Launch Systems Enterprise Directorate (SMC/LE)
Systems Engineering & Integration (SE&I) II Contract
Draft Performance-based Work Statement (PWS)

5 March 2018

Launch Systems Directorate
Space & Missile Systems Center
483 North Aviation Boulevard
Los Angeles AFB, California 90245-2808

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1.1 DESCRIPTION OF SERVICE

The System Engineering and Integration (SE&I) contractor (referred to as the contractor for the remainder of this document) shall furnish all personnel, equipment, labor, tools, materials, supervision, transportation and other items and services necessary to perform SE&I services for the Launch Systems Directorate (SMC/LE) located at the Space and Missile Systems Center at Los Angeles Air Force Base, California (LAAFB); Cape Canaveral Air Force Station, Florida (CCAFS); and Vandenberg Air Force Base, California (VAFB).

Services provided under this contract support SMC/LE's space launch operations for current and future SMC/LE launch systems. Deliverables provided under this contract are in accordance with (IAW) Exhibit A, The services include the following function areas:

Systems Engineering and Integration
Mission Integration Management
Systems Safety Engineering
Systems Environmental Engineering
Systems Security & Cybersecurity
Quality and Production
Launch Schedule Management Launch Risk Management
Launch Systems Certification

1.2 SYSTEMS ENGINEERING & INTEGRATION (SE&I)

This PWS consists primarily of systems engineering and integration tasks in support of the Launch Enterprise. The SE&I also includes overarching integration of launch and range programs which will require interfacing both the EELV and any future SMC/LE launch systems. In addition, the launch SE&I effort provides for SE&I support to 45 SW and 30 SW launch responsibilities at CCAFS and VAFB.

For EELV, the SE&I contractor will provide support of SMC/LE and LCG mission assurance efforts for an average of X National Security Space (NSS) missions per year; approximately X from VAFB and X from CCAFS/KSC. Additionally, the SE&I contractor will provide support of fleet surveillance for non-NSS mission activity for approximately X missions per year, in order to assess the cross-over impact to NSS mission assurance. Fleet surveillance includes performing surveillance of commercial and civil activities for the purpose of maintaining awareness of issues that intersect or may intersect EELV flight worthiness or other government mission assurance requirements for certified EELV and New Entrant Launch Service Providers.

The SE&I effort will be performed at LAAFB, VAFB, and CCAFS. The SE&I effort in support of SMC/LE launch services will be funded by the SMC/LE at LAAFB (Section 1.3), CCAFS (Section 1.4.1), VAFB (Section 1.5.1).

The SE&I support directly to 30 SW and 45 SW (non-SMC/LE specific activity) will be performed at VAFB and CCAFS. This effort will be funded by the launch bases in support of the 45th Launch Group (45 LCG) at CCAFS (Section 1.4.2) and the 30th Launch Group (30 LCG) at VAFB (Section 1.5.2).

1.3 LAAFB PWS

1.3.1 SE&I SUPPORT TO SMC/LE LAUNCH SERVICES

1.3.1.1 SYSTEMS ENGINEERING & INTEGRATION

The contractor is responsible for, but not limited, to the following:

1.3.1.1.1 SYSTEMS ENGINEERING

1.3.1.1.1.1 The contractor shall perform assessments of SMC/LE launch systems engineering program documents as required for adequacy, currency, and compliance with the Office of the Secretary of Defense (OSD), Air Force (AF), Air Force Space Command (AFSPC), and SMC instructions. The contractor shall assess (audit) SMC/LE internal compliance with the approved SMC/LE systems engineering documents on an annual basis, or as otherwise required by SMC/LE. For the SMC/LE systems engineering documents, the contractor shall produce or assess needed changes, and gather inputs from stakeholders, maintain comment resolution matrices (CRMs), incorporate agreed to changes, and deliver draft updated documents to SMC/LE on a mutually agreed to schedule. Support staffing and/or Technical Review Board (TRB)/ Configuration Control Board (CCB) approval. The documents to be included in this section are as follows:

1.3.1.1.1.1.1 System Performance Requirements Document (SPRD)

1.3.1.1.1.1.2 Standard Interface Specification (SIS)

1.3.1.1.1.1.3 Systems Engineering Plan (SEP)

1.3.1.1.1.1.4 Risk Management Plan (RMP)

1.3.1.1.1.1.5 SMC/LE Process Guide

1.3.1.1.1.1.6 The contractor shall develop any other required launch systems engineering documents identified by the contractor needed to provide the necessary and sufficient launch support.

1.3.1.1.1.2 Support New Entrant Certification validation traceability to the SPRD/SIS, as needed

1.3.1.1.1.3 The contractor shall provide support to AFSPC Capabilities Production Document (CPD) updates, ConOps and Operating Concepts.

1.3.1.1.1.4 The contractor shall support SMC/LEE taskers, including review and CRM responses. Expect up to 2 taskers per week.

1.3.1.1.1.5 Provide support to the SMC/LE Chief Engineers Council (CEC) and Technical Review Board (TRB).

1.3.1.1.1.6 The contractor shall coordinate NASA, National Reconnaissance Office and LE leadership collaboration at Launch Collaboration Steering Groups.

1.3.1.1.1.7 The Contractor shall provide Configuration Management and Data Management (CM/DM) for the Launch Systems Enterprise Directorate (SMC/LE) EELV documentation.

1.3.1.1.1.7.1 Configuration Management: The contractor shall execute the EELV Configuration Management Plan (CMP) IAW SMCI 62-109 to ensure all CM required functions and activities are executed and documented, including managing technical review boards/configuration control boards, configuration identification, change control, status accounting, verification, reviews, audits, and metrics for the program baseline documentation (per the program baseline list in the CMP). The Contractor shall review and update the EELV Change Control Board (CCB) Operating Instruction (OI) annually to document Change Control processes that are enforceable and subject to inspection (A003).

1.3.1.1.1.7.2 Launch Service Provider (LSP) CDRL Management: The LSP CDRL management process shall manage CDRLs from submittal through acceptance to Archival. The CDRL management process shall include but is not limited to:acquiring and maintaining all CDRLs submitted by LSPs, notification and distribution of the documents for review, maintaining the current status of each CDRL, collecting metrics, maintaining comments submitted against CDRLs, coordinating reviews, facilitating the CDRL Review Board and Actions Items (A003).

1.3.1.1.1.7.3 Data Management Development: The contractor shall develop a Data Governance policy recommendation that defines the rules, standards and models that govern and define the type of data that exists in the Launch Enterprise (Enterprise Data) and how it is used, stored, managed and integrated within the organization and its systems (A003).

1.3.1.1.1.7.4 The contractor shall update the Launch Systems Directorate Data Management Plan (DMP) to incorporate the tenets of the Data Governance policies and processes into a single source document for Enterprise Data management (A003).

1.3.1.1.1.7.5 The contractor shall update as required the Launch Systems Directorate Configuration Management Plan (CMP) to incorporate the tenets of the Data Governance policies and processes (A003).

1.3.1.1.1.7.6 The contractor shall create a one-time Data Conversion Plan (DCP) for reorganizing/migrating existing data to incorporate the tenets of the DMP (A003).

1.3.1.1.1.7.7 Data Management Implementation: The contractor shall implement the new Data Management Plan's structures and processes in accordance with the Data Governance Policy across the Launch Enterprise and its systems, as tailored by the USG.

1.3.1.1.1.7.8 The contractor shall implement the one-time Data Conversion Plan's reorganizing/migrating of existing data across the Launch Enterprise and its systems, as tailored by the USG and as approved per phase, in accordance with the DGP, DMP, and CMP.

1.3.1.1.1.7.9 Data Management Operations and Maintenance: The contractor shall transition operation and maintenance of administrative data and technical data management to the USG once implementation actions are completed.

1.3.1.1.1.7.10 Then contractor shall operate and maintain the repositories of enterprise critical data and protected data.

1.3.1.1.2 INTEGRATION

1.3.1.1.2.1 The contractor shall provide overarching systems integration for launch verification and integration with associated launch support systems across all existing and new acquisition programs falling under SMC/LE and the EELV enterprise. This activity will include integration between launch and associated launch support systems acquisition.

1.3.1.1.2.2 The contractor shall perform integrated assessments of analysis of alternatives and project management for New Entrants. Products may include but are not limited to technical assessments of Certification Guides/Plans and other systems engineering products.

1.3.1.1.2.3 The contractor shall perform concept trade studies for launch and other relevant subjects as determined by SMC/LE (e.g. west coast GPS launches, autonomous flight termination, and space-based telemetry). (In accordance with section J).

1.3.1.1.2.4 The contractor shall perform strategic planning for launch and range support (e.g. LV program viability to 2030 and range divestiture), identify and propose cost reduction initiatives, and launch systems sustainment strategies.

1.3.1.1.2.5 Support to AFSPC studies and Analysis of Alternatives (AoA) for future launch systems (e.g. Space Enterprise Vision)

1.3.1.1.2.5.1 The contractor shall support SMC/AD interaction, Rapid Innovation Fund (RIF), Space Experiments Review Board (SERB), Program Executive Officer (PEO)/Technical Executive Officer (TEO) tasks, Technical Needs Roadmaps (TNR), Space Enterprise Vision (SEV)/Space Warfighting Construct (SWC), Enterprise Systems Engineering Council (ESEC), and Enterprise Architecture and Systems Engineering (EASE) activities.

1.3.1.1.2.6 The contractor shall support the development, technically assess, and update LE launch service acquisition strategies, request for proposals, and supporting documentation for USG review as required. The contractor shall use standard, and create as necessary, templates and tools to document, update and make recommendations for product disposition. Products include but are not limited to the following: acquisition strategy plans and briefings; technical Justification & Approvals (J&As); Requests for Proposals (RFPs); draft Performance Work Statements (PWS); Work Breakdown Structure (WBS) Summaries; Contract Data Requirements Lists (CDRLs); Incentive Plans; Proposal Instructions; and other ad hoc documentation/presentations. The contractor shall support program management activities under the execution of launch service contracts (excluding the EELV Phase 1 contract FA8811-13-C-0003 and the NRO Delta IV Heavy sole source contract FA8811-16-R-0005) to include review of contract deliverables, and support of program reviews as required.

1.3.1.1.2.7 RDT&E: The contractor shall support the development, and coordination EELV-specific acquisition strategies, Requests for Proposals (RFPs), Other Transaction Authority (OTA) agreements, Broad Agency Announcements (BAAs), and the like, in support of the EELV strategy for future development and acquisition for USG review as required. The Contractor shall support Government execution of development contracts and investment vehicles by assessing development efforts for commercial viability and the ability to meet National Security Space (NSS) requirements. The contractor shall support development of schedules that integrate acquisition tasks for new EELV development contracts and investment vehicles as required. The contractor shall assess and make recommendations in response to external program inquiries as required.

1.3.1.1.2.8 The contractor shall provide master schedules that integrates acquisition tasks for new EELV contracts as required.

1.3.1.1.2.9 The contractor shall provide technical assessment, evaluation and recommendations for post-RFP release activities, to include fact finding, proposal evaluations, and negotiations.

1.3.1.1.2.10 The contractor shall assess and make recommendations in response to external program inquiries as required.

1.3.1.1.3 ENGINEERING LAUNCH SUPPORT SYSTEM (ELSS)

1.3.1.1.3.1 The contractor shall technically analyze ELSS user-requested changes and provide recommended implementation options to LE. The contractor shall analyze the requested changes in the context of the ELSS requirements, develop system designs, implement system updates, and document changes to ELSS Launch Support Centers (LSCs), High Speed Network (HSN) and campus network interface requirements.

1.3.1.1.3.2 The contractor shall revise the ELSS Systems Requirements Document (SRD) to reflect requirements changes. The contractor shall perform technical assessments of ELSS systems changes and document them as appropriate. This will include ELSS systems integration and activation activities, and ELSS system revisions to support LE launch vehicle systems operations. (ELSS includes interfaces to National Reconnaissance Office (NRO) Operations Squadron (NOPS) and Spacelift Telemetry Acquisition and Reporting System (STARS)).

1.3.1.1.3.3 The contractor shall perform technical analysis of NOPS, CSC, and STARS proposed changes to ELSS interfaces as specified in the Interface Control Document (ICD). The contractor shall provide written recommendations to LE on optimum implementation of proposed changes to ELSS interfaces. The contractor shall document verification of revised ELSS interface requirements implementation compliance by assessing end-to-end launch vehicle systems and ELSS operations testing.

1.3.1.1.3.4 The contractor shall develop and document a recapitalization plan for systems satisfying ELSS requirements. The contractor shall address supportability and sustainment planning and shall perform and document Requirements Definition and Functional Analysis as required when operational capability is identified and determined.

1.3.1.1.3.5 The ELSS currently consists of the following LSCs: LVLSCs at CCAFS and VAFB supporting ULA Atlas and Delta missions; the Multi-Vehicle LSC (MVLSC) at CCAFS supporting Falcon missions; and the Falcon LSC (FLSC) at VAFB supporting Falcon missions. The contractor shall also integrate preliminary requirements for new entrant Launch Support Centers (LSCs) as required into program documentation.

1.3.1.1.4 RD-180 ENGINEERING

1.3.1.1.4.1 The contractor shall develop, document and provide integrated technical assessments of Government-funded launch vehicle risks associated with

the RD-180 engine to advise the Government whether cost, schedule, and performance goals are met.

1.3.1.1.4.2 The contractor shall support USG and launch vehicle contractor technical review boards (e.g. Engineering Review Boards, Anomaly Review Boards, Technical Decision Meetings, as appropriate), and provide RD-180 engine integrated assessments to aid USG evaluation of cost, schedule, and performance risks and opportunities. Subject breadth incorporates engine production, testing, hardware acceptance, operations, and flight performance. Integrated assessments include an RD-180 Accountability Matrix, RD-180 Issues Log, analyses and recommendations in support of USG technical review boards, and summary and analysis of launch vehicle contractor technical review boards, reported to SMC/LE. Additional integrated assessments include manufacturing/discrepancy assessments, hardware review and configuration management analyses, post-flight analysis and mission lessons learned as identified.

1.3.1.1.4.3 The contractor shall evaluate and provide assessments of the RD-180 manufacturing process, to include foreign supplier political/management reports, crossover assessments, and technology transfer status reports.

1.3.1.1.4.4 The contractor shall evaluate and provide assessments of the Former Soviet Union policy requirements, technical assistance agreements, and State Department requirements impacting the RD-180 engine and EELV program.

1.3.1.1.5 PROJECT ENGINEERNG

1.3.1.1.5.1 The contractor shall provide integrated assessments to aid USG evaluation of cost, schedule, and performance risks and opportunities associated with EELV systems, subsystems and components. Subject breadth incorporates, but is not limited to, separation systems, booster propulsion, upper stage propulsion, solid motors, ordnance, avionics, structures, ground support equipment, payload fairings, and launch site facilities. Integrated assessments may include but not limited to draft SOOs and SOWs for launch vehicle system modifications; draft PWS, ECP, and Proposal Technical Evaluations; schedules, weekly status reviews, telecons, PDRs, CDRs, PMRs, ARBs, CABs, ERBs, TDMs, Pedigrees, Hardware Acceptance Reviews, Design Center Walkdowns, development projects, requirements, manufacturing, test, and discrepancies; and provide recommendations in support of USG technical in support of USG technical and acquisition activities. Capture and document Best Practices and provide training and certification support as directed. Perform Fleet Surveillance of non-NSS launch vehicle and acquisition activity and assess impact to NSS, and provide mitigating recommendations as directed.

1.3.1.1.5.2 Operations Support: The contractor shall coordinate cohesive technical and program management activities and communication between the USG, launch vehicle contractor, the Aerospace Corporation, and other support contractors, to enable launch readiness and provide integrated assessments. The contractor shall support development of training and certification and operations materials for the SPO Technical Team and participate in training, certification, critical pre-launch and launch events (e.g., Integrated Crew Exercises, Mission Reediness Review, Launch Reediness Review, Mission Dress Rehearsals, Wet Dress Rehearsals, Static Fire, and Day of Launch.) The contractor shall support and assess pre-launch and post-launch reviews for readiness and cross-overs. Functional areas: separation systems, booster propulsion, upper stage propulsion, solid motors, ordnance, avionics, structures, ground support equipment, payload fairings, and launch site facilities.

1.3.1.1.5.3 Technical Issue Resolution Process (TIRP): The contractor shall participate in TIRP activities to assess issues and risks, both mission- specific and fleet-wide, associated with launch vehicle and ground systems, subsystems, and components. The contractor shall provide an integrated assessment and recommendations to the USG regarding the status of mission- specific and fleet-wide risk mitigation activities. Functional areas: separation systems, booster propulsion, upper stage propulsion, solid motors, ordnance, avionics, structures, ground support equipment, payload fairings, and launch site facilities. Perform Fleet Surveillance and Resource Protection analyses and assess for cross-overs from non-NSS missions to NSS Missions. Propose risk mitigation activities in support of Mission Assurance.

1.3.1.1.5.4 Lessons Learned, Process Capture and Improvements: The contractor shall provide integrated assessments of LSP and DOD processes and media as requested to aid USG evaluation of cost, schedule, and performance risks and opportunities. The contractor shall capture existing SMC/LEG processes, recommend enhancements, and collaborate as required to implement approved changes.

1.3.1.1.5.5 The contractor shall provide integrated assessments of the LSP's and supplier subsystem/component design, performance, reliability/ maintainability, operability and supportability (as required) and perform Fleet Surveillance of non-NSS launch activity , assess impact to NSS, and provide mitigating recommendations as directed. Assessments shall include but are not limited to evaluations of factory operations, transportation, launch site operations, and mission operations.

1.3.1.1.5.6 The contractor shall assess the readiness of launch infrastructure (e.g., LSP, USG and commercial) and perform Fleet Surveillance of non-NSS launch site activity, assess impact to NSS, and provide mitigating recommendations as directed in support of SMC/LE programs to meet launch requirements and recommend upgrades/repairs. The contractor shall recommend

changes to the existing launch systems that could take advantage of identified and existing USG or Commercial infrastructures and meet USG launch requirements. Products include but are not limited to the Facilities, Infrastructure, and GSE Database (FIDB) specification, facility walk-down reports, major launch site maintenance and repair requirements, Facility Utilization Assessments, and Ground Systems Readiness Reviews (GSRR). Functional areas: CCAFS and VAFB Space Launch Complexes used for SMC/LE programs; ground support equipment (GSE), and Electrical Ground Support Equipment (EGSE)

1.3.1.1.5.7 The contractor shall evaluate launch infrastructure for supportability issues to include parts obsolescence, facility refresh/refurbishment and other supportability issues. The contractor shall recommend upgrades/repairs and prepare assessment reports as required. Functional areas: CCAFS and VAFB Space Launch Complexes used for SMC/LE programs; ground support equipment (GSE), and Electrical Ground Support Equipment (EGSE).

1.3.1.1.5.8 The contractor shall provide weekly written summaries on their project engineering activity.

1.3.1.2 MISSION INTEGRATION MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.3.1.2.1 The contractor shall provide recommendations related to EELV mission buy contract requirements and early integration studies for USG review. Products include, but are not limited to: draft Performance Work Statement, Work Breakdown Structure Summary (WBS), Contract Data Requirements List (CDRLs), Incentive Plan, Proposal Instructions (proposal sections), and analyses of Basis of Estimates (BOEs), as required.

1.3.1.2.2 The contractor shall analyze technical, schedule and programmatic issues related to the Launch Program contracts (e.g. cost, schedule and performance) and provide recommendations to the USG as required support program mission integration related taskers, on average 2 per month.

1.3.1.2.3 The contractor shall analyze and identify mission management programmatic and technical issues associated with cost, schedule and performance, and provide assessments/recommendations to the USG. Products include recommendations for ICDs, technical assessments of mission unique efforts, de-confliction of mission schedules, etc.

1.3.1.2.4 The contractor shall provide integrated products required to execute readiness reviews, rehearsals, launch campaigns, and day of launch activities as specified below. These activities may be repeated due to unforeseen launch delays.

1.3.1.2.4.1 The contractor shall exercise anomaly processes and Day of Launch decision making processes during rehearsal campaigns. Evaluate success of rehearsal campaign with respect to pre-defined exit criteria, and brief results to the Mission Director for non-OSL missions. Evaluate, update and maintain the Day-of- Launch (DOL) decision process by ensuring that the SMC/LE DOL decision process meets AF and AFSPC requirements.

1.3.1.2.4.2 The contractor shall, as the lead for Rehearsal Anomaly Team (RAT) for AF missions (and as an integral member of the RAT for other LE contracted missions), integrate with the LSP, SVC, and other mission stakeholders (to include the Eastern/Western Ranges, Aerospace Corporation, NOPS, Space Launch Squadrons and Launch Groups) to plan, develop and de-conflict activities, and evaluate goals and objectives for launch campaign rehearsals (i.e., Integrated Crew Exercises (ICEs) and Mission Dress Rehearsals (MDRs); and tabletop exercises, stand-alone exercises as required) as defined in the Baseline USG Evolved Expendable Launch Vehicle Rehearsal Plan. Products include but are not limited to profile letters, pre-departure briefings and overview briefings anomaly development, timeline and clock planning. The Team shall execute up to three ICEs, as coordinated with mission stakeholders, and one MDR per LE contracted mission.

1.3.1.2.4.3 The contractor shall define evaluation criteria, design and develop anomaly scenarios (e.g. design script inputs and provide inputs to members on console), and evaluate mission launch teams on operations execution performance. Products include timelines, anomaly scenarios, entry/exit briefings, initial conditions and rehearsal overview brief.

1.3.1.2.4.4 The contractor shall report findings to the integrated launch team. The contractor shall identify, evaluate and document rehearsal and day-of-launch Mission Integration lessons learned and provide them to the USG for continuous launch program improvement. The contractor shall update the Generic Baseline USG Launch Rehearsal Plan as required.

1.3.1.2.4.5 The contractor shall evaluate efficiencies of console operations and provide strategic planning recommendations for Mission Integration Management as needed.

1.3.1.2.5 The contactor shall evaluate mission integration activities for knowledge transfer to Government mission team members. Products and processes include updates to the Government Mission Integration Manager (GMIM) continuity/training book, updates to Roadmap to Launch, GMIM Forums, on the job training, etc.

1.3.1.2.6 The contractor shall collect, evaluate and document "Lessons Learned" from launch rehearsals and day of launch activities. The contractor shall provide an

out brief of lessons learned following each activity (e.g., hotwash, quicklook, postflight review) and incorporate lessons learned into the next launch activity. Products include but are not limited to documented lessons learned and briefing materials (e.g. database, postflight review package).

1.3.1.3 SYSTEM SAFETY ENGINEERING

1.3.1.3.1 The contractor shall conduct launch systems safety engineering for activities at LAAFB and report recommendations to SMC/LE. The contractor shall evaluate and update the System Safety documentation (e.g. System Safety Management Plan (SSMP) and Programmatic Environmental Safety and Health Evaluations (PESHE)) IAW National Security Space Acquisition Policy Interim Guidance for DoD Space System Acquisition Process, and AFI 91-202 AFSPCSUP1, and determine compliance with applicable Department of Defense (DoD) and AF requirements.

1.3.1.3.2 The contractor shall evaluate LSP documentation and activities and report whether they are in technical compliance with applicable system safety requirements (e.g. EWR 127-1, AFSPCMAN 91-710, MIL-STD-882E, and AFI 91-202 AFSPCSUP1) and provide the USG with written documentation of discrepancies. Other products may include but are not limited to waiver packages, risk assessments, SDAR, assessment of LVM products, etc.

1.3.1.3.3 The contractor shall technically assess and report on open launch and range safety items, and provide the USG with written recommendations for disposition of the open items.

1.3.1.3.4 The contractor shall provide systems safety assessments of payload integration, ground testing, and flight safety activities to ensure mission readiness. The contractor shall report noted deficiencies to the USG within 1 work day of the assessments, or as necessary to support LVM item closure. Products include but are not limited to other technical safety assessments on hardware, anomalies and mishaps.

1.3.1.3.5 The contractor shall analyze the design and testing of launch vehicle flight termination systems and other critical safety components to provide the USG with written recommendations for risk mitigation.

1.3.1.3.6 The contractor shall assess the LSP's hazard analyses to verify all hazards are properly identified and mitigated; findings shall be reported to the USG.

1.3.1.3.7 The contractor shall evaluate mission-unique EWR 127-1 or AFSPCMAN 91-710 requirements and provide the USG with a technical assessment of discrepancies and potential cost impacts.

1.3.1.3.8 The contractor shall deliver system safety engineering analysis for the deactivation and disposition of LE launch systems. This will include providing system safety and environmental safety analysis reports related to disposition alternatives and closeout activities.

1.3.1.3.9 The contractor shall provide safety personnel manning on day of launch at the MCC, and deliver products including the SMC/LE Mishap Control Center (MCC) checklist and notebook for MD/LV1 use during DoL activity, MCC personnel training and document recommendations to LE leadership during DoL anomaly or mishap. Other products include but are not limited to briefing charts to support launch pre-departure brief and integrated assessment of LE, launch site and Launch Vehicle contractor mishap response, and coordination of response with external agencies (e.g. AFSPC HQ).

1.3.1.3.10 The contractor shall provide technical assessments, and recommendations as required in mishap investigations including system safety and environmental safety analyses related to disposition alternatives and closeout activities.

1.3.1.3.11 The contractor shall review and contribute to and finalize drafts of orbital safety products: Space Debris Assessment Reports (SDAR) by mission, and SMC/LE portions of the Orbital Debris Mitigation Standard Practices (ODMSP) annual Exception to Policy package.

1.3.1.3.12 The contractor shall deliver technical assessments of LE program and acquisition documents including SIS, SPRD, CPD, RFPs, Acquisition strategy, PWSs, for compliance with safety requirements and provide a detailed assessment of EELV impacts.

1.3.1.3.13 The contractor shall provide export/import support to all organizations within LE. Interprets USG regulations including the Arms Export Control Act (ACEA), the International Traffic in Arms Regulations (ITAR), Export Administration Act (EAA), Export Administration Regulations (EAR), Anti-boycott Regulations, Office of Defense Trade Controls and U.S. Customs Service agencies. Contractor shall provide comprehensive strategic export/import advice and support to the organization, initiating strategies, programs, processes and tools to meet strategic and critical challenges. Acts as liaison between departments/divisions, levels of management, and outside service providers to produce export/import services that meet LE needs. Contractor shall provide EELV and New-Entrant export control support through review of material and provide export and ITAR technical advice on SMC publications, Freedom of Information Act (FOIA) requests and Technical Assistance Agreements.

1.3.1.3.14 The contractor shall support SMC debris recovery with expert advice, review, briefing, scheduling and transportation (re-export) efforts of International deorbited US USG procured Launch Vehicle (LV) and Satellite Vehicle (SV) debris.

Contractor shall support SMC liaison between Department of State (DoS), United Nations (UN) and host country officials. The contractor shall coordinate recovery team schedules and provides senior leadership briefings as directed by the USG (SMC/DoD/DoS/Host Nationals). Procures MilAir and/or Commercial transportation, to include review of potential hazardous materials (HAZMAT), verification/validation of debris type and vehicle, and direction for packaging/transportation to ensure safe and efficient return of debris to US USG control (AFI 91-217 para. 5.8.1). Contractor shall coordinate and participate with in-country inspection/shipment, re-export activities and arrival/transfer to SMC.

1.3.1.4 SYSTEMS ENVIRONMENTAL ENGINEERING

The contractor is responsible for, but not limited, to the following

1.3.1.4.1 The contractor shall evaluate the LSP's designs, operations, and procedures for launch vehicles and ground support systems to verify compliance with environmental requirements, and report discrepancies. The Contractor shall provide strategies and recommendations for compliance.

1.3.1.4.2 The contractor shall review LSP proposed changes, and provide mitigation options to decrease or limit potential environmental liabilities and costs.

1.3.1.4.3 The contractor shall evaluate LSP to hazardous materials management to ascertain compliance with the provisions of applicable federal, state, and local laws, regulations, requirements, and standards, and hazardous materials management requirements imposed by contract. The contractor shall provide documentation of compliance status. Pollution prevention is a sub-part of hazardous materials management

1.3.1.4.4 The contractor shall develop requests for Environmental Impact Analysis (AF Form 813) to initiate the National Environmental Policy Act (NEPA) process for launch activities.

1.3.1.4.5 The contractor shall assess launch operations NEPA documentation to verify that the documentation complies with applicable requirements. Contractor shall document discrepancies and recommend strategy for continued NEPA compliance.

1.3.1.4.6 The contractor shall monitor and document research and analyses of environmental impacts, as required, associated with launch operations to confirm continued compliance IAW EELV Environmental Mitigation Plans (EMP).

1.3.1.4.7 The contractor shall review proposed federal, state and local environmental requirements, regulations, laws, and standards to evaluate potential impacts to launch operations and provide impact analyses.

1.3.1.4.8 The contractor shall evaluate program execution (e.g. PMRs, technical meetings, working groups, etc.) and provide technical assessments and recommendations to ensure compliance with federal, state, local environmental laws, regulations, requirements, and standards.

1.3.1.4.9 The contractor shall evaluate and update the PESHE and EMP. The Contractor shall deliver technical assessments of LE program and acquisition documents including SIS, SPRD, CPD, RFPs, Acquisition strategy, PWSs, for compliance with environmental requirements and provide a detailed assessment of EELV impacts.

1.3.1.5 SYSTEMS SECURITY & CYBER SECURITY

The contactor is responsible for, but not limited to the following:

1.3.1.5.1 Systems Security

1.3.1.5.1.1 The contractor shall evaluate and update the EELV Program Protection Plan (PPP), Counterintelligence Support Plan (CISP) and the Operations Security Plan (OPSEC) and Security Classification Guide (SCG) as needed, IAW DoDI 5200.39, DoDI 5200.1-M, AFI 31-401, and NATIONAL SECURITY SPACE (NSS) ACQUISITION POLICY INTERIM GUIDANCE FOR DoD SPACE SYSTEM ACQUISITION PROCESS.

1.3.1.5.1.2 The contractor shall deliver technical assessments of LE program documents including SIS, SPRD, CPD, RFPs, Acquisition Startegy, DD-254s (average of 6 per month) for compliance with Critical Program Information (CPI), OPSEC, INFOSEC, Industrial Security, Anti-terrorism, and other program protection requirements IAW the PPP and provide a detailed assessment of EELV impacts.

1.3.1.5.1.3 The contractor shall evaluate and provide technical analysis of LSP's, Program Protection Implementation Plans (PPIP's) and effectiveness. Products include but are not limited to Program Protection Surveys and recommendations for corrective action.

1.3.1.5.1.4 The contractor shall evaluate LVC proposed security waivers and deviations, and perform security assessments IAW the applicable system contract, acquisition plan, Security Classification Guide (SCG) and the PPP

1.3.1.5.1.5 The contractor shall deliver a security assessment on requests for information from AF, DoD, US USG, public and foreign USGs, (average of 4 per month) IAW the EELV SCG and PPP.

1.3.1.5.1.6 The contractor shall develop and present documentation (including proposed actions and potential impacts) associated with the Quarterly EELV System Security Working Group (SSWG).

1.3.1.5.1.7 The contractor shall develop and update the LE security library on Livelink/Sharepoint IAW the LE file plan, AFMAN 37-104, AFMAN 37-123, and AFI 37-138.

1.3.1.5.1.8 The contractor shall evaluate and update the SMC/LE Security Operating Instruction (SOI) annually.

1.3.1.5.1.9 The contractor shall evaluate LE internal security documentation and provide recommendations to support systems security and cybersecurity self-inspections, AF-level Inspections, to include the Air Force Inspector General, Higher Quarters Air Force Space Command Inspector General Inspection, Air Force Audit Agency Inspections, Space and Missile Systems Center Integrated Program Reviews annually.

1.3.1.5.1.10 The contractor shall support SMC/LE personnel security activities including clearance checks, visit requests, badging, system access forms, area access forms, entry access lists, etc. via JPAS.

1.3.1.5.1.11 The contractor shall support physical security including Random Antiterrorism Measures (RAM) activities, end of day security checks as required.

1.3.1.5.1.12 The contractor shall support COMSEC/SVRO as required.

1.3.1.5.1.13 The contractor shall support SMC/LE security training, i.e. develop annual security briefing, newcomer security briefings, etc.

1.3.1.5.1.14 The contractor shall provide support ITAR assessments as needed.

1.3.1.5.2 Mission Systems Certification and Accreditation

1.3.1.5.2.1 The contractor shall develop, evaluate and update SMC/LE launch programs' systems certification and accreditation products. Products include but are not limited to C&A packages for launch systems IAW the Risk Management Framework (RMF), DoDI 8510.01.

1.3.1.5.2.2 The contractor shall register SMC/LE Launch support systems in the Enterprise Mission Assurance Support Service (eMASS), as appropriate, in compliance with the Federal Information Security Management Act (FISMA) and conduct status reviews as required to validate currency and accuracy.

1.3.1.5.2.3 The contractor shall review evolving Cybersecurity and space systems certification policies, programs, procedures and reports for initial and follow-on system releases, including new and evolving cybersecurity requirements. The contractor shall provide a written report of impact analysis with recommendations for changes/revisions.

1.3.1.5.2.4 The contractor shall work with the Intelligence Community (IC) to identify and mitigate intelligence threats to the EELV system. The Contractor shall assist in the analysis of IC products to determine most suitable applications to the EELV program.

1.3.1.6 QUALITY AND PRODUCTION

1.3.1.6.1 The contractor shall verify the existence offinal reports, RFIs, RIDs, and other documentation required per internal pedigree guidance. The contractor shall monitor and report status of technical review items (RFIs and RIDs) generated from the pedigree reviews.

1.3.1.6.2 The contractor shall develop, update and maintain pedigree guidance documentation and processes. Products may include but are not limited to the following: drafts and updates of pedigree process documents, pedigree process guidelines, handbooks, forms, and training materials, pedigree forum presentation package, process map to execute hardware pedigree reviews, pedigree process metrics and recommendations, filtering criteria for QE participation in pedigree reviews, draft of Quality Engineering Checklist for QE role at pedigree reviews and HARs; and pedigree program metrics.

1.3.1.6.3 The contractor shall evaluate hardware data packages IAW internal pedigree guidance. The contractor shall assess, as assigned as a member of the pedigree team, Launch Service Provider (LSP) and supplier manufacturing, production, and quality processes. Products include but are not limited to results from pedigree reviews using the Quality Engineering Checklist. The contractor shall identify and document hardware pedigree issues IAW internal pedigree guidance. The contractor shall follow up on LSP analyses of cause and corrective action for RIDs generated at pedigree reviews.

1.3.1.6.4 The contractor shall evaluate LV production operations (e.g. fusion and friction stir welding, metal forming, electronics assembly, printed wiring board production, wire harness assembly, X-Ray inspection and other nondestructive inspection techniques, electrical testing, final assembly, and transportation methods). The evaluation will include identification of key process parameters, associated monitoring metrics, variability, determination of statistical control, capability, and capacity. The contractor shall provide technical assessments of conditions adverse to quality hardware production.

1.3.1.6.5 The contractor shall evaluate production issues, escapements, non-conformances, anomalies, and failures as requested. The contractor shall provide production, quality and statistical analyses of LSP root-cause determination and verify corrective action implementation and monitor process health. Products may include but are not limited to analyses of LSP problem-solving performance (cause and corrective action) from reviews of product-integrity reports and participation in LSP and supplier corrective action boards as well as reports of process trends.

1.3.1.6.6 The contractor shall provide production/manufacturing readiness assessments to the USG. Products include but are not limited to reports assessing LSP and subcontractor supplier production readiness reviews, manufacturing readiness reviews, and product-process improvement reviews.

1.3.1.6.7 Contractor Quality Engineers (QEs) shall evaluate LSP and suppliers' production and quality systems. Contractor QEs will assess existence, adequacy, compliance, and effectiveness of these systems and evaluate LSP contractor implementations of modern quality methods such as statistical process control, sampling methods, statistical analysis, and design of experiments (DOE) as requested. Products may include but are not limited to technical critiques of command media, formulation of USG-contractor collaboration projects, reports of internal and external process audits based on direct observation, and reports of LSP contractor's and supplier management decisions affecting product quality.

1.3.1.6.8 The contractor shall assess metrics (e.g. cost of quality, non-conformances and escapements, supplier quality ratings) to examine LSP and supplier production and quality performance as requested. Products include but are not limited to reports that critique contractor statistical implementations, analyses of process control, white papers on production risks, and development of metrics describing process quality.

1.3.1.6.9 The contractor shall assess production related issues to determine impacts to the overall mission assurance, and provide recommendations for mitigation.

1.3.1.6.10 The contractor shall assess LSP and supplier Quality Engineering projects and recommend methods to enhance the effectiveness and efficiencies of such projects including: non-conformance reduction, lean manufacturing initiatives, foreign/domestic object damage, and quality escapement elimination. Products include but are not limited to evaluations of LSP and suppliers' decisions on process quality at quality councils/summits, program management reviews, and other LSP or supplier-led meetings/events.

1.3.1.6.11 The contractor shall provide technical assessments of LSP and 3rd party audits, Program Management Reviews (PMRs), Corrective Action Boards (CABs), and Quality Councils.

1.3.1.6.12 The contractor shall develop drafts, update, tailor, and maintain SMC/LE manufacturing and quality engineering documentation and processes. Products may include, but are not limited to: draft of SMC/LE Quality Engineering Plan, suggested tailoring of SMC-S-003 Quality Space and Launch Requirements and AS6500 Manufacturing Management, and PWS drafts of LSP requirements for quality management.

1.3.1.7 LAUNCH SCHEDULE MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.3.1.7.1 The contractor shall work with USG Action Officers to integrate and assess LE Enterprise Master Schedule (EMS) data as required.

1.3.1.7.2 The contractor shall evaluate the Space Launch Manifest (SLM), identifying potential scheduling conflicts (launch dates, facilities, rehearsals, etc.) and provide an assessment to LE on available options as required. The contractor shall assemble an LE Launch Manifest using the LISN. Following the assessment, contractor shall update the Space Launch Manifest (SLM) resident on the Launch Information Support Network (LISN), or equivalent (includes LE and Office of Space Launch (OSL) missions). Products include but are not limited to SLM assessments, Course of Action (COAs), and LISN updates.

1.3.1.7.3 The contractor shall coordinate and support LE involvement in manifest meetings, e.g. as the Current Launch Schedule Reivew Board (CLSRB) and Senior Management Review (SMR), as required.

1.3.1.7.4 The contractor shall develop the LE Launch Manifest Operating Instruction (LMOI) and update as required.

1.3.1.8 LAUNCH RISK MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.3.1.8.1 The contractor shall evaluate the current LE risk management process for adherence to compliance and guidance documents listed in the LE Risk Management Plan and provide assistance to the Government appointed risk leads in maintaining the Risk Management process. The contractor shall document the LE risk management process, and submit the draft plan for USG approval. The contractor shall update the LE Risk Management Plan annually, and provide LE with written recommended changes as needed/required, for USG approval.

1.3.1.8.2 The contractor shall develop a monthly consolidated EELV risk status report for the EELV Program Manager and LE Chief Engineer as defined in the LE Risk Management Plan-and as appropriate any related operational, safety, and contractor risks potentially affecting the program. The contractor shall provide briefing packages, in conjunction with USG appointed AF risk leads, for the monthly LE Risk Management Working Group (RWG) and the monthly LE Risk Management Board (RMB). The contractor shall act as the local (LE) risk database administrator. In this capacity the contractor will input new and maintain existing RMB approved risks, in the risk database.The contractor will ensure all risks in the tool are kept up to date, in accordance with Government RMB decisions. Products may include but are not limited to the following: risk definition analysis, risk handling analysis, analysis of risk handling plans and recommended actions captured and delivered in a report; risk database products to support monthly RWG

and RMB packages; RMB after action meeting minutes; risk inputs into programmatic documents such as the Monthly Acquisition Report (MAR), Defense Acquisition Executive Summary (DAES), and other reviews such as the Spring Program Review (SPR) and the Executive Risk Management Discovery Session.

1.3.1.8.3 SYSTEMS ENGINEERING

1.3.1.8.3.1 The contractor shall collect, evaluate and document "Lessons Learned" from SpaceX certification/verification activities. The contractor shall provide an out brief of lessons learned following each activity (e.g. CCB, Process Verification, etc.) and incorporate lessons learned into the next certification/ verification activity. Products may include but are not limited to documented lessons learned and briefing materials (e.g. database/Livelink).

1.3.1.8.4 INTEGRATION

1.3.1.8.4.1 System engineering documentation as required for adequacy, currency, and compliance with the Office of the Secretary of Defense (OSD), Air Force (AF), Air Force Space Command (AFSPC), and SMC instructions. Products may include but are not limited to detailed technical reports, assessments and recommendations provided weekly to the cognizant AF representative as required.

1.3.1.8.4.2 The contractor shall manage SpaceX Falcon Launch System certification/verification data deliverables necessary to assess contractual preparedness, i.e., provide databases to maintain certification/verification data tracker/deliverables, milestone reviews products (RIDs and RFIs), electronic procedures, CCB coordination materials, document trees, certification/verification action items and certification/verification status items for the SpaceX Falcon 9Launch System, as required. Products may include associated databases. Databases must meet New Entrant data protection requirements.

1.3.1.8.5 PROJECT ENGINEERING

1.3.1.8.5.1 In support of SpaceX Falcon launch system certification and verification, the contractor shall provide assessments of technical reviews (e.g. Engineering Review Boards, System Verification Reviews, as appropriate). The contractor shall assess information from biweekly meetings, issue system reporting, and change management systems reporting. The contractor shall maintain a tool that tracks and reports on all changes to the Flight Configuration baseline list (FCBL) and Ground Configuration Baseline List. These lists will be tracked and synchronized with the SpaceX CDRL deliverables. The list is coordinated with USAF and Aerospace POCs to ensure accuracy. The changes

are tracked to establish if the engineering team assesses an impact to the SIS and SPRD. The contractor shall review and provide assessment of test plans, certification/verification reports, New Entrant Certification/Verification Team (NECT) provide Integrated Products Team (IPT) inputs and Configuration Control Board inputs. The contractor shall participate and provide technical feedback during NASA/NRO collaboration (i.e. NASA ERB participation, information sharing). Products may include but are not limited to technical reports, assessments, and weekly summaries of activity.

1.3.1.8.6 SYSTEMS SAFETY ENGINEERING

1.3.1.8.6.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide system, range, and orbital safety verification assessments as required and provide coordination of launch site safety activities. Products may include but are not limited to technical reports and recommendations.

1.3.1.8.7 SYSTEMS ENVIRONMENTAL ENGINEERING

1.3.1.8.7.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide environmental verification assessments, as required, and provide coordination of launch site environmental activities. Products may include but are not limited to technical reports and recommendations.

1.3.1.8.8 SYSTEM SECURITY & CYBERSECURITY

1.3.1.8.8.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide System Security and Cybersecurity verification assessments, and provide coordination of launch site Security and Cybersecurity activities. Products may include but are not limited to technical reports and recommendations.

1.3.1.8.9 QUALITY & PRODUCTION

1.3.1.8.9.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall perform, support, and assess LSP process audits, audit report inputs, pre-ship reviews, LSP issue-system reviews, LSP change management systems reviews, LSP corrective action reviews, and LSP test plan reviews as required. The contractor shall provide factory surveillance, as required, and provide manufacturing technical and quality assessments to the USG team.

1.3.1.8.9.2 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide recommendations on the LSP's procedures compliance.

1.3.1.8.10 LAUNCH RISK MANAGEMENT

1.3.1.8.10.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall track and assess certification/verification risks, certification/verification flight mission risks. The contractor shall assess the LSP risk management plan for validation and verification, roll-up and reporting. Products may include but are not limited technical reports, assessments, recommendations and briefing material for the Risk Management Board.

1.3.1.8.10.2 The contractor shall integrate and analyze enterprise schedule risk for EELV certification/verification activities.

1.3.1.8.11 CCAFS LAUNCH SYSTEMS ENGINEERING & INTEGRATION

1.3.1.8.11.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide technical assessments of and support to launch site checkout and verification, Day of Launch activities, and LVDB activities as appropriate. Products may include but are limited to technical reports, recommendations, day of launch products and database management.

1.3.1.8.12 VAFB EELV MISSION ASSURANCE SYSTEMS ENGINEERING AND INTEGRATION

1.3.1.8.12.1 In support of SpaceX F9 V1.1 and F9U Launch System verification, the contractor shall provide technical assessments of and support to launch site checkout and verification, Day of Launch activities, and LVDB activities as appropriate. Products may include but are limited to technical reports, recommendations, day of launch products and database management.

1.3.1.10 LAUNCH MANIFEST COMPETITION CONTRACT EXECUTION

1.3.10.1.1 The contractor shall support program management activities under the execution of a launch service to include program management, systems engineering, launch vehicle production, mission integration, launch operations, and support to government space flight worthiness through the review of contract deliverables, milestone payment requests and support of program reviews as required. For the review of contract deliverables, these areas can include but are not limited to launch system data (As Designed/As Built Configuration List, Flight Critical Items List., etc) and program management data reporting (Integrated Master Schedule, Contractor Work Breakdown Structure, Cost Reporting, etc.). For program reviews, these areas can include but are not limited to program milestone reviews (mission kickoff, mission design reviews, flight readiness reviews, etc.), mission assurance activities (space flight worthiness meetings, government hardware review, production and engineering forums, etc.), and routine

program meetings (Program Management Reviews, contract deliverable reviews, status reviews, etc.).

1.4 CCAFS PWS

1.4.1 SE&I IN SUPPORT OF SMC/LE LAUNCH SERVICES

1.4.1.1 SYSTEMS ENGINEERING AND INTEGRATION

The contractor is responsible for, but not limited, to the following:

1.4.1.1.1 LAUNCH SYSTEMS ENGINEERING & INTEGRATION

1.4.1.1.1.1 The contractor shall provide launch site activity mission assurance related inputs to the 5th Space Launch Squadron Commander (5 SLS/CC) on EELV launch site activities. Products include but are not limited to point papers, white papers and briefings.

1.4.1.1.1.2 The contractor shall provide system integration for launch- flow processing, including range and range systems for heritage and EELV programs.- Products include but are not limited to the following:

1.4.1.1.1.2.1 Initial and periodic updates, as requested or required, to the Master Mission Checklist (RTL Mission Checklist).

1.4.1.1.1.2.2 Multiple reviews of drafts for Integrated Mission Script for each major console op.

1.4.1.1.1.2.3 The contractor shall provide technical evaluations and reccomendations to the 5 SLS in support of Pre-VAR, VAR and Operational Status Briefings.

1.4.1.1.1.2.4 The contractor shall provide technical evaluations, assessments and updates, and recommendations during but not limited to launch campaign planning meetings, mission working groups, readiness reviews and 5 SLS technical forums. The contractor shall identify issues/risks to the Launch Mission Manager (LMM) and make resolution recommendations. The contractor shall provide a technical summary of meeting as required. Products include but are not limited to the following:

1.4.1.1.1.2.5 Mission processing status updates.

1.4.1.1.1.3 The contractor shall evaluate, assess and provide status of LSP processing activities and problem resolution. The contractor shall provide

summary processing schedules and information for 5 SLS status products on a weekly basis or as-required. Products include but are not limited to inputs to Pre-VAR, VAR and Operational Status Briefings and Daily Glideslope Reports during approximately the last 2 weeks of a launch campaign.

1.4.1.1.1.4 The contractor shall provide assessment on payload integration requirements, ability of the LVC and Range to meet payload requirements, and assist in identifying risks/issues to the EELV LMM and 5 SLS. The contractor shall gather data and assist in technical information flow between NRO and mission managers.

1.4.1.1.1.5 The contractor shall provide technical products for on-console EELV launch/processing operations, rehearsals, and East Coast shadow operations in support of on the average 6 EELV launches per year. Products include but are not limited to the following: 1) Tailored Integrated Mission Script for AF Leadership (MD, LV-1, AFLD) for each major console op, 2) Job aids and other mission specific DoL Console Products (Integrated Ops Assessment, COLA, Range instrumentation, Countdown Summary, Weather Job Aid, Launch Window Worksheet, etc.) for each major console op, 3) Mission Certification Letter for 45 LCG/CC Signature.

1.4.1.1.1.5.1 The contractor shall deliver and update an archive of launch campaign products and provide technical training on mission management processes to the Government mission team members. Products include but are not limited to archive of Integrated Mission Scripts, Procedures, Job Aids, Console Seating Assignments, and Communications Requirements

1.4.1.1.2 LAUNCH SUPPORT CENTERS (LSC)

1.4.1.1.2.1 The contractor shall coordinate requirements to the appropriate configuration manager to ensure the LSC systems (LV_LSC and MVLSC) are fully mission capable and the data system hardware and software are verified/validated for each major launch operation.

1.4.1.1.2.1.1 The contractor shall facilitate LSC integration requirements in support of launch vehicle systems operations and the ELSS. The contractor shall plan for extended support of requirements to anticipate launch delays and recycle opportunities in support of the launch manifest.

1.4.1.1.2.1.2 The contractor shall deliver a LSC architecture plan, evaluate and provide configuration management update to the current LSC architecture plan IAW source requirements documents to include the following: SRD and ICD.

1.4.1.1.2.1.3 The contractor shall develop evaluate and update an integrated schedule of the LSCs events and provide de-confliction

recommendations of EELV processing and launch rehearsals to LMM and execute approved schedule (e.g., Launch Operations Calendar).

1.4.1.1.2.1.4 The contractor shall evaluate, review and update maintenance plans for all equipment utilized by EELV in the LSCs, as well as any other equipment acquired by EELV. (e.g., ELSS Recapitalization Plan)

1.4.1.1.2.1.5 The contractor shall analyze requirements and ensure LSCs configuration requirements have been properly completed for each launch campaign. The contractor shall act as the technical point-of-contact for mission communications meetings. Products include but are not limited to Mission Support Requirements Package.

1.4.1.2 MISSION INTEGRATION MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.4.1.3 SYSTEMS SAFETY ENGINEERING

The contractor is responsible for, but not limited, to the following:

1.4.1.3.1 The contractor shall provide systems safety engineering for activities at CCAFS. The contractor shall review the System Safety documentation (e.g. SSMP and PESHE) IAW NSS 03-01, and AFI 91-202 AFSPCSUP1, to ensure compliance with applicable DoD and Air Force requirements. Products include but are not limited to 5 SLS Safety Operating Instructions and Training Plans.

1.4.1.3.2 The contractor shall review and verify LSP documentation and activities are in compliance with applicable system safety requirements (e.g. EWR 127-1, AFSPCMAN 91-710, MIL-STD-882E, and AFI 91-202 AFSPCSUP1) and provide the USG with recommendations.

1.4.1.3.3 The contractor shall evaluate and update open launch and range safety items, and provide the USG with recommendations.

1.4.1.3.4 The contractor shall provide systems safety assessments of payload integration, ground testing, and flight safety activities to ensure mission readiness. The contractor shall report noted deficiencies to the USG within twenty-four hours of the assessments. Products include but are not limited to the following: 1) Console Safety/Mishap Binders for Senior USG Launch Team Members (MD, LV-1, GMIM, AFLD) for each launch, 2) Population worksheet (personnel by name & facility) to 45 SW/SE for each launch, 3) draft ISBP appointment letter for each launch.

1.4.1.3.5 The contractor shall analyze the design and testing of launch vehicle flight termination systems and other critical safety components to provide the USG with risk mitigation options as required.

1.4.1.3.6 The contractor shall technically assess the LSP's hazard analyses to verify hazards are properly identified and mitigated; recommendations shall be reported to the USG.

1.4.1.3.7 The contractor shall evaluate mission-unique EWR 127-1 and AFSPCMAN 91-710 safety requirements and provide the USG with documentation of discrepancies and potential impacts. Products include but not limited to inputs to EWR 127-1 "Tailored" for specific EELV launch vehicles.

1.4.1.3.8 The contractor shall provide system safety engineering analysis for the deactivation and disposition of LE systems. This shall include providing system safety and environmental safety analysis reports related to disposition alternatives and closeout activities.

1.4.1.4 SYSTEMS ENVIRONMENTAL ENGINEERING

The contractor is responsible for, but not limited, to the following:

1.4.1.4.1 The contractor shall evaluate the LSP's designs, operations, and procedures for launch vehicles, and ground support systems to verify compliance with all environmental requirements. Products include but are not limited to periodic reports.

1.4.1.4.1.1 The contractor shall evaluate the LSP's environmental compliance through all programmatic phases, from concept development through program closeout and disposal, as required.

1.4.1.4.1.2 The contractor shall provide strategies needed to achieve and maintain compliance with federal, state, and local environmental laws, regulations, requirements, and standards.

1.4.1.4.1.3 The contractor shall evaluate launch ECPs, and provide mitigation options to decrease or limit potential environmental liabilities and costs.

1.4.1.4.2 The contractor shall evaluate LSP environmental compliance and pollution prevention progress to ascertain compliance with the provisions of applicable federal, state, and local laws, regulations, requirements, and standards; providing documentation of compliance status.

1.4.1.4.3 The contractor shall develop Requests for Environmental Impact Analysis (AF Form 813) to initiate the NEPA process for launch activities.

1.4.1.4.4 The contractor shall evaluate and review launch operations National Environmental Policy Act (NEPA) documentation to verify compliance with

applicable requirements (e.g. LSP Leased License documentation and Real Property Transfer documentation) and report nonconformance.

1.4.1.4.5 The contractor shall perform technical research and analysis of environmental impacts associated with launch operations IAW EELV EMP. This includes special studies required by local and federal USGs.

1.4.1.4.6 The contractor shall assess proposed federal, state and local environmental requirements, regulations, laws, and standards to determine potential impacts to launch operations; provide documentation of impact analyses on launch operations processing and flight hardware transportation and delivery.

1.4.1.4.7 The contractor shall provide, as required, a technical representative environmental engineer to attend program reviews, working groups, TIMs, audits (e.g. Environmental Safety and Occupational Health Compliance Assessment and Management Program (ESOHCAMP)), evaluations, and assessments to ensure compliance with federal, state, local environmental laws, regulations, requirements, and standards. The contractor shall report on compliance.

1.4.1.4.8 The contractor shall evaluate and provide updates to the PESHE and EMP. Products include but are not limited to updates to the Programmatic Environmental Safety and Health Report and the Environmental Management Plan.

1.4.1.4.9 The contractor shall prepare 45 LGC and 5 SLS documentation and practices in support of ESOHCAMP audits. Assess compliance with applicable laws, regulations, and standards. Products include but are not limited to reports to 5 SLS leadership summarizing vulnerabilities and inspection focus areas. The contractor shall integrate and assess inspection findings, and develop a mitigation plan for resolution of environmental impacts and issues. Track mitigation plan to completion.

1.4.1.4.10 The contractor shall evaluate Hazardous Material (HAZMAT) management, environmental and bioenvironmental compliance and pollution prevention to ensure compliance with applicable laws, standards, regulations, and codes. Products include but are not limited to integrated assessment of LSP proposed projects for environmental compliance.

1.4.1.5 SYSTEMS SECURITY & CYBERSECURITY

The contractor is responsible for, but not limited, to the following:

1.4.1.5.1 The contractor shall integrate system security, program protection planning and cybersecurity policies, products, and procedures IAW the following documents and identify non-conformances:
AFPAM 63-1701, Program Protection Planning, 27 Mar 2003
DoDI 5000.02, Operation of the Defense Acquisition System, 8 Dec 2008
DoDI 5200.1-M, Acquisition Systems Protection Program, 16 Mar 1994

DoDI 5200.39, Critical Program Information Protection within the Department of Defense, Change 1, 28 Dec 2010
DoDM 5200.01, has four volumes describing the Information Security Program, pub, 24 Feb 2012
V1 - Overview, Classification and Declassification V2 - Marking of Classified Information
V3 - Protection of Classified Information
V4 - Controlled Unclassified Information (CUI)

1.4.1.5.2 The contractor shall evaluate critical program data (e.g. classified and unclassified controlled information) IAW AFI 31-401 and applicable Air Force Instructions. The contractor shall document and provide a report of results and any subsequent actions, and participate in periodic Integrated Program Reviews (IPR's).

1.4.1.5.3 The contractor shall evaluate and update the EITDR database as required to ensure mandatory compliance with FISMA reporting.

1.4.1.5.4 The contractor shall assess LSP security practices for compliance with security requirements and EELV security ConOps. The contractor shall evaluate technical recommendations of system security working groups and ensure strong lines of communication between LSP and 45 SW security organizations. The contractor shall inform the USG of any issues and concerns, and recommend solutions.

1.4.1.5.5 The contractor shall determine personnel access requirements of Entry Access Lists (EALs) and/or badging for visiting Government personnel to EELV restricted access facilities and provide coordinate associated products as required.

1.4.2 SE&I IN SUPPORT OF 45 SW/45 LCG

1.4.3

1.4.4 LAUNCH PROGRAMS

1.4.4.1 SYSTEMS ENGINEERING AND INTEGRATION

The contractor is responsible for, but not limited, to the following:

1.4.4.1.1 FACILITY ENGINEERING

1.4.4.1.1.1 The contractor shall support launch facility engineering to include risk assessment, monitoring and reporting on status of projects, operations and maintenance of CCAFS launch processing facilities and their associated systems IAW AFSPCI 21-202. Products include but not limited to the following:

Launch processing facilities status briefings, technical reports and FIDB updates.

1.4.4.1.1.1.1 Deliver quarterly status reports on launch facilities, hardware and support equipment IAW AFSPCI 21-202/5.2.13.

1.4.4.1.1.1.2 Develop/produce/deliver a monthly launch infrastructure/system life-cycle logistics status report, launch facility risk-assessment matrix quad charts, as well as VAR and Director of Operations (DO) integration briefing charts IAW AFSPCI 21-202.

1.4.4.1.1.1.3 Provide capability assessments and concepts of operations for launch facilities to include: conducting monthly facility requirements analysis, identifying facility requirement shortfalls and perform weekly engineering and facilities analyses, planning, design review, and studies IAW AFSPCI 21-202.

1.4.4.1.1.1.4 Generate launch facility/system concept of operations report weekly/monthly, comment and review on system schematics weekly, and generate facility Smart Book on a quarterly basis.

1.4.4.1.1.2 The contractor shall develop and update launch facilities status charts and reports for the weekly Pre-VAR and VAR prior to the scheduled meeting.

1.4.4.1.1.3 The contractor shall conduct launch facilities project management surveillance, testing, quality control inspections and associated documentation for s processing facilities. The contractor shall update facility floor plan configurations, create and manage facility checklists, create storyboards for facilities projects and update/provide reports in facilities Smart Book and VAR/DO integration meetings.

1.4.4.2 MISSION INTEGRATION MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.4.4.2.1 TECHNICAL TRAINING

1.4.4.2.1.1 The contractor shall provide development, implementation, validation and update of technical training and course materials for the 45th Launch Group and 45th Operations Group in support of launch operations for approximately 200 USG and contractor personnel.

1.4.4.2.1.2 Provide technical training and course materials to include to an annually maintained Master Training/Execution Plan, initial/recurring lesson plans and plans of instruction (course syllabus).

1.4.4.2.1.3 Provide technical training to include Combat Mission Ready (CMR) and Mission Support (MS) training, Mission Assurance and Qualification Training Programs, DOL training programs, the RAT process, Integrated Crew Exercises (ICE), Launch Rehearsals, and Mission Dress Rehearsals (MDR) (e.g., Operations and Day of Launch Training Plans).

1.4.4.2.1.4 The contractor shall develop and evaluate technical examinations designed to identify student comprehension of course material. Evaluate results of the technical training and examination. Assess failure rates in excess of 30 percent and provide a report detailing the findings. The contractor shall provide quarterly reports and annual reports to the USG on student performance.

1.4.4.2.1.5 The contractor shall conduct an annual analysis of LCG technical training requirements in adherence to the Instructional System Development (ISD) model, and produce/design a technical training program (e.g., annual review of lesson material to ensure ISD compliance).

1.4.4.2.1.6 The contractor shall train launch team members ensuring they are capable of supporting critical spacecraft processing and launch activities in compliance with applicable Air Force, AFSPC and unit-level training instructions. Products include but are not limited to Plans of Instruction, Lesson Plans, and Knowledge Tests.

1.4.4.2.1.7 The contractor shall develop, evaluate and update the 45 WS MS Instructor Certification Program, the 45 WS MS Evaluator Certification Program and unit compliance for the 45 SW CMR Annual Plan of Instruction (APOI) (e.g., Plans of Instruction, Lesson Plans, and Knowledge Tests).

1.4.4.2.1.8 The contractor shall develop/maintain 45 SW CMR Unit Qualification Training (UQT)/Recurring Training (RT)/Supplemental Training (ST) (review 100% materials for Higher Headquarters (HHQ)/local compliance) for Records Custodian (RC), 45th Operations Support Squadron (45 OSS/OSO) Records File Plan and update Implementation Plans upon receipt of HHQ updates IAW AFSPCI 21-202 and IAW AFI 36-2201.

1.4.4.2.1.9 The contractor shall develop, maintain and inspect binders annually for Mission Readiness Training and Spacelift Operations Self Inspection Programs (SIP) in compliance with 45th Space Wing Instruction (SWI) 90-201, AFSPCI 10-1202, AFSPC Checklist (AFSPCCL) 10-12, AFI 36-2201, and 45 LCG guidance. Evaluate Staff Assistance Visit (SAV)/SIP Checklist and provide recommendation to USG. Status report due within five business days after the inspection is complete.

1.4.4.2.1.10 The contractor shall, at the unit level, conduct annual Operations Standardization Team Inspections and develop an inspection report for OG leadership.

1.4.4.2.1.11 The contractor shall collect, analyze, store, and distribute training "lessons learned" from 45 LCG and 45 OG and provide recommendations for gaining efficiencies, timeliness and effectiveness in mission training annually (e.g., incorporation of "lessons learned" into training materials).

1.4.4.3 SYSTEMS SAFETY ENGINEERING (N/A)

1.4.4.4 SYSTEMS ENVIRONMENTAL ENGINEERING (N/A)

1.4.4.5 SYSTEMS SECURITY & CYBERSECURTIY (N/A)

1.4.4.6 PRODUCT ASSURANCE (N/A)

1.4.4.7 LAUNCH SCHEDULE MANAGEMENT (N/A)

1.4.4.8 LAUNCH RISK MANAGEMENT (N/A)

1.4.4.9 LAUNCH SITE PROCESS OPTIMIZATION

1.4.4.10 LAUNCH SITE APPLICATION SOFTWARE SUSTAINMENT

1.4.4.10.1 The contractor shall provide system-level evaluation of mission assurance and launch verification software to include oversight of structure and use, training development, and system maintenance and upgrades. The contractor shall evaluate, review and update mission assurance data in the 45 LCG databases (e.g. the LVDB, Critical Data Management Applications (CDMAs), Change Problem Request (CPR) databases, Stargate, and Roadmap to Launch application).

1.4.4.10.2 The contractor shall provide system-level evaluation of mission assurance and launch verification software to include oversight of structure and use, training development, and system maintenance and upgrades. The contractor shall evaluate, review and update mission assurance data in the 45 LCG databases (e.g. the LVDB, Critical Data Management Applications (CDMAs), Change Problem Request (CPR) databases, Stargate, and Roadmap to Launch application).

1.4.4.10.3 The contractor shall provide end-user technical recommendations for proper use of software and program features and functionality changes.

1.4.4.10.4 The contractor shall develop and maintain a fully integrated data environment for mission assurance and launch verification software applications on a government-provided server. The server shall be accessible to all authorized users, to include remote users. The contractor shall verify configuration requirements of all computers supporting the above-listed mission assurance and launch verification software.

1.4.4.10.5 The contractor shall perform Structured Query Language (SQL) server database technical configuration, database programming, backup, disaster recovery and security to prepare for launch operations, satellite and booster processing, and contingency/anomaly resolution.

1.4.4.10.6 The contractor shall develop and maintain system-level technical analysis of mission assurance and launch verification software to include structure and use, training development, and system maintenance and upgrades.

1.4.4.11 LAUNCH SYSTEMS ENGINEERING & INTEGRATION

1.4.4.11.1 Console Level Voice Matrix providing requirements for each operation for all communication circuits needed for the op. (Moved from 1.4.1.1.1.7.4)

1.4.4.11.2 Console Seating Assignments for multiple facilities for each major console op. (Moved from 1.4.1.1.1.7.5)

1.4.4.11.3 The contractor shall assess and update script, timelines, and technical reference products for the Government technical team (e.g., Inputs to Integrated Mission Script). (Moved from 1.4.1.1.1.10.1)

1.4.4.11.4 The contractor shall assess and update the RAT process including developing and executing anomaly scenarios, scheduling necessary exercise resources, and supporting the lessons-learned process. Products include but are not limited to the following: 1) Anomaly inputs and inputs to rehearsal scripts-Coordination and scheduling of rehearsal assets (facilities, conference rooms, etc.), 2) Academic briefings for Rehearsals (ICEs & MDRs) for each major console operation, 3) Console Assignments for console operations at multiple facilities for each rehearsal, 4) Seating chart for conference rooms used for rehearsal academics, 5) Lessons Learned Inputs. (Moved from 1.4.1.1.1.10.2)

1.4.4.11.5 The contractor shall assess and update the RAT process including developing and executing anomaly scenarios, scheduling necessary exercise resources, and supporting the lessons-learned process. Products include but are not limited to the following: 1) Anomaly inputs and inputs to rehearsal scripts-Coordination and scheduling of rehearsal assets (facilities, conference rooms, etc.), 2) Academic briefings for Rehearsals (ICEs & MDRs) for each major console operation, 3) Console Assignments for console operations at multiple facilities for each rehearsal, 4) Seating chart for conference rooms used for rehearsal academics, 5) Lessons Learned Inputs. (Moved from 1.4.1.1.1.10.2)

1.4.2.12 Launch Integration Management

1.4.2.12.1 The Contractor shall provide launch vehicle and spacecraft customer interface support as required, liasing between customers and 45 LCG leadership, to facilitate communication of requirements, capabilities, limitations, schedules, and risks.

1.5 VAFB PWS

1.5.1 SE&I IN SUPPORT OF SMC/LE LAUNCH SERVICES

1.5.1.1 SYSTEMS ENGINEERING AND INTEGRATION

The contractor is responsible for, but not limited, to the following:

1.5.1.1.1 EELV MISSION ASSURANCE SYSTEMS ENGINEERING AND INTEGRATION

1.5.1.1.1.1 The contractor shall provide launch site activity mission assurance related recommendations to the Commander representing the 30LCG and Chief Engineer (CE) on EELV launch site activities, such as recommendations for resolution of technical issues within ARB/ERB, Chief Engineer's Council, and Lessons Learned forums.

1.5.1.1.1.2 The Contractor shall monitor and assess all configuration changes to the SLC-4E, SLC-4W, SLC-3, SLC-6 and SLC-8 or SLC-2, as required, as compared to the approved certification configuration baseline, and make recommendations to the USG.

1.5.1.1.1.3 The Contractor shall perform mission assurance and fleet surveillance duties in accordance with the 30 LCG's Mission Assurance and Launch Verification processes. The Contractor shall assess the LSP's launch vehicle checkout and processing activities at the launch sites. The Contractor shall perform supporting functions to the launch site responsible engineer including assessing requirements, evaluating past procedures/documentation for current applicability, attending required meetings, assessing process verification, developing independent risk assessments, and providing recommendations for required LVDB updates, processing closure and risk assessment functions, and developing applicable lessons learned to a designated USG representative. Products include, but are not limited to, LVDB reports of mission assurance assessments, risk assessments, daily reports, and issue charts showing risk burn-downs.

1.5.1.1.1.4 The contractor shall maintain and update launch site mission assurance documents such as operating instructions, plans, and ConOps. The contractor shall review Launch and Range related AF guidance documents for technical validity and make recommendations for revisions to 30 LCG documents.

1.5.1.1.1.5 The contractor shall assess the execution of the 30 LCG Launch Verification Processes and its consistency with overall EELV Space Flight Worthiness Certification and Readiness Review processes, and make recommendations for improvement. Products include but are not limited to

comment resolution matrices, configuration control of master and mission LVMs, and LVDB ConOps.

1.5.1.1.1.6 The contractor shall provide technical recommendations for and provide summary documentation of EELV system TIMs/TEMs/Reviews. Products include but are not limited to position papers, assessment summaries, and risk assessment charts.

1.5.1.1.1.7 The contractor shall act as the primary point of contact for the LVDB and perform technical updates to ensure its functionality and availability as the primary tool for 30 LCG technical risk assessment. Track and manage the status of LVM loading into the LVDB. Periodically assess user inputs into the LVDB and make recommendations on improving quality and consistency to the 30 LCG, and collect 30 LCG inputs for database enhancements and coordinate with LVDB developers.

1.5.1.1.1.8 The contractor shall conduct LVDB training for the 30 LCG launch verification team. Products shall include but are not limited to training presentation and hands on demonstration.

1.5.1.1.2 LAUNCH SUPPORT CENTERs (LSCs) FORMAT

1.5.1.1.2.1 The contractor shall perform LSC integration in support of launch vehicle systems operations and the ELSS for the LV_LCS and FLSC. The contractor shall plan for extended support of requirements to anticipate launch delays and recycle opportunities in support of the launch manifest.

1.5.1.1.2.2 The contractor shall evaluate and update configuration management of LSC architecture Plan and implement processes. Products include but are not limited to updates to the ELSS SRD and ICD.

1.5.1.1.2.3 The contractor shall evaluate, update and implement an integrated schedule of the LSC events and provide the schedule and de-confliction recommendations for EELV processing to LMMs. Products include but are not limited to weekly schedule of ELSS/LSC events and technical risk assessment charts for Tech Forum.

1.5.1.1.2.4 The contractor shall develop, evaluate and update maintenance plans for all government-purchased equipment in the LSCs. Products include but are not limited to the ELSS Recapitalization Plan and technical evaluation of contractor ELSS proposals.

1.5.1.1.2.5 The contractor shall perform technical evaluations for mission communications, integrating technical communications requirements between the LSCs, 30 SW and NRO. Products include but are not limited to Mission Support

Requirements Package, technical agendas, and development of an action item matrix.

1.5.1.1.2.6 The contractor shall analyze requirements and ensure the LSCs are properly configured for each operation. Products include but are not limited to, review of the console level voice matrix (CLVM), F1/F2 day verifications with NRO/VAFB providers, and risk assessment charts.

1.5.1.1.2.7 The contractor shall evaluate the need for LSC upgrades based on user inputs, the need to maintain commonality with the Cape LSCs, and self-assessment of LSC systems performance and age. The contractor shall provide recommendations on upgrades to leadership and implement approved changes.

1.5.1.1.3 Remote Launch Control Center (Building 8510) Systems Engineering and Integration

1.5.1.1.3.1 The contractor shall provide facility systems engineering to include risk assessment, monitoring and reporting on status of projects, operations and maintenance of Bldg. 8510 Remote Launch Control Center (RLCC) and associated mission support systems.

1.5.1.1.3.2 The contractor shall perform RLCC integration in support of launch operations, mission events, and 30 LCG Mission Assurance, Fleet Surveillance, and New Entrant Certification activities. The contractor shall plan for extended support of requirements to anticipate launch delays and recycle opportunities in support of the launch manifest.

1.5.1.1.3.3 The contractor shall evaluate the RLCC architecture plan, provide configuration management of current architecture, and manage the facility systems baseline for communication, video, data transmission, emergency management, power and backup power (UPS and generator), HVAC, structural, water/sewage, other systems upgrades and proposed modifications IAW source requirements documents. Products include but are not limited to ConOps and FRD/SRD.

1.5.1.1.3.4 The contractor shall conduct engineering analyses, planning, design review, and studies to identify any facility requirement shortfalls and provide capability assessments, concepts of operations, and risk assessments to ensure RLCC readiness to meet mission needs.

1.5.1.1.3.5 The contractor shall technically analyze RLCC user-requested changes and provide recommended implementation options to 30 LCG. The contractor shall analyze the requested changes within the context of RLCC requirements and develop system designs, implement system updates, and document changes to baseline RLCC drawings, documentation, and the Facility Requirements Document.

1.5.1.1.3.6 The contractor shall conduct RLCC project management, surveillance, testing, quality control inspections, assess project documentation, maintain and/or oversee all entries into the 30 LCG Facilities and Asset Management Database (FIDB), and produce reports as required by the 30 LCG. The contractor shall update facility floor plans, systems configuration, create and manage facility checklists, maintain a list of systems specifications, history of issues, equipment demarcations, and life expectancy of associated equipment. The contractor shall maintain a current facility system continuity "smart book" containing building reports, schedules, work orders, facility layouts, drawings/schematics including redlines, and relevant electronic files for ancillary equipment in support of the launch mission.

1.5.1.1.3.7 The contractor shall deliver an integrated schedule of RLCC projects and provide recommendations for de-confliction of issues affecting utilization of the RLCC.

1.5.1.1.4 EELV LAUNCH SITE APPLICATION SOFTWARE SUSTAINMENT

1.5.1.1.4.1 The contractor shall evaluate and update all non-system software documentation (e.g. commenting in the code, user's manuals, training guides, explanation of the software coding, audit/change logs and Cyber Security artifacts providing evidence of approval to operate on Air Force Systems) and make available for USG use.

1.5.1.1.4.2 The contractor shall evaluate and recommend end-user LVDB and FIDB software updates, enhancements, features and functionality.

1.5.1.1.4.3 The contractor shall update and maintain a fully integrated data environment for mission assurance and launch verification software applications on a USG-provided server.

1.5.1.1.4.4 The contractor shall evaluate and update SQL server databases to include but not limited to database programming to prepare for launch operations, satellite and booster processing, and contingency/anomaly resolution.

1.5.1.1.4.5 The contractor shall develop, update, and maintain system- level mission assurance and launch verification software to include structure and use, training development, and system maintenance and upgrades.

1.5.1.1.5 EELV FLIGHT CERTIFICATION DATA CONFIGURATION MANAGEMENT

1.5.1.1.5.1 The contractor shall develop, update, and maintain a data management system for receiving, recording, and archiving LSP flight hardware

processing procedures, technical briefings, technical drawings, mission data, and other technical documents required to support the Flight Certification Process. The contractor shall ensure data is readily retrievable and available to 30 LCG personnel on a daily basis.

1.5.1.1.5.2 The contractor shall establish, update and maintain a system to track and control program technical data such as 30 LCG technical risk assessment products, launch campaign lessons learned, technical briefings, readiness review packages, and critical facility/infrastructure assessments.

1.5.1.1.5.3 The contractor shall evaluate and make recommendations related to data products, data management environment and systems to transfer information from the LSP and the 30 LCG.

1.5.1.2 MISSION INTEGRATION MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.5.1.2.1 MISSION INTEGRATION

1.5.1.2.1.1 The contractor shall provide technical assessments for launch campaign planning meetings, mission working groups, readiness reviews, and 30 LCG technical forums. The contractor shall identify technical issues/risks to the EELV LMM and make recommendations for resolution. The contractor shall make a written summation of technical findings as requested by the LMM.

1.5.1.2.1.2 The contractor shall monitor, assess, and provide status/recommendations related to LSP processing activities and problem resolution to the EELV LMM, and Flight leadership. The contractor shall provide summary processing schedules and information for 30 LCG status products on a weekly or as required basis.

1.5.1.2.1.3 The contractor shall evaluate payload integration requirements, assessing the ability of the Launch Vehicle Center (LSC) and Range to meet payload requirements, and identifying risks/issues to the EELV LMM. Products include, but are not limited to, the maintenance of the mission calendar, maintenance of the remote mission support status, preparation and maintenance of the mission checklist database, and technical assessment of Lessons Learned.

1.5.1.2.1.4 The contractor shall provide technical evaluation for on- console EELV launch processing operations, rehearsals, and East Coast shadow operations. Products include but are not limited to console level voice matrix, facility charts, and on-console technical risk assessments.

1.5.1.2.1.4.1 The contractor shall evaluate and update scripts, timelines, and technical reference products for the USG launch team.

1.5.1.2.1.4.2 The contractor shall, as an active member in the RAT, develop and execute anomaly scenarios, scheduling necessary exercise resources, evaluating and updating the lessons-learned process. Products include but are not limited to anomaly inputs and inputs to rehearsal scripts-coordination and scheduling of rehearsal assets (facilities, conference rooms, etc.), Academic briefings for Rehearsals (ICEs & MDRs) for each major console operation, Console Assignments for console operations at multiple facilities for each rehearsal, and evaluation and updating of lessons learned.

1.5.1.2.1.4.3 The contractor shall assess 30 LCG on-console processes and products for consistency with the 5 SLS and provide recommendations to Flight and 30 LCG leadership where deviations exist. The contractor shall implement approved changes as appropriate.

1.5.1.2.1.4.4 The contractor shall review and update 30 LCG operating instructions, ConOps, mission assurance products, checklists, etc. for technical validity and recommend revisions. The contractor shall support implementation of changes as required.

1.5.1.2.1.4.5 The contractor shall deliver and update an archive of launch campaign products and provide technical training to USG mission team members on the mission management process. Products include but are not limited to archive of integrated Mission Scripts, Procedures, Job Aids, Console Seating Assignments, and Communications Requirements.

1.5.1.3 EELV SYSTEMS SAFETY ENGINEERING

The contractor is responsible for, but not limited, to the following:

1.5.1.3.1 The contractor shall provide systems safety engineering for activities at VAFB. The contractor shall review the System Safety documentation (e.g. SSMP and PESHE) IAW NSS 03-01, and AFI 91-202 AFSPCSUP1, to ensure compliance with applicable DoD and Air Force requirements. Products include but are not limited to position papers, assessment summaries, risk assessment, 30 LCG Safety Operating Instructions and Training Plans.

1.5.1.3.2 The contractor shall review and verify technical LSP documentation and activities comply with applicable system safety requirements (e.g. EWR 127-1, AFSPCMAN 91-710, MIL-STD-882E, and AFI 91-202 AFSPCSUP1) and provide the USG with recommendations. Products include but are not limited to position papers, assessment summaries, risk assessment charts, and comment resolution matrices for publication reviews.

1.5.1.3.3 The contractor shall evaluate and update open launch and range safety items, and provide the USG with recommendations for disposition of the open items. Products include but are not limited to position papers and assessment summaries.

1.5.1.3.4 The contractor shall provide systems safety assessments of payload integration, ground testing, and flight safety activities to ensure mission readiness. The contractor shall report noted deficiencies to the USG within 24 hours of the assessments. Products may include position papers and assessment summaries.

1.5.1.3.5 The contractor shall analyze the design and testing of launch vehicle flight termination systems and other critical safety components to provide the USG with recommendations for risk mitigation.

1.5.1.3.6 The contractor shall assess the LSP's hazard analyses to verify all hazards are properly identified and mitigated; recommendations shall be reported to the USG.

1.5.1.3.7 The contractor shall evaluate mission unique EWR 127-1 and AFSPCMAN 91-710 requirements and provide the USG with documentation of discrepancies and potential cost impacts. Products include but are not limited to inputs to EWR 127-1 "Tailored" for specific EELV launch vehicles.

1.5.1.3.8 The contractor shall provide system safety engineering analysis for the deactivation and disposition of LE systems. This will include providing system safety and environmental safety analysis reports related to disposition alternatives and closeout activities.

1.5.1.4 EELV SYSTEMS ENVIRONMENTAL ENGINEERING

The contractor is responsible for, but not limited, to the following:

1.5.1.4.1 The contractor shall evaluate the LSP's designs, operations, and procedures for launch vehicles, and ground support systems to verify compliance with all environmental requirements. Products include but are not limited to position papers, assessment summaries, and risk assessment charts.

1.5.1.4.1.1 The contractor will evaluate the LSP's environmental compliance through all programmatic phases, from concept development through program closeout and disposal. Products include but are not limited to position papers and assessment summaries, and TIM/TEM assessments and recommendations.

1.5.1.4.1.2 The contractor shall provide strategies needed to achieve and maintain compliance with federal, state, and local environmental laws, regulations, requirements, and standards. Products include but are not limited to position papers, assessment summaries, and comment resolution matrices for publication review recommendations.

1.5.1.4.1.3 The contractor shall evaluate launch ECPs, and provide mitigation options to decrease or limit potential environmental liabilities and costs.

1.5.1.4.2 The contractor shall evaluate LSP environmental compliance and pollution prevention progress to ascertain compliance with the provisions of applicable federal, state, and local laws, regulations, requirements, and standards; providing documentation of compliance status.

1.5.1.4.3 The contractor shall develop Requests for Environmental Impact Analysis (AF Form 813) to initiate the NEPA process for launch activities.

1.5.1.4.4 The contractor shall evaluate and review launch operations National Environmental Policy Act (NEPA) documentation to verify compliance with applicable requirements (e.g. LSP Leased License documentation and Real Property Transfer documentation) and report nonconformance.

1.5.1.4.5 The contractor shall perform technical research and analysis of environmental impacts associated with launch operations IAW EELV EMP. This includes special studies required by local and federal USGs.

1.5.1.4.6 The contractor shall assess proposed federal, state and local environmental requirements, regulations, laws, and standards to determine potential impacts to launch operations; provide documentation of impact analysis on launch operations processing and flight hardware transportation and delivery.

1.5.1.4.7 The contractor shall provide technical assessment at program reviews, working groups, TIMs, audits (e.g. ESOHCAMP), evaluations, and assessments to ensure compliance with federal, state, local environmental laws, regulations, requirements, and standards. The contractor shall report on compliance status.

1.5.1.4.8 The contractor shall evaluate and provide updates to the PESHE and EMP. Products include but are not limited to updates to the Programmatic Environmental Safety and Health Report and the Environmental Management Plan.

1.5.1.4.9 The contractor shall prepare 30 LGC and 30 LCG documentation and practices in support of ESOHCAMP audits. Assess compliance with applicable laws, regulations, and standards. Products include but are not limited to reports to 30 LCG and 30 LCG leadership-summarizing vulnerabilities and inspection focus areas. The contractor shall integrate and assess inspection findings, and develop a mitigation plan for resolution of environmental impacts and issues. Track mitigation plan to completion.

1.5.1.4.10 The contractor shall evaluate Hazardous Material (HAZMAT) management, environmental and bioenvironmental compliance and pollution prevention to ensure compliance with applicable laws, standards, regulations, and codes. Products include but are not limited to integrated assessment of LSP proposed projects for environmental compliance.

1.5.1.5 EELV SYSTEMS SECURITY AND CYBERSECURITY

The contractor is responsible for, but not limited, to the following:

1.5.1.5.1 The contractor shall integrate system security, program protection planning and cybersecurity policies, products, and procedures IAW the following documents and identify non-conformances:
AFPAM 63-1701, Program Protection Planning, 27 Mar 2003
DoDI 5000.02, Operation of the Defense Acquisition System, 8 Dec 2008 DoDI 5200.1-M, Acquisition Systems Protection Program, 16 Mar 1994
DoDI 5200.39, Critical Program Information Protection within the Department of Defense, Change 1, 28 Dec 2010
DoDM 5200.01, has four volumes describing the Information Security Program, pub, 24 Feb 2012
V1 - Overview, Classification and Declassification V2 - Marking of Classified Information
V3 - Protection of Classified Information
V4 - Controlled Unclassified Information (CUI)

1.5.1.5.2 The contractor shall evaluate critical program data (e.g. classified and unclassified controlled information) IAW AFI 31-401. The contractor shall document and provide a report of results and any subsequent actions, and participate in periodic IPRs.

1.5.1.5.3 The contractor shall evaluate, update the technical accuracy of the EITDR database as required to ensure mandatory compliance with FISMA reporting.

1.5.1.5.4 The contractor shall assess LSP security practices for compliance with security requirements and EELV security ConOps. The contractor shall evaluate technical recommendations of system security working groups and ensure strong lines of communication between LSP and 30 SW security organizations. The contractor shall inform the USG of any issues and concerns, and recommend solutions.

1.5.1.5.5 The contractor shall determine personnel access requirements of Entry Access Lists (EALs) and/or badging for visiting USG personnel to EELV restricted access facilities and provide associated products as required.

1.5.2 SE&I IN SUPPORT OF 30 SW/30 LCG LAUNCH PROGRAMS

1.5.2.1 MISSION SYSTEMS ENGINEERING AND INTEGRATION

The contractor is responsible for, but not limited, to the following:

1.5.2.1.1 30 SW/30 LCG MISSION ASSURANCE SYSTEMS ENGINEERING AND INTEGRATION

1.5.2.1.1.1 The contractor shall evaluate and update the 30 LCG Flight Worthiness Verification (FWV) processes for launch vehicle, spacecraft, and launch agency ground systems; evaluate for compliance with AFSPCI 10- 1202, AFSPCI 10-1208, TOR-2007(8546)-6018, and applicable Letters of Assignment (LOA) to identify all deviations, weaknesses, or limitations affecting mission assurance; and implement approved changes. Products include but are not limited to position papers, compliance assessments with FWV requirements, TIM/TEM presentation packages, position papers, compliance assessments with LOA requirements.

1.5.2.1.1.2 The contractor shall assess technical risk incurred by non-compliance and develop mission-assurance process-improvement recommendations to the 30 LCG commander and senior leadership. Products include but are not limited to position papers, review and recommendations for technical interchanges, and risk assessment summaries.

1.5.2.1.1.3 The contractor shall evaluate and recommend technical solutions for the 30 LCG commander's weekly senior leadership meetings and 30 LCG Technical Director's/Chief Engineer's councils. Products include but are not limited to position papers, minutes, action items and technical assessments.

1.5.2.1.1.4 The contractor shall evaluate and update 30 LCG strategic plan, 30 LCG operating instructions, and 30 LCG ConOps. The contractor shall provide technical analysis for Launch and Range related AF-and AFSPC-level instructions for technical validity and recommend revisions to 30th Launch Group Commander (30 LCG/CC) and 30th Launch Group Technical Director (30 LCG/TD).

1.5.2.1.1.5 The contractor shall provide technical analyses during 30 LCG of TIMs/TEMs and reviews.

1.5.2.1.1.6 The contractor shall act as the primary point of contact and perform technical updates to the Launch Verification Matrix (LVM) database, in support of 30 LCG.

1.5.2.1.1.7 The contractor shall conduct training for the LVDB, track and manage the status of LVM loading into the LVDB, periodically assess user inputs into the LVDB, make recommendations for implementation to the 30 LCG technical leads on improving quality and consistency, and collect 30 LCG inputs for database enhancements and coordinate with database users.

1.5.2.1.1.8 The contractor shall evaluate SVC planning and technical information (e.g., schedules, test notes, and presentation packages) to assess space flight readiness. The contractor shall present recommendations at flight mission meetings and mission operational activities.

1.5.2.1.1.9 The contractor shall evaluate and update 30 LCG mission-assurance plans and provide technical recommendations. Products include but are not limited to assessment reviews and recommendations, prepare and maintain comment resolution matrix, configuration control documentation.

1.5.2.1.1.10 The contractor shall analyze environmental and system safety issues and technical risks associated with the launch flow process. The contractor shall provide recommendations for risk mitigation to 30 LCG. Products include but are not limited to safety and risk assessment reviews and recommendations, safety plans, mission readiness recommendations to support Ops decisions.

1.5.2.1.1.11 The contractor shall evaluate and assess 30 LCG facilities for compliance with safety and environmental program requirements, and provide documentation of compliance status. Products include but are not limited to safety assessment reviews and inspection reports

1.5.2.1.1.12 The contractor shall evaluate and update mission assurance documents such as 30 LCG operating instructions, plans, and checklists. The contractor shall review Launch- and Range-related AF guidance documents for technical validity and make recommendations for revisions to 30 LCG documents.

1.5.2.1.1.13 The contractor shall analyze and update the current baseline requirements ("As Is") for 30 LCG launch infrastructure, equipment, resources, and personnel IAW DoDAF 1.5. The contractor shall evaluate and identify opportunities to increase performance, reduce cost or manpower, enhance sustainability, provide for new programs, or define alternatives that best meet mission requirements and update as future state ("To Be") architecture requirements. The contractor shall develop a strategic roadmap which identifies activities and resources required to transition the 30 LCG functional, allocated & physical architecture from "As Is" to the Net-Centric "To Be" state and continually assess program progress against the roadmap to identify issues that would result in failure to meet intent. The contractor shall update the roadmap annually and provide to 30 LCG/CC and 30 LCG/TD to address changes in direction or execution. Products include but are not limited to Strategic Roadmap Capacity Planning Tool, baseline architecture assessments, USAF Net-Centricity compliance assessment, resource utilization and re-utilization efficiency studies, spend plans, project plans, cost/benefit analyses, white papers, and recommendations.

1.5.2.1.2 LAUNCH SITE APPLICATION SOFTWARE SUSTAINMENT

1.5.2.1.2.1 The contractor shall provide system-level evaluation of mission assurance and launch verification software to include oversight of: structure and use, training development, and non-system maintenance and upgrades. The

contractor shall review and update mission assurance data in the 30 LCG databases, (e.g. Stargate, LCDB, LVDB, CDMAs, and databases). Products include but are not limited to System Software Implementation Plan, System Security Guide, DIACAP compliance review, recommendations, and database management plan.

1.5.2.1.2.2 The contractor shall evaluate, review and update all non- system software documentation (e.g. commenting in the code, user's manuals, training guides, explanation of the software coding, and audit/change logs). Products include but are not limited to System Software Implementation Plan, System Security Guide, Software User Manual, System Requirement Specification and database management plan

1.5.2.1.2.3 The contractor shall evaluate, review and update a Software System Requirements Specification and Software System Design Specification. The contractor shall compile required information relevant to scheduled mission critical milestones (e.g., items of interest, criticality, and responsible organization).

1.5.2.1.2.4 The contractor shall evaluate, review and update a fully integrated data environment for mission-assurance and launch-verification software applications on a USG-provided server.

1.5.2.1.2.5 The contractor shall perform SQL server database configuration engineering, database programming to prepare for launch operations, satellite and booster processing, and contingency/anomaly resolution.

1.5.2.1.2.6 The contractor shall evaluate and update a 30 LCG software solution to enable the real-time generation of Operational Mission Data. Products include but are not limited to database management plans, detailed monthly schedule, graphical displays of data trends, current status, and real- time critical metrics for Operational Status reporting.

1.5.2.1.3 LAUNCH SITE TRAINING

1.5.2.1.3.1 The contractor shall provide development, implementation, validation and update of technical training and course materials for launch operations, evaluation of EELV launch rehearsals, scenario-based exercises, launch-related activities and Day-of-Launch (DOL) for 30 SW. Training will include risk assessment and mission assurance processes and procedures. Products include but are not limited to DOL training plan, integrated mission readiness plan, web-based interactive training, classroom and on-console training, training implementation plan, performance evaluation reports and improvement plan.

1.5.2.1.3.2 The contractor shall evaluate and update technical training products to comply with requirements of AFMAN 36-2234, Instructional Systems Development.

1.5.2.1.3.3 The contractor shall annually assess instructional products for currency, completeness, and effectiveness and provide recommendations for update. The contractor shall implement updates approved by applicable squadron leadership.

1.5.2.1.3.4 The contractor shall inspect, maintain, and update individual electronic training records, ensuring that the data is current and accurate.

1.5.2.1.3.5 The contractor shall assess 30 LCG squadron training products annually at a minimum and provide recommendations for updates to maintain consistency and gain efficiencies. The contractor shall implement updates approved by applicable squadron leadership.

1.5.2.1.3.6 The contractor shall evaluate and update a specialized launch vehicle training capability for the 4 SLS. This training encompasses the full spectrum of 30 LCG mission assurance responsibilities including acquisition, engineering, operations, and maintenance.

1.5.2.1.3.6.1 The contractor shall maintain at a minimum one person who is knowledgeable and qualified to conduct 30 LCG training IAW ISD.

1.5.2.1.3.6.2 The contractor shall compile case studies based on 30 LCG experiences and incorporate lessons learned into 30 LCG training. Document how daily activities feed into mission assurance for selected duty positions and incorporate into 30 LCG training.

1.5.2.1.3.6.3 The contractor shall assess 30 LCG training against 5 SLS training annually at a minimum and provide recommendations for updates to maintain consistency and gain efficiencies. The contractor shall implement updates approved by 30 LCG leadership.

1.5.2.1.3.6.4 The contractor shall provide training and evaluation for EELV launch rehearsals, scenario-based exercises, and DOL.

1.5.2.1.3.6.5 The contractor shall evaluate and update the RAT process for development and execution of anomaly scenarios and lessons-learned process.

1.5.2.1.3.6.6 The contractor shall evaluate, assess and update rehearsals, shadow operations, exercises, and launch on-console training to assess the effectiveness of 30 LCG training.

1.5.2.1.3.7 The contractor shall support the development scenario-based training for 30 LCG DOL positions to enhance knowledge of positional responsibilities, on-console equipment, communications polling, problem identification and response outside of a full EELV rehearsal. The contractor shall evaluate and update 30 LCG introductory training lesson plans covering roles and responsibilities for LCG units, processing facilities, launch facilities, booster overviews, space vehicle overviews and DOL roles and responsibilities. The contractor will create specialized lesson plans to include but not limited to the following: training/certification of Mission Critical positions as outlined by unit OIs, training/qualification of Mission Assurance Technicians, and quarterly recurring training.

1.5.2.1.3.8 The contractor shall evaluate and update a specialized spacelift training capability for the 30 LCG. This capability includes training for Launch Campaign Team positional duties, specifically the campaign management positions, and on research and development efforts in spacelift and launch-related programs that utilize 30 LCG resources. Systems training include but are not limited to the following: Minotaur, Taurus, Pegasus, Missile Defense Agency target and interceptor vehicles, Space-X programs, Operational Responsive Spacelift (ORS), and other EELV New Entrants.

1.5.2.1.3.8.1 The contractor shall compile case studies based on 30 LCG experiences and incorporate lessons learned into 30 LCG SLS training. Document how daily activities feed into mission assurance for selected duty positions and incorporate into 30 LCG training.

1.5.2.1.3.8.2 The contractor shall provide training and evaluation for EELV launch rehearsals, scenario-based exercises, and DOL.

1.5.2.1.3.8.3 The contractor shall evaluate and update the RAT process for development and execution of anomaly scenarios and lessons-learned process.

1.5.2.1.3.8.3.1 The contractor shall evaluate, assess and update rehearsals, shadow operations, exercises, and launch on-console as directed to assess the effectiveness of 30 LCG training.

1.5.2.1.3.8.3.2 The contractor shall support development, evaluate, and update crew training for 30 LCG DOL positions, on- console equipment, communications polling, problem identification and response outside of a full rehearsal.

1.5.2.1.3.8.4 The contractor shall evaluate and update Space Launch Maintenance Technician (SMT) training capability for the 30 LCG. Products include but are not limited to training product reviews, updates and development.

1.5.2.1.3.8.5 The contractor shall sustain and update a specialized launch vehicle training capability for the 30 LCG. This training encompasses 30 LCG mission assurance responsibilities for both spacecraft processing and facility management including acquisition, engineering, operations, and maintenance.

1.5.2.1.3.8.6 The contractor shall evaluate new missions assigned to 30 LCG and provide training recommendations on how to support unique mission requirements.

1.5.2.1.3.9 The contractor shall compile case studies based on 30 LCG experiences and incorporate lessons learned into 30 LCG training.

1.5.2.1.3.10 The contractor shall provide Government personnel training on the Air Force ISD including the ability to analyze and define training requirements to sustain and modify 30 LCG-level training programs. Training shall include to lessons on identifying course objectives and samples of behavior, writing and reviewing lesson plans and test questions, maintaining audio/visual aids, and verifying references.

1.5.2.1.3.11 The contractor shall augment 30 LCG assessments/evaluations, as required. This will include technical, core expertise for space launch operations, training and standardization, program management, and launch rehearsal activities that support the new 30 LCG assessment/evaluation process. Additionally, this task will include sustaining products and processes for assessor/evaluator training, certification letters, academic and hotwash briefings, and other recurring training material, as required.

1.5.2.1.3.11.1 The contractor shall evaluate, develop, and document the Training & Evaluation Administrative Management System (TEAMS) database and software.

1.5.2.1.3.11.2 The contractor shall respond to user problems, perform troubleshooting and implement timely fixes as necessary to maintain maximum TEAMS availability to users.

1.5.2.1.3.11.3 The contractor shall establish a process for identifying required TEAMS updates (e.g., for compatibility/supportability), soliciting new user requirements, gaining 30 LCG leadership approval for requirements, and packaging approved updates into software builds.

1.5.2.1.3.11.4 The contractor shall create, test, and deploy a minimum of one TEAMS update build per year.

1.5.2.1.3.11.5 The contractor shall evaluate and update all software documentation related to TEAMS.

1.5.2.1.4 LAUNCH SCHEDULE MANAGEMENT

The contractor is responsible for, but not limited, to the following:

1.5.2.1.4.1 The contractor shall compile tasks and events from each Ballistic Missile, Launch Vehicle and Spacecraft launch campaign, Spacecraft program office and 30 SW support activities to include planned power & water outages, road maintenance, and controlled burns, to produce an integrated schedule for each launch campaign in support of Flight Worthiness Verification and Certification IAW AFI 21-214. The contractor shall update this schedule on a weekly basis.

1.5.2.1.4.2 The contractor shall identify critical-path activities, key USG decision points, and cross-schedule risk assessments and provide the USG with options to mitigate. The contractor shall provide recommendations to Launch and Spacecraft Mission Managers.

1.5.2.1.4.3 The contractor shall update mission schedule documentation, including, but not limited to: weekly 30 LCG mission assurance and readiness slides, and weekly senior leadership meeting documents and slides.

1.6 NEW ENTRANT CERTIFICATION SUPPORT

1.6.1 Performance Requirements

1.6.3 The Contractor service requirements are summarized into performance objectives that relate directly to mission essential items. The performance threshold briefly describes the minimum acceptable levels of service required for each requirement. These thresholds are critical to mission success. In accordance with AFI 63-124, the following section specifies the Performance Objectives and Performance Elements for the contract.

1**.6.4 CCAFS, KSC, VAFB Support**. The Contractor shall perform system engineering and integration services for the New Entrant Certification Team (NECT) at Cape Canaveral Air Force Station (CCAFS), Kennedy Space Center (KSC) and Vandenberg Air Force Base (VAFB) Launch Complexes.

1.6.4 **Launch Site Operations**. The Contractor shall check out and verify the launch site operations, including—but not limited to--, pre-launch processing, vehicle checkout activities, launch operations, wet dress rehearsals, static fire, and vertical/horizontal integration modifications and operations for new entrant vehicle configuration(s). The Contractor shall support Government personnel and work with Aerospace Corporation counterparts to check out and verify the launch site operations in accordance with the following standards and requirements (including, but not limited to): SMC-S-002, SMC-S-003 (T), SMC-S-013, SMC-S-016, SMC-S-021, EELV Standard Interface Specification (SIS), the Launch Service Provider's Command Media, applicable

Military Standards and Industry Standards, and local requirements. The Contractor shall enter their observations and analysis in the Launch Certification Database (LCDB) or other report formats as requested by the Government (CDRLs A002, B002, A004, B004).

1.6.5 **Safety and Range.** The Contractor shall coordinate with New Entrant (NE) Launch Service Provider(s) (LSP) and Range Safety personnel to verify that the NE LSPs meets system safety and range safety requirements (as defined in AFSPCMAN 91-710, MIL-STD-882, RCC-319, RCC-324) for launch sites operations. The Contractor shall enter their observations and analysis of the LSP's ability to meet EELV requirements in the Launch Certification Database (LCDB) or other report formats as requested by the Government applicable for each system (CDRLs A002, B002, A004, B004).

1.6.6 **Environmental.** The Contractor shall coordinate with NE LSP(s) and Government personnel to analyze and verify that the NE LSP(s) meets environmental (in accordance with National Environmental Policy Act and Federal, local state, and local base rules) and occupational health compliance (in accordance with OSHA standards) for launch site operations. Specifically, for occupational Health the Contractor shall comply with the applicable parts of CFR 29 and as a minimum the following major items: CFR 29, Part 1904, Recording and Reporting Occupational Injuries and Illness CFR 29, Part 1910, Occupational Safety and Health Standards CFR 29, Part 1926, Construction Safety Standards CFR 29, Part 1952, Subpart K, Approved State Plans for Enforcement of State Standards, California. The Contractor shall enter their verifications and analysis of the LSP's ability to meet EELV requirements in the Launch Certification Database (LCDB) or other report formats as requested by the Government (CDRLs A002, B002, A004, B004).

1.6.7 **Site Security and Cybersecurity.** The Contractor shall coordinate with the NE LSP(s) to verify launch site security and Cybersecurity requirements (in accordance with DOD 5220.22-M, DODI 8582.01, CNSSI 1253, ISO 27000, and Industry Standards) for new entrant launch vehicles. The Contractor shall enter their analysis and verifications of the LSP's ability to meet EELV requirements in the Launch Certification Database (LCDB) or other report formats, as requested by the Government for each system (CDRLs A002, B002, A004, B004).

1.6.8 The contractor shall comply with the EELV Program Protection Plan listed in Table 2 of this document. The contractor shall supply the government with a Protection Implementation Plan that describes how the contractor intends to handle and protect any CPI.

1.6.9 **LA AFB Support**. The Contractor shall perform work at various CONUS locations in support of SMC/LE Directorate at LA AFB.

1.6.10 **Design Reviews.** The Contractor shall support major reviews (Configuration Control Boards (CCB), System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Reviews (CDR), Engineering Review Board (ERB), etc.), interface/coordinate with NASA/NRO, Aerospace Corporation, and update new entrant related documents (CDRLs A002, B002, A006, B006).

1.6.11 **Manufacturing and Quality**. The Contractor shall perform Manufacturing and Quality tasks and deliver associated documentation as directed by the Government (CDRLs A002, B002, A005, B005).

1.6.12 **Manufacturing and Quality Management**. The Contractor shall assess and evaluate/audit manufacturing management per standard, MIL-STD-1528A, and quality management per SMC-S-003(T) to meet certification objectives. Requirements from these two standards including AS9100 apply to both manufacturing and quality management. The Contractor shall conduct audits on the factory floor or at the appropriate facility. (CDRLs A002, B002, A004, B004, A005, B005)

The Contractor shall enter the assessments and evaluations, (e.g. analyses, findings/ issues, corrective actions, concerns, observations, opportunities for improvement) in the report formats requested by the Government. For factory/supplier/field audits or person-to-person interviews, the Contractor shall write, execute and deliver audit plans, audit checklists, and audit reports to the Government. For findings/ issues, the Contractor shall write and track them along with their root causes and corrective actions in a spreadsheet format and punch list format, and shall vet the acceptance and ensure the consolidation of the corrective actions into the respective ULA's or Orbital-ATK's corrective action system/database. The Contractor shall ensure that the proprietary information of each Launch Service Provider is protected.

1.6.13 The Contractor shall assign risks and ratings based on the implications of the assessment and evaluation/ audit results in accordance with standards referenced in Section 2.0 and present them in slide/ chart format at the Chief Engineer Review Boards (ChERBs).

1.6.14 Manufacturing Engineering. The Contractor shall assess and evaluate/ audit manufacturing products and processes per standards, MIL-STD-1528A, SMC-S-003(T), AS9100, applicable industry/commercial standards, or Launch Service Provider company standards to meet certification objectives. The Contractor shall conduct the audits on the factory floor or at the appropriate facility. (CDRLs A002, B002, A004, B004, A005, B005)

1.6.15 The Contractor shall enter the assessments and evaluations, (e.g. analyses, findings/ issues, corrective actions, concerns, observations, opportunities for improvement) in the report formats requested by the Government. For factory/supplier/field audits or person-to-person interviews, the Contractor shall write, execute and deliver audit plans, audit checklists, and audit reports to the Government. For findings/ issues, the Contractor shall write and track them along with their root causes and corrective actions in a spreadsheet format and punch list format, and shall vet the acceptance and ensure the consolidation of the corrective actions into the respective ULA's or Orbital-ATK's corrective action system/database. The Contractor shall ensure that the proprietary information of each Launch Service Provider is protected.

1.6.16 The Contractor shall assign risks and ratings based on the implications of the assessment and evaluation/ audit results in accordance with standards in Section 2.0. The Contractor shall coordinate and collaborate with Design Engineering (Aerospace Corporation) on the risks and ratings, and present them in slide/ chart format at the ChERBs.

1.6.17 The Contractor shall participate in the Preliminary and Critical Design Reviews (PDRs and CDRs), Engineer Review Boards (ERBs) and ChERBs for manufacturing.

1.6.18 The Contractor shall identify, assess and audit product design and manufacturing processes requirements for the manufacturing baseline including special tooling, process proofing (qualifications), standards, methods, procedures, metrics, and data.

1.6.19 The Contractor shall assess and audit flow down of critical and key design requirements and characteristics to manufacturing requirements and their implementation in the process for manufacturing.

1.6.20 The Contractor shall verify/validate that manufacturing/producibility approaches/processes are developed/correlated with the critical design (See SMC-S-021 CDR Appendix E, MIL-STD-1528A and SMC-S-003(T)).

1.6.21 The Contractor shall perform manufacturing process audits on selected flight critical items and flight critical processes.

1.6.22 The Contractor shall develop technical content of audit checklists for manufacturing process.The Contractor shall assess and audit use/implementation of industry standards in the process for manufacturing and management.

1.6.23 The Contractor shall assess and audit facility capacity, process proofing, manufacturing controls, manufacturing and production readiness, and vendor/supplier control requirements for manufacturing.

1.6.24 The Contractor shall verify/validate that ULA and Orbital-ATK performs and documents Physical Configuration Audits (PCA), hardware acceptance reviews, and/or equivalent functions, as required. [Note: New Entrant Certification Guide (NECG) requires a "PCA-like" activity (section 7.7) for all LSPs certifying under alternatives 3 or 4].

1.6.25 The Contractor shall verify/validate the NE as-built documentation reconciles with the respective NE as-designed documentation.

1.6.26 The Contractor shall verify/validate the “as-built” configuration of the major components being shipped (e.g. Booster Assembly, Upper Stage Assembly, and Avionics Tower) against the ABCL (As-Built Configuration List) for NE certification efforts, respectively.

1.6.27 The Contractor shall attend and evaluate selected pre-ship reviews by Launch Service Provider (LSP) for manufacturing, during NE Certification efforts.

1.6.28 The Contractor shall verify/validate that the work being performed out-of-position for production (i.e. work that should have been performed at the factory but was performed at the launch site instead) is in accordance with approved procedures.

1.6.29 The Contractor shall assess and audit configuration change control management system for production.

1.6.30 The Contractor shall provide inputs to major reports and briefings (i.e. audit reports, certification status briefings, CCB briefings, etc.) for manufacturing.

1.6.31 The Contractor shall provide and perform factory surveillance and manufacturing issues support for NE certification efforts. The Contractor shall verify/validate that ULA and Orbital ATK are tracking and resolving those issues, non-conformances, and corrective actions.

1.6.32 Quality Engineering. The Contractor shall assess and evaluate/ audit manufacturing products and processes per standards, MIL-STD-1528A, SMC-S-003(T), AS9100, applicable industry/commercial standards, or LSP company standards to meet certification objectives. The Contractor shall conduct the audits on the factory floor or at the appropriate facility. (CDRLs A002, B002, A004, B004, A005, B005)

1.6.33 The Contractor shall enter the assessments and evaluations, (e.g. analyses, findings/ issues, corrective actions, concerns, observations, opportunities for improvement) in the report formats requested by the Government. For factory/supplier/field audits or person-to-person interviews, the Contractor shall write, execute and deliver audit plans, audit checklists, and audit reports to the Government. For findings/ issues, the Contractor shall write and track them along with their root causes and corrective actions in a spreadsheet format and punch list format, and shall vet the acceptance and ensure the consolidation of the corrective actions into the respective ULA's or Orbital-ATK's corrective action system/database. The Contractor shall ensure that the proprietary information of each Launch Service Provider is protected.

1.6.34 The Contractor shall assign risks and ratings based on the implications of the assessment and evaluation/ audit results in accordance with standards referenced in Section 2.0. The Contractor shall coordinate and collaborate with Design Engineering (Aerospace Corporation) on the risks and ratings, and present them in slide/ chart format at the ChERBs.

1.6.35 The Contractor shall participate in the PDRs, CDRs, ERBs and ChERBs for quality.

1.6.36 The Contractor shall identify, assess and audit verification and validation methods of the manufacturing baseline (including standards, procedures, metrics, and results) for Quality Engineering.

1.6.37 The Contractor shall assess and audit purchasing requirements (supplier control).

1.6.38 The Contractor shall organize, plan, and facilitate and co-perform manufacturing process audits with the manufacturing engineers.

1.6.39 The Contractor shall assess and audit configuration change control management system for production.

1.6.40 The Contractor shall verify/validate the as-built documentation reconciles with the as-designed documentation.

1.6.41 The Contractor shall verify/validate that ULA and Orbital-ATK performs and documents physical configuration audits, hardware acceptance reviews, and/or equivalent functions, as required.

1.6.42 The Contractor shall assess and audit manufacturing management and quality management systems for NE launch systems.

1.6.43 The Contractor shall provide inputs to major reports and briefings (i.e. audit reports, certification status briefings, Configuration Control Board (CCB) briefings, etc.).

1.6.44 The Contractor shall provide and perform factory surveillance and manufacturing issues support for NE certification efforts. The Contractor shall verify/validate that ULA and Orbital ATK are tracking and resolving those issues, non-conformances, and corrective actions.

1.6.45 Project Engineering. The Contractor shall perform project engineering and deliver associated documentation as directed by the Government (CDRLs A002, B002, A004, B004, A005, B005).

1.6.46 The Contractor shall develop products for and support the NECT in technical reviews (e.g. ERB, System Verification Review (SVR), ChERB, as appropriate), system level risks, test plan reviews, certification reports, NECT IPT inputs, and CCB inputs.

1.6.47 The Contractor shall support Biweekly meetings regarding NASA, NRO and/or NECT-related activities (e.g. ERB participation, information sharing etc.).

1.6.48 The Contractor shall evaluate and track NE issues and NE change and configuration management reporting, and shall provide reports to the NECT to support these certification activities.

1.6.49 System Engineering Processes. The Contractor shall perform system engineering processes tasks and deliver associated documentation, as directed by the Government

1.6.50 The Contractor shall maintain a risk database and present the information in briefing chart format, as requested for risk management reviews.

1.6.51 The Contractor shall evaluate the NE risk management plans for conformance with Risk Standards per section 2.0 of this document and deliver reports to Government.

1.6.52 The Contractor shall manage NE mission data deliverables by maintaining Government database(s) and shall deliver a status report to the Government, as required.

1.6.53 The Contractor shall track certification data (and associated metrics) and deliver status documentation to the Government, as required.

1.6.54 The Contractor shall track Review Item Discrepancies (RIDs) and Requests for Information (RFIs) for major reviews and deliver status reports to the Government, as required.

1.6.55 The Contractor shall support the Government in preparing and coordinating Configuration Control Board (CCB) packages.

1.6.56 The Contractor shall maintain document trees, the Livelink database (pertaining to the NECT), certification action item trackers, and certification status trackers for Systems Engineering Processes and deliver a status reports to the Government, as required.

1.6.57 The Contractor shall generate, document, and deliver a lessons learned Database to the Government.

1.6.58 **Logistics.** The Contractor shall evaluate requirements for logistic effort and deliver associated documentation, as directed by the Government. At a minimum, the Contractor shall evaluate logistics requirements for, packaging, handling, storing, and transporting all critical flight hardware/supporting hardware for the NE launch vehicle configurations. The Contractor shall enter their observations, evaluation, analysis, assessments, and recommendations in the report formats requested by the Government. If audits are necessary, the Contractor shall draft and execute the audit plans

1.6.59 **System Safety and Environmental Engineering.** The Contractor shall perform and coordinate system, range, orbital safety verification and validation of items, and launch site safety and environmental activities for the NE launch vehicle configurations and deliver associated documentation, as directed by the Government. The Contractor shall enter their observations, evaluation, analysis, and assessment recommendations in the report formats requested by the Government. If audits are necessary, the Contractor shall draft and execute the audit plans

1.6.60 **Security and Cybersecurity.** The Contractor shall ensure the Security and Cybersecurity requirements associated with NE are being met per section 2 of this document and the NECG. This activity includes but is not limited to the evaluation of the New Entrants Security Plan. The contractor shall deliver associated documentation, as directed by the Government. The Contractor shall enter their observations, evaluation, analysis, and recommended assessments in the report formats requested by the Government. If audits are necessary, the Contractor shall draft and execute the audit plans

2.1 SERVICES SUMMARY

2.2 General:

The contractor service requirements are summarized into performance objectives that relate directly to mission essential items. The performance threshold briefly describes the minimum acceptable levels of service required for each requirement. These thresholds are critical to mission success.

2.3 Performance Evaluation:

Performance of a service shall be evaluated to determine whether it meets the performance requirements of this contract. Re-performance of unacceptable services will be completed at no additional cost and will be preferred when appropriate. The Functional Area Evaluator (FAE) will use a Monthly Surveillance Checklist Report (SCR) to record their evaluation of the contractor conformance with the terms of the contract. The FAE shall document discrepancies on a Corrective Action Report (CAR). If a CAR is issued, the contracting officer will respond appropriately IAW the “Inspection of Services” clause in this contract. These same criteria will be used for the annual CPAR.

SS#	Performance Objective	PWS Share	Performance Threshold (Satisfactory)	Method of Surveillance
1	QUALITY OF SERVICE	1.2 1.3 1.4	Met all performance requirements. Minor problems had corrective actions with no impacts to the mission.	Monthly Status Report and Customer
2	SCHEDULE	1.2 1.3 1.4	All reviews, tasks, and deliverables are completed on time. Minor problems had corrective actions with no cost or schedule impacts.	Monthly Status Report and Customer Comments
3	COST CONTROL	Total PWS	Contractor managed overall cost/price estimates while meeting contractual requirements in line with Government priorities. Minor temporary cost overruns due to surging Government priorities explained and mitigated to achieve overall cost. Provided plan to resolve cost/price issues or facilitated overall reductions without jeopardizing performance. Contractor efficiently utilizes costs to meet Government requirements regarding adequate staffing levels, skill mix and allocation of personnel. Contractor provides sufficient notice of anticipated cost overrun. a. No late notices of anticipated Contractor overrun. Notices shall be no later than 60 days before expending 75% of the estimated cost. The notice of anticipated overrun shall include justification for cost increases. b. No more than one (1) formal customer complain per year related to cost.	CFSR Review and Customer Comments

4	BUSINESS RELATIONS	1.2 1.3 1.4	Professional and responsive. Met expectations. Adequate user satisfaction. Met subcontractor goals and small business goals of 20% as required (NAICS 541712). Responses were on time. No more than three (3) verified formal customer complaints per quarter. The contractor resolved customer complaints within ten (10) working days of receipt.	Periodic Inspection and Customer comments
5	MANAGEMENT OF KEY PERSONNEL	4.1	Maintained qualified staff to meet all requirements. Communicative and capable management to oversaw activities in a competent and professional manner. Direction of subcontractors or consultants met, and in some instances, exceeds all requirements of the contract.	Periodic Inspection and Customer comments
6	CYBERSECURITY AND SECURITY	Total PWS	Met security and cybersecurity requirements. Oversaw Security and IA activities in a very competent and professional manner. No more than (2) minor security incidents and zero (0) security violations for entire Award Term (AT) period.	3rd Party Audits and Customer Comments

3.1 USG FURNISHED PROPERTY AND SERVICES

The USG will provide, without cost to the contractor, the facilities, equipment, materials, and services listed below and in Section J, Attachment 7. All USG-furnished property and services shall be used only for performance of this contract. Requests for property or services not covered in this section shall require SMC/LE approval. The contractor shall manage USG-furnished property IAW FAR 52.2451 USG Property (Cost- reimbursement contracts). At the close of each work period, USG facilities, property, and materials shall be secured. The contractor shall complete a USG-furnished property inventory with a SMC/LE USG representative within 20 workdays of the contract start date and receipt for said property. Section J, Attachment 7 will be modified to reflect any discrepancies noted in the inventory.

3.2 FACILITIES:

3.2.1 No smoking is allowed in USG facilities. The contractor shall return the facilities to the USG in the same condition as received, fair wear and tear and approved modifications excepted. Keep work areas clean. Storage areas shall be kept in an orderly and professional manner to facilitate use and minimize loss or damage.

3.2.2 Office Space:

The contractor shall provide its own office space for its SMC employees within 30 minutes driving time of LAAFB. Limited USG office space may be permitted if instructed by the PCO. USG office space is available at VAFB and CCAFS.

3.3 USG-FURNISHED SERVICES:

USG-furnished services include services provided by USG activities as well as contracted services.

3.3.1 Utilities:

The USG will furnish utility services including water, sewer, electric, and heating for contractor use in performing this contract. The contractor shall ensure employees conserve utilities.

3.3.2 Postal Service:

Official USG-contractor mail that is generated by the USG as a result of this contract will be processed through the base mail system.

3.3.3 Communications:

3.3.3.1 Telephone:

The contractor shall be allowed the use of the telephone for contacting the Contracting Officer, Civil Engineer, Fire Department, Security Forces, receiving customer complaints and any other directly contract related communications.

3.3.3.2 Local Area Networking (LAN):

The USG will provide official use only Internet access in USG facilities through the USG-provided Local Area Net (LAN). The contractor shall obtain network access using local procedures. The USG must approve all access to the LAN.

3.3.3.3 Communication Security (COMSEC):

All DoD communications are subject to COMSEC review. Use of DoD telephones and telephone systems constitutes consent to COMSEC monitoring. The contractor shall comply with LAAFB COMSEC procedures and rules.

3.3.4 Refuse Collection:

Waste generated by the contractor in performance of the services specified with this PWS shall be deposited in USG dumpsters, excluding hazardous materials in which proper

disposal instructions shall be complied with. The contractor shall comply with base recycling regulations.

3.3.5 Insect and Rodent Control:

If evidence of insect or rodent infestations is discovered, the contractor shall immediately notify the FAE or Civil Engineer service call desk at (310)-653-1775 (for SMC).

3.3.6 Emergency Medical Service:

Emergency medical treatment and emergency patient transportation service is only available through the local community.

3.3.7 Security Forces:

The USG will provide general security service. Security Forces phone extensions are 911 for emergencies, and (310)-653 -2121 for routine calls.

3.4 USG-FURNISHED PROPERTY:

There are no known requirements for USG-Furnished Property (GFP) at this time. Offerors should complete the table contained in Appendix A, if applicable.

3.5 FORMS AND PUBLICATIONS:

The contractor shall obtain and maintain all forms and publications needed to perform the contract.

4.1 GENERAL INFORMATION

4.2 CONTRACTOR PERSONNEL

4.2.1 Contract Manager:

The contractor shall appoint a Program Manager (PM) to provide daily supervision and quality control, and who shall represent the contractor and account for the performance of the work throughout the term of the contract. The name of this person, and an alternate(s) who shall act for the contractor when the manager is absent, shall be designated in writing to the CO and the Functional Area Evaluator (FAE). The Program Manager (PM) shall be able to speak, read, write, and understand English. The PM shall be able to communicate effectively with contractor employees.

4.2.2 Contractor Employees:

The USG reserves the right to restrict the employment, under this contract, of any contractor employee, or prospective contractor employee who is identified as a potential threat to health, safety, security, general well-being, or the operational mission of the installation and its population. Contractor shall perform background checks, at contractor's expense, to ensure that said employee has not been convicted of any sexual crime or any crime against children.

4.2.3 Employee Training:

The contractor shall have all internal employee training except USG-provided for USG-facility/site safety/security at no additional cost to the USG.

4.2.4 Employee Certifications:

The contractor performing cybersecurity tasks shall be compliant with DoD requirements for IAM or Cybersecurity Technical (IAT) level I, II or III. The contractor shall be CISSP certified or in the process of completing CISSP certification within 6 months of contract award. The contractor shall diligently maintain cybersecurity certifications IAW 8570.1 requirements.

4.2.5 Dress and Appearance:

Contractor personnel shall present a clean, neat and professional appearance at all times and be easily recognized as contract employees. This may be accomplished by wearing a contractor provided badge depicting company name, employee's name, and title. Each employee shall wear the badge on the outer clothing on the front of the body between the neck and waist so the badge is visible at all times. No item of military clothing shall be worn as an outer garment.

4.2.6 Employment of USG Employees:

The contractor shall not employ any person who is an employee of the United States USG if the employment of that person would create a conflict of interest, or the appearance of a conflict of interest. Nor shall the contractor employ any person who is an employee of the Department of the Air Force, either military or civilian, unless such person seeks and receives proper approval. The contractor is cautioned that off-duty active military personnel hired under this contract may be subject to permanent change of station (PCS), change in duty hours, or deployment. Military reservists and National Guard members may be subject to recall to active duty. Their absence at any time shall not constitute an excuse for nonperformance under this contract. The contractor is prohibited from employing off-duty QAP who are managing any contracts or subcontracts awarded to the contractor.

4.3 INSTALLATION AND CONTROLLED AREA ACCESS

4.3.1 Installation Entry:

4.3.1.1 Los Angeles AFB and its Annexes are designated as a closed base. The boundaries of LAAFB are defined as the main base, Fort MacArthur, Pacific Heights, and Pacific Crest military family housing areas. Contractors are prohibited from entering LAAFB without USG sponsorship. The LAAFB Visitor Center (VC), located adjacent to Douglas Street Gate, issues short-term visitor and vehicle passes for 30 days or less. The VC is open 0700 – 1600, Monday – Friday, excluding holidays and designated AFSPC family days. When the VC is closed, visitor passes will be issued at the gate by the installation entry controller.

4.3.1.2 IAW Los Angeles AFB Supplement to AFI 31-101, 1 July 2009, the installation entry controller will verify the need for entry and issue an AF Form 75,

Visitor/Vehicle Pass or SFMIS Installation Access/Vehicle Pass. If verification cannot be accomplished, access will not be allowed. In all cases, the visitor must present valid picture identification prior to being issued a pass.

4.3.1.3 Contractors requiring continuous entry must obtain proof of Contractor Verification System (CVS) clearance (via AF Form 2586) from SMC/LE Security and process a vehicle pass request through Pass and ID in building 272. Additional documentation required includes a valid driver's license, vehicle registration and proof of insurance.

4.3.2 Facility Access:

Controlled Area Badges will only be issued to contractor personnel working on base a minimum of 32 hours per week. Additionally, in order to qualify for unescorted access to LE facilities, the contractor shall possess a final Secret Security Clearance issued by the Defense Industrial Security Clearance Office (DISCO). All other facility access shall be under escort required restrictions with pre coordination completed to ensure availability of authorized escorts.

4.4 HOURS OF OPERATION

4.4.1 Normal Hours of Operation:

The contractor shall perform the services required under this contract during the following hours:

SMC: 0730 – 1630 Monday through Friday, except federal holidays. VAFB: 0730 – 1630 Monday through Friday, except federal holidays. CCAFS: 0730 – 1630 Monday through Friday, except federal holidays.

4.4.2 Federal Holidays:

The contractor is not required to provide services on the following federal holidays. If the federal holiday falls on a Saturday or Sunday, it may be observed on Friday or Monday as directed.

New Year's Day
Martin Luther King's Birthday
Presidents Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veterans Day
Thanksgiving Day
Christmas Day

4.4.3 Emergency or Special Event Services:

As noted in subparagraphs of 1.2, 1.3 and 1.4. Other times as directed by the CO for emergency situations.

4.5 INSPECTION OF FILES:

The contractor shall electronically maintain records to document inspections, corrective or preventative actions taken, and the results of such actions.

4.6 PERFORMANCE EVALUATION MEETINGS:

The contracting officer may require the contracts manager to meet at least weekly with the Functional Area Evaluator (FAE), the Contracting Officer Representatives (COR) and/or the Contracting Officer during the first month of the contract. Meetings will be as often as necessary thereafter as determined by the Contracting Officer. However, if the contractor requests, a meeting will be held whenever a Contract Discrepancy Report is issued. The contracts manager, Contracting Officer, COR and FAE, shall sign the Contract Administrator's written minutes of these meetings. Should the contractor not concur with the contractor Administrator's minutes, the contractor shall so state any areas of non-concurrence in writing to the Contracting Officer within ten (10) calendar days of receipt of the signed minutes.

4.7 QUALITY ASSURANCE

4.7.1 USG Quality Assurance

4.7.1.1 According to the Inspection of Services clause FAR 52.246-5 Section E of the contract, the USG will evaluate the contractor's performance under this contract. The Functional Area Evaluators (FAE) will follow the methods of surveillance specified in the Performance Plan of this contract. USG personnel will record all surveillance observations. When an observation indicates defective performance, the (FAE) will require the contract manager or representative at the site to initial the observation. The initialing of the observation does not necessarily constitute concurrence with the observation, only acknowledgment that he or she has been made aware of the defective performance. USG surveillance of tasks not listed in the PWS or by methods other than those listed in the PWS (such as provided for by the Inspection of Services clause) may occur during the performance period of this contract. Such surveillance will be done according to standard inspection procedures or other contract provisions. Any action taken by the contracting officer as a result of surveillance will be according to the terms of this contract.

4.7.1.2 The USG will periodically evaluate the contractor's performance IAW the Performance Plan. The USG may inspect each task as completed and increase the number of quality assurance inspections if deemed appropriate because of repeated failures discovered during surveillance inspections or because of repeated customer complaints. Likewise, the USG may decrease the number of quality assurance inspections if performance dictates. The USG shall also receive and investigate complaints from customers. The contractor shall initially validate customer

complaints; however, the USG representative shall make the final determination of the validity of customer compliant (s) in the cases of a disagreement between the contractor and the customer.

4.7.1.3 Functional Area Evaluator (FAE):

FAEs are representatives of the Contracting Officer (CO) and will participate in performance evaluation and the administration of this contract except where exemptions have been approved by the Contracting Officer. Subsequent to contract award, the contractor will be provided with a letter identifying FAEs and Contracting Officer Representatives (CORs) and setting forth their duties and authorities.

4.7.2 Discrepancy Notification:

FAE will inform the contractor PM (or authorized representative) in person when discrepancies occur and will request corrective action. FAE will make a notation of the discrepancy on their surveillance checklist with the date and time the discrepancy was noted and will request the contractor PM (or authorized representative) to initial the entry on the checklist.

4.8 SCOPE CHANGES:

Any matter concerning a change to the scope, prices, terms or conditions of this contract shall be referred to the Contracting Officer and not the SMC/LE PM, FAEs or the CORs.

4.9 ADMINISTRATIVE RECORDS:

All records, documents, and associated papers provided by the USG and generated during the period of this contract become USG property and will remain in place upon contract termination or completion. During the period of the contract, records, documents, and associated papers shall be available for review.

4.10 SAFETY:

The applicable Occupational Safety and Health Act (OSHA) standards will be mandatory for this contract. The contractor shall comply with all Federal, State and Local laws concerning safety. Contractor shall manage all work areas to ensure the safety of building occupants, base personnel, or visitors in or near the areas. The contractor must provide a Safety Plan to Operational Contracting for review and the plan must be implemented to ensure all personnel are aware of the safety requirements. Contractor must ensure that personnel are properly trained on the equipment they are tasked to operate. The contractor shall provide support to the base safety office to resolve facilities and infrastructure related safety issues.

APPENDICES:

USG Furnished Property/Services/Equipment
Acronyms, Abbreviations and Definitions
Applicable Publications and Forms

Appendix A - USG Furnished Property/Services/Equipment

DESCRIPTION	MODEL	SERIAL NUMBER	STOCK NUMBER	QUANTITY	MARKET VALUE

Appendix B - Acronyms, Abbreviations and Definitions

1 ASTS	1st Air and Space Test Squadron
4 SLS	4th Space Launch Squadron
4 SLS/CC	4th Space Launch Squadron Commander
4 SLS/CE	4th Space Launch Squadron Chief Engineer
5 SLS	5th Space Launch Squadron
5 SLS/CC	5th Space Launch Squadron Commander
30 LCG	30th Launch Group
30 LCG/CC	30th Launch Group Commander
30 LCG/TD	30th Launch Group Technical Director
30 LCSS	30th Launch Support Squadron
30 SW	30th Space Wing
30 SW/CES	30th Space Wing Civil Engineer Squadron
45 GCC	45th Group Control Center
45 LCG	45th Launch Group
45 LCG/CC	45th Launch Group Commander
45 LCG/CD	45th Launch Group Chief Engineer
45 LCG/TD	45th Launch Group Technical Director
45 LCSS	45th Launch Support Squadron
45 OG	45th Ops Group
45 OSS/OSO	45th Operations Support Squadron
45 SW	45th Space Wing
45 SWI	45th Space Wing Instruction
AECC	Automated Entry Control Card
AF	Air Force
AFI	Air Force Instruction
AFPEO/SP	Air Force Program Executive Officer for Space
AFSPC	Air Force Space Command
AFSPCCL	AFSPC Checklist
AFSPCI	AFSPC Instruction
APOI	Annual Plan of Instruction
C&A	Certification and Accreditation
C2	Command & Control
CAB	Corrective Action Board
CAR	Corrective Action Report
CCAFS	Cape Canaveral Air Force Station
CCB	Configuration Control Board
CCP	Configuration Change Proposal
CDMA	Critical Data Management Applications

CDRL	Contract Data Requirements List
ConOps	Concept of Operations
CMR	Combat Mission Ready
COMSEC	Communications Security
COR	Contracting Officer Representative
CPI	Critical Program Information
CPR	Change Problem Request
CRM	Comment Resolution Matrix
CSP	Counterintelligence Support Plan,
CSR	Critical System Resources
DCRD	Derived Communications Requirements Document
DIACAP	DoD Cybersecurity Certification & Accreditation Process
DIS	Defense Investigative Service
DISCO	Defense Industrial Security Clearance Office
DMSP	Defense Meteorological Satellite Program
DO	Director of Operations
DoD	Department of Defense
DOE	Design of Experiments
DOL	Day-of-Launch
e-MASS	enterprise Mission Assurance Support Service
EAL	Entry Access List
ECP	Engineering Change Proposal
EELV	Evolved Expendable Launch Vehicle
EITDR	Enterprise Information Technology Data Repository
ELSS	Engineering Launch Support System
EMP	Environmental Mitigation Plan
ESOHCAMP	Environmental Safety & Occupational Health Compliance Assessment & Management Program
FAE	Functional Area Evaluator
FFRDC	Federally Funded Research and Development Corporation
FISMA	Federal Information Security Management Act
FML	Flight Mission Lead
FRR	Flight Readiness Review
FSU	Former Soviet Union
FTE	Full-Time Equivalent
FWV	Flight Worthiness Verification
GCC	Group Control Center
GFP	Government-Furnished Property
GIDEP	Government Industry Data Exchange Program
HAZMAT	Hazardous Materials
HHQ	Higher Headquarters

HSN	High Speed Network
HVAC	Heating, Ventilation and Air Conditioning
IA	Information Assurance
IAM	Information Assurance Manager
IAT	Information Assurance Technical
IAW	In Accordance With
ICE	Integrated Crew Exercise
IDE	Integrated Data Environment
IPR	Integrated Program Review
ISD	Instructional System Development
ISI	Installation Security Instruction
ITA	Integrated Threat Assessment
LAAFB	Los Angeles Air Force Base
LAN	Local Area Network
LCDB	Launch Certification Database
LCG	Launch Control Group
LCMP	Life Cycle Management Plan
LCSP	Life Cycle Sustainment Plan
LCSS	Launch Support Squadron
LISN	Launch Information Support Network
LMM	Launch Mission Manager
LMOI	Launch Manifest Operating Instruction
LOA	Letter of Assignment
LRSW	Launch & Range Systems Wing
LRSW/EN	Launch & Range Systems Wing, Engineering Division
LSC	Launch Support Center
LTRS	Launch and Test Range System
LV	Launch Vehicle
LV_LSC	Launch Vehicle Launch Support Center
LVC	Launch Vehicle Contractor
LVDB	Launch Verification Database
LVM	Launch Verification Matrix
MAJCOM	Major Command
MAP	Mission Assurance Plan
MCC	Mishap Control Center
MDA	Missile Defense Agency
MDR	Mission Dress Rehearsal
MMC	Master Mission Checklist
MS	Mission Support
NEPA	National Environmental Policy Act
NOPS	NRO Operations Squadron

NRO	National Reconnaissance Office
NSS	National Security Space
OI	Operating Instruction
OPSEC	Operations Security
ORS	Operational Responsive Spacelift
OSD	Office of the Secretary of Defense
OSL	Office of Space Launch
OSP	Operations Security Plan
OSS&E	Operational Safety, Suitability, and Effectiveness Plan
PESHE	Programmatic Environmental Safety and Health Evaluations
PI	Program Integration
PM	Program Manager
PMPCB	Parts Material and Process Control Board
PMR	Program Management Review
PPIP	Program Protection Implementation Plan
PPP	Program Protection Plan
PPS	Program Protection Survey
PWS	Performance-based Work Statement
QE	Quality Engineer
RAT	Rehearsal Anomaly Team
RC	Records Custodian
RLCC	Remote Launch Control Center
RLCR	Remote Launch Control Room
RMB	Risk Management Board
RT	Recurring Training
RTL	Roadmap to Launch
SAV	Staff Assistance Visit
SCG	Security Classification Guide
SCI	Sensitive Compartmented Information
SCR	Surveillance Checklist Report
SDS	System Design Specification
SE&I	Systems Engineering and Integration
SEP	Systems Engineering Plan
SIP	Self Inspection Program
SIS	Standard Interface Specification
SLM	Space Launch Manifest
SLS	Space Launch Squadron
SMC	Space & Missile Systems Center
SMC/PI	SMC Program Integration
SMT	Space Launch Maintenance Technician
SOI	Security Operating Instruction

SPRD	System Performance Requirements Document

SQL	Structured Query Language
SRD	Systems Requirements Document
SRS	System Requirements Specification
SRTP	Space Research and Technology Protection
SSMP	System Safety Management Plan
SSWG	System Security Working Group
ST	Supplemental Training
STAR	System Threat and Analysis Report
STARS	Spacelift Telemetry Acquisition and Reporting System
SV	Space Vehicle
SVC	Space Vehicle Contractor
SWI	Space Wing Instruction
TCP	Task Change Proposal
TEAMS	Training & Evaluation Administrative Management System
TEM	Technical Exchange Meeting
TIM	Technical Interchange Meeting
TSP	Transition Support Plan
ULA	United Launch Alliance
UQT	Unit Qualification Training
VAFB	Vandenberg Air Force Base
VAR	Vehicle Activity Review
WMS	Wing Master Schedule

Glossary

30th Civil Engineering Squadron (30 CES) – process all emergency, urgent and non-routine work request submitted to Production Control. 30 CES shall maintain all real property and real property installed equipment in support of mission assurance in the RLCC.

Federally Funded Research and Development Corporation – Federally funded research and development centers, or FFRDCs, are unique independent nonprofit entities sponsored and funded by the U.S. USG to meet specific long-term technical needs that cannot be met by any other single organization. FFRDCs typically assist USG agencies with scientific research and analysis, systems development, and systems acquisition.

Instructional System Development (ISD) – ISD is an instructional design model for analyzing, designing, developing, and implementing effective and cost-efficient instructional systems. Applications of the principles and processes are found in AFMAN 36-2234 and apply to all personnel who plan, design, develop, implement, approve, administer, conduct, evaluate or manage instruction for Air Force personnel.

Launch Flow Processing – All activities required to prepare the space lift vehicle and payload for launch, to include all DOL actions.

Performance Objective – The outcome associated with successful contract performance in a specific area. This is a critical success factor in achieving the Organization's mission, vision and strategy which, if not achieved, would likely result in a significant decrease in customer satisfaction or risk mission failure. Obtaining multi-services/sub-services performed at a certain measurable standard and consistently ensures success in achieving the objectives critical to the mission.

Performance Threshold – The minimum performance level of a performance objective required by the USG.

Quality Assurance Personnel (QAP) -Individuals designated to perform quality assessment functions, and manage performance IAW the Performance Plan. They serve as on-site technical managers assessing contractor performance against contract performance standards. Personnel in this area have many titles, such as Quality Assurance Evaluator (QAE), Quality Assurance Specialist (QAS), Functional Area Evaluators (FAEs) (A&AS), and Contracting Officer Technical Representative (COTR).

Service Delivery Summary – A summary of the performance objective and performance threshold required by the USG in contractor performance. Also known as a Performance Requirements Summary or Services Summary or Performance Requirements Document.

Source of Repair Assignment Process – A SORAP is required for all new acquisitions, modifications or reconfigurations, and depot workload source changes including any potential for overseas depot workload. In the case of new acquisition or modification programs, this process should be initiated prior to Milestone B.

Transition Support Plan (TSP) -The TSP is used to assign responsibilities and identify actions required to complete the transition of management responsibilities.

Appendix C - Applicable Publications and Forms

Publications (to include their supplements at any wing level) and forms that apply to this PWS are listed below. The publications and forms have been coded as mandatory or advisory. The contractor is obligated to follow those publications and use those forms coded as mandatory to the extent specified in other sections of this PWS. The contractor shall be guided by those publications or use those forms coded advisory to the extent necessary to accomplish requirements in this PWS.

Supplements or amendments to listed publications from any wing level may be issued during the life of the contract. The contractor shall immediately implement those changes that result in a decrease or no changes in the contract price and notify the contracting officer in writing of such changes. Before implementing any change that will result in an increase in contract price, the contractor shall submit to the contracting officer a price proposal within 30 calendar days following receipt of the change by the contractor.

The contracting officer and the contractor shall negotiate the change into the contact under the provisions of the contract clause entitled “Changes.” Failure of the contractor to submit a price proposal within 30 calendar days following receipt of the change entitles the USG to performance according to such change at no increase in contract price (unless the time requirement is waived by the contracting officer according to Paragraph C of the changes clause).

Note: Documents available in electronic format.

Publication Number	Title	Date	Class	Reference Source	Mandatory/ Advisory
Air Force Forms					
AF Form 0312	Classified Information Nondisclosure Agreement (SF312)		U	PWS 1.2	
AF Form 0332	Base Civil Engineer Work Request		U	PWS 1.3	
AF Form 0813	Request for Environmental Impact Analysis (Example)	TBD	U	PWS 1.2; 1.3; 1.4	A
AF Form 2586	Unescorted Entry Authorization Certificate		U	PWS 4.0	
DoD Forms					
DD Form 0254	Department of Defense Contract Security Classification Specification	1-Dec-99	U	PWS 1.2	
Air Force Documents					
AFI 10-245	Anti-Terrorism (AT)	30-Mar-09	U	PWS 4.0	M
AFI 10-701	Operations Security	18-Oct-07	U	PWS 1.2	M
AFI 31-101 USAFESUP 1	Air Force Installation Security Program	2-Jan-03	FOU O	PWS 1.2	Code: 6064790
AFI 31-401	Information Security Program Management	1-Nov-05	U	PWS 1.2, 1.3, 1.4	M
AFI 31-501	Personnel Security Program Management	27-Jan-05	U	PWS 1.2	M
AFI 31-601	Industrial Security Program Management	29-Jun-05	U	PWS 1.2	M
AFI 33-115 Vol 1	Network Operations (NETOPS)	24-May-06	U	PWS 1.4	M
AFI 36-2201 Vol 3	Air Force Training Program/On The Job Training Program	4-Feb-05	U	PWS 1.2	M
AFI 37-138	Records Disposition Procedures and Responsibilities	10-Jan-05	U	PWS 1.2	

AFI 63-101	Acquisition and Sustainment Life Cycle Management & AF LCMP Guide, 19 Apr 05	17-Apr-05	U	PWS 1.2	A
AFI 63-1201	Life Cycle Systems Engineering	23-Jul-07	U	PWS 1.2	M
AFI 91-202 AFSPCSUP1	US Air Force Mishap Prevention Program	30-Jul-07	U	PWS 1.2; 1.3; 1.4	M
AFMAN 36-2234	Educational Training - Instructional System Development	1-Nov-93	U	PWS 1.4; Appx A Glossary	A
AFMAN 37-104	Managing Information to Support the Air Force Mission	1-Jun-95	U	PWS 1.2	A
AFMAN 37-123	Management of Records	17-Jul-95	U	PWS 1.2	A
AFPAM 63-1701	Program Protection Planning	27-Mar-03	U	PWS 1.2; 1.3; 1.4	A
AFPD 31-6	Industrial Security	01 Apr 00 Change 1: 13 Mar 07	U	PWS 4.0	M
AFSPCCL 10-12	Crew Operations (MAJCOM/NAF/Wing)	2-May- 05	U	PWS 1.3	A
AFSPCI 10-1202	Crew Operations	15-Nov-08	U	PWS 1.3	M
AFSPCI 10-1208	Spacelift Operations	1-Oct-08	U	PWS 1.3	M
AFSPCI 21-202	Space Launch Maintenance and Responsibilities	15-Sep-08	U	PWS 1.3; 1.4	M
AFSPCMAN 91-710 Vol-1 through Vol-7	Range Safety User Requirements Manual Volumes 1 -7	1-Jul-04	U	PWS 1.2; 1.3; 1.4	A
ANSI/PMI 99-001-2004				PWS 1.2	

EELV DCRD	SMC/EV EELV Derived Communications Requirements Document (DCRD) for ELSS and NOPS Support	20-Oct-03	FOUO	PWS 1.2	M
EELV EIMP	Environmental Impact Mitigation Plan (Draft)	7-Mar	U	PWS 1.2; 1.3; 1.4	M
EELV MAP	LESW Mission Assurance Plan (MAP)	DRAFT	FOUO	PWS 1.2	M
EELV PESHE	Programmatic Environmental, Safety, and Occupational Health Evaluation (PESHE)	8-Mar	FOUO	PWS 1.2; 1.3; 1.4	M
EELV SEP	EELV Systems Engineering Plan Ver 1.3	13-Feb-08	FOUO	PWS 1.2	M
EELV SIS	EELV Standard Interface Specification Version 6.0	5-Sep-00	U	PWS 1.2	M
EELV SPRD	EELV System Performance Requirements Document (SPRD)	6-Feb-06	U	PWS 1.2	M
EELV SRD	EELV Engineering Launch Support System (ELSS) System Requirements Document Rev 2.1	27-Jan-04	U	PWS 1.2; 1.3; 1.4	M
EELV SSMP	Atlas V and Delta IV System Safety Management Plan	xxx 2008	FOUO	PWS 1.2; 1.3; 1.4	M
SMC AFPEO/SP	Technology and	26-Nov	U	PWS 1.4	
Policy 63-17	Acquisition Systems Security Program Protection	1			
SMCI 20-101	Space Systems Sustainment Planning and Management	5 Mar 09, Rev1	U	PWS 1.2	M
TOR-2005(8546)-6018	Mission Assurance Guide	1-Jul-07	U	PWS 1.4	

TOR-2005(8583)-4018	Risk Management Guide for Space Acquisition	29-Apr-05	US Gov & Cntrs	PWS 1.2	A
TOR-2005(8583)-4019	Risk Management Plan Guide for Space Acquisition Programs	29-Apr-05	US Gov & Cntrs	PWS 1.2	A
MIL-HDBK-502	Acquisition Logistics	30-May-97	U		A
MIL-PRF-49506	Logistics Management Information		U	PWS 1.2	A
45 SWI 90-201	Installation Exercise Program	8-Feb-05	U	PWS 1.3	
DoD Documents					
DoD 5200.1 PH	DoD Guide to Marking Classified Documents	28-Apr-97	U	PWS 1.2	
DoD 5200.1 PH-1	Classified Information Nondisclosure Agreement (SF312)	7-May	U	PWS 1.2	
DoD 5200.1- R	DoD Information Security Program	17-Jan-97	U	PWS 1.2	
DoD 5200.2- R	DoD Personnel Security Program Regulation	Jan-87	U	PWS 1.2	
DoD 5220.22-M	National Industrial Security Program Operating Manual	28-Feb-06	U	PWS 1.2; 4.0	
DoD 5220.22-R	National Industrial Security Program (NISPOM) Regulation	4-Dec-85	U	PWS 1.2	
DoDD 5000.1	The Defense Acquisition System	12-May-03	U	PWS 1.3; 1.4	A
DoDD 5200.01	DoD Information Security Program	9-Oct-08	U	PWS 1.3; 1.4	A
DoD 5200.1- M	Acquisition Systems Protection Program	Mar-94	U	PWS 1.3; 1.4	A
DoDD 5200.39	Security, Intelligence, Counterintelligence Support of Acquisition Program Protection	10-Sep-97	U	PWS 1.3; 1.4	A
DoDD 5205.02	DoD Operations Security Program	6-Mar-06	U	PWS 1.2	

DoDI 5200.39	Critical Program Information (CPI) Protection Within the Department of Defense	16-Jul-08	U	PWS 1.2	
DoDI 8510.01	DoD Information Assurance/Cybersecurity Certification and Accreditation Process	28-Jul-07	U	PWS 1.2	
FAR 52.246-5 Section E	Inspection Of Services	Apr-84	U	PWS 4.0	
FAR 52.245-1	USG Property (Cost-reimbursement contracts)		U	PWS 3.0	
FAR SUPP 5352.204-9000	Installation Exercise Program	8-Feb-05	U	PWS 4.0	
FAR SUPP 5352.204-9000 Section I	Contractor Visitor Security Agreement between 61 ABG/SFS and base contractors.		U	PWS 4.0	
NISPOM	National Industrial Security Program Operating Manual (NISPOM)	28-Feb-06	U	PWS 4.0	
NSS 03-01	National Security Space (NSS) Acquisition Policy 03-01	27-Dec-04	U	PWS 1.2; 1.3; 1.4	A
EWR 127-1 MDC-99H1112	Eastern and Western Range Safety Manual 127-1 for Delta IV Program	Revision D Jan 04	Exp Cntl	PWS 1.2; 1.3; 1.4	M
EWR 127-114000-00-019	Eastern and Western Range Safety Manual 127-1 for Atlas V Program	Revision C 13 May 04	Exp Cntl	PWS 1.2, 1.3, 1.4	M
EWR 127-1 Ver 1997	Range User Handbook	31-Oct-97	U	PWS 1.2, 1.3, 1.4	A