume boundary and pressure contours

9. Timing for hardware release and separation thruster firing

10. Clearance analysis report [NLT L-3 months]

11. Clearance analysis detailed results [NLT L-3 months]

C. Dynamics/Loads – Input for mission-specific Loads Analysis Plan (LAP) (For National Reconnaissance Office [NRO] Missions only) [Prior to VLC initiation, NLT L-8 months]

D. Dynamic Environments - Vibroacoustic and Shock

1. Acoustics, Shock and Vibration Environments Derivation (as requested) [NLT L-180 CD]

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a. Provide analysis and test data used to predict and verify Acoustic, Shock, and Vibration Unit; Subsystem and System Environments of Launch Vehicle, including flight critical components of Engine Section; First Stage, Interstage, Payload Fairing (PLF) Section, Second Stage.

b. Provide documentation of acoustics, shock, and vibration analyses and requirements, including a methodology description and any associated test or flight data used in the requirements derivation. Provide Excel or equivalent files of all frequency domain plots of specifications, predictions, and measurements.

2. Vibroacoustic Modeling and Analysis: Provide dynamic models or analysis, as applicable (NASTRAN, VA One) of PLF, Payload Attach Fitting (PAF), and Upper Stage in appropriate format (bulk data file, vaone, or .xml file), including material properties, modal, and damping data. Provide access to Material Laboratory (MATLAB) or equivalent scripts used for analysis (as requested) [NLT L-180 CD]

3. Transportation Environments (as requested) [NLT L-180 CD]

a. Provide Qualification and Acceptance Criteria, a description of their derivations, and test and analysis data used for Verification.

b. Provide Excel or equivalent files of all frequency domain plots of specifications, predictions, and measurements.

c. LV Transportation, handling, and hoist LVC documentation of criteria, specification of limits, instrumentation location and data.

4. Acoustics, Shock and Vibration Testing (as requested) [NLT L-90 CD]

a. Provide Unit (Flight critical component), Subsystem (flight critical component), and System test reports including discrepancy report and margin descriptions. The reports must include all locations and results of all raw (unscaled) microphones sound pressure level (SPL) and accelerometers (PSD or SRS), test set-up and instrumentation diagrams.

b. If raw (unscaled) measurements are not available, then provide scaled data and scale factors separately.

c. All microphone measurements in 1/3 octave frequency bands and accelerometer measurements in 10 Hz or 1/6 octave frequency bands from 10 to 10,000 Hz.

d. All spectral data are to be provided in either Excel or equivalent format.

e. Provide access to raw time history test data in ASCII, MATLAB, or equivalent file format.

5. Interface Environments [NLT L-90 CD]

a. Provide ICD requirements (including Interface Acoustic Environment, Interface LV to PL Shock Environment, Interface SV to LV Shock Environment for each SV, and Interface Vibration Environment requirements) and description of their derivations.

b. Provide Excel or equivalent files of all frequency domain plots of specifications, predictions, and measurements.

6. Postflight Data and Analysis [Date Contractor receives data +3 CD or L+14 CD, whichever comes earlier]

a. Provide flight data including instrumentation list (in Excel or equivalent format) and description of locations for all Acoustic, Shock and Vibration Flight Instrumentation, Ground Support Equipment (GSE), instrumentation list shall include channel number, axis, calibration factor, transducer model number, sample rate.

b. Provide specific flight times analyzed for all mission events of interest and define all relevant data processing parameters.

E. Provide maximum predicted environments (MPE) for associated microphones and accelerometers. Raw (unfiltered and unedited) time history data from 10 seconds before lift-off until 10 seconds after spacecraft separation event. The data should include all microphones and accelerometers. All data provided in either Excel or equivalent format.

F. Dynamic/Loads – Descent Loads Analysis (if applicable) [NLT L-6 months]

1. Descent Modeling Data

a. Any additional models or model data specifically required for descent and landing loads analysis of reusable vehicle

b. For sub-systems, Hurty/Craig-Bampton model data (reduced structural dynamic mass and stiffness matrices, and degrees of freedom table). For reusable vehicle model free generalized mass, damping, stiffness, and mode shape matrices, transformation matrices for subsystems, and degree-of-freedom tables. The mode shape matrices should include data sufficient for all forcing functions as well as all response recovery.

c. Details of launch vehicle damping exceptions including tables of launch vehicle damping exceptions, and description of the method used in generating the coupled system damping matrix.

d. Launch vehicle output transformation matrix data used for loads and response recovery, and definition of rows and columns.

e. Description of recovery transforms and instrumentation locations used in post-flight assessments.

f. Finite element model bulk data used to develop all descent loads analysis models.

2. Forcing Functions and Related Data

a. Loads analysis forcing functions and generalized force transformation matrices for each event analyzed, and associated documentation or description of force application points and coordinates.

b. Any additional data specifically required for landing or transportation analysis, if applicable.

c. Post-flight data review reports to demonstrate booster dynamic properties and excitation sources (engine transients, thrust oscillations, etc.) do not change on subsequent flights due to reuse.

3. Analysis Methodology and Documentation

a. All analysis input data (e.g., gust wavelengths and frequencies, vehicle velocity, dynamic pressure, timing differences between multiple engines) including inputs from preflight runs and post flight reconstruction for all loads events.

b. Loads analysis report for all coupled loads events.

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c. Other related documentation/data detailing specific inputs, assumptions, and load combination equations for each flight event and documentation showing the implementation of analysis methodologies (e.g., dispersion analysis)

d. Documents describing autopilot and autopilot data used in all applicable load events analyses

e. Documents describing descent procedures, analysis codes, and corresponding input data

4. Analysis Results

a. Reuse LV output transformation matrix results (e.g., loads, accelerations, displacement, and pressure outputs) for each of the events analyzed in the coupled loads analyses. Each component results (e.g., STEL, buffet, and gust) as well as combined results are required for loads events in which component responses are combined. Associated documentation or description of results.

b. List of uncertainty factors used in analysis results and equations that show how the uncertainty factors are used.

c. Landing pad force time histories (and initial conditions) for all landing impact analyses, if applicable.

d. Engine gimbal angle time history data of each analysis case for all loads events involving the autopilot (e.g., gust) in the coupled loads analyses.

e. Core Booster radii information to calculate LV centerline equivalent loads.

5. Miscellaneous

a. Identification and description of flight data for all accelerations, strains, pressures, etc. used in descent CLA post-flight assessment

6. List of all missions that used previously flown boosters, and which mission(s) the boosters were previously flown on

IV. Thermal/Aero/Fluids/Contamination

A. Test reports describing test plans, test procedures, and post-test analysis for the development, qualification, and proof tests [plans required ahead of testing, and test results and analysis NLT L-90 CD]

B. Descriptive documentation of aerodynamics and venting analyses and requirements: Static and dynamic aero/pressure coefficients/distributions, single point and distributed aero, vent models [NLT L-90 CD]

C. Descriptive documentation of contamination analyses and requirements

1. Contamination requirements to be verified by analysis or measurements [NLT L-60 CD]

2. Contamination analysis/measurement data used to verify LV to PL cross contamination conformed to the SIS requirements of molecular (150 A) and particulate obs% < 1%, (mission-specific requirements take precedence), considering contamination contributed from, but not limited to, the following:

a. Ground processing

i. All LV adapter mates

ii. PLF encapsulation

iii. Continuous monitoring and recording of PLF and SV(s) purge air/GN2 cleanliness (HC, particulates, temp, RH) for PL transport and on-pad

iv. Hardware surface cleanliness verification measurement data (0.05% obscuration) of particulate and molecular contaminants on PLF interior surfaces, adapters, etc.

v. Ground wind ingestion during PL transport and on-pad

vi. LV/PL mate and hoist environment

vii. Purge air/GN2 switchover

viii. Witness plate, if applicable per mission-specific requirement

b. Launch

i. Particulates redistribution due to vibration/acoustic environment

ii. Plume ingestion

iii. Ascent wind ingestion

c. Early flight

i. Particulates redistribution

ii. Material outgassing

iii. PLF jettison

iv. Staging

v. SV(s) separation

vi. CCAM

vii. Passivation

3. Mission-specific contamination analyses resulting from data collected in sections IV.D.1 and IV.D.2 [NLT L-10 CD]

4. Metallic Material Selection [NLT L-60 CD]

5. Nonmetallic Material Selection [NLT L-60 CD]

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D. Flight data for all aero/thermal environmental sensors [NLT L+3 CD]

E. Mission-specific trajectory, thermal analyses results (i.e., Integrated Thermal Analysis [ITA], components analysis, and subsystem thermal analysis), and propellant tank heating analyses to include descriptive documentation of integrated and subsystem/component thermal analyses and requirements and bounding temperature profiles [NLT L-60 CD]

F. Mission-Specific ECS Conditioning Analysis (e.g., air and GN2) [NLT L-60 CD]

G. Environmental Control System (ECS) Impingement Velocity Analysis, including derivation of applied uncertainty factors and documentation supporting mission unique flow definition [NLT L-60 CD]

H. Mission-specific contamination analyses [NLT L-60 CD]

I. Contamination Control Plan (including operational controls) (Reference: see ASTM E1548 for guidance on the preparation of contamination control plans) [NLT L- 60 CD]

J. Mission-specific tape-lift/NVR Wipe and Witness Plate Data/analysis [NLT L-10 CD]

K. Mission-specific free molecular heating analysis using worst case solar cycle conditions and bounds launch at any time during any year [NLT L-60 CD]

L. Mission-specific thruster plume analyses [NLT L-60 CD]

M. Mission-specific ignition overpressure analyses, including description of vehicle locations at which forcing functions are applied [NLT L-90 CD]

N. Mission-specific aerodynamic heating analyses [NLT L-60 CD]

O. Mission-specific buffeting and compartment venting analyses [NLT L-60 CD]

P. Mission-specific FMH analysis [NLT L-60 CD]

V. Software

A. Flight Software Source Code (RAM/ROM/Bootloader) [As soon as available but NLT L-4 months]

1. Source code, assembly code, compiled code, link map, executable load module, compiler/linker/load directives

a. Flight Software Source Code (including operation system, drivers, bootloader, and application software)

b. Symbol table output from compiler tool that contains the address/size/type for each data object in the source code

c. Compiled code listing output from compiler tool that contains both source and compiled code (preferably with physical addresses prefixed to each instruction rather than location offsets)

d. Linker map listing

e. Linker option inputs

f. Compile/link build scripts and build tools (tool chain)

g. Executable load module(s) in the load format

2. Any code or constant (mission or vehicle specific) load module overlays/resets Hardware Documentation: Hardware System Specifications, including Flight Computer Hardware Architecture, Chipset Specifications, Flight Computer Programmer's Manual, MIL-STD or documentation for Flight Computer Processor and Communication devices, FPGA VHDL

3. Software documentation: Requirements, Detailed Design, Test Plans, ICDs

a. Contractor mission, system, and software requirements

b. Contractor design documentation (including flow diagrams and detailed design documentation)

c. Contractor coding standards (compiler/processor specific, source code feature usage)

d. Contractor timing/sizing studies

e. Contractor interrupt/task synchronization design methodology and analysis results documentation

4. Documentation of ground systems interface to flight software

5. Software action requests (trouble reports, change requests, etc.) [As soon as available]

B. Preliminary mission-specific flight software parameters in load format and engineering units [NLT L-3 months]

C. Flight Software Test Readiness Review [NLT L-3 months]

D. Mission Integration Kick-off package [NLT L-6 months]

E. Preliminary sequence of events documentation [NLT L-3 months]

F. Software and build-related Software Change documentation [NLT L-55 CD]

G. Telemetry format file [NLT L-55 CD]

H. Flight Software test bed inputs and outputs and outputs for nominal and off-nominal tests [NLT L-3 months]

I. Flight Software Build Kickoff and change review [As soon as available but NLT L-4 months]

J. Support of IV&V Review of Integrated Flight Software Test Data [NLT L-40 CD]

K. Flight Software Mission Integration Kickoff [NLT L-4 months]

L. Parameter Control Board packages [NLT L-35 CD]

1. Documentation to allow for verification of mission parameters and traceability to source

M. Flight Software Table Top Review packages (includes all technologies reviews) [NLT L-35 CD]

N. Technology derivations and documentation of values delivered to flight software via memos, peer reviews, or electronic means [As soon as available but NLT L-35 CD]

O. Integrated Mission review presentation package [NLT L-35 CD]

P. Final flight parameter set including resets [NLT L-60 CD]

Q. Final sequence of events documentation [NLT L-60 CD]

R. Software release audit and software release documentation [NLT L-20 CD]

S. Flight software hardware-in-the-loop test bed inputs and results using final targeting updates [NLT L-20 CD]

T. Requirements Verification Closure documentation [NLT L-15 CD] This documentation is referring specifically to Flight Software requirements that are verified and tracked by the Flight Software organization. This subsection requires a matrix or document showing that every FSW requirement has been verified with traceability to either Test/Analysis/Inspection. Test could be integrated testing, unit level testing or other testing deemed acceptable by contractor.

U. Vehicle Software System Documentation Matrix [NLT L-15 CD]

V. Flight Software subsystem load files [NLT L-15 CD]

W. Telemetry Flight Software modules [NLT L-15 CD]

X. Parameter patches, resets, overlays, or uploads associated with launch operations [NLT L-5 CD]

Y. Minus count telemetry launch constraint limits and associated events/commands

VI. DOL Software Load Verification

A. Procedures for readying

VII. DOL - DOL Placards [NLT L-32 CD] (Due Dates assume a NLT L-2 CD Rehearsal)

A. Documentation of day of launch placarding process and description of data utilized: Ground wind, winds aloft, trajectory, controls, loads, atmospheric heating, others

B. Documentation of day of launch go/no-go decision process and description of data utilized: Ground wind, winds aloft trajectory, controls, loads, atmospheric heating, others

C. Documentation of DOL placarding tools and models and description of data utilized: How the placard limits are defined; how POLs/CRs/ERs/LA are calculated on launch day

D. Launch countdown manual/timelines/wind profile schedule

E. Documentation of inputs and outputs of day of launch placarding tools

VIII. DOL Winds Analysis

A. Trajectory for Placard development: Most current input/output simulation; Vehicle dispersions mean + 3 sigma values [NLT L-57 CD]

B. Steering for persistence [NLT L-47 CD]

1. List of time intervals used in the lack-of-wind-persistence (WP) loads analysis. Provide typical intervals used in analysis. (Suggest 210, 180, 150, 120, 105, 90, 75, 60, 45 minutes)

2. Text files of wind pairs (A wind and B wind) data corresponding to each of the WP time intervals above. Provide winds including the month prior to the ILC through 2 months after the ILC. Additional months will be requested if the launch date changes. Wind files should be in typical range format as received on DOL with a list of altitude, azimuth, wind speed, shear, ascent rate, and data quality in 100-foot altitude increments. Winds should be measured and QC'd by the launch site.

3. Steering data files in namelist format for each A wind from above.

C. DOL Loads Data/Pre-calculated Engine Deflections [NLT L-32 CD]

1. Final VLC CLA documentation summarizing mission-specific atmospheric flight loads analyses, methodology, Mach numbers included, inputs, and results

2. Typical trajectory output file for this mission in same file format that is input to DOL loads analysis. File should, at a minimum, contain time, Mach number, altitude, dynamic pressure, pitch and yaw angles of attack and angular accelerations, axial acceleration, and any other pertinent output at each trajectory time step.

3. Electronic transmission of the mission-specific atmospheric flight loads of record from the VLC CLA in separate arrays (station versus Mach number) for the applicable pitch, yaw, and axial components of STEL, gust, and buffet loads, and any others if needed. Provide the STEL loads from the balanced (trimmed) vehicle analysis and, if applicable, include separate arrays for both the lateral responses due to axial inputs and then also due to lateral inputs, for both positive and negative angles of attack.

4. List of critical stations to be monitored and the Mach numbers of the discrete loads data input to the DOL loads analysis

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5. Identification of the coupled loads analysis (CLA) loads transformation matrix (LTM) and the LTM row numbers corresponding to the station loads in item 4
6. Dispersion loads
    a. Documentation of the dispersions included, and the dispersion loads analysis
    b. Dispersion loads corresponding to the stations, Mach numbers, and LTM described above
7. Output of trajectory dispersion analysis
8. Lack-of-wind-persistence (Provide loads and engine deflection data separately)
    a. Text file containing the mean and enclosure statistics for the load indicators (delta-Qalpha, delta-Qbeta, or equivalent) and the engine deflections at each 100-foot altitude increment for each of the wind persistence (WP) time intervals. Identify the statistical distribution and methodology used to obtain the statistical enclosure.
    b. Text file containing the enveloping load indicators (delta-Qalpha, delta-Qbeta, or equivalent) and the enveloping engine deflection values of the mean and enclosure statistics at each DOL critical Mach number for each of the WP time intervals in B.1. Identify altitude and Mach number correspondence.
    c. Text file containing curve fit equation and associated coefficients for the mean and dispersed WP pitch, yaw loads, and the engine deflections as a function of persistence time for each DOL critical station for each of the DOL critical Mach numbers.

D. Define Booster Allowable Loads [NLT L-62 CD]: Electronic transmission of the structural load allowables corresponding to the stations identified in the list of critical stations
1. Identify limit load allowables and type of allowable (tension, shear, or compression), and include values for both axial loads and bending moments
2. Documentation supporting the structural loads allowables.

E. Other data supporting DOL loads analysis [NLT L-62 CD]
1. Altitude and flight time corresponding to the Mach numbers identified in item VII.C.4
2. Dynamic pressure and angle of attack associated with each of the STEL loads
3. Vehicle radius at each of the DOL critical stations
4. Aerodynamic drag coefficients as a function of DOL critical station and Mach number
    a. All external aerodynamic data files associated with calculating the drag coefficients
    b. All internal compartment pressure data files associated with calculating the drag coefficients
    c. All dispersion values used in calculating the drag coefficients
5. Dry bearing weight and inclusion factor (0,1) to multiply the fluid weight for each of the DOL critical stations and the spacecraft, plus data to verify total bearing mass modeling
    a. Propellant loading of the first and second stage tanks.
    b. Propellant mass and ullage gas mass versus time of flight in each propellant tank and propellant line in increments of 0.1 second for the first stage, based on a nominal best estimate trajectory.
    c. COPV gas mass versus time of flight in each COPV in increments of 0.1 second for the first stage, based on a nominal best estimate trajectory.
    d. Vehicle station map picturing or diagraming the major structural features of the launch vehicle, and listing the stations of vehicle segment interfaces and major structural joints. This could be included in a mass distribution or bearing mass memo or be provided separately.

F. Example Run for DOL Analysis Comparison: Consistent set of DOL analysis inputs and outputs using a consistent set of above data. Use a balloon release consistent with the primary load relief balloon and a window length consistent with the mission. A zerowind run and a separate representative stressing 100foot altitude increment Automated Meteorological Profiling System wind run in the typical range format as received during DOL operations is requested. [NLT L-32 CD]

G. Launch Availability (within Multi Wind Compare Data): Final Multi Wind compare runs. Provide updates when needed. [NLT L-16 CD]

H. DOL Schedules: Standard LVC documentation for the nominal mission-specific timeline of balloon releases and operations for DOL analysis. Similar documentation is requested prior to each DOL rehearsal or launch attempt. [NLT L-16 CD]

IX. Structures

A. All vehicle element and component level engineering drawings, solid models, and specifications including mission-specific changes, deviations, and waivers from the qualification test hardware. [NLT L-8 months]

B. Test plans and test procedures to address deviations or changes relative to the qualified vehicle configuration. [NLT Test Date -14 CD]

C. Test reports describing post-test data, inspections, analysis, and assessment of results to address deviations/changes relative to the qualified vehicle configuration. [NLT +28 CD after test completion]

D. Provide all applicable updates to material properties and strength characterizations. [NLT L- 90 CD]

E. Overall mission design flight stress analysis, margin predictions, and critical station allowable loads, stresses, or displacements. [NLT L-90 CD]

F. Propellant tank pressure with acceleration and fill level and tank temperature profile at critical stations versus time of flight. Include assumed propellant temperature and density. [NLT L-90 CD]

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G. Mission-Specific Strength Reports assessing margins for mission-specific design changes, payload accommodations, and significant non-conformances. [NLT L-90 CD]

H. Report/documentation of mission-specific structural allowable limit loads, stresses, and displacements, including both the placarded and non-placarded DOL critical stations. [NLT L-90 CD]

I. Finite Element Models that are utilized to generate analysis-based structural allowables and documentation supporting validation of the models [NLT L-90 CD]

X. Orbital Debris Mitigation Data [NLT L-150 CD]

A. Description of any planned or expected debris from the launch vehicle during the mission [NLT L-120 CD]

B. Data describing explosive probability of launch vehicle during mission and post-disposal

C. Description of upper stage disposal maneuvers and passivation procedures

D. Data describing launch vehicle reliability for completion of mission and disposal maneuvers

E. Probability of collision with known space objects larger than 10 centimeters in diameter during the orbital lifetime of each orbital stage

F. Justification for any non-compliance with orbital debris mitigation requirements

XI. Booster Propulsion Analysis [NLT L-150 CD] (as applicable to the launch service provided)

A. Booster Propulsion System Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key parameters include

1. Trajectory
2. Mission constants
3. Propellant loading and allocation
4. Ascent heating
5. Engine performance (thrust, Isp, MR, flow rates, final engine throttle profile and operating engine mixture ratio) [NLT L-60 CD]
6. Engine start and run box (pressure, temperature)
7. Engine shutdown parameters, including shutdown impulse uncertainty

B. Booster Propulsion System Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key input parameters include

1. Engine ground test data
2. Nominal and dispersed flight engine inlet temperature and pressure conditions
3. Stage dry mass at liftoff
4. Propellant mass at liftoff

C. Booster Pressurization Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key parameters include

1. Pressure control logic
2. Pressurant flow rate, mass usage, pressure profile
3. Cavitation prediction

XII. Upper Stage Propulsion Analysis [NLT L-120 CD] (as applicable to the launch service provided)

A. Tank Thermodynamics and Pressurant Margin Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key input parameters include

1. Pressure control logic including ullage targets and control windows
2. Vent and pressurization orifice areas and discharge coefficient
3. Propellant tank geometry
4. For each propellant tank:
   a. Initial ullage volume and pressure
   b. External heat rates
   c. Propellant outflow rate history
5. Pressurant bottle geometry
6. Pressurant load at liftoff
7. Mission sequence of events
8. Vehicle acceleration history
9. Descriptive documentation of propellant slosh and coast maneuver analyses and requirements [NLT L-90 CD]

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B. Upper Stage Engine and Propulsion System Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key parameters include

1. Trajectory
2. Mission constants
3. Propellant loading and allocation
4. Engine performance (thrust, Isp, MR, flow rates, final engine throttle profile and operating engine mixture ratio) [NLT L-60 CD]
5. Engine start and run box (pressure, temperature)
6. Engine shutdown parameters including shutdown impulse uncertainty

C. Upper Stage Engine and Propulsion System Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key input parameters include

1. Engine ground test data
2. Nominal and dispersed flight engine inlet temperature and pressure conditions
3. Stage dry mass at liftoff
4. Propellant mass at liftoff

D. Upper Stage Engine Chilldown Analysis – Analysis documentation to include methodology, assumptions, requirements, input parameters, and analysis results. Key input parameters include

1. Mission sequence of events
2. Valve open/close durations to establish chill durations

XIII. Solid Rocket Booster [NLT L-150 CD] (as applicable to the launch service provided)

A. Ballistic Performance Predictions

1. Motor Burn Rate Acceptance Data
    a. Subscale ballistic burn rate trends as a function of test pressure for each available propellant mix.
2. Propellant Mechanical Properties
3. Contractor's performance predictions
    a. Nominal and dispersed performance parameters versus prime contractor specification limits or contractor derived limits
    b. Contractor ballistic model
4. All known deviations in motor and propellant design and characteristics that may affect performance

B. Motor Mass Properties

1. Inert mass for the final flight article and the major subassemblies
2. Live mass for the final flight article and the major subassemblies

C. Non-Conformance Conditions

1. All data related to a non-conforming event/condition
2. Contractor analysis reports, models, input data sufficient for independent assessment of the contractor's margins, stresses, strains, fatigue life, etc.

D. Qualification Analysis and Data

1. Contractor's analysis and data supporting the qualification test configuration and design
2. Qualification data and data reduction methodology used to yield the contractor's assessment of the qualified hardware design
3. Plans, reports, and documentation relevant to hardware qualification

E. Prime Contractor SRB Flightset Definition

1. Provide SRB positional assignments prior to flight
2. Class versus Tested and Guarantee Flight Set Pass/Fail Criterion (if class data is being used for flight instead of TAG data)

F. SRB Motor Defect Data

1. Provide analysis, data, and relevant documentation supporting qualification of non-destructive evaluation system(s)
2. Non-destructive Evaluation Data and Reports
    a. Motor case, attach hardware, and rocket motor assembly non-destructive evaluation data and examination reports
    b. Propellant grain, grain-insulation bondline, insulation-insulation, and case-insulation bondline non-destructive evaluation data and examination reports
    c. Nozzle non-destructive evaluation inspection reports

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G. SRB Hardware Data

1. Provide all information relevant to statistical process control data and material certification reports
2. Provide all information regarding design and material changes to the qualified design and/or updates to production processes

XIV. Rocket Engine(s) [NLT L-180 CD] (as applicable to the launch service provided)

A. Qualification test report and data

B. Acceptance data of flight engine

C. Hotfire Test Data, including flow rates, thrust, temperature, and pressure data

D. Hotfire High Frequency Dynamics Data

1. All hotfire high frequency dynamics data for all boosters are received in the same telemetry file (ex. .sun file) and not multiple files

E. Engine Trim and Parameters, including orifice sizes, valve flow areas, and area schedules

F. Isp and any other derived parameters the engine manufacture uses to assess the health of the engine

XV. Avionics (as applicable to the launch service provided)

A. Avionics Baseline [NLT L-180 CD]

1. Electrical/Avionics System Design and Approach
2. Electrical power and Power distribution
    a. Power sources analysis
    b. Power distribution: voltage, current
    c. Power system design, redundancy
    d. Worst Case Analysis
3. Radio Frequency Compatibility
    a. LV
    b. SV
    c. Launch Site
    d. Integrated PL/LV Transportation
    e. Others
4. Electrical Interfaces including drawings
    a. LV/SV (Primary)
    b. LV/SV (Secondary)
    c. LV/Ground Command and Control
    d. LV/GSE
5. Electromagnetic Compatibility and Interference
    a. LV
    b. PL
    c. Electro Explosive Devices (EED)
    d. Electrostatic Discharge
    e. Space Radiation
6. EED radio frequency (RF) susceptibility analysis [NLT L-90 CD]

B. Avionics Mission-Specific Analysis Documents [NLT L-90 CD]

1. Avionics Mission Requirements Record of Discussion/Decision
2. Avionics Sequence of Events
3. Battery Margin Analysis, including Excel spreadsheet of calculations [NLT L-60 CD]
4. Ordnance Firing Analysis
5. All System End-to-End RF Link Margin Analyses, including applicable Antenna Pattern files applicable to the mission/booster/antenna configuration
6. Mission-specific Antenna Switching Analysis as applicable [Final NLT L-30 CD, updated NLT L-10 CD]
7. RF Hazard Analysis (including EEDs)
8. Electromagnetic Interference Safety Margin Analysis
9. Single Event Upset Analysis

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C. Electrical Design – Documentation supporting SV to LV Electrical Drawing [NLT L-180 CD]

D. Avionics Anomaly Documentation [NLT ARB-1 CD]

1. Anomaly Review Package (ARP)

a. Anomaly Definition

b. Root Cause

c. Test Analysis and Data

d. Risk Assessment and Recommendation

XVI. Ground Software [NLT L-120 CD] (as applicable to the launch service provided)

A. Ground Software Baseline

1. Ground software design documents
2. Ground software interface documents
3. Software requirements documents
4. Ground software design walkthrough

B. Mission Specific [NLT L-60 CD]

1. Mission Database Load Files
2. Software Configuration Document
3. Formal Qualification Test Files (pre and post files)
4. Ground System Change Notices or Change Requests
5. Test Requirements Documents
6. Ground Software Version Source Code File Set Access
7. Test Flags
8. Software in the loop test bed, test runs, and results
9. Integrated ground and flight fluid systems design description, requirements, and procedures
10. Ground Electrical Drawings
11. Redline limits documentation and justification
12. Computer Controlled Launch Sequence Description, requirements, autofiles, and logs
13. Flight software change notices
14. Telemetry format parameter file
15. Telemetry display change notices
16. Telemetry display access

XVII. Ground Support Equipment [NLT L-120 CD] (as applicable to the launch service provided)

A. Engineering drawings of critical GSE used on DOL

1. All GSE that supports, attaches, or releases from the launch vehicle
2. Assembly/schematic drawings of pad commodity delivery systems
3. Any other GSE that provides a critical function on DOL

B. Qualification documentation of GSE and pad systems

C. Test reports supporting design reviews or changes

D. Test procedures and documentation

E. Presentations and supporting documentation for engineering changes or anomaly resolutions

F. Videos of umbilical release and retract from testing and launch

XVIII. Launch Site Operations [NLT L-120 CD]

A. Launch site procedural documents

B. Deviations to launch site procedures

C. Launch site mishap and anomaly documentation

D. Launch site test requirements

E. End-to-end test and verification of LV Electromagnetic Compatibility/Electromagnetic Interference, RF interference, and RF communications systems

F. Waivers to launch site test requirements

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XIX. Secondary Objective Risk Assessment

A. Provide a compatibility assessment between the secondary objectives to the deliverables provided in this CDRL and as defined in Table 3-2 of the PWS for the Government to develop its risk posture statement.

1. For missions accelerated by 9 months, submit final by L-10M for approval by L-8M.
2. For missions accelerated by 12 months, submit final by L-8M for approval by L-6M.

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A040	Design Data and Calculations	Space Safety Collision Avoidance Data

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement, Para 3.6.5	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

   a. Replace 10.2 with the following:

   "10.2 Content. The Space Safety Collision Avoidance (SSCOLA) data shall contain the following items:

   i. Final pre-flight or flight safety nominal trajectory data (time, position and velocity) for the space vehicle from liftoff until 100 minutes past space vehicle separation, provided in the Earth-Fixed Greenwich (EFG) coordinate system at a time step to meet 18th Space Defense Squadron (18 SDS) requirements for calculation of collision probabilities (less than or equal to 3 seconds is preferred).

   ii. Final pre-flight or flight safety nominal trajectory data (time, position, and velocity) for the upper stage(s) from the time of stage separation to 100 minutes past the final stage maneuver (or until atmospheric re-entry in the case of a controlled stage re-entry), provided in the EFG coordinate system at a time step that meet 18 SDS requirements for calculation of collision probabilities (less than or equal to 3 seconds is preferred).

   iii. Position covariance data that meet 18 SDS requirements shall be provided as part of the pre-flight or flight safety nominal trajectory data listed in items a and b."

   b. Delete 10.3.

2. (BLKs 10, 12, 13): Submit for each mission NLT Launch 10 CD (concurrent with SSCOLA Form 22 requests to 18 SDS)

14. DISTRIBUTION			
15. a. ADDRESSEE	b. COPIES		
	Draft	FINAL	
		Reg	Repro
See Distribution List			
15. TOTAL			

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A041	Design Data and Calculations	Radio Frequency Power Impingement Data

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement, Para 3.6.5	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	BLK 16	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

   a. Replace 10.2 with the following:

   "10.2 Content. The Radio Frequency Power Impingement (RFPI) Analysis data shall contain the following item:

   "Government and Contractor facilities, ground, maritime, aviation vehicles and vessels near the Range and other Ranges with proximity must coordinate so as not to interfere with each other's radio frequency operations. Unclassified maximum allowable radio frequency (RF) intensity is delivered as government purpose rights for the launch vehicle. Government utilizes acquired government purpose rights' data to mitigate and/or eliminate frequency interference. These limits should indicate the RF levels that pose a risk of damage (e.g., to ordnance, critical electrical/electronic circuits, etc.), as distinguished from the lower RF levels associated with possible receiver interference. List the safety margins included in these limits. The limits shall be provided as peak field strength (volts/meter) as a function of frequency, spanning the range from 14kKz to a minimum of 18 GHz ((or to 40 GHz or higher if available). Any RF bands having average field strength susceptibility limits should be identified and the applicable average filed strength limits for these RF bands should be provided. All limits shall be tabulated with and without the effects of any payload fairing shielding or attenuation. Indication shall be given as to whether the specified RF limits apply to powered or unpowered configuration, and as to which configuration applies on day-of-launch from lift-off until space vehicle separation +100 seconds."

   Reference: Range Commander's (RCC) Frequency Management Group SPECTRUM MANAGEMENT METRICS STANDARDS, RCC 707-14.

   Delete 10.3.

2. (BLKs 10, 12, 13): Submit for each Launch Task Order at Launch – 30 CD

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	X TDP	TM	OTHER	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A042	Master Launch Operations Schedule	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
BLK 16	Performance Work Statement, Para 3.5.3.1	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ASREQ	BLK 16	

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	BLK 16

16. REMARKS

1. (BLK 4):

   a. The Contractor shall provide the USG Team a master Launch Operation schedule. Contractor format acceptable.

2. (BLKs 10, 12, 13)

   a. Submit to Government schedule no later than 30 calendar days (CD) prior to initial flight hardware arrival at the launch site for each Launch Task Order.

   b. Submit updates when the master schedule changes or provide access to the schedule on the IDE.

15. a. ADDRESSEE	15. b. COPIES		
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		Reg	Repro
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	TDP	X	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A044	Test/Inspection Report	Post-Flight Assessment Report

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80809B/T	Performance Work Statement, Para 3.6.8, 3.6.8.2, and 3.6.8.4	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	ASREQ	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
N/A		N/A	BLK 16	

16. REMARKS

1. (BLK 4):

a. Replace 10.2 with the following:

i. The Post-Flight Assessment Report shall include but not be limited to:

1) Assessment of achieved orbital parameters

2) Identification of known ICD violations

3) Identification of significant anomalies

4) Assessment of system and sub-system performance to include flight performance, guidance and navigation analysis and flight control for core vehicle and upper stage hardware (solid rocket motors, liquid engines, propulsion, structures, and mechanical systems), payload accommodations (payload adapter fitting and payload fairing), avionics (guidance and navigation control systems, electrical, telemetry and instrumentation, and flight termination system), flight software, ordnance and separation systems, and launch support systems (ground systems, debris analysis and visual data products)

5) Assessment of the spacecraft flight environment to include loads and dynamics, vibration acoustics and shock, and aero and thermal environments

6) Separation assessment

7) Corrective action plans for all anomalies and anomaly resolution

8) Identification of out-of-family observations

9) Any other observation

ii. Data reduction and the post-flight assessment shall address all data obtained from the launch for standard flight instrumentations, special flight instrumentation (if such instrumentation is installed), and ground system and commodity usage and supply data.

iii. Upper Stage Disposal Data

1) The launch Vehicle Contractor (LVC) shall identify which upper stage disposal method was planned and flown (random atmospheric reentry, controlled atmospheric reentry, maneuvering to a storage orbit, direct retrieval).

2) The LVC shall provide telemetry data confirming the depletion of propellant by blowdown or depletion burn and the replace of compressed gases.

15. a. ADDRESSEE	b. COPIES		
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CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0001	A	X	TDP	TM	OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS

3) The LVC shall provide the following information appropriate to the selected method of disposal for the as-flown upper stage:

a. Random atmospheric reentry. Value for risk of human casualty, state vector for end of mission upper stage disposal orbit, disposal orbit lifetime for upper stage based of as-flown end of mission, description of analysis that produced the upper stage disposal orbit lifetime values.

b. Controlled atmospheric reentry. Latitude and longitude of upper stage reentry impact location and comparison to Notice to Airmen and Mariners (NOTAM) box.

c. Maneuvering to storage orbit. Orbital elements at end of mission for flown upper stages.

d. Direct retrieval. Description of retrieval operation. Time after end of mission when upper stage will be removed.

b. Replace 10.3 with the following: Document content shall be clearly written and described accomplishments and other facts adequately with no technical errors.

2. (BLKs 10, 12, 13):

a. Initial Post-Flight Assessment Report (covering Items i1-i3 above) shall be submitted within 10 working days (WD) following Contractor's receipt of Launch Vehicle (LV) telemetry data.

b. Final Post-Flight Assessment Report including the upper stage disposal method that was planned and flown to demonstrate compliance with upper stage disposal requirements no later than (NLT) L+2 months.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
0005	A	X TDP	TM	OTHER	

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A045	Technical Report	LOE Study/Service

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80508B/T	Performance Work Statement, Para 3.7.2 and 3.8.2.2.7	SSC/AAL Product Line Chief Engineer

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

1. (BLK 4):
   a. Replace 2 (a) with "(a) Electronic submittal shall be in Microsoft Word, Microsoft PowerPoint, or Acrobat PDF."
   b. Replace 2 (b) with "The report shall be printable on standard size paper (e.g., 8 ½ x 11 or A4)."
2. (BLKs 8, 12, 13): Submit final report 15 CD after completion of the study for Government approval.

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
CLIN 4000 Series	A	X TDP TM OTHER

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A046	Technical Report	Fixed Price Study/Service

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80508B/T	Performance Work Statement, Para 3.10	SSC/AAL Product Line Chief Engineer; SSC/AAMI

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	D	ASREQ	BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	N/A	BLK 16

16. REMARKS

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2. (BLKs 8, 12, 13): Submit final report 15 CD after completion of the study for Government approval.

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15. a. ADDRESSEE	b. COPIES		
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
CLIN 4000 Series	A	X TDP	TM	OTHER	

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A047	Technical Report	EIS Requirements Analysis Report

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-GDRQ-80650/T	Performance Work Statement, Para 3.9, 3.9.2.1, 3.9.2.2, 3.9.2.5.1, 3.9.2.5.2, 3.9.2.7, 3.9.2.8, 3.9.2.9, 3.9.2.10, 3.9.2.11, 3.9.2.12, and applicable EIS SOW Section 8 paragraphs.	SSC/AAMI Chief of Integration

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	D	OTIME	BLK 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A		N/A	BLK 16	

16. REMARKS

a. (BLK 4):

i. Contractor's format acceptable

ii. Replace 10.2, 10.3 with EIS SOW identified analysis selection. Basic list below (from PWS)

1. 3.9.2.1 Trajectory and Mission Design Analysis
2. 3.9.2.2 SV Configuration and Access Analysis
3. 3.9.2.3 Mission Specific/Mission Unique Requirements Assessment
4. 3.9.2.4 Draft Interface Control Document (ICD)
5. 3.9.2.5 Coupled-Loads Analysis (CLA)
6. 3.9.2.6 Launch Site CONOPS & Security
7. 3.9.2.7 Integrated Thermal Analysis (ITA)
8. 3.9.2.8 Acoustic Analysis
9. 3.9.2.9 EMI/EMC Analysis
10. 3.9.2.10 Contamination Analysis
11. 3.9.2.11 Vibration/Shock Analysis
12. 3.9.2.12 Program Security Assessment

3. (BLKs 10, 12, 13): Submit per dates in the applicable EIS SOW paragraphs

15. a. ADDRESSEE	b. COPIES Draft	b. COPIES FINAL Reg	b. COPIES FINAL Repro
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15. TOTAL			

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:		
TBD	A	TDP	TM	OTHERX

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A049	Business Review Meeting	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
Blk 16	Performance Work Statement para 3.1.7.1	SSC/AAF

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT		Blk 16	Blk 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
A	Blk 16	Blk 16	Blk 16	

a. ADDRESSEE	b. COPIES		
		FINAL	
	Draft	Reg	Repro
15. TOTAL			

16. REMARKS

16. Remarks

Block 8: This deliverable must be accepted by the Government. If revisions are required, the Government will notify the Contractor in writing. Contractor will incorporate Government review comments and re-submit revision for approval no later than 15 business days after Government notice that a revision is required.

Block 9: Further dissemination only as directed by the SSC/AATS Program Office.

Blocks 10, 11, 12, 13: The Contractor shall deliver a bi-annual (every 6 months) business data package. The first business data package delivery shall be delivered NLT 45 calendar days after contract start. The business data package will contain high level metrics and supporting details, which will be compared to a threshold value, and if breached will kick-off quarterly in-depth Business Management Review (BMR) meetings. The BMRs will occur in conjunction with PMRs (see next page for data package thresholds and BMR specifics). The BMRs, if necessary, shall be held virtually and in person at LA AFB or at a Contractor facility, as approved by the Government, or solely via virtual setting when applicable. Presentation and agendas are due 3 business days prior to BMRs. Corrections and actions are due 3 business days following with weekly updates until closed.

Purpose: The business data package and BMRs (if necessary) will allow the Government to monitor a company's business/financial health during contract execution to ensure the company can successfully execute NSS missions.

Format: For the business data package and BMR, the contractor will use their format. All documents will be MS Office 2016 compatible.

See next page for field 16 continuation

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

DRAFT

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
TBD	A	X	TDP	TM	OTHERX

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS (Continued)

Business Data Package: The following table will be delivered bi-annually and if any threshold values are breached, it will kick-off quarterly BMRs which will occur in conjunction with PMRs.

Metric	Calculation	Purpose	Threshold
EBITDA Margin	Revenue plus depreciation, amortization, and stock-based compensation, minus total cost of goods sold, sales, general, administrative expenses, research and development expenses, divided by revenue	Assess company's ability cover non-operating costs, such as debt servicing	<0
Interest Coverage (earnings)	EBITDA Profit divided by Interest Expense	Assess company's ability to pay outstanding interest on outstanding debt	≤1.5x
Current Ratio	Current Assets divided by Current Liabilities	Assess the short-term liquidity of the company	≤1x
Quick Ratio	Cash (& cash equivalents) plus Accounts Receivable divided by Current Liabilities	Assess the company's ability to cover current liabilities using the most liquid current assets	≤0.5x
Cash Generation/ Burn	EBITDA minus interest payments, dividends, and capital expenditures	Assess company's cash flow	<0
Cash Balance divided by Cash Burn (ignore if generating cash)	Cash & cash equivalents on balance sheet divided by EBITDA plus cash from financing minus interest payments, and capital expenditures	Assess company's cash runway at current cash burn rate	≤1.5x

BMR Briefing Materials:

The Contractor's data provided at the BMR should address the purpose of the Business Management Review as it directly relates to the project or program. The purpose should include the value or benefits, intended audience, and the users of the BMR. The BMR shall describe the status of the work being performed at the subtask level and address accomplishments, schedule, and plans for the next reporting period, and expenses. In addition, the financial management activities being performed under the contract are presented.

The BMR shall include, but is not limited to:

- Contract Summary and Background of the Scope of Work
    - In this section, provide a summary of the project or program.
    - This section should include the type of work being performed, the goals of the contract, the place of performance, and significant features of the contract.
- Identification of Key Contract Management Team Members, including Authorities and Limitations
    - This section should identify individuals that have direct contract oversight responsibilities in ensuring that the government receives the deliverables identified in the contract.
- Includes contract progress reports identifying both actual and projected expenditures for the current and projected contract period;
- Summarizes Contractor cost and schedule performance;
- Contract to date expenditures;
- Project completions percentage and expended by CLIN/SubCLIN and contracts;
- Status of submitted and pending invoices;
- Status of funding including estimated 75% expenditure date and 100% expended date per CLIN;
- Status of contract administration actions;
- Review of action items from previous BMRs;
- Special Termination Liability updated monthly;

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G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:			
TBD	A	X	TDP	TM	OTHERX

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
NSSL	FA8811-23-R-0002	

16. REMARKS (Continued)

- BMR financial data shall include Contract Funds Status Report (CFSR) data with Special Termination Liability Updated monthly;
- Company's historical annually audited (last 3 years) and quarterly (last 2 years) Income Statement, Balance Sheet and Cash Flow statements. If the company is not cash flow break even, identify any anticipated significant changes of cash burn rate over the next 12 months.
- Company's historical revenues (last 3 years) by product line (e.g. launch vehicles, satellites, etc.) and customer segment (e.g. DoD, NASA, Commercial, etc.)
- Describe how much debt is due in each of the next 3 years? Describe plans to buy down and/or address the total debt and any near term debt maturities.
- Describe if the company plans to raise any additional capital within the next 3 years. If so, describe how much is needed, what will be the sources of and mix of the additional capital and what is the intended business purposes.
- Provide the company's current and projected (next 3 years) annual launch vehicle production capacity and launch vehicle throughput rate

The Contractor's data provided at the BMR should address the purpose of the Business Management Review as it directly relates to the project or program. The purpose should include the value or benefits, intended audience, and the users of the BMR. The BMR shall describe the status of the work being performed at the subtask level and address accomplishments, schedule, and plans for the next reporting period, and expenses. In addition, the financial management activities being performed under the contract are presented.

This data deliverable constitutes "Other Information that Cannot Easily Be Categorized" in accordance with N52.227-002. The Government and the Contractor shall jointly determine how it should be handled and marked. This agreement shall be documented in the contract in Section J.

Copyright markings, if used on this deliverable, shall be agreed to by the contractor and the Government contracting officer, and shall reflect additional rights due the Government resulting from this contract.

DRAFT

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE