

NAS10-99001

JOINT BASE OPERATIONS AND SUPPORT

CONTRACT

ATTACHMENT J-1

(CHANGES CURRENT THROUGH MOD 511)

STATEMENT OF WORK

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1.0 PROJECT MANAGEMENT

The contractor shall accomplish the Joint Base Operations and Support Contract (J-BOSC). The J-BOSC provides launch support and public works such as civil engineering services, work control, infrastructure sustainment, and base operations support including information technology, logistics, PMEL laboratories, transportation, airfields operations, and protective, administrative, medical, and environmental services to NASA at Kennedy Space Center (NASA-KSC), the Air Force at Cape Canaveral Air Force Station (CCAFS), at Patrick Air Force Base (PAFB), and at the Florida Annexes.

The contractor shall interact, plan, and effectively coordinate and communicate with all levels of customers, both government and other associate contractors. The contractor shall provide reliable and efficient service that fully satisfies the requirements of the U.S. Air Force (USAF) and NASA and allows them to accomplish their diverse missions without exception and concern for their facilities and services.

The contractor shall implement government initiatives such as the maintenance and restoration of facilities, energy management and conservation, and evolving requirements related to the protection of the environment and minimizing personnel exposure to hazardous materials. Because of constrained budgets, the contractor shall implement trade-offs with other contract functions for the duration of the contract to ensure compliance with regulatory and statutory requirements. Government personnel shall be notified, in a timely manner, of such trade-offs and the impact of these trade-offs to contract requirements.

The contractor shall partner with KSC and the 45th Space Wing to maintain public safety and trust as well as the safety of the workforce. The contractor shall maintain safe and secure operating locations and be flexible and innovative in protecting and preserving physical and environmental assets. The contractor shall prepare for, and effectively respond to, emergency situations and contingencies. The contractor shall support real-time requirements 24 hours a day, 7 days a week.

The contractor shall assure superior customer satisfaction at all stages of work from requirements development through delivery. The contractor shall implement and sustain a customer-oriented work control and planning process that shall provide responsive base support and simultaneously support a multitude of customers having conflicting requirements and priorities.

Management Approach. The contractor shall develop, implement, and maintain a management approach to support NASA-KSC and the Air Force 45th Space Wing's goal to be the premier gateway to space. The contractor shall employ a highly innovative, entrepreneurial, and efficient management program that challenges the status-quo and worker culture in formulating and implementing high quality, timely, and cost-effective base support services. The contractor shall apply an integrated team approach that incorporates a centralized Program Management Office and a single set of consolidated and easily understandable policies and procedures for the J-BOSC program. The contractor shall: take a proactive approach to labor relations involving collective bargaining agreements that includes the formation of a consolidated Labor Management Council; "right-size" the workforce staffing profile; implement an incentive plan for the entire workforce that rewards employees for suggesting and developing ideas that result in quantifiable benefits; and manage the project through incorporation of quality concepts. The contractor shall comply with DRD 1.1-13, Report, Advance Notification of Workforce Reductions, when a workforce reduction is imminent.

The contractor shall optimize J-BOSC support services at the least possible cost within all performance parameters. The organization structure shall balance flexibility and accountability

to ensure responsiveness, product quality, and resource control. The workforce shall be empowered with the responsibility and authority to achieve performance goals.

Business Approach. The contractor shall establish a program which embodies sound financial management concepts that result in affordable costs while continuously improving customer support. The contractor must realize cost savings through improved project efficiency while reducing dependency on government-furnished property and services. The contractor shall team with KSC, the 45th Space Wing, and their customers to optimize resource management. The contractor shall develop a subcontract program that recruits and selects qualified subcontractors, maximizes the use of commercial services, and provides meaningful subcontracting or teaming opportunities to achieve the J-BOSC socio-economic procurement goals.

Resource Management. The contractor shall provide a contract resource management system, to include subcontracts, for the total contract work activity. The contractor resource management system shall provide timely and accurate visibility of contract manpower, cost, and schedule performance and the interrelationship among them. This includes data and supporting variance analyses as well as special exercises involving schedules, work flows, and budgets. Work shall be prioritized, managed, and controlled within program funding levels. Contractor data shall be current, accurate, and complete, and actual costs shall not exceed approved operating plans.

Applicable Work Load Indicators (WLIs) for each WBS are incorporated in attachment J-12 and reported in accordance with DRD 1.1-12, Report and Review, Workload Indicators, Work Backlogs and Deferred Work.

1.1 MANAGEMENT AND CONTROL

1.1.1 Mission Support

The contractor shall support all mission related events per this statement of work.

1.1.1.1 Launch Support. The contractor shall provide all services consistent with mission requirements for support of Space Transportation System (STS) and other vehicle launches. These services shall include planning for operations, maintenance, and logistics support in preparation for launches, operations and maintenance support during launch operations, and requirements following launches prescribed in the Shuttle Integrated Operations and Maintenance Instructions (IOMIs) and Air Force Program Directives. NASA’s KPD 8630.3, KSC Shuttle Processing Flight Readiness Certification Review Plan, and ELV/EELV, 501-97 (Draft) Universal Documentation System, depict the standard mission support requirements in accordance with Base Support Policy.

1.1.1.1.1 Launch Readiness Briefings. The contractor shall provide Launch Readiness Briefings for each major milestone of the Space Transportation System (STS) flow. The briefings for the Pad Flow Readiness Review and Launch Countdown Review will be comprehensive in nature, while the remaining briefings will be milestone specific and consist of updates to the comprehensive packages. Joint NASA/SGS Reviews that will be required for STS flow are:

#	Event/Milestone
1	Pad Rollover & Flow Readiness (MAJOR)
2	A5214 – Rollout
3	S00024 – Propellant Load
4	S0017 – TCDT
5	S5009 – Ord. Installation
6	S0037 – Tanking Test
7	Launch Countdown/RTLS (MAJOR)

8	Landing - EOM
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The contractor shall also facilitate at least one JBOSC Launch Readiness briefing for ELV and 45 SW launches inviting the government to attend. The contractor will provide the government with preliminary copies of the launch briefing package to review readiness status prior to the briefing (MOD 436)..

1.1.1.2 24-Hour Turn-Around. The contractor shall provide the necessary resources to support 24-hour turn-around time between launch configurations.

1.1.1.3 Liaison Duties. The contractor shall respond to customer needs 24 hours a day, 365 days a year. The contractor shall perform liaison duties between range users, customers, 45th Space Wing and KSC elements, contractors, and host agencies. Liaison duties include, but are not limited to, receiving support requests, coordinating activities such as work clearance request/excavation permits and utility outages, and passing work requirements to other contractors. Technical Exhibit 5.1-501 lists all the duties. The contractor shall provide a Cape Superintendent function to assist the Cape Commander's office with support activity.

1.1.1.3 Community Special Events. The contractor shall provide miscellaneous support for NASA-KSC, Air Force-CCAFS, PAFB special events, and community special events. This includes the External Relations Office and public affairs support.

1.1.2 Deleted

1.1.3 Flexibility

The contractor shall respond to changing service requirements, including work resulting in unexpected surges, and prioritize activities to best accomplish the intent of the contract in terms of mission support, Cape Canaveral Spaceport Management Office (CCSMO) initiatives, and customer service.

1.1.3.1 PAFB In-Scope Service Requirements. The contractor shall respond to service requirements contained within the general scope of this contract (not specifically identified) at PAFB, upon contracting officer direction, on a non-interference reimbursable basis. The contractor shall document work performed at PAFB under the scope of this paragraph and brief the government on such work on a monthly basis during the Work Management Process IPT. (Mod 306).

1.1.4 Work Classification and Control

The contractor shall properly classify and prioritize all work through the Work Control Center for day-to-day work requirements and through Engineering Services for facilities projects.

1.1.4.1 Schedules and Cost Estimates. The contractor shall provide schedules and cost estimates at the work order level that include cost element breakdowns as requested by the customer.

1.1.5 Work Management System

The contractor shall provide controlled access (network accessible), on-line, interactive automated management and work information system(s). The contractor shall provide authorized users with electronic access to this system and other on-line management information systems and databases. Management and work information systems shall be user friendly and provide required customer data as needed. Access includes the ability to read and download data, and construct and execute ad hoc queries and custom reports with current and

historical data. Data shall be compatible with Microsoft software products or made available through a front-end user interface. Data shall be current, accurate, and complete. The contractor shall develop and maintain user's guides, and provide training for user on how to access on-line Management Information Systems (MIS) and databases.

1.1.6 Automated Systems

The contractor shall provide an information infrastructure that links all applications, resident on all present systems, to share data and information for real-time decision-making across functional area boundaries. The contractor architecture shall provide for interoperability among all management, operations, administrative, and financial systems to improve the efficiency of services and communications for all stakeholders. The architecture shall provide a functional-area independent mechanism to gather data throughout J-BOSC without interfering with the current business process and provide the backbone necessary to sustain orderly systems and applications migration through a set of phases designed to remove system dependencies and improve communication.

The contractor shall provide an on-line commercial off-the-shelf (COTS) work management package to manage scheduled maintenance and repair, corrective maintenance and repair, construction, trouble calls, and other operations and maintenance activities with one integrated tool; ensure work orders are properly handled, necessary approvals are obtained, and follow-on work after emergency mitigation is properly planned and scheduled; improve resource planning and efficiencies across departmental boundaries; capture cost and status tracking at all levels of interest, including individual work orders, by accounting code, project, and WBS area, and feed this information into the customized business system. The purchasing function is centralized through its interface with the customized business system.

1.1.6.1 Government MIS Systems. The contractor MIS shall collect and input required data via Job Ordered Cost Accounting System (JOCAS) submittal in accordance with DRD 1.3-01, Report, Weekly Job Ordered Costs to support government financial reporting requirements.

1.1.6.2 Cost and Schedule Status Reports. The contractor shall provide daily access to an electronic Automated Data Extract Report DRD 1.1-06, Report, Automated Data Extract to keep the government and end customers informed of the cost, schedule, and status of work performed or in progress. Cost data is updated in accordance with DRD 1.3-01, Weekly Job Ordered Costs Report.

1.1.6.3 Data Exchange Standards. The contractor shall support efforts to develop and use data exchange standards (or equivalent functions) to share information concerning Air Force and NASA resources between organizations.

1.1.7 Performance Metrics

The contractor shall develop, maintain, analyze and report performance for contract requirements and provide management reviews. The contractor shall provide objective, measurable metrics as partnered with CCSMO. The contractor shall report existing or potential problem areas with recommended solutions. Applicable Performance Standards for each WBS are incorporated in Attachment J-1, Appendix C and are reported in accordance with DRD 1.1-03, Report, Contract Performance (Metrics).

1.1.8 General Project Management

The contractor shall provide a detailed business model that includes specific recommendations for using the resources base; a practical modernization approach for equipment and facilities; a stewardship approach; J-BOSC cost reductions; an approach for phasing out general purpose

government property; functions to be subcontracted; and a proactive labor relations approach with the unions.

The contractor shall initiate proactive measures to support the government in achieving the goal of becoming the world's premier gateway to space while concurrently maximizing operational effectiveness for the government and commercial customers. The contractor shall form a full partnership with CCSMO to create and implement a beneficial approach to reduce J-BOSC costs associated with relying on government investments in infrastructure and equipment.

1.1.8.1 Risk Management. The contractor shall execute a risk mitigation plan for abating all identified management and technical risks, including labor relations with the unions, loss of skill sets and institutional knowledge to support base operations, information infrastructure, disruption to current service levels, and organizational change necessary to implement the government's vision of the premier gateway to space.

The contractor's Program Manager is responsible for identifying and managing risk elements for the program. While some risk elements include items that are external and beyond the contractor's control, planning for all risks includes proper management recognition and attention to reduce or eliminate these items and their impact. The Program Manager identifies all risk elements and prepares mitigation plans. Each quarter, the contractor's Program Manager shall brief CCSMO on management risk elements and their status concerning potential impact to J-BOSC operations and assess risk elements to be removed or included.

1.1.8.2 Equal Employment Opportunity. The contractor shall submit a quarterly electronic Equal Employment Opportunity (EEO) Report on KSC Forms 32-58 C/G 1/91 including Attachments A, B, and C, in accordance with DRD 1.1-01, Report, Equal Employment Opportunity.

1.1.8.3 Phase-out of Government Property. The contractor shall create and adhere to a disciplined methodology and process to significantly reduce time and costs associated with the analysis and purchase of general purpose property. The contractor shall assess, recommend, and purchase property necessary for maintaining successful day-to-day contract operations. The contractor shall systematically phase out J-BOSC government-furnished general purpose property to support the government's objective of reducing dependency on government-furnished property. The contractor shall maintain a master list of all equipment items purchased for review at final contract termination in accordance with DRD 1.1-11, Report and Review, Replacement of Government Furnished Property.

1.1.8.4 Training. The contractor shall provide a user's guide and training for user access to on-line MIS and databases for NASA, Air Force and other specified organizations and personnel. The contractor shall provide fire and security awareness training. Quality Assurance (QA) training and recurrent training shall be provided to the contractor personnel. Training shall meet customer needs and shall be conducted in a timely and courteous manner. The contractor shall maintain current data for all required certifications. The contractor shall ensure that there are no violations resulting from lapses in required personnel certifications.

1.2 SAFETY AND HEALTH

The contractor shall partner with NASA-KSC and the 45th Space Wing to maintain public safety and trust as well as the safety of the workforce. The contractor shall maintain safe operating locations and be innovative in the protection of personnel and property. The contractor shall establish, implement, and maintain a comprehensive safety and health program that meets current: Programmatic requirements, federal law, and nationally recognized consensus standards referenced within OSHA, NASA guidelines, handbooks, specifications, and standards, and is effective in the identification and mitigation of risks. The safety and health

program shall be fully documented and auditable and the contractor shall support government audit and surveillance activities of contractor plans, procedures, and processes when deemed necessary by the government. Contractor internal assessments, results, and surveillance activities shall be made available and auditable by the government. The contractor shall comply with safety and health requirements set forth in EWR 127-1 Eastern and Western Range Safety Policies and Processes; KNPR 8715.3(T), KSC Safety Practices Procedural Requirements and programmatic requirements. **(Mod 334)**

1.2.1 Safety Compliance

The contractor shall be responsible for providing a safe and healthful work environment and shall perform all operations in a safe manner. The contractor shall establish and implement a safety program that provides protection from injuries to contractor personnel, government personnel, members of the general public, and damage to government facilities, systems and equipment as a result of the contractor's action or inaction. The safety program shall comply with all applicable Federal, NASA, Air Force, KSC and CCAFS regulations and requirements.

1.2.1.1 Operational Safety. The contractor shall develop and implement a process for assessing hazards of contractor activities and protecting personnel and property from exposure to these hazards. The process shall provide for appropriate hazardous operation surveillance, review of hazardous procedures, and assessment of risks associated with deviations from procedures or safety and health requirements.

The contractor shall conduct and document an operational safety assessment of all high risk, first time operations and submit the assessment to the government for review.

For contractor-controlled operations involving hazardous materials that meet or exceed the threshold specified in 29 CFR 1910.119, Process Safety Management standard, the contractor shall develop an auditable program that complies with all of those requirements. All personnel engaged in potentially hazardous operations or hazardous material handling shall be certified as capable to operate the equipment and perform their jobs in a safe manner. Hazardous operation safety certification is required for those tasks that potentially have an immediate danger to the individual (death/injury to self) if not done correctly, or could create a danger to other individuals in the immediate area (death or injury), or are a danger to the environment. All employees shall be trained and/or maintain certification per the requirements outlined in specific government standards/requirements.

1.2.1.2 Institutional Safety. The contractor shall conduct safety inspections of all contractor-occupied facilities on a quarterly basis. The inspections shall be formally documented and all findings tracked to closure. Qualified safety professionals shall perform inspections at least annually.

All injuries, damage and close calls resulting from contractor activities shall be investigated and have appropriate corrective action taken. The contractor shall electronically enter all mishaps meeting the criteria for Type A through Type D mishaps as defined in KNPR 8715.3(T), KSC Safety Practices Procedural Requirements into the NASA mishap-reporting database. All close calls with the potential to have been Type A through Type D mishaps shall also be entered. Mishap reporting methods and timelines shall be in accordance with DRD 1.1-04, Report Anomaly. **(Mod 334)**

The contractor shall establish and implement a construction safety program to ensure that contractor and subcontractor construction operations comply with appropriate requirements and are performed in a safe manner. This program shall include weekly site safety surveillance of all active construction sites awarded by the contractor by qualified safety personnel, documentation and mitigation of all identified hazards, a process to ensure that all construction personnel have

all required training and certifications, a process to coordinate with other KSC and CCAFS organizations that could be negatively impacted by the construction activity, and review of subcontractor safety plans.

The contractor shall provide safety support for the Spaceport public events and visitor programs under the contractor's control. This includes ensuring that facilities, systems, equipment, and services provided by the contractor are safe and ready for use prior to the public event, that traffic control and parking plans are adequate and do not pose any hazards to vehicles and pedestrians, and that any equipment leased, rented, or provided by the contractor from off-site locations is properly assembled and safe for use.

In the event that the contractor determines the need to vary from a government requirement, a formal request must be processed through the appropriate variance review and approval system. The contractor shall perform risk assessments for all variances requested to safety procedures and processes. The risk assessment shall be performed to a managerial level to assure the safety of personnel and equipment is not compromised, and alternate work procedures as a result of a variance shall be evaluated prior to implementation. Requests for a variance to safety requirements (where the only justification is to meet schedules or cost) will be denied.

The contractor shall continue participation in the OSHA Voluntary Protection Program (VPP) as a STAR Site.

1.2.1.3 Transportation Safety. All motor vehicles, railcars, boats, and others used for transportation of personnel or hazardous material shall comply with laws regarding inspections and markings and must have passed an inspection to ensure that the vehicle or vessel is in safe mechanical operating condition. The mode of transportation shall be inspected to the applicable standards of the Federal Highway Administration, U.S. Coast Guard, Department of Transportation (DOT), and Federal Railroad Administration. All vehicles transporting hazardous materials on government and public roadways shall display all DOT required placards, lettering, or numbering. All personnel operating such vehicles shall receive the appropriate training and or licensing. The contractor shall provide support for the Spaceport public events and visitor programs under their control. This includes ensuring that traffic control and parking plans are adequate and do not pose any hazards to vehicles and pedestrians, and ensuring that any equipment leased, rented, or provided by the contractor from off-site locations is properly assembled and safe for use.

1.3 FINANCIAL MANAGEMENT

The contractor shall employ best business practices and sound financial management in the performance of financial management and reporting. Flexible and innovative procedures designed to ensure compliance with the variety of cost charging and reporting requirements of the NASA and Air Force based on category of customer and sources of funds are critical. Complete, accurate, and timely reporting of planned and actual costs is of paramount importance.

1.3.1 Financial Management System

The contractor's financial management system shall be fully integrated with an automated work management system capable of maintaining complete cost integrity, while capturing and reporting cost at the work order level. The contractor shall provide an automated, network accessible, on-line, ad hoc query capability to permit government users access to determine the cost, schedule, and status of work at the level of detail reported in the Job Ordered Cost Accounting System (JOCAS) and 533 reports. The system shall be capable of linking both the accounting and work management systems. The contractor shall notify the government

immediately upon detection of significant errors in their accounting system affecting 30% of work orders and/or 10% of costs reported in one period.

1.3.2 Cost Reports

The following cost reports are required:

- **Job Ordered Cost Accounting System Reports.** The contractor shall submit an electronic Weekly Job Ordered Costs to the Air Force standard JOCAS while maintaining the capability of identifying costs to a daily level. Strict observance of Air Force program funding year of costs is essential in accordance with DRD 1.3-01, Report, Weekly Job Ordered Costs;
- **Geographic Economic Impact Report.** The contractor shall submit an electronic Geographic Economic Impact Report in contractor format by 15 October of each contract year in accordance with DRD 1.3-02, Report, Geographic Economic Impact;
- **Monthly 533 Reports.** The contractor shall submit detailed and accurate Monthly Financial Management Analysis Reports on Forms 533M in accordance with instructions in NPR 9501.2D, NASA Contractor Financial Management Reporting in accordance with DRD 1.3-03, Rev. C, Reports, Contractor Financial Management Analysis, 533M;
- **Cost Pool Analysis.** The contractor shall submit quarterly Cost Pool Report and Analysis of all cost pools to include planned and actual cost pool content on a government fiscal year 12-month time phased schedule, the planned and actual percentages and basis of distribution for the same period, and recommendations for modifications of the rates of distribution. Included as an attachment to this report shall be a detailed dictionary containing a complete description of each cost pool, a detailed listing of the content, and the methodology for the distribution algorithm in accordance with DRD 1.3-04, Rev. A, Report, Cost Pool/JOSA Analysis;
- **Estimate at Complete (EAC).** The contractor shall submit a detailed Estimate at Complete (EAC) at the agency/customer/fund source level for the government fiscal year in accordance with DRD 1.3-05, Rev. B, Report, Estimate at Complete (EAC);
- **Contractor Commitment Cost Data Report.** The contractor shall submit a Contractor Commitment Cost Data Report on the same basis and schedule as the JOCAS cost report in accordance with DRD 1.3-07, Rev. A, Report, Contractor Commitment Cost Data;
- **Launch Scrub Costs.** The contractor shall submit a Launch Scrub Costs Report in accordance with DRD 1.3-08, Rev. A, Report Launch Scrub Costs;
- **Catalog of Services.** The contractor shall submit a Catalog of Services in accordance with DRD 1.3-09, Rev. A, Catalog of Contract Services with Estimated Costs;
- **Job Order Estimates.** The contractor shall submit complete, detailed, accurate, and timely estimates of cost at the agency, customer, and/or Job Order Number (JON) level for current and future government fiscal year requirements in accordance with DRD 1.3-10, Job Order Estimates;
- **Reconciliation of Incurred Costs to Reported Costs.** The contractor shall submit a monthly reconciliation of the costs reported in its general ledger system to the costs reported to the government in either the 533 or JOCAS reports in accordance with DRD 1.3-11, Report, Reconciliation of Incurred Costs to Reported Costs;
- **Contract Operating Plan.** The contractor shall develop and manage an annual contract operating plan by government fiscal year on the basis of agency, customer, fund source, WBS, and cost element, with monthly execution and variance analysis to ensure total contract costs have been reconciled.

- **Monthly Analysis of Actual to Planned Costs.** The contractor shall provide a monthly analysis of actual to planned costs at the WBS level to include volume and rate analysis. The contractor shall partner with the government on the development of variance explanations to ensure common understanding and reporting in accordance with DRD 1.3-12, Monthly Analysis of Actual to Planned Cost;
- **Prime and Sub-contractor Contract Value (CV) Status Report and Review.** The contractor shall provide a Prime and Sub-contractor CV Status Report and Review in accordance with DRD 1.3-13, Rev. A, Report and Review, Prime & Subcontractor Contract Value Status;
- **Direct and Indirect Rates Report and Review.** The contractor shall provide a Direct and Indirect Rates Report and Review in accordance with DRD 1.3-14, Report and Review, Direct & Indirect Rates;
- **Reconfiguration of Contract Value into Cost Structure Reports Response and Review.** The contractor shall provide Reconfiguration of Contract Value into Cost Structure Reports Response and Review.

1.3.3 Job Ordered Cost Accounting System

The contractor shall employ a full job ordered cost accounting system to capture the full costs to the final cost objectives. The final cost objective is defined as the JON. Job Order Numbers may be assigned to specific agency, programs, projects, events, and/or fund sources. Accuracy of cost reporting to the correct JON and government-funding year is critical. Procedures shall be developed to insure adequate processes, training, and/or instruction to contractor work force to ensure maximum accuracy of cost reporting. The contractor shall provide an on-line system capable of identifying and tracking erroneous cost reporting through satisfactory completion.

The contractor shall partner with the government to develop algorithms, as necessary, to distribute indirect costs to appropriate service pools and/or direct job order number. Indirect costs may include costs of common support to each agency, such as Joint Operating Support Agreements (JOSAs), functionally specific common costs (i.e. 3rd level Work Breakdown Structure [WBS] costs which cannot be specifically attributed to the final cost objective), other WBS intersects which bear costs indirectly related to the support being provided.

The contractor's cost accounting system shall have adequate internal checks and balances and audit steps built in to isolate and identify erroneous or incomplete data and procedural deviations under controlled conditions and ensure timely and proper corrective actions consistent with the complexity of the situation. The contractor's system shall employ a point of entry edit capability sufficient to minimize the opportunity for erroneous data to be recorded.

All data reflected in the database shall be adequately supported by auditable documentation that is cross-referenced to provide readily traceable audit trail(s). The system shall contain controls and edits to ensure that all directly identifiable costs are properly identified and reported.

1.3.4 Cost Distribution

The contractor shall update the cost accounting system database so that the status of total costs to a cost objective or final cost objective can be determined. The total costs shall include the direct costs, allocable portions of overhead, G&A, Fee and the distributed indirect costs. For the purposes of overhead, the government will identify some portion of contract direct costs as directly allocable to the overhead.

1.3.5 Budget Development

The contractor shall respond to requests for an annual Operating Plan, NASA's Program Operating Plan (POP), 45th SW Financial Plan (FinPln), and the Air Force Program Objective Memorandum (POM) budget development and other special budget exercises as requested. The contractor shall assist the Air Force and NASA staff in adjusting requirements to meet expected funding availability by identifying the highest priority needs and specifying the operational impact of leaving lower priority requirements unfunded.

1.3.6 Reimbursement Policy

The contractor shall comply with the requirements of the 45th Space Wing Instruction 65-601, Reimbursement Policy when advising the CCSMO of direct costs for Range users that can be identified readily with the particular program support.

1.3.7 Negotiated Estimated Cost (NEC)

The contractor shall ensure complete reconciliation of the Operating Plan to the Annual NEC, and the actual cost to the NEC on the same six month schedule as the accounting calendar.

1.4 QUALITY AND MISSION ASSURANCE

The contractor shall establish, implement, and maintain a comprehensive quality and mission assurance (reliability, maintainability, and quality assurance) program that meets programmatic requirements and is effective in the identification and mitigation of risks. The contractor shall establish and maintain a configuration control process for all configured Facility, Systems and Equipment (F/S/E) that is within the contractor's control for design and operations and maintenance as defined in the Configuration Management Data System (CMDS). Risks shall be identified in sufficient time to allow correction or acceptable risk mitigation without programmatic impact.

1.4.1 Quality Approach/Continuous Improvement

The contractor shall establish and implement a quality management system for all services provided under this contract that complies with the guidance in ANSI/ASQC/ISO 9001 2000 and KNPR 8720.1 **and KNPR 8730.2**. The contractor shall assess and benchmark internal processes to improve services and processes to optimize the delivery of services or products to the customer. The approach shall include a disciplined methodology to determine process effectiveness (time or cost savings), a quality improvement plan and implementation schedule for identified deficiencies, and documentation of lessons learned. (MOD 436) **(Mod 493)**

1.4.1.1 Product and Service Quality. The contractor shall identify the requirement for Government Source Inspection for procurements based on the criticality (1, 1R, and 1S) (reference NSTS 22206 for criticality definitions) of the procurement for ground support equipment, cryogenic/hypergolic propellant mission essential equipment, and other procurements identified by the government based on system interface and vendor performance history.

The contractor shall provide and maintain Acceptance Data Packages, test results, analysis reports, inspection records, and delivery logs in accordance with programmatic requirements for hardware, software, and commodity delivery, or transfer to the government. The contractor shall collect and compile data and information to demonstrate that the products and services delivered to the government are in compliance with programmatic requirements and specifications contained within those programmatic documents.

1.4.2 Systems Safety

All F/S/E of the following types that will be turned over to the contractor for O&M, that have either been temporarily turned over to the government for modification or repair or are a part of

new construction shall be verified/validated through a partnered process as operational to support required mission milestones: (Mod 481)

- F/S/E that is deemed a “critical system” per NSTS 22206
- Non-Critical/MEE F/S/E which have a Combined ORMSD/SAA Assessment (COSA) per Technical Exhibit 2.1.2-003
- Non-critical high/medium voltage F/S/E (for the purpose of ensuring that modifications to the non-critical portion of the system do not impact the critical portions of the system).

System verification/validation shall be accomplished through the following when the situation exists as specified below (excluded from this effort is any normal maintenance that does not alter the configuration):

- The partnered Institutional Design Certification Review (IDCR) process – This process will be used at project completion or at the end of major project phases when all required documentation is available.
- The partnered Interim Readiness Assessment (IRA) process – This process will be used in the interim stages of a project (i.e. construction, activation, turnover, etc.) to document mission support readiness

System verifications/validations (IRA/IDCR) shall include all modifications categorized as “first use” for affected milestones. The process is intended to document that the Appropriate Organizations (i.e. Engineering, Reliability, NASA Center Operations, NASA Safety, etc.) have reviewed the project and determined:

1. In the case of an IRA that either:
 - The project content performed is a like-for-like replacement and the configuration documentation matches the modified system. As such, there is no additional risk to the system or the program OR
 - The project content performed does impact configuration documentation but the updates are administrative in nature and can be performed after the planned mission OR
 - The project content performed does impact configuration documentation and a risk assessment shall be performed to determine if the configuration adds any additional/presently unknown risk(s) to the system or program.
 - The project open items deemed necessary for mission support shall be listed.
2. In the case of an IDCRC that either:
 - The project content performed is a like-for-like replacement and the configuration documentation matches the modified system. As such, there is no additional risk to the system or the program and the finalized documentation will reflect this OR
 - The project content performed does impact configuration documentation, but in an administrative nature. Updates will be made to the finalized documentation to reflect this OR
 - The project content performed does impact configuration documentation and a risk assessment shall be performed to determine if the configuration adds any additional/presently unknown risk(s) to the system or program. The finalized documentation will be updated to reflect this.

The contractor shall prepare or update any required operations and maintenance documentation per the partnered processes. (reference SOW paragraph 2.1.2.4.1).

For JBOSC controlled projects, the system verification/validation and associated OMD required per the partnered processes shall be completed in sufficient time to allow correction or acceptable risk mitigation without programmatic impact. The verification/validation and OMD shall be completed through technical review per the partnered processes with the customer prior to its use in a critical operation or flow. For projects not under the control of the JBOSC contractor, system verification/validation and associated OMD required per the partnered processes will not be completed until the project contractor provides detailed drawings and equipment manufacturer specifications to the JBOSC Activation and Turnover group. System verification and OMD completion dates will be negotiated for each project with NASA-KSC safety and center operations.

In general, completion of documentation updates prior to STS launches will be the priority. Changes in the system configurations requiring interim conditions to be documented will not require complete documentation suite (SAA and OMRSD) updates. The contractor will coordinate with NASA-KSC safety and center operations for overall priorities to accomplish the launch mission and work to a published (and government coordinated) schedule. (MOD 436)

The contractor shall develop and implement a process to identify critical F/S/E which supports the institutional program per the requirements specified in NASA STD 8719.7. For new or modified F/S/E that the contractor builds, procures, or assumes operation or maintenance responsibility for, the contractor shall submit a project specific Hazard Analysis Data Sheet for the government's review. This requirement applies to F/S/E that is critical, mission essential, or has significant or unique hazards associated with it. The format of the Hazard Analysis Data Sheet shall be determined by the contractor and shall include, at a minimum, the type of analysis to be performed, an analysis schedule with established milestones, methods of analysis, depth of effort, identification of single failure points, and proposed mitigation of risks. The plan shall also address reviews and interfaces between the customer and the contractor. The plan shall be developed for the complete lifecycle of the F/S/E, and facility system safety activities shall take place concurrent with the normal facility acquisition process.

For the Shuttle Program, the contractor shall develop and implement a process to identify critical F/S/E which supports the Shuttle Program per the requirements specified in NSTS 22206 and submit a Hazard Analysis Data Sheet for the government's review. For F/S/E identified as Critical, a Failure Modes Effects Analysis /Critical Items List (FMEA/CIL) and a Hazard Analysis shall be performed and Hazard Report(s) generated per the requirements specified in NSTS 22254. The contractor shall present all Critical Items (1, 1R, 1S, and 2) identified in the FMEA and Hazard Report for initial approval to the KSC Shuttle Program Risk Review Board (RRB), and final approval will be granted by the Kennedy Safety Review Panel (KSRP) and the Program Requirements Control Board (PRCB) per the requirements specified in NSTS 07700 Volume V, Information Management, and shall be maintained for all critical items per the requirements specified in NSTS 07700-10-MVP, Shuttle Master Verification Plan. The contractor shall obtain NASA Safety Engineering concurrence(s) on all analyses performed for the SSP. (MOD 436)

1.4.2.1 Reliability and Maintainability. Shuttle System reliability shall be performed under the guidance of NSTS 5300.4 (1D-2). The contractor shall develop and implement a process which ensures the reliability and maintainability throughout the lifecycle of the F/S/E for which the contractor is responsible per the CMDS listing. The process shall include reliability and maintainability assessments for baseline allocations, trend analysis of materials and parts in support of operational integrity, and participation in failure reviews. The assessments shall identify critical items and the operational impacts of associated failure modes. The contractor shall prepare and maintain the associated FMEA/CIL and shall integrate the results of the reliability assessments with the system safety function. The contractor's process shall be based

on the fundamental reliability and maintainability concepts and principles described in NASA-STD-8729.1. (MOD 436)

1.4.3 GIDEP

The contractor shall participate in the Government/Industry Data Exchange Program (GIDEP) in accordance with the requirements of the GIDEP S0300-BT-PRO-010 and S0300BU-GYD-010. The contractor shall review all Failure Experience Data GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Agency Action Notices, and NASA Advisories to determine if they affect the contractor products produced for NASA. For GIDEP ALERTS, GIDEP SAFEALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories that are determined to affect the program, the contractor shall take action to eliminate or mitigate any negative effect to an acceptable level. The contractor shall generate the appropriate failure experience data report(s) (GIDEP ALERT, GIDEP SAFE-ALERT, GIDEP Problem Advisory) in accordance with the requirements of GIDEP S0300-BT-PRO-010 and S0300BU-GYD-010, and KNPR 8715.3(T), KSC Safety Practices Procedural Requirements, whenever failed or nonconforming items, available to other buyers, are discovered during the course of the contact. **(Mod 334)**

2.0 PUBLIC WORKS

2.1 ENGINEERING SERVICES

The contractor shall provide engineering services to accomplish base operations and support services in support of facilities planning, real property management, facility programming, design services, specifications, engineering documentation, construction management, surveying, cost analysis, facility activation, and energy management at KSC, CCAFS, and the Florida Annexes. For specific Air Force services, please refer to the subparagraphs below. (Mod 451) The contractor shall maintain Air Force and NASA facilities in a cost-effective manner that protects and preserves investments. The contractor shall provide engineering services to NASA in accordance with NASA-STD-8719.11 and NPG 8820.2E.

2.1.1 Facilities Planning

The contractor shall provide a full range of facilities planning services for KSC, CCAFS, PAFB, and the Florida Annexes, as described in the following paragraphs. The facility inspection services that support the long term planning services will not be provided for the Air Forces's F/S/Es. The contractor shall be committed to preserving government assets and protecting the environment. The contractor shall continuously promote the stewardship of government resources among managers and the workforce. The contractor approach shall be to protect the government's investment through dedicated maintenance and repair of infrastructure, advocacy for capital improvements, effective land use for all activities and tenants, and continuous observations and recommendations to appropriate government personnel in all areas. **(Mod 397)**

2.1.1.1 Real Property Management. The contractor shall maintain real property records and perform physical inventories to include utilization of government-accountable facilities located on KSC, CCAFS, and Florida Annexes as listed in Technical Exhibit 2.1.1.1-001, NASA Real Property and Technical Exhibit 2.1.1.1-002, AF Real Property. Upon land withdrawal or return from the Fish and Wildlife Service, the contractor shall enter data in the Cape Canaveral Spaceport Geographic Information System (CCSGIS).

The contractor shall support management of NASA accountable real property in accordance with NPD 8800.14B, Policy for Real Property Management for NASA. The contractor shall

support management of Air Force-accountable Real Property information in accordance with Air Force 32 Series publications 9001, 9002, 9003, 9004, and 9005.

The contractor shall maintain reports, to include the KSC Annual 1400 report, the NASA Quarterly Real Property report, the KSC Trailer Abatement Report, and the Air Force Quarterly Report for Stuart P. McKinney Homeless Act.

2.1.1.2 Space Planning. The contractor shall provide space assessments for NASA-KSC and Air Force facilities, in accordance with KHB 1200.1E and 45 SW Instruction 32-1007.

The contractor shall maintain space utilization information, other than Air Force facility floor plans, for facilities as listed in Technical Exhibit 2.1.1.1-001, NASA Real Property and Technical Exhibit 2.1.1.1-002, AF Real Property (Mod 451).

The contractor shall maintain and validate a current list of all facility managers and serve as the coordinating agency for dissemination of information, training, and instructions for NASA-KSC facilities. The contractor shall provide initial training for all newly assigned facility managers for NASA-KSC facilities. (Mod 451)

2.1.1.3 Comprehensive Master Planning. The contractor shall develop, publish, and distribute the Basic Information Guides (BIGs) for KSC, CCAFS, and the Florida Annexes.

The contractor shall maintain the Air Force General Plan, and the KSC Master Plan in consideration of the Cape Canaveral Spaceport Master Plan (CCSMP) and in accordance with AFI 32-7062 and KHB 1200.1E. The contractor shall document amendments and exceptions to the CCSMP per a government approved process. The contractor shall utilize CCSGIS for maps contained within the CCSMP, KSC Master Plan, and Air Force General Plan. Plans shall be provided in printable format, and electronic format via the intranet. The contractor shall develop, and maintain Air Force Airfield Waivers. The Operational Risk Management (ORM) documentation to accompany airfield waivers will be in accordance with UFC3-150-1 and AFPAM 90-902. The ORM documentation will be worked as a type 3 C project. This includes maintaining the Air Force "On-Installation Obstructions to Airfield Criteria" (Map E-1) and the "Approach/Departure Zone Obstruction" (Map E-2). The contractor shall maintain the Cape Canaveral Spaceport (CCS) Quantity Distance (QD) Map and CCS Line of Site (LOS) Map. The contractor shall develop and process site-plans and shall coordinate the review and concurrence by applicable offices within KSC and CCAFS. The contractor shall review excavation permits for confirmation of valid site plans. The contractor shall provide comprehensive planning studies. The contractor shall provide cartographic support to provide comprehensive map packages.

The contractor shall have capability to provide Area Development Plans. These will be worked as Type 3 C projects.

The contractor shall have capability to maintain the bi-annual Technical Summary of Infrastructure Books, (worked as type 3 C projects) to include the following sections:

1. Electrical Power Distribution System
2. Water Distribution System
3. Wastewater Collection and Treatment System
4. Heating, Ventilation and Air Conditioning
5. Fire Protection Systems
6. Roads & Bridges
7. Structures
8. Airfield

9. Propellants (NASA Only)

The contractor shall have capability to facilitate the implementation and comprehensive use of the 45th Space Wing Facilities Excellence Plan (FEP) by reviewing, enforcing, and coordinating FEP issues. These will be worked as type 3 C projects.

2.1.1.4 Facility Project Programming. The contractor shall perform programming of facility construction projects, real property maintenance projects, and programming for facilities/systems at KSC, CCAFS, PAFB, and Florida Annexes.

The contractor shall maintain SRMC and MILCON project data for the Air Force Automated Civil Engineering System for Project Management (ACES/PM). The contractor shall develop initial project electronic records, monitor and update data as projects develop, and ensure accuracy and consistency of project data.

The contractor shall support annual program calls such as the NASA Program Operating Plan (POP), Construction of Facilities (CoF) Call, KSC Reinvestment Plan, Air Force Facility Investment Metric (FIM) Validation, Air Force Demolition Program Call, and Air Force MILCON.

The contractor shall perform Program Submittal and support for the Air Force Installation Readiness Report (IRR).

The contractor shall prepare specific formal project approval and support documentation for submission to the respective government approval authority in accordance with specific program guidelines. The contractor shall prepare DD Form 1391 and supporting documents for Air Force projects and NASA Form 1509/1510 for NASA projects. The contractor shall prepare other necessary documents, spreadsheets to support various calls, as required.

The contractor shall perform facility project support in accordance with AFI's 32-1021, 1022, and 1032.

2.1.1.5 Geographic Information System (GIS) Support. The contractor shall maintain the (CCSGIS) in accordance with PLP-MP-RP01, CCSGIS Maintenance Plan.

In addition, the contractor shall identify and propose GIS applications for enhancements of Spaceport utilization of GIS.

2.1.2 Design Engineering Services

2.1.2.1 Engineering Design. The contractor shall provide design services (in-house and subcontract) in support of KSC, CCAFS, and the Florida Annexes. The contractor shall prepare designs in accordance with the 45th SW Facilities Excellence Plan (FEP)

The contractor shall provide engineering and drafting services in support of the facilities, systems, equipment and utilities within the contractor's responsibilities. Support shall consist of a skill mix that provides elements such as engineering design, drafting, and cost estimates, to assist in implementing projects to maintain and enhance the performance of J-BOSC assigned facilities, systems, equipment and utilities as identified in the Operations, Maintenance, Engineering, User (OMEU) Matrix.

The contractor shall provide the capability for on-call dedicated engineering and drafting support for high priority and short suspense special projects, and shall accelerate the design program for these projects when necessary.

The contractor shall initiate, as applicable and appropriate for the task, value engineering and constructability analysis during the design phase, provide engineering assistance during construction/installation, and support facility activation following construction/installation.

The contractor shall perform professional engineering services necessary for technical consultations, planning, studies, investigations, surveys, project books, drawings, and specifications. These services involve architectural, chemical, civil, control systems, electrical, environmental, fire protection, mechanical, and structural engineering efforts in varying degrees for assigned projects. Professional Engineers and/or Registered Architects shall seal drawings on an as needed basis.

2.1.2.2 Specifications-Kept-Intact. The contractor shall manage the NASA standard master guide specifications, Specifications-Kept-Intact (SPECSINTACT), for the preparation of facility construction project specifications. The contractor shall produce updated text changes to the NASA and KSC Master text for electronic transfer to the National Institute of Building Science (NIBS) twice annually; produce and maintain the NASA Master text database for use by the SPECSINTACT user community; maintain the local KSC SPECSINTACT guide specifications, provide review and engineering support, and update the Specification Documentation System (SDS) computer to ensure that the latest guide specifications are available; provide engineering support to users; and support the project with involvement in NIBS and the Construction Specifications Institute (CSI). The contractor shall convert government-provided Air Force Master text to the SPECSINTACT format and post to the SPECSINTACT web page for use by the SPECSINTACT user community and electronic transfer to the National Institute of Building Science (NIBS) twice annually. The contractor shall provide engineering support to users. The contractor shall support the project with involvement in NIBS and the CSI.

The contractor shall bi-annually provide the NASA SPECSINTACT Configuration and Change Control Board (NS-CCBB) with information on pertinent industry news, engineering updates, and budget requirements for review and action. The contractor shall continuously review and update the KSC SPECSINTACT database to latest industry reference standards, federal regulations, and executive orders, and shall ensure that all sections are reviewed and updated with the latest technical content at least once every 3 years. The contractor shall disseminate current products and information.

The contractor shall perform tasks associated with maintaining the SPECSINTACT computer software in support of NASA, the Army Corps of Engineers, the Air Force, the Naval Facilities Engineering Command, and any other future government agency and their architectural/engineering firms. The contractor shall perform all software tasks associated with supporting member agencies guide specifications, including analysis and incorporation of software change requests, referenced publications, and format. The contractor shall prepare recommendations to be considered by the SPECSINTACT Interagency Configuration Control Board (SICCB). The contractor shall support all NASA and Interagency Control Board meetings, NIBS meetings, and SPECSINTACT presentations, and utilize and maintain a web site for software, text, and documentation distribution. The contractor shall bi-annually arrange a SICCB meeting and provide its members with information on pertinent industry news, software update, and budget requirements for review and action.

2.1.2.3 Engineering Programs.

2.1.2.3.1 J-BOSC Managed Pressure Vessel/Systems (PV/S). The contractor shall manage and implement the PV/S In-service Inspection (ISI) process in accordance with KNPR 8715.3(T), KSC Safety Practices Procedural Requirements, for vessels/systems as listed in Technical Exhibit 2.1.2-001. **(Mod 334)**

The contractor shall perform any required PV/S Certifications for vessels/systems, as listed in Technical Exhibit 2.1.2-001, to applicable American Society of Mechanical Engineers (ASME) pressure vessel or piping standards.

The contractor shall maintain the NASA PV/S database for J-BOSC PV/S units as listed in Technical Exhibit 2.1.2-001.

2.1.2.3.2 Engineering Inspections.

Shuttle Landing Facility. The contractor shall conduct inspection of the Shuttle Landing Facility (SLF) runway, taxiway, and apron pavements once every 2 years. Inspections shall include a Pavement Condition Index (PCI) survey conducted in accordance with Federal Aviation Administration (FAA) AC 150/5380-6 and AC 150/5320-12C requirements.

KSC Bridges. The contractor shall conduct inspections of KSC bridges, which include the Indian River Bridges (2), State Road 3 Overpass Bridges (2), Banana River Bridge, Banana River Relief Bridge, Jay-Jay Railroad Bridge, and the Haulover Canal Bridge once every two years. Inspections shall be conducted using State of Florida Statute 335.074, Safety Inspection of Bridges.

2.1.2.3.3 Power Systems Analysis (PSA). The contractor shall review, update and maintain engineering analyses and studies associated with critical or mission essential F/S/E. These analyses shall be configured for critical and mission essential F/S/E. The contractor shall provide and maintain a comprehensive PSA (short circuit and load flow) of an approximately 4,200 bus power system that extends from the 115kv power substations to the facility transformer secondary bushing. The PSA shall be updated once per year to include approximately 50 element changes resulting from design modifications or maintenance change outs.

The contractor shall provide and maintain Power System Coordination (PSC) documentation for approximately 3,000 devices within the 115kv power substations to the facility transformer secondary bushing, approximately 40 of which are revised each year due to routine maintenance.

The contractor shall file hardcopy and software computer aided engineering (CAE) files of these studies in the Engineering Documentation Center (EDC).

2.1.2.3.4 Department of Transportation Compliance for Propellants and Life Support Mobile and Portable Equipment. The contractor shall revise and maintain mobile and portable equipment marking plans in accordance with Part 49 CFR for approximately 80 different types of units.

The contractor shall prepare renewal packages for DOT exceptions as listed in Technical Exhibit 2.1.2-002.

The contractor shall review Part 49 CFR, Chapter 1, Subchapters A, B, and C, Chapter III, Subchapters A and B, and determine the effect of applicable changes in the Federal Register.

2.1.2.4 Joint Technical Documentation Control Center (JTDC). The contractor shall maintain the baseline of and prepare, maintain, and deliver to the J-BOSC Engineering Documentation Center (EDC) updated engineering documentation for assigned J-BOSC F/S/E to include (as appropriate to the task) engineering documentation for conceptual, preliminary, and detailed design for sustaining engineering tasks. The contractor shall provide configuration controlled release and retrieval coding for J-BOSC engineering originals and associated engineering drawings, specifications, and documents. The contractor shall provide designated engineering records, document, and data management and control to include documentation closure against configured and critical F/S/E and related systems. The contractor shall prepare, maintain, release, and control documentation (such as OMI and PMI, maintain or "record" drawings as shown in CMDS) required by the contractor to perform operations, maintenance, repair, and modification of all assigned structures, facilities, utilities, and equipment on KSC,

CCAFS, and the Florida Annexes, excluding PAFB. The contractor shall perform engineering documentation support as required to produce the Facility Number Report (CMDS/CID).

2.1.2.4.1 Operations and Maintenance Documentation. The contractor shall modify and update the following Operations and Maintenance Documentation (OMD), which includes drawings, instructions, specifications, System Assurance Analyses/System Criticality Analyses (SAAs/SCAs) and other Risk/Hazard Analysis Packages, SPAs, PV/S and Department of Transportation (DOT) compliance reports, OMRSDs, OMI, and PMIs as directed by the applicable J-BOSC Configuration Control Board (CCB). At a minimum, all NASA critical F/S/E shall require drawings, SAAs/SCAs, SPAs, OMRSDs, OMI, and PMIs. For non-critical F/S/E where OMD may add value to effective system maintenance or reliability, a Combined OMRSD SAA Assessment (COSA) will be generated. The contractor and government shall partner such cases (Reference Technical Exhibit 2.1.2-003. (MOD 436)

The delivery of SAA, SCA, OMRSD documents shall be consistent with Section 1.4.2 "System Safety". The delivery of OMI, PMI and SPA documents shall be consistent with section 2.2.

As-built drawings for NASA maintained drawings, provided by the government or other contractors, shall be processed and released to EDC or logged for document maintenance upon final acceptance of turnover and subsequent receipt of accurate as-builts, and turnover documentation per the following schedule, or as directed by the applicable J-BOSC CCB:

- 95% within 60 days for government critical systems--remainder within 90 days;
- 75% within 90 days for government configured and mission essential systems—remainder within 120 days; and,
- No more than 10 Engineering Orders (EOs) per maintained document, excluding pending EO (not yet implemented) and EOs for Relay Settings (MOD 436)
- * - For AF drawings, applies only to electrical and potable water systems (Mod 451)

For AF Configured drawings, existing drawings are accepted as "Best Available Data" and will be as-built as projects affect the drawings, and only to the extent the project affects or verifies the configuration. Reference Technical Exhibit 2.1.3-001 for the anticipated annual project value of NASA-KSC Construction of Facilities (Coff) projects. (MOD 436)

2.1.2.4.2 Critical/Configured Systems Documentation. The contractor shall provide critical/configured systems baseline identification and change control; coordinate and maintain contractor interface agreements (memoranda of understanding); Configuration Management Data System (CMDS) technical data administration and maintenance; coordination and maintenance of CMDS memoranda of understanding between contractor and others as needed; maintenance of the CMDS configuration identification module; and provision of required CMDS release and retrieval coding.

The contractor shall utilize consistent, unambiguous data classification and maintenance codes to ensure that classifications and criticality status for all F/S/E and associated OMD are clearly identified. Classification codes shall include Critical, Non-Critical, Configured, Mission Essential Equipment, and Maintained items. (MOD 436)

2.1.2.4.3 Data Management. The contractor shall provide data management for CMDS derived web-based F/S/E O/M/E/U Matrix in accordance with DRD 2.2-01, Report, Facilities, Systems, and Equipment Operations/Maintenance/Engineering/User Matrix.

2.1.3 Construction Engineering

The contractor shall perform construction management, construction services, field surveillance and inspection, construction cost engineering, land surveying, facility activation and turnover support, environmental consultation, and associated planning, scheduling, and administrative support for those construction projects implemented by the contractor or implemented by others and assigned to the contractor for construction engineering support.(Mod 451) **(Mod 481)**

The contractor shall provide construction engineering services beginning with environmental consulting and coordination during the project planning and design phase. The contractor shall also provide constructability reviews at the 90% design phase. Support shall continue through the construction, beneficial occupancy, activation/turnover, and warranty program phases. (Mod451) **(Mod 481)**

2.1.3.1 Construction Management. The contractor shall provide project and construction management support for all NASA-KSC facility projects assigned to the contractor for design, construction management, and/or implementation. The contractor shall implement a construction management approach that provides high-quality construction performance and facilities that meet functional requirements on schedule and within approved funds. The contractor shall ensure that all bid packages contain complete and detailed documentation that fully describes each facility configuration, performance requirement and the intent for the facility construction work, including environmental permitting and construction. The contractor shall track, analyze and report project status, scope, schedule, and cost. The contractor shall address these items monthly and report on variances from agreed upon cost and schedule. (Mod 451)

2.1.3.2 Construction Services. The contractor shall provide field surveillance and associated inspection services to ensure successful implementation of facility, equipment and Program projects per Technical Exhibit 2.1.3-001. The contractor shall provide inspection services, while focusing on safe and environmentally sensitive execution of facility, equipment and Program projects. The contractor shall perform daily site visits and witness specified on-site acceptance testing and mandatory inspection points. The contractor shall document non-conformance with drawing, specifications, contract provisions, and safety regulations. The contractor shall prepare and track punch list items to completion. The contractor shall coordinate shop support for outages, system testing, and utility locates. **(Mod 481)**

The contractor shall provide environmental support to NASA facility, equipment and Program projects as required. The contractor shall provide environmental consulting expertise and coordination throughout the project delivery process. The contractor shall provide consultant services at the Project concept, NASA Program Operating Plan, Preliminary Engineering Report, Engineering Design and Project Construction phases. The contractor shall provide input to the identification of potential environmental compliance requirements and documentation of requirements necessary to ensure that environmental requirements are adequately scoped. The contractor shall participate at pre-work meetings to ensure that environmental requirements are communicated to all contractors. The contractor shall supplement inputs from other environmental subject matter experts from NASA, consulting engineers, and various J-BOSC organizations to support the planning and design engineering phases of facility, equipment and Program projects. This support will also include project field implementation consultation for environmental requirements such as waste management, stormwater pollution prevention plans, etc. and the monitoring of field compliance with KSC/regulatory requirements and best practices. **(Mod 388) (Mod 481)**

The contractor shall provide tracking and distribution support for construction contractor shop drawings, material submittals, and other information provided for government review and approval. The contractor shall maintain submittal tracking logs to track the review and approval

process. The contractor shall maintain submittal files as official Government records. The contractor shall maintain tracking logs for construction contract change orders and supplemental agreements. The contractor shall track estimated, proposed, evaluated, and negotiated costs.

The contractor shall have construction inspectors on the job site when needed to support significant construction operations, critical inspection points, acceptance tests, and final inspections.

2.1.3.3 Construction Cost Engineering. The contractor shall provide facilities, systems, and equipment cost estimating and cost engineering services to support NASA-KSC construction activities. The contractor shall provide construction cost engineering and scheduling support for assigned projects. The contractor shall review, analyze, and provide recommendations regarding contractor progress schedules, pay requests, cost proposals, and claims. (Mod 451)

The contractor shall prepare complete findings of facts, including impact assessments for claims and proposed change orders with supporting cost estimate, for use by the Government on those construction contracts under surveillance. Cost analysis and estimating construction support shall be as requested for projects under surveillance commencing no later than project notice to proceed.

The contractor shall review and analyze construction activities in accordance with the following schedule or by the negotiated due date 90% of the time:

- Construction schedule – 3 days
- Pay request – 3 days
- Cost proposals – 10 days
- Claims – 30 days

The contractor shall conduct independent assessments and cost estimation of selected facility, equipment and Program projects, including quality control of project cost estimates. The contractor shall maintain the capability to perform life cycle cost analyses of facility, equipment and Program projects. The contractor shall develop and maintain a project cost element database, including monthly cost indices, for facility, equipment and Program projects. The contractor shall develop reports that analyze project bids and compare the bids against official government estimates. (Mod 481)

2.1.3.4 Land Surveying. The contractor shall provide survey support for verification of requested in-place construction to required elevations and grades for projects assigned to the contractor for construction management services and minor data collection support for customer use. Geographic Information System (GIS) standards shall be utilized to support real estate data for KSC, CCAFS, and the Florida Annexes for the GIS maintenance function.

2.1.3.5 Facility Activation and Turnover. The contractor shall implement a facility activation plan that ensures that new or modified facilities, systems and equipment procured by the government are coordinated, reviewed, and accepted by J-BOSC for engineering, operations, and maintenance responsibility.

In support of facility activation, the contractor shall prepare Interim and Final O&M turnover packages for assigned projects. The contractor shall participate in projects requirement reviews, design reviews, project status meetings, systems acceptance testing, and final inspections. The contractor shall prepare real property turnover packages for government signature and distribute to appropriate KSC/CCAFS O&M and Real Property Officers. The contractor shall ensure that all OMD documentation has been properly processed and distributed to responsible O&M support organizations.

Projects implemented by others require that turnover packages be provided to J-BOSC for integration of F/S/E assigned to the contractor for O&M responsibilities.

The contractor shall prepare KSC 21-136 forms and submit interim O&M turnover documentation to allow start of breakdown and code required maintenance within 2 weeks of customer's request after substantial completion. (MOD 436)

The contractor shall prepare and submit final turnover documentation within 30 working days after completion and closure of all punch list items and complete all OMD as required in sections 1.4, 2.1 and 2.2. (MOD 436)

2.1.4 Energy and Water Conservation

2.1.4.1 Energy Management Program. The contractor shall provide program management support for the overall KSC Energy Management Program. The contractor shall conduct an Energy Management Program that plans, implements, and measures the status of conservation initiatives for J-BOSC responsible NASA-KSC F/S/E in accordance with the O/M/E/U Matrix. The contractor shall coordinate an effective utilities conservation program that includes hot and chilled water, natural gas, propane, fuel oils, and electric power. (Mod 451)

The contractor shall perform Facility Energy Audits for all NASA J-BOSC facilities which meet the intent of Executive Order (EO) 13123 and NPR 8570.1, Chapter 4. (Note: Due to a lack of government funds, the contractor will not be required to comply with EO 13123 and NPR 8570.1, Chapter 4 energy audit requirements until such time as funds become available).

The contractor shall actively support the KSC energy program and shall conduct an internal program for J-BOSC. The contractor shall provide the following support to the energy management and conservation program: (Mod 451)

- Support the coordination of the contract-wide program through information, collection and analysis;
- Identify and assist in implementing opportunities for applying cost-effective alternative fuel technologies and energy reduction projects;
- Identify and assist in implementing opportunities for cost-effective purchasing and application of utilities; and
- Utilize Type 3I energy saving projects and energy efficient designs for future projects

2.1.4.2 Energy Conservation. The contractor shall reduce energy consumption as defined in Performance Standard 2.1.4-01 (Energy Use Index in J-BOSC/NASA Facilities). The performance standard shall consist of two measures and shall be posted quarterly on the contractor's energy web page. One measure shall be calculated from standard EUI calculations and is not a contract requirement goal. The second measure shall be calculated without the Orsino Area miscellaneous category and is the contract requirement goal.

2.1.4.3 Reports and Plans. The contractor shall provide energy management program status to the government and shall collect, analyze, validate, and prepare reports and plans as listed in Technical Exhibit 2.1.4-01 – Energy Management Office Periodic Report Requirements. Reference Air Force Energy Program Procedural Memorandum (AF EPPM) 96-3 for Defense Utility Energy Reporting System (DUERS) for Air Force Periodical Report.

2.1.4.4 Water Management Program. The contractor shall provide a water management and conservation program in accordance with EO 13123 for KSC and CCAFS. The contractor shall conduct a Water Program that plans, implements, and measures the status of conservation initiatives for J-BOSC NASA-KSC responsible F/S/E. (Mod 451)

2.2 INFRASTRUCTURE

The contractor shall provide operations, maintenance, engineering, and custodial services for the facilities, systems, equipment, grounds, and utilities at KSC, CCAFS, and the Florida Annexes at **JDMTA, Ft. Pierce, Stuart and Wabasso** to accomplish safe, effective, and environmentally compliant base operations and support services. Assigned F/S/E are designated by the contractor's O/M/E/U Matrix in accordance with DRD 2.2-01, Report, Facilities, Systems, and Equipment Operations/Maintenance/Engineering/User Matrix. **(Mod 472)**

The contractor shall continuously maintain an infrastructure maintenance program based on the Reliability Centered Maintenance (RCM) principles and the Integrated Logistics Support (ILS) requirements. The contractor shall continuously maintain the inventory and systems analysis process and maintain optimal baselines for each system and subsystem. The contractor shall not provide systems analysis process for AF. **(Mod 397)**

The contractor shall develop and provide a Five-Year Facility Maintenance and Facility Project Plan that establishes long-term system sustaining projects and planning in accordance with DRD 2.2-04, Five Year Facility Maintenance and Facility Project Plans. **(Mod 397)**

The contractor shall maintain an electronic F/S/E O/M/E/U Matrix in accordance with DRD 2.2-01, Report, Facilities, Systems, and Equipment Operations/Maintenance/Engineering/User Matrix.

2.2.1 Facilities/Systems/Equipment (F/S/E)

The contractor shall provide a comprehensive integrated management information system for receiving, validating, scheduling, controlling, subcontracting, project management, cost management, and tracking all work associated with the contract. The work control function shall identify all tasks, costs, durations and resources required. The contractor shall identify and implement tasks and work necessary to ensure that all facilities, structures, systems, and equipment for which O&M responsibility is assigned shall continue to function at their original capacity and at their design efficiency. Work to be identified includes preventive maintenance, corrective maintenance, and overhaul or replacement to obtain best value.

The contractor shall provide and maintain an on-line, interactive automated work control system that provides current, accurate visibility of all work. The system shall provide sufficient scheduling and reporting capability to communicate to customers work milestones (programming, design, procurement/contracting, pre-bid, bid opening, award, notice to proceed, completion dates, revised completion dates, construction status, utility locates) and cost (Rough Order of Magnitude (ROM), Final Design Estimate (FDE), original contract, current contract, pending change orders, and final contract) to completion, in accordance with DRD 2.2-08, Type 3C Project and Work Status Report.

The contractor shall provide the government with access to the man-hours expended on government submitted projects. Information input into the system shall include the facility number, system description, equipment number, utility description, and a complete description of work to be done. Information shall be sufficient enough to allow government customers to enter the system and perform searches for any F/S/E. The contractor shall provide the government with F/S/E reports in accordance with DRDs 2.2-04, Five Year Facility Maintenance and Facility Project Plans, 2.2-05, Backlog of Maintenance and Repair (BMAR), 2.2-06, Facility Maintenance Execution Summary, and 2.2-07, Facility and System Availability.

The contractor shall ensure the reliability of assigned facilities, systems, and equipment. Maintenance shall be performed to prevent deterioration to the point at which major refurbishing is required prior to the end of the designed life cycle to restore the system, facility, or equipment.

Reliability Centered Maintenance (RCM) principles shall be employed in accordance with NPR 8831.2. For critical, mission essential, or life safety F/S/E, the contractor shall perform 100% of scheduled preventive/predictive maintenance (PM) tasks including all applicable maintenance/validation steps contained therein. Any PM not performed or completed in its entirety for critical, mission essential, or life safety F/S/E shall be briefed or reported to the responsible government functional subject matter expert (e.g. TA, CES) and to the contracting officer's technical representative (COTR) on a weekly basis. Maintenance analysis decisions requiring changes to the levels of preventive/predictive maintenance, shall be documented on the Maintenance Action Request (MAR) form, FAM-F-0006. Reductions in PM requirements or frequency for any F/S/E (i.e. critical, mission essential, life safety, or other) shall require pre-approval of the responsible government functional subject matter expert. (MOD 436)

Warranty Maintenance. The contractor shall execute warranty provisions and maintain warranty or guarantee records for all equipment and material in the facilities support area during the time they are under warranty or guarantee; investigate the failure of any covered equipment or material and report findings to the appropriate customer; and take no action that would void a warranty without prior approval from the government representative. The contractor shall be responsible for obtaining warranty documents on all warranted equipment and materials installed by the contractor. Warranty documents shall be provided to the contractor upon installation of new equipment by others.

2.2.1.1 Operations, Maintenance, and Engineering. The contractor shall provide operations, maintenance, and engineering for all F/S/E, in accordance with the O/M/E/U Matrix, DRD 2.2-01, Report, Facilities, Systems, and Equipment Operations/Maintenance/Engineering/User Matrix (Technical Exhibit 2.2—017) including associated F/S/E firmware and software. When the contractor, the government, or both have identified F/S/E omissions or deletions, the O/M/E/U Matrix shall be updated by direction from the contracting officer. However, during the update or turnover process, the contractor shall continue to provide operations, maintenance, and engineering services for the pending facilities, systems, subsystems, structures or other items required for function. **(Mod 286)**

For the implementation of maintenance, the contractor shall, at a minimum, have appropriate OMI, PMI and SPAs for all NASA Mission Essential and or Critical Systems. Upon final acceptance of turnover and subsequent receipt of accurate as-builts and vendor documentation, the above maintenance OMDs shall be updated per the following schedule, or as directed by the applicable J-BOSC CCB:

- 95% within 60 days for government critical systems--remainder within 90 days;
- 75% within 90 days for government configured and mission essential systems-- remainder within 120 days; and
- No more than 10 Engineering Orders (EOs) per maintained document excluding pending EO (not yet implemented) and EOs for Relay Settings.

Reference Technical Exhibit 2.1.3-001 for the anticipated annual project value of KSC Construction of Facilities (CofF) projects.

The contractor shall provide problem reporting for all anomalies and off-nominal configuration changes for critical and/or mission essential F/S/E. Problem documentation shall include anomaly description and analysis, critical and/or mission essential F/S/E impacts, operational constraints, troubleshooting steps and findings, and corrective actions performed leading to closure of the anomaly. Problem documentation shall be readily accessible to responsible government functional subject matter experts. All open problem reports shall be briefed to

government management on a regular basis. The formats and frequencies of the reports shall be partnered with the Government. (MOD 436)

2.2.1.2 Deleted.

2.2.1.3 Work Orders. (Mod 244) The contractor shall initiate and/or respond to construction, modification, maintenance and repair work orders as defined in Attachment J-9 and in accordance with the cost Ceiling established in the table below.

	GFY	Internal (Type 3I)	Customer (Type 3C)
Air Force	2004 - 2008	AFI32-1032	AFI32-1032
NASA	2004 - 2005	\$200,000	\$5,000,000
NASA	2006 - 2008	\$200,000	*\$500,000

Table 2.2.1.3-1 Work Order Cost Ceiling

All Air Force type 3 projects (3I and 3C) require Air Force coordination/approval prior to implementation. All projects greater than \$1,500,000 require pre-approval by both the COTR and the Government Contracting Officer. Annual Type 3C Work Order Most Probable Cost Adjustments are defined in Technical Exhibit 2.2.1.3-001. All work requirements shall be documented in accordance with AFI 32-1032 or NPG 8820.2 as appropriate.

*This ceiling may be increased by mutual agreement of the parties to an amount not to exceed \$5M in any fiscal year. (Mod 244)

The contractor shall perform project management, construction management, and subcontracting management, and shall provide Intranet based reporting for government-selected projects and other selected work to include project scope, status, budget, schedule, and accountability in accordance with DRD 2.2-08, Type 3C Project and Work Status Report.

Infrastructure-related work shall be given a numerical priority based on safety, environmental and mission criticality, and/or customer requirements. The contractor shall receive, document, schedule, and control infrastructure work requirements. The contractor's Work Control System shall assign a discrete Work Order Number (WON) for all maintenance, repair, construction and support services.

Every 6 months the contractor Work Control shall notify customers of current open Type 3C work orders and ask customers to revalidate the need for the work. If the customer indicates the work is no longer required, the contractor Work Control shall close those work orders.

Every 3 months the contractor Work Control shall notify the contractor Crafts/Shop management of current open continuous, repetitive or collection (Type 4) work orders to determine if the work is completed. If the work is certified as completed by the contractor Crafts/Shop Management, then the contractor Work Control shall close those work orders.

The contractor shall submit a Type 3C and a Type 3I Work Order Status Report in accordance with DRD 2.2-09, Type 3C Work Order Status Report and DRD 2.2-10, Type 3I Work Order Status Report.

2.2.1.4 Maintenance Support. The contractor shall provide engineering services and studies to ensure the economical maintenance of the CCAFS and KSC infrastructure to support space lift and launch base support missions. The contractor shall provide life-cycle sustaining engineering

for F/S/E. Contractor life-cycle sustaining engineering shall provide continuing engineering support to: maintain a design that fulfills its original design intent and is compatible with the operational use; upgrade operational performance capabilities through product improvement redesign for more cost-effective operations; incorporate approved changes in requirements as they evolve; and provide other engineering support herein.

The contractor shall perform National Fire Protection Association (NFPA) code required maintenance on all fire alarms, fire suppression, emergency generator, emergency power, emergency lighting, and other applicable assigned F/S/E. The contractor shall perform routine and recurring maintenance on all assigned F/S/E as prescribed by maintenance analysis to ensure safe and efficient operations. The contractor shall perform maintenance on a non-interference basis with facility operations. Where this is not possible, outage requests for planned maintenance shall be coordinated with facility operations a minimum of 14 days in advance.

2.2.1.5 Deleted (MOD 436)

2.2.1.6 Deleted.

2.2.1.7 Road Shoulder Maintenance and Clear Drainage Systems. The contractor shall maintain road shoulders free from ruts, washouts, and dead or missing grass. The contractor shall clear drainage systems, including culverts, and control vegetation along access roads to allow waters to flow freely to natural basins or collecting points. Roads, roads shoulders, and drainage systems shown in Technical Exhibit 2.2.1.7-01 and per the schedule defined in the 5-Year Drainage System Maintenance Plan.

2.2.1.8 Preparation for Launch, Test and Training and Search (Xenon) Lights/Generator Support. The contractor shall provide facilities, equipment, and utilities support during pre-launch and landing for all launches according to shuttle integrated operations and maintenance instructions and Air Force Program Directives. NASA's KPD 8630.3, KSC Shuttle Processing Flight Readiness/Certification Review Plan, and ELV/EELV, 501-97 Universal Documentation System, depict the standard mission support requirements. **(Mod 257)**

The contractor shall prepare KSC Pad A&B slidewire bunker areas for launch, test, or training exercises as listed in Technical Exhibit 2.2.1.8, Pad A&B Slide Wire Area Support Standards. Preparation includes: grading area between sidewalks, removal of accumulations of eroded sand from perimeter of areas within the bunkers, and removal of large shells, rocks, and debris, adding clean builders sand as necessary, and removal of sand deposited on bunker sidewalks. The contractor shall inspect bunker dirt cover for proper depth and erosion control. If necessary, the contractor shall replenish dirt and seed properly. Sand fill depth at slide wire landing shall be inspected and sand replenished, if necessary, in accordance to the established safety guidelines.

The contractor shall maintain and operate search lights and associated generators in support of all government launches. This support includes four remote Trans Atlantic Launch Sites (TAL-sites). These sites include Moron, Spain, Zaragosa, Spain, Ben Guerir, Morocco and Istres, France. The Contractor is required to provide manning of three of these TAL-sites per shuttle launch. Existing inventory of search lights (xenon) is 126 units. The existing inventory of generators associated with the search lights is 76 units. In addition to this inventory, the contractor shall be responsible for providing parts for 44 search lights located in White Sands and Edwards AFB. **(Mod 257)**

2.2.1.9 Deleted.

2.2.1.10 Office Moves and Alterations. The contractor shall perform moves and office alterations, including the relocation of personnel and office materials, partitions, and systems

furniture, and perform the necessary design layout. The Launch Operations and Support Contract (LO&SC), Space Program Operations Contract (SPOC), KSC Visitor Complex Concessionaire, and Checkout and Payload Processing Services Contract (CAPPS) are responsible for moves and non-floor-to-ceiling alterations within their assigned areas. **(Mod 402)** **Air Force support may be provided through Type 3C projects. The contractor will only accept tasking for move/mods for Air Force customers on an AF Form 332 and execute only with approval of 45 CES. (Mod 441)**

Services extend to minor modifications as necessary. In all facilities, the contractor shall design and implement all necessary convenience outlets, lighting, fire detection and alarm, and HVAC systems to accommodate the move. The contractor shall conduct Safety Design Reviews of Move/Mod Packages.

2.2.1.11 Move/Relocate Portable Facilities. The contractor shall move or relocate all government real property accountable portable buildings, trailers, modulars, and mobile homes identified in the O/M/E/U Matrix. This includes all associated preparation, siting, utilities, and fixtures. The contractor shall perform minor site work including the moving of Modulars, single- and double-wide trailers, and installing tie-downs, steps, blocking, and skirting. After removal of a facility from an area, the contractor shall clean up all remaining debris and grade the site to its original state, including re-sod or resurfacing as necessary. The contractor shall support the implementation of the NASA Trailer Abatement Plan.

2.2.1.12 Corrosion Control and Facilities Painting. The contractor shall provide corrosion control to include support to cathodic protection systems under J-BOSC, per the O/M/E/U Matrix and facilities painting support to include road markings, fabrication, and installation of signs and banners.

The contractor shall provide abrasive blasting and protective coating services for KSC and CCAFS, and to equipment transported to the corrosion control facilities at KSC and CCAFS by CAPPS, Space Station, SPOC and the LO&SC contractors. The contractor shall provide corrosion control and paint services to include scaffolding and rigging support as required, for maintenance activities of assigned structures, facilities, systems, and equipment. The contractor shall prepare and maintain a Cathodic Protection Booklet in accordance with AFM 85-5, AFI 32-1054, and DRD 2.2-11, Cathodic Protection Report. One (1) hard copy and one (1) electronic copy shall be delivered on an annual basis. Painting color scheme of facilities shall be in accordance with facility excellence plans. The contractor shall provide National Association of Corrosion Engineers (NACE) Level 3 inspection services as required. **(Mod 397) (Mod 402)**

2.2.1.13 Deleted.

2.2.1.14 Asbestos Protection Program. The contractor shall manage the asbestos containing material (ACM) program at all contractor maintained F/S/E, as specified in the O/M/E/U Matrix, in accordance with the 45th Space Wing and NASA-KSC Asbestos Management Program. The contractor shall develop and maintain a written asbestos management and operation plan as detailed in Appendix "A" of Section "J", Attachment "J-1" (to include a 5-year abatement plan updated every year). The contractor shall conduct ACM condition inspections as required. The contractor shall plan and program asbestos abatement projects to correct deficiencies found. Asbestos abatement should be incorporated into facility maintenance, repair or renovation projects where feasible. The contractor shall submit a 5-year abatement plan updated every year to NASA-KSC and the 45th Space Wing asbestos program managers and infrastructure maintenance managers. The contractor shall remove ACM for maintenance, operations, and mission requirements in accordance with all Federal, State, local, Air Force regulations and requirements, and as described in Appendix "A" of Section "J", Attachment "J-1". **(Mod 397)**

When health hazards are identified, ACM is being disturbed because of modification activities, or ACM is identified as deteriorated by any source, the contractor shall abate the asbestos, re-insulating, or resurfacing as needed.

2.2.1.15 Utility Coordination, Reports and Generator Inventories. The contractor shall support activities required to manage utilities. Utility coordination activities shall include the notification of impacts and scheduling utility outages for NASA and CCAFS. Utility coordination activities shall also include the provision of the CCAFS Unscheduled Utility Outage and Incident Reports specified in accordance with DRD 1.1-04, Report Anomaly and the NASA Quick-Look Unscheduled Utility Outage Incident Reports, on an as-needed basis. Using the USAF Real Property records and the O/M/E/U Matrix, the contractor shall provide an annual listing of CCAFS/PAFB generators in support of the USAF Annual Generator Inventories.

The contractor shall communicate/coordinate maintenance and operations with FPL thru the NASA Operating Representative which is contained in the compliance document "Interconnection Agreement Between Florida Power & Light Company and the National Aeronautics and Space Administration." **(Mod 299)**

2.2.1.16 Dredge and Spoil Areas. The contractor shall mow the embankments at least once every 6 months of 3 government dredge and spoil areas. This support is limited to mowing the slopes as well as the center track. The extent of this mowing is as indicated below:

- Dike 2B is 7,100 linear feet long
- Dike 3 is 5,500 linear feet long
- Dike 5 is 4,400 linear feet long

2.2.1.17 Support to Vessels. The contractor shall provide support to home-ported and transient vessels at the Trident Poseidon Wharfs and the Army Outport on CCAFS. This support includes electrical and water waste connections and dockside services for arriving/departing vessels. The contractor shall also provide minor ship repairs, as directed. These actions include minor electrical, metal or carpentry work not associated with vessel structural integrity or seaworthiness.

The contractor shall provide management, certification, operation, and maintenance of dockside portal and fixed cranes inside CCAFS Naval facilities, in accordance with NAVFAC P-307. Additionally, hazardous waste shall be received from ships and processed for disposal.

The contractor shall provide an OSHA-compliant oil spill recovery team and maintain all oil spill recovery equipment, to include booms, buoys, anchors, deployment boats, and absorption materials, to ensure availability on immediate notice.

Facility Condition Assessments of NOTU FSEU shall be conducted in accordance with NAVFAC MO-322, Volume 1. Supporting documentation for the preparation of the annual NOTU FSEU O&M budget shall be prepared in accordance with OPNAVINST 11010.34.

2.2.1.18 Deleted.

2.2.1.19 Clean Rooms. The contractor shall ensure that NASA and Air Force clean rooms and clean work area facilities and associated support equipment at CCAFS meet customer cleanliness requirements (Facility numbers 01428, 01619, 01728, 49635, 55005, 60505, and 60680). The contractor shall use engineering and personnel controls, housekeeping procedures, and contamination-generating constraints to monitor and maintain high levels of cleanliness in the Contractor Work Authorizations (CWAs) assigned to J-BOSC. The contractor shall implement all procedures specified in referenced compliance documents. Description and classification of clean rooms are contained in Technical Exhibits 5.5-801 and 5.5-802.

The contractor shall use engineering and personnel controls, housekeeping procedures, and contamination-generating constraints to monitor and maintain high levels of cleanliness in clean work areas. The contractor shall implement all procedures specified in KCI-HB-5340.1, Payload Facility Contamination Control Plan. In addition, the contractor shall apply the standard and alternate classes of air cleanliness for clean rooms and clean zones based on specified concentrations of airborne particles, in accordance with FED-STD 209E, Federal Standard Airborne Particulate Cleanliness Classes in Clean Rooms and Clean Zones.

2.2.1.20 Deleted.

2.2.1.21 Special Dewatering Support. The contractor shall provide support for storage, treatment, or disposal of dewatering effluent as a result of construction, manhole entry, or other events requiring dewatering. (CCR 06-44, **Mod 398**)

2.2.2 Refuse, Pest Control and Roads/Grounds Maintenance

The contractor shall provide grounds and landscape maintenance for KSC as listed in Technical Exhibit. 7.0-016. The contractor shall provide grounds and landscape maintenance for CCAFS, and the Florida Annexes as listed in Tech. Exh. 5.5-826. Contractor responsibilities shall include: grass mowing, edging or trimming; eliminating weeds; applying fertilizer; maintaining the landscaping; cleaning up debris; watering; and maintaining the watering system. The contractor shall provide sanitation (trash pick up and disposal) in accordance with Technical Exhibits 2.2.2.3A Florida Annexes Refuse Collection Sites and Frequencies, 2.2.2.3B CCAFS Refuse Collection Sites and Frequencies, and 2.2.2.3C KSC Refuse Collection Sites and Frequencies. (The contractor shall consolidate refuse collection and disposal contracts to realize savings from economy of scale. To comply with state permit requirements, one landfill operator shall be on duty at all times that the landfill is open for disposal activities. This operator shall physically witness all tippage and shall sign off on manifests as appropriate. **(Mod 269)**) The contractor shall provide pest control services for assigned facilities, systems, and equipment as listed in the OMEU Matrix. Roads Maintenance includes inspection, maintenance, and repair of ditches and storm water systems and the operation of bridges on KSC. **(Mod 469)**

2.2.2.1 Roads and Grounds. The contractor shall:

- Perform operations, maintenance, and engineering (O/M/E) on all roads, airfields, parking lots, pavement, and bridges on KSC and CCAFS, including marking and street sweeping;
- Provide engineering to analyze and make recommendations for road rehabilitation contracts. Contractor shall sweep, vacuum, and maintain the concrete SLF and Skid Strip runway and parking aprons, and the SLF tow-way to K6-894 (OM) and K6-848 (VAB) to maintain an environment that is free of foreign object debris (FOD) and ready for Orbiter landing and towing operations;
- Provide annual inspections of all paved roadways to identify areas that require repair following the guidance of the Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Green Book, May 2002); and
- Provide the annual inspection results, within 30 working days following the annual inspection, to the CCSMO.
- The contractor shall provide roads maintenance at KSC, CCAFS, and the Florida Annexes following the guidance in paragraph 10 of the Florida Department of Transportation Green Book. This shall include inspection and maintenance of pavement and shoulders, with particular emphasis on maintaining shoulders flush with the pavement, and debris removal

from the pavement, shoulders, and roadside clear zones. The contractor shall provide operator coverage 24 hrs per day, 7 days a week for the NASA Causeway (Indian River) and Haulover Canal drawbridges and shall operate the NASA Causeway (Banana River) drawbridge and Jay-Jay Railroad Bridge on an on-call basis. Roads maintenance areas of responsibility for KSC and CCAFS are listed in Technical Exhibit 2.2.2.1-01. The contractor shall be responsible for all areas of Florida Annexes.

The contractor shall operate and maintain Government Furnished Equipment (GFE) provided for Roads and Grounds support and listed under the NASA Equipment Management System database. Operators shall be properly licensed and equipment shall be maintained in safe and reliable condition.

The contractor shall maintain a designated Memorial Tree Planting Area east of the Headquarters Building. This task includes pruning trees, shrubs, and hedges and removing the cuttings, replacing grass sod, and removing stumps and dead plants. The contractor shall maintain grass, shrubs, and trees in a healthy condition.

The contractor shall maintain existing "cleared" Lines of Sight (LOS), fence lines and utility corridors in conformance with Technical Exhibit 5.5-827. Contractor is expected to maintain approximately 250 acres of LOS and 450 acres of utility corridors under this contract. LOS includes Range, Public Affairs (VIP/press site views) and navigational Aid Range Markers. The contractor shall also provide initial clearing of LOS, fence lines and utility corridors as Type 3C projects. **(Mod 293) (Mod 469)**

2.2.2.2 Pest Control. The contractor shall provide pest control services associated to structures, on a trouble call basis, for KSC, CCAFS, and the Florida Annexes facilities listed in the O/M/E/U Matrix where contractor maintenance responsibilities include structures. The contractor shall develop and implement a pest control program for Cape Canaveral Spaceport. All buildings, facilities, and outside work areas shall be inspected and sprayed at a frequency necessary to prevent damage to structures and control pests that may affect health and morale. The contractor shall provide monthly inspections and treatment, as needed, to all food preparation and service areas of KSC and CCAFS. Food preparation and service areas include the ITL Warehouse cafeteria, E&L Shoppette, Cape Main Cafeteria, and Green House Navy Cafeteria at CCAFS. For KSC food preparation and service areas, included are areas located at O&C, SSPF, HQ, CIF, ARF, MFF, OSB, LCC, Conference Center, Lackmann Warehouse, and USA Logistics. (Mod 451)

The contractor shall trap and relocate small nuisance mammals that are in or on a structure on KSC and CCAFS. Mammals that have had direct human contact (bite or scratch) shall be turned over to animal control or the health department for rabies determination. (Mod 451)

The contractor shall comply with The Air Force Pest Management Plan in accordance with Technical Exhibit 2.2.2.2-01. The following items, pertaining to Technical Exhibit 2.2.2.2-01 entries, Mosquito Fogging/Larvae Control shall be provided to all areas of CCAFS. Termite Treatment/Inspection shall not be provided for Cape Canaveral Air Force Station. For all areas of Kennedy Space Center and NASA facilities on CCAFS, mosquito fogging/larvae control and termite treatment/inspection services will continue to be provided. (Mod 451)

2.2.2.3 Trash Collection and Disposal. The contractor shall collect and dispose of refuse and bulk items for KSC and CCAFS. For the Florida Annexes, the contractor shall only collect, transport, and dispose of refuse. The contractor shall provide special refuse handling at CCAFS and KSC for International Regulated Food Waste and trash resulting from food products obtained outside the United States, and shall operate the CCAFS Construction and Demolition Debris Landfill (C&D), CCAFS Asbestos Monofill, and KSC Class III landfills. This refuse task includes providing services to empty compactors and containers for CCAFS and KSC and

refuse removal services for containers at the CCAFS Picnic Pavilion, CCAFS Museum, and at launch viewing sites. The contractor shall move recyclables from central locations inside facilities to outside recycle dumpsters for all KSC facilities. (Mod 204)

For all KSC Facilities and locations, the contractor shall collect, transport, and dispose of all KSC garbage, KSC office trash, and KSC solid waste to the Brevard County Landfill. Brevard County Landfill tipping fees shall be paid directly by NASA.

The contractor shall dispose of all vegetative material produced from the pruning or removal of trees, shrubs and hedges in the most economical and cost effective way. The most cost effective method of green waste disposal is allowing the green waste to decompose in a green waste disposal site or for the green waste to be used as fuel in a controlled-burn environment. The contractor shall transport vegetative waste material to Air Force and NASA-KSC designated green waste sites. The contractor shall obtain written permission from the government before placing green waste in a disposal site.

KSC Non-reusable wood pallets shall be collected on a work order basis. CCAFS reusable pallets shall be turned in to Central Supply by the pallet generator. There are no wood pickup services performed on CCAFS by the JBOSC Contractor. (Mod 451)

The contractor shall remove and dispose of carrion from the roads and near buildings and populated areas on KSC, CCAFS and the Florida Annexes the same day as reported during normal working hours (0700-1500 Monday through Friday excluding holidays). If reported after normal working hours carrion shall be removed and disposed of the following workday. On KSC and CCAFS, the carrion are to be double-bagged and placed in designated dumpsters and disposed at the county landfill.

Within a an eight mile radius of launch pads 39A and 39B, the contractor shall develop and implement an aggressive carrion removal plan. As part of the plan, the contractor will increase road surveillance and when reported will remove and dispose of carrion from the roads and road shoulders within two hours during normal working hours. If reported after normal working hours carrion shall be removed and disposed of the following workday morning. All Shuttle launch days, including weekends and holidays, are considered normal work days and carrion removal services will be provided. (CCR 06-56, **MOD 398**)

2.2.3 Deleted

2.2.4 Custodial

The contractor shall provide custodial services at KSC and Jonathan Dickinson Missile Tracking Annex (JDMTA) facilities, including facility cleaning, special events support, immediate response to spills, glass breakage, overflows, and blood-borne pathogen cleaning. This task includes laundry and dry cleaning support for PAFB, and specialized cleaning services for NASA and Air Force clean room/clean work area facilities and associated support equipment at CCAFS (Facility numbers 01428, 01619, 01728, 49635, 55005, 60505, and 60680) to meet customer cleanliness requirements. The contractor shall remove and reapply surface protective coating to the uncarpeted floor areas and shampoo the carpets in the Kennedy Children's Center (M6-0883) every 3 months. The contractor shall empty exterior smoking material receptacles in designated smoking areas on KSC only and shall ensure they are no more than 75% full at any time. Once every two years, on an "on-call" basis, the contractor shall clean those interior windows with no obstructions in front of them. (**Mod 269**) (Mod 451)

The contractor shall provide custodial support as listed in Technical Exhibit 2.2.4, Custodial Services, and shall maintain this to document locations and frequencies of services provided.

2.3 ONE-TIME SPECIAL PROJECTS FOR CUSTOMERS (Mod 232)

Closed projects will be transferred to Technical Exhibit 2.3-01, One-Time Special Projects, on a periodic basis.

Support construction, modification, repair, and other special projects from customer as needed.

- a. Provide design software and shop support for the transition of Complex Control System (CCS) function to the Programmable Logic Controller (PLC) based Kennedy Space Complex Control System (KCCS) as defined in the Shuttle Processing Directorate Plan, SPP-EL007.
- b. Perform operational testing of a liquid helium pump provided by Air Products & Chemicals, Inc. in accordance with NASA/APCI Cooperative Agreement (NCC 10-0031). The pump is located at the Converter Compressor Facility (CCFF, K7-468).
- c. Provide security support to the KSC Vehicle Assembly Building (VAB) for construction personnel to access the VAB via the VAB North Gate. Standard support is six days week, (Monday through Saturday, 10 hours a day), starting 15 March 2004 to 1 Feb 2006. (Mod 207)
- d. Increase support to the implementation of IFMP by providing full-time system administrator to set up new accounts, establish role/permissions, and develop applications for managing user's access and roles.
- e. The contractor will pickup, palletize, and prepare drums (55 gallon) for disposition to the recycler. This requirement is for a current 200 drum backlog and additionally for 50 drums/month for a period of one year effective December 2003.
- f. Transition the Airborne Field Mill (ABFM) design database, including online and offline components, from the National Center for Atmospheric Research (NCAR) to Kennedy Space Center (KSC). The work should also include the procurement of the necessary hardware and software to be compatible with the existing NCAR data research web application and operation, maintenance, and sustaining support for the system once transition is complete. The data should be backed up on a regular basis. Standard life cycle development process and documentation will be followed in accordance with KSC and Contractor policies and procedures. The transition should occur in three phases:

Data transfer (completed by March 31, 2004)
Online application up and running by April 30, 2004
Archiving current and future weather data
- g. The contractor shall procure parts and, in conjunction with the NASA procurement and delivery of material/fabric, manufacture up to 20 Self-Contained Atmospheric Protective Ensembles (SCAPE) suites.
- h. The contractor shall prepare a design, with an option for procurement, for the replacement of existing Liquid Hydrogen Rechargers.
- i. The contractor shall purchase precision cleaning equipment to include a Combustion Total Organic Carbon (TOC) Analyzer/Software/Autosampler and ultrasonic generators.
- j. The contractor shall procure the necessary parts and material and subsequently rebuild/refurbish the existing, aging Toxic Vapor Scrubber to operational condition.

k. The contractor shall refurbish existing inert Compressed Gas Trailer (CGT) for Oxygen Service using the requirements of Specifications 98K01359.

l. Support the development/analysis of design requirements and associated documentation for NPG 7120.5b for the Cyber Identity Management System (CIMS) in support of the One NASA recommendations. (Mod 226)

m. Support the implementation of the Agency's IFMP and ePayroll implementation effort and post go-live issue resolution activities. The primary tasking includes modifications, interface development, parallel and end-to-end testing and other integration of activities for the Labor Distribution System, Employee Data Warehouse and other KSC legacy systems. The list below identifies additional work JBOSC will do as a result of IFMP and ePayroll:

1. Modifications to legacy systems including EDW, GPES, MTB, Labor, RD00, RD02, CFC, AWDS.

2. Reworking EDW interfaces/integrations with numerous KSC legacy systems including GPES/CMS, ATDS, CFC, AWDS, KPRO

3. Establishing new EDW interfaces/integrations with PM50

4. Establishing interfaces/integrations between FPPS and EDW, Labor, CFC, and AWDS

5. Work through data validations and reconciliation issues for the Labor system.

6. Shutdown of PATS, AJ02.

7. Support reporting needs for GG and BA by developing Brio reports as coordinated with IT-D. **(Mod 233)**

n. Provide security support to the KSC Vehicle Assembly Building (VAB) for construction personnel to access the VAB via the VAB North Gate. Standard support is expected to be 2304 hours a month starting 15 March 2004 to 1 Feb 2006. For the period 7 Oct 2004 through 31 December 2004, increase the VAB North gate operations an additional 150 hours a month for a total of 450 hours for this period. **(Mod 348 (CCR 05-04))**

o. FY07 NOTU KSC Radar Security Support: The contractor shall provide security access control at and patrol coverage adjacent to the North-end KSC radar (NCAR) site during NOTU launch activities, not to exceed 227 projected overtime hours. Internal access controls shall be partnered with the customer and patrol coverage coordinated with KSC/TA-G 1 October 2006 through 30 September 2007. (CCR 06-66, **Mod 398**)

p. Provide support to AMPAC under a Space Act Agreement KCA-4130. The project shall take place within the period 20 March 2007 through 30 September 2008. (CCR 07-34, Mod 451)

3.0 BASE SUPPORT SERVICES

The contractor shall provide base services for KSC, CCAFS, PAFB, and the Florida Annexes as specified, including comprehensive protective services; full logistical capabilities; computer and designated communications; administrative printing; library, mail, and technical training; and medical and environmental health services.

3.1 PROTECTIVE SERVICES

The contractor shall provide protective services for KSC, CCAFS, and Florida Annexes to protect and safeguard personnel, property, information, and mission operations based on ability to prepare, respond, mitigate and recover. This includes long and short term activities, and emergency mitigations, as necessary based on a safe, flexible, objective, efficient, and innovative "Public Safety and Trust" program. Protective Services includes comprehensive Fire Protection, Emergency Preparedness, and Security Programs.

3.1.1 Fire Protection Program

The contractor shall provide a comprehensive, professionally managed fire prevention, fire protection, and emergency services program for NASA-KSC, CCAFS, and Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)**. Activities include: flight crew; high angle; confined space; aircraft; structural; vehicle and fire rescue; fire fighting; Return To Launch Sites (RTL) support; emergency response and standbys per Technical Exhibit # 3.1.1-01; consolidated training per agency requirements; aircraft and facility pre-fire plans; fire inspection; fire permits (Burn/Petroleum, Oil, and Lubricants (POL)); fire prevention education, inspection and maintenance of fire extinguishers; fire protection engineering; and fire hydrant flow testing. National Fire Incident Reporting System (NFIRS); and hazardous material emergency response support; support technical fire and rescue investigations; emergency medical services, and other agreed to services with outside entities. The fire department shall maintain fire investigative unit personnel that are trained to complete timely and accurate investigations of fires at KSC, CCAFS, and the Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)**. The contractor's Fire Chief shall actively participate in the local area mutual aid program. (Mod 428)**(Mod 506)**

The contractor shall standardize uniforms, turn-out gear, Self-Contained Breathing Apparatus (SCBA), and associated equipment.

The contractor shall centralize the fire department's rapid response of Advanced Life Support (ALS) Emergency Medical Services (EMS), including transport, to provide services for KSC and CCAFS.

The fire department shall manage all emergency operations, large or small, with a consistent, nationally accepted Incident Management System that complies with NFPA. Personal Accountability on the incident scene shall be a priority consideration by the fire department's Incident Commander and shall be managed in compliance with NFPA.

The mission focus of the fire department shall be fire prevention. This mission shall be supported by the department's operations level, training and education section, and fire prevention unit, as well as through the use of required engineering disciplines to support the prevention posture of the fire department. The fire department shall use a system of work and personnel asset management to support the required missions of KSC, CCAFS, and the Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)****(Mod 506)**.

The fire prevention unit shall, through a planned inspection program, continually assess the fire-safe posture of KSC, CCAFS, and the Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)** based upon NFPA and State of Florida standards and requirements. The contractor shall identify problem areas and immediately correct imminent danger situations. All inspections shall be documented, with follow-up and closure activities, to ensure that deficiencies are corrected. The fire prevention unit shall test, inspect, and ensure the maintenance of fire extinguishers at KSC, CCAFS, and the Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)**, according to NFPA's inspection

frequency requirements. As part of its public fire and safety education programs the fire department shall provide periodic publications focused on fire prevention

3.1.1.1 Fire Stations. The fire department shall staff 5 fire stations in 2 divisions, 24 hours a day, 365 days a year, to meet the emergency response mission of KSC and CCAFS. The KSC shall have 1 task force station and 2 satellite stations and CCAFS shall have 1 task force station and 1 satellite station that are staffed to handle emergencies based against defined response matrixes. All emergency responses shall comply with OSHA 1910.134 requirements for required personnel on scene to enter a fire area. Emergency response at the Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)** shall be accomplished through local mutual aid agreements. (Mod428)(Mod 506)

3.1.1.2 Fire Equipment and Services. The fire department shall conduct formalized shift turnover meetings to ensure that all on-duty personnel are informed of activities scheduled for their shift, including special scheduled work details, training requirements, and any special activities. Each shift shall perform detailed inspections of all emergency response apparatus and equipment, inspect their protective clothing, and ensure that all emergency response elements are functional. All fire apparatus pumps shall be tested annually per NFPA 1911; all aerial ladders shall be tested annually per NFPA 1914; and all ground ladders shall be tested annually per NFPA 1931. All fire department SCBA shall be tested and maintained annually per NFPA 1404 and manufacturer's requirements. All fire hoses shall be tested annually per NFPA 1962. The Chief Officer, with responsibility for the fire apparatus and equipment at the Shuttle Landing Area, shall ensure that all equipment is inspected daily. The Shuttle Landing Facility (SLF) shall be manned during all aircraft operations outlined in Federal Aviation Regulation (FAR) Part 139. All fire department personnel shall be trained and qualified to respond to all aircraft take-offs and landings, to include aircraft emergencies and shuttle landings at KSC and CCAFS, in compliance with NFPA 403 and Federal Aviation Regulation (FAR) Part 139. (Mod 428)

In addition, all fire department personnel shall be trained and equipped to respond to shipboard emergencies at the port. All emergency service and daily communications for the fire department shall be managed through the Joint Communications Control Center (JCCC). The fire department's Incident Commander on scene shall manage all emergency operations; all communications shall be through the dispatch center.

3.1.1.3 Response and Standbys. The fire department shall support all stand-by requirements of NASA-KSC and CCAFS through an "in-district" response readiness posture. In-district is defined as "fire rescue personnel and equipment to include Emergency Medical Service are available for immediate response to a scheduled hazardous operation within their response district in the event of an incident. They are not necessarily positioned in their respective station but may be in their geographical response district."

The fire department shall provide a rapid intervention crew to provide emergency back-up during interior fire ground operations when they exceed initial response guidelines. This concept of emergency response shall ensure that the required manpower and equipment are on scene and available to safely manage, contain, control, and mitigate emergencies at KSC and CCAFS. In addition, the fire department shall maintain, on each shift, personnel required to handle hazardous materials emergencies, special rescue emergencies, and emergency medical situations.

3.1.1.4 Rescue and Firefighting. The fire department shall meet all customer requirements for Orbiter flight crew rescue and response to Return to Launch Site Services (RTLs) and landing mishaps at KSC and CCAFS. The fire department shall support all training (except dive training) and demonstration requirements requested by the customer. All emergency response activities

shall be compliant with OSHA requirements for required personnel on scene to enter a fire area. (CCR 06-45, **MOD 398**)

3.1.1.5 Protective Clothing. All emergency service protective clothing (such as turn-out gear, Aircraft Rescue and Fire Fighting [ARFF] suits, HAZMAT suits, and uniforms) shall meet all current NFPA 1971, NFPA 1976, and OSHA requirements.

3.1.1.6 Health Examination and Physical Fitness. All combat/operations fire department personnel shall receive an annual medical physical based against an ergonomic review of the critical attributes required for emergency service operations. To ensure employee wellness, the fire department shall have physical fitness exercise requirements. Personnel shall exercise for a prescribed length of time during each on-duty shift. The fire department shall run an annual physical requirements test, which meets the requirements of NFPA 1500, based against the normal functions required on the fire ground. The test shall be used to establish a physical fitness baseline for each employee.

3.1.1.7 Minimum Personnel Qualifications. All fire department personnel assigned to combat operations shall meet Firefighter 2 and ARFF Firefighter qualifications. All firefighters who hold the rank of Driver shall be qualified to operate assigned fire apparatus (Structural/ARFF). Fire officers shall be qualified as Fire Officer I. Fire department training personnel shall meet Fire Instructor I qualifications. All fire inspection personnel assigned to perform fire inspections shall meet Fire Inspection I qualifications. Personnel assigned to perform as firefighter-paramedics shall meet all qualifications set forth by the contractor Medical Director and the State of Florida. All personnel assigned to perform specialized tasks, such as Astronaut Rescue, Technical Rescue, and Hazardous Material response shall be trained and qualified to perform said operations.

3.1.1.8 Fire Department Training. The fire department shall provide a fire service-training program that meets the requirements of OSHA and the NFPA Professional Qualifications standards. This training program shall provide classroom training from lesson plans, practical factor check-offs for required skills, drills, interactive exercises with support assets, college credit education programs, and evaluated drills.

All fire department members with an emergency response mission shall be required to meet annual training requirements consisting of the following: SCBA training, live fire training, driver training, HAZMAT training, a minimum of 12 fire training sessions, aircraft rescue and fire fighting, safety training, and fire prevention training. Additional requirements shall be assigned to meet the mission requirements of special skills training and the customer. All personnel assigned to the fire prevention unit shall receive training and course education on the requirements of their job (such as fire prevention inspections, testing of fire alarm systems, testing and maintenance of sprinkler systems, and fire extinguisher inspections). The fire department training program shall also run drills to ensure that all customer-established response times are maintained.

3.1.1.9 Fire Inspection and Prevention. The contractor shall develop and maintain a Fire Inspection program. The contractor shall participate in facility or operational walk downs as required by OMI's. The contractor shall identify all reportable fire discrepancies and track these until closure. The contractor shall coordinate inspections and discrepancy closure with the SPOC, CAPPS, and other contractors. (**Mod 402**)

Permits. The contractor shall prioritize and issue permits (Burn/POL) for scheduled, as well as short-notice, welding and burning/POL operations in all areas of KSC, CCAFS, and the Florida Annexes, (**excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes**) except when other contractors may be responsible for issuing permits. Preceding the start of work AF

request must be submitted 72 hours in advance and NASA request are 48 hours prior (Mod 428) **(Mod 506)**.

Fire Extinguishers. The contractor shall select, purchase, install, and inspect portable fire extinguishers for those facilities, and areas identified by the customer, in accordance with NFPA 10. However, fire inspectors are only required to inspect fire extinguishers at KSC/CCAFS and Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)** during the regularly scheduled facility inspection. (Mod 428) **(Mod 506)**

Fire Prevention Education. The contractor shall conduct fire evacuation drills and train the KSC/CCAFS and Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)**, populace in maintaining good fire safety habits, recognizing and eliminating fire hazards, reporting fire or emergency situations and evacuating facilities identified by customers. The contractor shall ensure that fire protection requirements are included in activities and projects on KSC/CCAFS. (Mod 428) **(Mod 506)**

3.1.1.10 Fire Protection Engineering. The contractor shall develop and implement a Fire Protection Engineering Program that shall govern KSC, CCAFS, and Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)**. The contractor shall provide Fire Risk Analyses and Fire Protection Engineering Surveys for required NASA and USAF facilities. **(Mod 506)**

The contractor shall witness all final acceptances of fire protection systems to ensure compliance with all applicable codes and standards.

The contractor shall perform review and support functions for design reviews on all new projects and modifications, including designs performed by other contractors. At a minimum, the initial and final stages of projects and modifications shall be reviewed.

3.1.1.11 Hazardous Material Emergency Response Support. The contractor shall respond to and mitigate all hazardous material spills or releases at KSC/CCAFS. Initial response to hazardous material incidents and spills at Florida Annexes **(excluding the Malabar, Cocoa Beach, & Melbourne Beach Annexes)** shall be accomplished through Mutual Aid Agreements. The contractor shall respond as needed and shall follow-up on all hazardous materials incidents at these locations. The contractor shall maintain the government-provided HAZMAT vehicle with the necessary equipment and materials to support the task. **(Mod 506)**

3.1.1.12 Fire Incident Reporting. Upon notification, the contractor shall report fire responses or incidents at KSC/CCAFS using the National Fire Incident Reporting System (NFIRS).

3.1.1.13 Fire Hydrant Flow Testing and Marking. The contractor shall develop a plan and flow test and mark all fire hydrants on KSC/CCAFS.

3.1.1.14 Immediate Danger to Life or Health Rescue Program. The Contractor will provide support in accordance with Technical Exhibit 3.1.1-01. (Mod 428)

3.1.1.15 On Site Standby Technical Rescue. On site standby technical rescue will be supported in accordance with Technical Exhibit 3.1.1-01 (Mod 428).

3.1.2 Security

The terms “security force” and “security services” as used throughout this statement of work (SOW) are all encompassing and include security, resource protection, special response, alarm response, law enforcement, and supervision. Unless specifically addressed to a particular function, such as security or law enforcement, this SOW refers to the security force in total. Incorporate technical exhibits 3.1.2-01 and -03. **(Mod 273)**

The contractor shall ensure that all personnel involved with security force functions are adequately informed and educated regarding current security posture. The contractor shall train and consistently evaluate the proficiency, certification, and qualifications of the security force.

3.1.2.1 Security Police Services. The contractor shall provide a comprehensive security services program for KSC, CCAFS, and the Florida Annexes, including armed uniformed security, law enforcement officers, and Emergency Response Team (ERT), Federal Arrest Authority Program (FAAP) and in-service training, use of force, investigative support, law enforcement, personnel security, primary and secondary perimeter protection, entry gate access controls, Electronic Security Systems (ESS) and Intrusion Detection System (IDS) monitoring, traffic management and parking, crowd control, certified locksmith services, resources protection program, and Systems Security Integration (SSI). Resource protection and SSI shall be provided at KSC, CCAFS, and the Florida Annexes. The contractor shall develop and implement a Physical Security Plan in accordance with AFI 31-101 that detects hostile activity, controls entry and access to sensitive areas, and, if necessary, defeats a hostile force, while adhering to requirements relevant to "arming and use of force." Technical Exhibit 3.1.2-01 establishes KSC ERT.

The contracted services shall provide for a fully trained Security Force, whose capability and quality meets NASA and Air Force Standards in accordance with NPR 1620.1A and AFI 31-101. The contractor shall plan, staff, and manage security surveillance functions, including safeguarding personnel, equipment, flight hardware, facilities, and classified information; providing temporary and permanent badges; performing area control where required; controlling contraband; and providing Investigative Services, Resources Protection, and Systems Security Integration (SSI). NOTE: Resources Protection and SSI shall be provided at KSC, CCAFS, and the Florida Annexes. Essential to this environment are the protection of all Air Force and NASA priority and critical resources, the maintenance of law and order, and the safeguarding of Government property and classified information. The nature of the Security Force mission requires that the contractor have the provisions to ensure continuous security services in the event of work stoppage or labor strikes that degrade the security services function.

The contractor shall provide the security of the primary perimeter of CCAFS and KSC. The contractor shall staff certain designated internal secondary perimeter posts, in addition to agreed-upon Minimum Essential Infrastructure (MEI) assets and Protection level 1-3 facilities when critical NASA or Air Force resources are stored or processed in certain facilities. As launch and landing activities occur, scheduled and real-time personnel requirements increase for short-term activities such as parking cars, controlling crowds, launching and landing day roadblocks, and increased threat. Means of prevention, deterrence, detection, assessment, and response shall be made on the basis of threat analyses, risk assessments, and other information essential to the protection of critical NASA and Air Force resources, personnel, operations, and facilities.

Miscellaneous security functions required on a scheduled basis include vehicle spot check, guard post relief, flag detail, area clearings, classified destruction duty (classified documents for destruction shall be destroyed in 30 working days), boat security support including DOD port operations, Atlantic boat response, roadblocks, aircraft surveillance and interdiction support, KSC Visitor Complex (KSCVC) support, and explosive and narcotics detection. Other examples of miscellaneous functions include providing a formal in-service training program for all officers and managers; providing a K-9 and law enforcement capability; assist control of non-endangered species population on CCAFS and ensuring that a designated Arms/Equipment custodian is on duty at all times for issuing weapons, radios, vehicles, and ammunition; and participating in the hurricane/tornado warning program as listed in Technical Exhibits 3.1.2-01, 02, and 03. (Mod 297)

The contractor shall provide off-site contingency landing support. This support shall require planning, coordination, and implementation of support at KSC and Contingency Landing Sites (CLS) worldwide, and shall require security personnel to be knowledgeable of CLS operational and programmatic issues such as launch and landing, recovery, and ferry. In addition, contract security personnel shall be required to travel off-site to all designated Space Shuttle landing sites for normal end-of-mission landing operations or shuttle refurbishment support and ferrying back to KSC.

The contractor shall designate a CLS security coordinator that shall conduct contractor scheduling, planning, providing badges, performing foreign country health and documentation requirements such as passports, visas, and international driver's licenses (50 percent of responding personnel shall have one), attending required meetings, developing and updating a CLS library, conducting security surveys and threat analysis, protecting critical NASA resources, and determining security equipment and uniform need status both for and at the sites. The contractor shall provide a security analyst to deploy to designated CLS areas before each launch and shall be prepared to deploy a Security Force team in the event there is a CLS landing or a critical NASA resources mishap occurring within 25 miles of KSC.

SGS shall maintain a Communications Security (COMSEC) account. This account shall handle all custodial and logistical cryptographic responsibilities for the secure telephone system at KSC, in addition to COMSEC equipment and material for record communications and other administrative systems directly supporting the NASA Security Office. SGS shall provide COMSEC data collections, studies, and analysis; COMSEC account administration; development of COMSEC technical security plans and procedures; evaluation of COMSEC material and information; and technical support for COMSEC audits and investigations. **(MOD 230)**

The contractor shall operate security systems in support of established operational requirements with the exception of satellite access control systems under operational control of other contractors.

The contractor shall provide locksmith services to support NASA-KSC, Air Force/45th Space Wing and their tenants, the U.S. Park Service, the U.S. Fisheries and Wildlife service, and the GSA Motor Pool facilities.

The contractor shall provide all necessary equipment for security, badging, and locksmith services in support of AFI 31-101, NPR 1620.1A and subordinate directives. Security Force vehicles shall contain the appropriate emergency equipment and identification to include emergency lighting, sirens, two-way radios, and in car video/audio evidence collection system for the primary patrol vehicles. On-duty Security Force members shall be armed with their primary sidearm and/or rifle, shotgun, sub-machine gun, (less-lethal shotguns or sub-machine gun) as determined acceptable by industry (police) and government law enforcement criteria. The contractor's security force shall be assigned weapons based on prescribed duty position as listed in Technical Exhibit 3.1.2-03.

The contractor shall provide security services to other government payload customers (such as the Department of Energy (DOE), Department of Defense (DOD), and the Strategic Defense Initiative Organization (SDIO)), special components, classified information, and others, as required.

3.1.2.2 Resource Protection Program. The contractor shall provide a Resource Protection Program (RPP) for KSC, CCAFS, and the Florida Annexes. By making a potential target inaccessible or unattractive, the contractor shall safeguard government property by reducing the opportunity for theft or terrorist attack. The contractor shall promote the use of the Crime Prevention Through Environmental Design (CPTED) principles of natural surveillance, natural

access control, and territorial reinforcement, and shall establish procedures and controls that proactively ensure that all personnel safeguard government property.

The contractor shall provide support to conduct threat and vulnerability analysis and studies; ensure that new or modified programs and facilities at KSC and CCAFS are evaluated against generic and specific types of threats; and provide recommendations and planning for the appropriate protective measures.

The contractor shall provide the greatest degree of protection for the greatest number of resources at the lowest cost by identifying resources, projecting the threat analysis against them, and developing realistic countermeasures based on existing and programmed capabilities. The contractor's Resources Protection Plan shall include all available resources that support emergency situations and contingencies and shall contain, at a minimum, the following elements:

- A threat estimate;
- A terrain and weather analysis of the installation and its surroundings;
- An assessment of the installation's vulnerability to terrorist acts or sabotage;
- An estimate of support resources from friendly forces; and
- A concept of operations for resources protection contingencies

Contingency Operations. The contractor shall develop and exercise contingency operation requirements/plans for the following situations and locations, at a minimum:

- Anti-hijack, anti-robbery, and anti-terrorist measures;
- Bombings or bomb threats, hostage, and barricaded situations;
- KSC Installation Minimum Essential Infrastructure (MEI);
- Mass casualty incidents, mobility, and Non-Nuclear Munitions Storage Areas (NMSAs);
- Other mission-essential resources as determined by the Installation Security Council or its equivalent;
- Work stoppages or walkouts and demonstrations;
- Natural disasters;
- Civil disturbance or riot threatening priority or critical resources;
- Overt attack on a restricted or critical area;
- Receipt of Threat Condition Alerting Message (TCAM) orders as the result of a Force Protection Condition (FPCON) change;
- The need to deploy security forces or obtain additional security forces;
- Receipt of Presidential, senior executive mission aircraft (SENEX), specifically designated special air mission aircraft (SDSAM), or special air mission (SAM) aircraft;
- Arrival of unidentified or unannounced military or commercial aircraft;
- DOE nuclear shipments;
- Arms, Ammunition and Explosives (AA&E) shipments; and
- All other shipments that require safe-haven status

The contractor shall translate basic Resources Protection and Physical Security requirements into local implementation procedures and shall be aware of the following:

- Basic Resources Protection Program (RPP) and Physical Security concepts;
- KSC Installation Minimum Essential Infrastructure (MEI);
- Potential installation threats; and
- Risk management implementation and CPTED

The contractor shall develop teams to evaluate the installation's protection needs and programs to support Air Force and NASA resources and coordinate initial and follow-up reviews. These reviews shall:

- Determine whether the installation program adequately protects its resources from criminal activities (on-base and off-base) and terrorist acts;
- Recommend program improvements; and
- Provide feedback for NASA and Air Force action

Resources Management Program Reviews. Initial reviews consist of conducting a detailed initial survey of the installation, building, facility, remote site, or Geographically Separated Unit, and its critical or sensitive assets with follow-up program reviews. As an example, program reviews shall be conducted for the following:

- All AA&E, as specified in compliance documents;
- Areas containing major funds and those areas approved for storage of controlled substances such as pharmacies and other medical supply facilities; and
- All other facilities as determined by NASA-KSC and the Air Force

The reviews shall include methods for indoctrinating personnel on circulation control procedures, an assessment of education and motivation programs, and an assessment of physical protection for facilities and equipment.

The contractor's Resource Protection Program (RPP) shall address the following issues:

- Anti-robbery tests;
- Community policing;
- Operation Crime Stop Program;
- Receiving reports;
- Recording calls;
- Setting up the Field Interview Program;
- Security Education and Motivation Program;
- Installation entry policy;
- Levels of control;
- Minimum controls;
- Unauthorized entry;
- Installation entry point checks;
- Gate closure devices and procedures;
- Installation vehicle entry points; and
- Special-purpose gates

3.1.2.3 Security Police Operations. The contractor shall maintain law and order and assist wildlife control/enforcement; maintain the capability to support detailed and specialized investigations of criminal activities; support space launch operations; and immediately notify NASA (Security) and the Air Force (Range Security) of all incidents that have or had the potential to become violent, result in felony arrest, concern potential counter intelligence matters, media involvement, or other significant events that would cause NASA-KSC or Air Force security to notify senior management. (Mod 297)

During actual and practice launches and landings, the contractor shall perform the following:

- Develop and coordinate timelines and checklists for all launch and landing activities;
- Provide teams to clear designated areas (such as Blast Danger Area/Impact Limit Line or SLF Landing approaches);
- Maintain blast danger area/impact limit line clearance and/or roadblocks as defined in appropriate plans to meet customer requirements;
- Establish roadblocks for perimeter control in the vicinity of the launch/landing pad(s) and/or SLF;
- Establish additional control/surveillance post(s) as stipulated in appropriate Operations Plans;
- Establish chase vehicles for major entry points;
- Establish control roadblocks to protect launch/landing site perimeter area and/or the SLF;
- Provide support for NASA Causeway viewing and other viewing sites;
- Provide protection for VIPs and astronauts and during escort to and from the launch and landing pad, following landing, and to and from other areas including special presentations/events at KSC Visitor Complex or other sites on the Center, and staff the astronaut crew quarters and cul-de-sac and provide personal protection to astronauts three days prior to launch and during TCDT; (Mod 442)
- Provide K-9 bomb/explosive detection support for astronaut and VIP protection and bus checks at the KSCVC as scheduled launch activity;
- Provide protection for special facilities or vantage sites critical to space launches and landings;
- Increase traffic control and direction to ensure the adequate and safe processing of all traffic;
- Augment emergency response forces to affected critical facilities;
- Provide controlled entry at SLF gates;
- Protect SLFs from unauthorized access;
- Provide additional Security Force personnel for waterway and helicopter patrols in support of all launches and/or landings; and contingency actions;
- Provide critical facility controls through launch and landing;
- Conduct helicopter patrols to ensure only authorized personnel are on restricted property, provide active air defense missions in accordance with KSC policy to protect flight crew and launch personnel; and
- Provide daily force protection posture as listed in Technical Exhibit 3.1.2-03

Systems Security. The contractor's Security Services shall support the security mission for protection of Air Force and NASA-KSC Priority/Critical Resources and Space Launch Systems including launch systems, payload systems, and command and control systems, in accordance with applicable Air Force and NASA standards and regulations. Accordingly, operating and post instructions and procedures shall be developed to support security force operations.

The contractor shall install portable sensors in key critical locations during surge periods of activity to augment existing security forces.

All emergency service and daily communications for security forces shall be managed through the Joint Communications Control Center (JCCC).

The contractor shall maintain a capability to routinely support security services post and patrol requirements in accordance with applicable directives, including protection of priority and non-priority aircraft.

Alarm and Security/Special Response Teams (SRTs) shall be equipped with suitable vehicles for response activity on and off roadway and shall be in constant communication with the consolidated communication control center.

The contractor shall perform user special operation support and hazardous operation safety roadblocks by the appropriate safety and security plans. Security Forces shall establish Extended Restricted Areas (ERAs) or launch danger area safety zones to preclude entry of unauthorized persons into the expanded temporary restricted or critical areas as outlined in the appropriate approved plans to support launch operations. The contractor shall convoy or escort launch systems payloads, flight hardware, miscellaneous movements, and other dangerous or hazardous movements on CCAFS and KSC.

Emergency Response. The contractor shall perform the following:

- Establish dedicated KSC Emergency Response Teams (ERTs) as listed in Technical Exhibit 3.1.2-01; and
- Provide CCAFS response teams as listed in Technical Exhibit 3.1.2-03

3.1.2.4 Law Enforcement. The contract security police force as a whole, shall provide Law Enforcement (LE) in support of institutional and user requirements and develop operating and post instructions and procedures to support the function. Contractor responsibilities shall be to protect human life, government assets, high-value property, and conduct motor vehicle traffic management enforcement.

The contractor shall:

- Apprehend violators;
- Investigate incidents and offenses;
- Safeguard disaster and crime scenes;
- Enforce traffic laws and regulations;
- Investigate traffic accidents;
- Issue traffic citations;
- Appear at hearings before the U.S. Magistrate and other Judicial agencies;
- Direct traffic;
- Process **security** police **administrative** forms; (Mod 442)

- Maintain records;
- Conduct security checks of closed, controlled, or sensitive areas at intervals as prescribed by compliance directives on a non-predictable basis;
- Perform protection escorts for astronauts or their families, VIP visits when required, and intra-site movement of nuclear isotope power sources;
- Support the KSC Traffic Management Review Board; and
- Implement and enforce compliance with state requirements of all new or modified KSC/CCAFS traffic signals, signs, and roadway markings

The contractor shall control ingress and egress at specified CCAFS and KSC installation entry control points in accordance with applicable NASA-KSC/CCAFS directives and plans, and maintain a deposit box at manned entry control points for depositing passes, badges, and cargo clearances for outgoing personnel.

Security Forces shall conduct random entry and exit point checks of vehicles entering or leaving the installation using an agreed upon formula. These checks shall be conducted to safeguard government property, prevent introduction of contraband, and preclude the unauthorized removal of classified information.

3.1.2.5 Investigations. The contractor shall:

- Conduct investigative support and surveillance of actual or suspected criminal activity in areas under the cognizance of KSC, CCAFS, and Florida Annexes with the approval and coordination of, or at the request of, KSC Protective Services or 45th Space Wing Range Security Office;
- Obtain prior written coordination and government approval before utilizing covert electronic surveillance techniques/methods;
- Plan, collect, evaluate, analyze, and integrate criminal and security information involving KSC, CCAFS, and Florida Annexes;
- Testify in court or other appropriate forum; (Mod 442)
- Assist in NASA/Range Security Office or NASA Office of the Inspector General (OIG)/Air Force Office of Special Investigations (OSI) investigation and surveillance activities;
- Coordinate all other investigative matters involving other KSC or CCAFS contractors through the appropriate contractor investigative elements;
- Control, maintain, and use surveillance equipment;
- Protect, store, and control evidence in accordance with appropriate evidentiary rules and practices; (Mod 442)
- Provide “centralized lost and found” services, including logging for receipt and destruction;
- Provide protection for designated flight-crew members, families, and distinguished visitors/very important persons (DVs/VIPs); and (Mod 442)
- Support NASA technical laboratory services available worldwide, to Law Enforcement Agencies

3.1.2.6 Security Plans. The contractor shall develop normal (day-to-day) and contingency operation plans, per NPR 1620.1A and 45 SW OPLAN 31-101, to ensure the smooth functioning of KSC and CCAFS security services. As a minimum, the contractor shall perform the following:

- Provide information and coordination to ensure that launch and landing operations, critical activities, and other special events are performed in compliance with established or real-time requirements, procedures, and constraints;
- Compile statistical data, prepare recommendations, and present briefings concerning security controls for major hazardous activities, special escorts, and mission-specific events;
- Prepare and publish Operations Plans, supplements to NASA and Air Force Regulations/Instructions, local directives, and Post Instructions and support the antiterrorism program; safeguard KSC and CCAFS and mitigate terrorist acts through the application of physical security and Random Antiterrorism Measures (RAM); establish antiterrorism funding estimates and provide antiterrorism training and updates; and
- Administer the waiver/deviation program

3.1.2.7 Badging and Identification. The contractor shall provide badging/identification services including:

- Receiving visit request data and processing, fabricating, and issuing all types of badges and permits;
- Logging, reporting, and filing all transactions and invalidating all lost or unaccounted for badges and permits;
- Providing level of clearance verification during non-duty hours in response to telephonic requests;
- Reviewing, validating, and processing requests for temporary passes, picture badges, area permits, and temporary area authorizations transmitted by electronic means from other KSC/CAAFS contractor security offices;
- Obtaining, maintaining, and issuing reserve gate badges, pouches, and equipment consistent with local strike plans;
- Process, fabricate, and issue temporary passes, picture badges, area permits, and temporary area authorizations for all foreign national visitors as approved by the International Visits Coordinator (IVC) or designee;
- Administer unescorted access requirements for NASA personnel entering CCAFS restricted areas;
- Process electronic fingerprints and associated data inputs for KSC visitor access determination;
- Providing fingerprint services to the appropriate CCAFS/KSC personnel; and
- Providing Air Force/NASA Badging Program support
- The Contractor will process random National Crime Information Center (NCIC) criminal background history reviews, during non-peak periods, to support Government force protection installation entry process. To meet federal requirements the 45 Security Forces Squadron is the criminal justice agency that will provide oversight for the NCIC terminal. The Government (45 Space Wing) will be responsible to provide all equipment, software, connectivity and maintenance of same at no cost to the Contractor. The Government (45 Space Wing) will also provide any operational training at no increased cost to Contractor. It is the understanding of all affected parties that routine pass & identification processing time may be increased during training periods. Technical Exhibit 3.1.2.7-01, Security Addendum, is being added as no-cost to the Contractor based on the agreements detailed in this paragraph. (Mod 406) (Mod 455)

3.1.2.8 Personnel Security. The contractor shall provide appropriate personnel security support for KSC and perform the following:

- Process (as applicable) routine investigative requests for KSC Personnel Reliability Program (PRP) and KSC Information Technology, and Personnel Security Programs;
- Conduct pre-employment screening for Interim PRP;
- Accept from and certify to other NASA Centers PRP Certifications;
- Conduct interviews, perform record checks, review and summarize investigations, out processing of civil servants and maintain a database of current and pending actions for the Federal Employees Security Program; and
- Provide administrative, investigative, database management systems and customer interface support to the NASA International Visitors Program at KSC
- Utilize NASA Sensitive but Unclassified Controlled Information as defined in Technical Exhibit 3.1.2.8-01 (Mod 451)
- **Provide PIV badging administrative enrollment support by researching prescribed Government data, made available by the Government, for specific enrollment information (i.e., SSN, DOB & State of birth, type and status of investigation, FBI fingerprints and Defense Center Index of Investigation date codes, etc) for sponsored individuals provided by NASA/TA-G Protective Services (PS) office. Once obtained the desired information shall be provided NASA/TA-G PS point of contact (POC) within five duty days from date contractor receives NASA/TA-G POC notification request for sponsored individual. (Mod 505)**

3.1.2.9 Security Education and Training. The contractor shall develop and implement a Security Education and Training Program Plan for all personnel at KSC/CCAFS and the Florida Annexes in accordance with NPR 1620.1A, AFI 31-207, and Lead Center Agreement.

The contractor shall provide NASA Federal Law Enforcement Training at KSC and other NASA centers and maintain records in support of the Lead Center Agreement for Agency policy and standards development and training in the area of security and law enforcement including the NASA Federal Arrest Authority program, the NASA Security Officer Fundamentals Course (SOFC), verification of the Commission on the Accreditation for Law Enforcement Agencies (CALEA), and the Department of State Foreign Service Institute SAFE (Serve Abroad for Families and Employees) training for NASA employees deployed overseas. Security Force Trainers shall be trained and certified by Federal Law Enforcement Training Center (FLETC), or as coordinated/partnered with cognizant government activity (NASA-KSC/TA-G – 45 SFS/SFR). Instructors shall be required to travel to other NASA Centers or facilities or to other locations to conduct training as partnered with the KSC Protective Services office in accordance with compliance document SI-PSO-IMI-FAAP-1, 07197. **(Mod 273) (Mod 442)**

The contractor shall provide safe operation and oversight of the KSC NFLET Range and shall ensure properly trained and certified Range-master/firearms instructors are available to conduct scheduled on-duty weapons qualifications. The NFLET Firearms Range personnel shall develop, host, and conduct specialized firearms training for NASA, the contract security/Emergency Response Team, and coordinate conduct mutual aid for local, State, and federal law enforcement agencies. This training shall include less-lethal weapons, judgmental shooting drills, night firing, shoot-house, Simunitions scenarios “active-shooter” responses, and sub-machine gun operator. Non-NASA/contractor agencies shall be allowed to utilize the range on a non-interference basis through coordination with the contractor security Training Division personnel.

Furthermore, the contractor shall develop and maintain a Training Records Automation Center (TRAC) that allows tracking of the following:

- **Historical Training Information.** Includes a complete history of all training and certifications received by each Security Force member.
- **Current Employee Information.** Shows assignment changes and tracks assignment requests made by Security Force members. This portion of the system also tracks Seniority, Weapons Restriction List, and the Fitness for Duty Report.
- **Physical Fitness Information.** Tracks the physical qualifications of the Security Force. This portion of the program shall also track all due dates based on contract requirements.
- **Scheduling of Training.** This is the control point for scheduling employees for training and tracking training qualifications. These programs interface with the Master Training Plan, Weapons, and Physical Fitness Modules. All courses are scheduled for Security Forces through the Scheduling Module to ensure that no conflicts in training occur.
- **Re-qualification of Specific Courses.** Tracks due dates for all course requirements and assists in scheduling future training. Is capable of generating updated reports to NASA/Range Security 30 days before expiration of current certification.
- **Weapons Qualification and Re-qualification.** This portion of the program is an unbound form that is used to enter Firing Records into the firearms table.

Specific requirements for the TRAC application are listed in Technical Exhibit 7.0-007.

The contractor shall certify initially as they qualify, and subsequently each year, that Security Force members meet and maintain the minimum requirements to perform assigned duties in compliance with AFI 31-101, AFI 31-207 and NPR 1620.1A.

3.1.2.10 Personnel Minimum Qualifications and Health Standards. Personnel to be employed under the provisions of this WBS shall participate in a physical fitness evaluation. The evaluation shall assess the individual's level of physical conditioning, aerobic capacity, flexibility and endurance. The individual shall perform the Physical Abilities Test (PAT) derived from the Florida Department of Law Enforcement Standards, which consists of the following:

- Exit vehicle/open trunk/grab baton-flashlight
 - 100 yard run
 - Obstacle course (40" wall, three hurdles (24", 12", 18" high), serpentine pylon maneuver, low crawl) - total length 115')
 - 50' sprint/150 lb dummy drag for 50'/50' sprint
 - Obstacle course (repeat)
 - 100 yard run (repeat)
 - Return baton-flashlight to trunk/enter vehicle
- The PAT must be completed within eight (8) minutes to pass.

In addition to the minimum qualification and health standards, personnel desiring to be considered for Security Police Special Duty positions shall demonstrate and complete the criteria contained in Technical Exhibit 3.1.2.10-01. (Mod 323)

3.1.2.11 Certificate Requirements. The contractor shall obtain the appropriate certifications. Certification requirements are specified in compliance documents NPR 1620.1 and AFI 31-101 and shall include, but not be limited to, the following:

- Law enforcement and investigative personnel successfully completing the Basic Police Standards Course (Florida Department of Police Standards) or an equivalent law enforcement certification from another state;
- Twenty percent of the Security Force shall be Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillators (AED) qualified, 100 percent of the Emergency Response Team and training instructors shall be CPR trained;
- (Mod 442)
- Certifications for KSC Emergency Response Team members;
- Recognized professional training certifications for contractor security/ERT instructors to include general and specific firearms, other weapons, tactics, rappelling, and Simunitions;
- Locksmiths completing an accredited master key system/locksmith course (Associated Locksmiths of America or equivalent);
- Security Force members obtaining and maintaining a SECRET national security clearance and the NASA PRP certification, as necessary;
- All Security Force members being weapons qualified;
- Providing certified Intoxilizer operators to conduct Intoxilizer tests, as required by State of Florida requirements;
- Providing certified detention cell personnel to perform detention and care of prisoners to ensure compliance with the appropriate state and federal requirements; and (Mod 442)
- Security Force members supporting specialized activities (such as K-9, helicopter, and boat patrol) being certified in accordance with appropriate NASA and Air Force requirements. (Mod 442)

3.1.2.12 Document Control. The contractor shall operate and maintain a classified document control system for KSC and prepare procedures and plans. This shall include the destruction of classified material and providing classified material custodian training for all KSC custodians.

In addition, all outgoing certified and registered mail shall be processed through the Classified Material Control Center to ascertain the presence or absence of classified material. Appropriate receipts shall be prepared by the contractor to maintain accountability records.

The contractor shall:

- Maintain automated accountability records for all classified material sent to or received at KSC and ensure delivery to the appropriate accountability records custodian;
- Maintain automated accountability records for all SECRET and accountable CONFIDENTIAL material sent to or received at KSC;
- Receive from the KSC Post Office all registered and certified mail addressed to Kennedy Space Center, FL 32899, open and inspect for classified material, attach appropriate documentation, and deliver material (exceptions: all mail addressed to NASA Procurement Office, NASA Office of Inspector General, NASA Personnel, NASA Security Office, and NASA Legal Counsel shall be delivered unopened to the addressee);
- Prepare classified documents and equipment for mailing or shipping;

- Receive all accountable classified material destined for destruction, screen and record such material prior to destroying it, ensure that all destruction is witnessed by an authorized employee;
- Maintain a current list of NASA-KSC accountable record custodians and locations of all classified document containers;
- Reproduce small amounts of classified material in support of real-time operations; and
- Conduct 100% annual classified document inventory and provide results to KSC Protective Services Office

3.1.2.13 Records. The contractor shall maintain and operate the following:

1. Personnel Security Records Subsystems:
 - a. Pre-employment screenings
 - b. Personnel Access Security System (PASS) records
 - c. Personnel Security Support Office (PSSO) records
2. Locksmiths Records Subsystems:
 - a. Work requests
 - b. Individual hand receipts for keys
3. Document Control Records Subsystems:
 - a. Classified documents
 - b. Registered mail (incoming and outgoing)
 - c. Certified mail (incoming and outgoing)
4. Investigative **Support** Records Subsystems: **(Mod 442)**
 - a. Incident reports
 - b. Investigative reports
 - c. Lost/stolen property, audit trail records
5. Traffic Records Subsystems:
 - a. Traffic accidents records
 - b. Traffic tickets (CCAFS/KSC)
6. Training Records
 - a. Weapons qualification
 - b. NASA Federal Arrest Authority (agency wide)
 - c. Instructor certifications
 - d. KSC security awareness and education **(Mod 442)**
 - e. Recognized professional security police certification/accreditations **(Mod 442)**

The contractor shall ensure that in addition to the above, all other record keeping and documentation as defined in this contract meets the requirements of PL 93-579.

3.1.2.14 KSC KARS-1 Park Attendant. (Mod 209) Provide KSC KARS-1 park attendant service with a KARS-1 marked motor vehicle, 24 hours a day, seven days a week. At no time does the park attendant position have force protection security guard requirements or law enforcement police authority and will report activities and incidents that require an emergency services (fire, police, or medical) response.

General duties include screening visitors and limiting access to the park area to authorized visitors and guests, assuring utilities conservation, and performing area and facilities safety and safeguards in accordance with policy provided by the Exchange Operations Manager and/or designated KARS management personnel. The attendant will respond to inquiries and provide

information to park members and visitors. Attendants may be required to maintain visitor logs and other paper records pertaining to their duties. Attendants will be responsible for proper use and care of telephones, and other equipment they may be issued.

The park attendant will ensure proper use of KARS I recreational facility by authorized members and guests. One attendant is required per shift. Park attendant work apparel clothing shall be the same for all individuals performing this function and readily identify these individuals as a Park Attendant and not a security force guard member. Attendant work apparel clothing items shall be provided by the contractor and these items coordinated with the NASA Exchange Operations Manager to assure the items satisfy the need of the NASA Exchange. Attendants may schedule meal and relief breaks with consideration to daily park activities. Attendant shift hours schedule and internal Park operating Instructions will be coordinated with the NASA Exchange Operations Manager and KARS management personnel. Persons employed as attendants are subject to personnel security screening as specified by the NASA Protective Services Branch.

Attendant Representative Duties/Responsibilities: Monitor access to KARS I park from 0600-2200. Use motor vehicle to travel through out KARS 1 Park and facilities from 2200 - 0600. Assure utilities (lights/water) are conserved, perform facility/barricade checks, assure the softball field gates and gun range gates are secure every evening. Wear a safety vest when monitoring traffic. Monitoring traffic by attendant is limited to directing visitors to where facilities or events are within the park.

The First and Second Shift attendant staffs the Park entry facility located near the boat ramp. The Second shift attendant closes the entrance gate located near the boat ramp at 2200 hours. (The only time the entrance gate is locked is when the outer electronic gate has malfunctioned and is out of order). No entry to the park is allowed after 2200 with the exception of registered campers. Campers will provide a visitor guest list/overnight guest list to the attendant for access purposes. Camping patrons have transceivers to access the outer electronic gate between the hours of 2200 and 0600. The Third shift attendant opens and staffs the entrance gate located near the boat ramp at 0600 hours until relieved by the First Shift attendant.

Internal KARS I policies and procedures are established by the NASA Exchange personnel (KARS Country Store) and are posted at the Park.

3.1.3 Emergency Preparedness and Joint Communications Control Center

The contractor shall develop a Consolidated Comprehensive Emergency Preparedness Program and Plan for KSC, CCAFS, and the Florida Annexes that ensures constant readiness for preparing for, mitigating, responding to, and recovering from emergencies.

The contractor shall operate and consolidate the two communication/control centers (CCAFS and KSC) into one state-of-the-art control center at KSC. The contractor shall provide a state-of-the-art, continuously operated (24/7) consolidated communications control center and maintain the capability to activate an alternate facility. The Joint Communications Control Center (JCCC) shall provide all emergency response communications, response of emergency services equipment and personnel, monitoring of all alarm systems, public address and adverse weather warnings. The contractor shall provide emergency response elements with updated information vital to decision making. The contractor shall operate the 911 emergency telephone, the Telephone Device for the Deaf (TDD), and maintain the ability to document a continuous chronological listing of events during response activities.

The contractor shall operate a Joint KSC/CCAFS Emergency Operations Center and related equipment in addition to maintaining an Alternate Emergency Operations Center.

The Contractor shall effectively and essentially respond to Executive Order 12148, Section 2-101 for Federal Emergency Management; Executive Order 12472 for Telecommunications Preparedness; Executive Order 12656 for Assignment of Emergency Preparedness Responsibilities; and the Federal Radiological Emergency Response Plan (FRERP), which shall establish contractor requirements for joining into an organized and integrated effort for timely, coordinated response by federal agencies to peacetime radiological emergencies.

The contractor shall provide car parkers for launches on KSC and CCAFS to include STS landings.

The Consolidated Comprehensive Emergency Management Plan (CCEMP) shall specify contractor actions to support the contract mission under a full range of emergency conditions and support KSC, CCAFS, and Florida Annexes in saving lives, protecting the environment, minimizing the loss and damage of government resources, assisting in recovery from emergencies toward timely resumption of normal operations, assisting in mitigating hazards and minimizing the effects of a natural or technological emergency or disaster, and supporting local, state, and federal agencies and appropriate emergency response authorities.

The contractor shall develop and administer an Emergency Preparedness Office to ensure constant readiness while preparing for, mitigating, responding to, and recovering from emergencies at KSC, CCAFS, and the Florida Annexes.

The contractor shall coordinate activities with NASA and other KSC organizations, the Air Force, CCAFS, the Brevard County Emergency Management group, and other local government agencies. The contractor shall ensure coordination of activities with KSC and CCAFS contractors and government organizations, including external federal, county, state, and local agencies as necessary, as well as maintaining program documentation.

The contractor shall operate a Mobile Command Vehicle in support of the Incident Command System, the On-Scene Commander, and shall use the vehicle to support launches from the KSC and CCAFS.

3.2 LOGISTICS

The contractor shall provide logistics capabilities to include: logistics services, vehicle operations and maintenance, airfield services, laboratory services, propellants, and life support services. The contractor shall develop and implement logistics procedures to ensure that all resources identified in this SOW are operationally ready to perform scheduled mission support. The procedures shall describe to the government and contractor personnel how the contractor shall obtain or provide logistics support. The contractor shall provide a centralized point of contact for logistics support functions.

3.2.1 Logistics Services

The contractor shall perform the following for approved customers (Technical Exhibit 7.0-001):

- Provide supply functions for NASA and AF under the J-BOSC contract at KSC, CCAFS, Patrick AFB, Florida Annexes and other designated locations including: acquisition; accountability; storage and warehousing support; receipt and issuance of supplies, materials, and equipment; and ordering, storage and delivery of fuels;
- Provide bottled water delivery and pick-up for NASA and AF under the J-BOSC contract at KSC, CCAFS, PAFB, and NOTU; Note: AF facilities with tested potable water will not receive bottled water service (CCR 06-41, **Mod 398**).
- Provide property management for NASA and J-BOSC including tagging for government-owned equipment, equipment records management ([using SAP and N-PROP—NASA's](#)

property management Web application that will provide access to Logistics SAP/N-PROP data fields for most users) (MOD 511) , training property custodians, excess property management, and inventorying equipment and documenting all findings;

- Provide temporary custodial storage, based on space availability to NASA and J-BOSC customers including pickup, storage, and delivery of items;
- Provide warehousing operations to excess property disposal at the Recycling, Reutilization and Marketing Facility (RRMF);
- Provide receipt, warehousing, and issuing of forms and publications;
- Manage KSC Records Staging Area (RSA) and document authorized records dispositions;
- Maintain IM03 KSC Records Management System database or its equivalent;
- Manage KSC/CCAFS Petroleum, Oils, and Lubricants (POL) hazardous materials storage facilities;
- Provide life-cycle tracking of contractor-acquired hazardous materials at KSC;
- Provide services to KSC Public Affairs Office and for KSC special events; and
- Establish and maintain Project Funds and Management Records (PFMRs) with AF Standard Base Supply System (SBSS).
- Establish new account and provide stock supply to ELVIS contractor.(CCR 06-24, **Mod 398**)

3.2.1.1 Material Management Services. The contractor shall perform the following:

- Provide maintenance for Government Furnished Equipment (GFE) and the NASA held equipment listed in the NEMS SAP/N-PROP account, with the exception of Information Technology equipment. (**MOD 511**)
- Catalog program, standby, and stores stock in the inventory management system;
- Screen Manufacturer's Part Numbers (MPNS) through Defense Logistics Information Service (DLIS) for adoption of existing National Stock Numbers (NSNs), request assignment of new NSNs, and ensure compatibility between NSNs common to J-BOSC and DLSC;
- Spare Parts Analysis (SPA) for new/modified critical/configured systems;
- Research stock, GSA/DLA, and Federal Supply Schedules to determine the source of supply for material requirements documents;
- Logistics Support Analysis for spares determination of new/modified critical/configured systems as required;
- Order propane, diesel and gasoline fuel;
- Utilize PFMR process to obtain critical spares, repair parts, supplies, materials and fuel delivery from SBSS at PAFB;
- Material requirements planning for work order kitting requested by NASA and the AF; and
- Provide services for NASA-KSC, including: Port-o-let service, cash register service, linen service, waste pickup from RRMF, and bottled water delivery.

3.2.1.2 Supply Operations. The contractor shall perform the following:

- Provide warehousing services to support operational activities of NASA-KSC, J-BOSC and supported contractors. Functions include: binning incoming materials, issuing outgoing materials, entering material requirements into inventory management system, managing

shelf-life controlled materials, managing the hazardous materials storage facilities (POL), assembling work order kits, and maintaining warehouse location control system;

- Receive, store, and issue blank forms and publications; fill orders or notify of non-availability; and accommodate requests for stocked forms and publications via electronic communication and internal mail system;
- Manage the KSC Record Staging Area (RSA) and update the on-line KSC Records Management System (IM03) pertaining to authorized records disposition, and destroy records as directed by the KSC Records Management Officer. IM03 is further described in Technical Exhibit 7.0-007;
- Maintain and replenish bench stocks (including HAZMAT), processing over-the-counter issues, binning, distributing incoming material to all supported customers including Florida annexes, issuing protective garments, and issuing loan tools and test equipment;
- Provide furniture support to NASA and all authorized customers to include: receive, store, assemble, issue, repair, deliver, and pick up excess furniture;
- Maintain fuel storage levels for diesel and gasoline, supporting equipment and associated records; and
- Provide receiving services required to support NASA, J-BOSC, and supported contractors. Functions include: receiving freight shipments utilizing NASA/J-BOSC information systems, in-processing materials and equipment, inspecting for over, short, damaged, special handling or storage requirements, verifying proper receipt documentation, resolving receipt discrepancies, processing documents to ensure accountability, and processing all receipt documentation to the appropriate procurement department.

3.2.1.3 Property Management. The contractor shall perform the following:

- Tag government equipment for NASA. This includes bar coding the items and the creation of an equipment receipt record (ERR) with supporting documentation. Items shall be input into ~~the NASA Equipment Management System (NEMS) SAP/N-PROP. (MOD 511)~~
- Government equipment inventories including the NASA 100 percent triennial inventory. Equipment inventory results shall be available within 30 days of completion;
- Excess property management for excess property identified by NASA, J-BOSC, and KSC-approved contractors. This includes entering information into the NASA Property Disposal Management System (NPDMS) to accomplish NASA and other federal agency screening and disposition;
- Record excess property freezes and dispositions using NPDMS and retain the official documentation file for receipts and dispositions of excessed property;
- Sale of NASA owned surplus, recycled, or exchange/sale of government property through coordination with the NASA Property Disposal Officer per NPR 4300.1A, NASA Personal Property Disposal Policy. Tasks Include: preparation, sales scheduling, lotting, advertising, staging property, customer assistance with inspection of property, security for inspection and sales, assist customer loading after sale, sales abandonment and destruction, contract administration, and preparation and maintenance of all required documentation;
- In-check, locate, store, and screen excess Automated Data Processing (ADP) equipment and electronics for disposition through federal transfers or donations (e.g., Stevenson-Wydler and Computers for Learning); and
- Conduct physical inventories of all stock supplies and materials.

3.2.1.4 Transportation Services. The contractor shall perform the following:

- Transportation of materials, supplies and equipment for NASA and NASA approved contractors and J-BOSC customers on KSC, CCAFS, PAFB, Florida annexes and other sites;
- Control the custody of, accounting for, preparation of, correction of, and conversion of Bills of Lading (commercial and government) for use with government shipments, and maintain records, files, and documentation;
- Package and prepare hazardous materials for shipment; ensure that all shipments containing hazardous materials are packaged, packed, marked, labeled, and all documentation complies with applicable federal, state, international, and military regulations;
- Process all requested international shipments through U.S. Customs for both imports and exports. J-BOSC shall recommend the requirements of a license and license exceptions when appropriate, properly complete all required documentation, and forward to the responsible NASA officer;
- Pick up excess J-BOSC materials and equipment and deliver to RRMF;
- Provide inbound and outbound freight shipping services including inspection and preparation of items and all documentation necessary for shipment of material for all locations;
- Coordinate, process, and complete all claims actions on inbound freight involved in Over, Short & Damaged (OS&D) items received;
- Coordinate, process and complete all claims actions on outbound freight and other movements of NASA property involved in OS&D items shipped;
- Deliver gasoline and diesel fuels;
- Maintain all certifications, endorsements, and function specific training requirements;
- Conduct Performance Oriented Package testing on packages to be used to transport HAZMAT by all modes of transportation for domestic and international shipments;
- Perform Non-Bulk Combination packaging tests, including Drop Test, Stacking Test, and Vibration Standard Test; and
- Counter-to-counter delivery of launch film shipments to designated location.

3.2.2 Vehicle/Railroad Operations and Maintenance

The contractor shall provide vehicle operations and maintenance services as required to support KSC, CCAFS, and PAFB as described in J-5 Technical Exhibits 7.0-005, 3.2.2-02, **3.2.2-03 and 3.2.2-04**. Vehicle operations and maintenance services at both CCAFS and PAFB shall be provided by a vehicle operations and maintenance branch at each location. The vehicle operations branches shall have dispatch services that provide service IAW Technical Exhibit J5 3.2.2-03. The general purpose vehicle fleet can be GSA leased and maintained. Alternative Fuel Vehicle acquisitions shall follow schedule matrix in Technical Exhibit J5 3.2.2-01. The vehicle operations branch at KSC shall consist primarily of scheduled and unscheduled bus services. Vehicle maintenance shall be performed primarily in Hangar U, Building 1744, CCAFS, Buildings 313, 511, 676 PAFB, Building M6-486, KSC Industrial Area, and K6-1844, Locomotive Maintenance Facility. (Mod 470)(**Mod 502**)

3.2.2.1 Vehicle Operations. The contractor shall provide:

- Taxi and bus transportation service at CCAFS (Skid Strip), KSC (SLF), and PAFB (Flight line) to support air crews and passengers traveling either to or from aircraft that are arriving or departing to various destinations both on and off the installation;

- Scheduled shuttle route bus service to include pad support at KSC;
- Transportation services assigned by the NASA-KSC Transportation Office to meet scheduled and unscheduled events, unmanned launches, and center activity tours, shuttle launches/landings, and VIP tours;
- Bus services at CCAFS, and PAFB to support tours, launches, VIPs;
- Normal PAFB 8 vehicle U-Drive It fleet to consist of: Sedan (2), LD Minivan 7 Pax (2), LD Van 4x2 8 Pax (2), MD Pickup 6 Pax (1) and MD Covered Truck 1 Ton (1). (Mod 470)
- Dispatch services at KSC, CCAFS and PAFB;
- Dispatch data for upward required reports;
- Support for the Decontamination Team and the Base Disaster Preparedness Team; and
- Flight-line cargo service at CCAFS, KSC, and PAFB
- Perform annual entries into the Federal Automotive Statistical Tool (FAST) database; entries shall be submitted no later than 24 October of each year. **(Mod 232) (Mod 470)**

3.2.2.2 Vehicle Maintenance. The contractor shall provide maintenance at CCAFS, PAFB, and KSC for government vehicles and equipment. The contractor shall also:

- Maintain vehicles in safe and serviceable condition. PAFB vehicle repair actions performed in accordance with vehicle priority category in Tech Exhibit J5-3.2.2-03 ; (Mod 470)
- Perform recurring periodic maintenance and services in accordance with established inspection intervals and standards;
- Maintain vehicles in safe and serviceable condition. PAFB vehicle repair actions performed in accordance with vehicle priority category in Tech Exhibit J5-3.2.2-03 ; (Mod 470)
- Perform recurring periodic maintenance and services in accordance with established inspection intervals, **standards, and Tech Exhibit J5-3.2.2-04. (Mod 502)**
- Maintain Air Force unregistered vehicles in safe and serviceable condition. Perform recurring periodic maintenance and services in accordance with commercial practices **and Tech Exhibit J5-3.2.2-04.** Track vehicles in contractor maintained database. **(Mod 502)**
- Collect and enter required maintenance data into the On-line Vehicle Integrated Management System (OLVIMS) and provide data for required reports at CCAFS and PAFB and **meet requirements of Tech Exhibit J5-3.2.2-04. (Mod 502)**
- Perform minor body repair on PAFB vehicles and equipment fleet. Minor body repair consists of but not limited to:
 - a. Replace: glass, seat, seat belts, seat covers, headliners, door panels, soft trim items, door/window hardware, window channels, dew wipes, and door seals. (Mod 470)
 - b. Adjust: Doors, windows and hinges (Mod 470)
 - c. Cut/apply stencil and markings as necessary. Minor dents and scratches not requiring paint booth application, shall be spot painted. (Mod 470)
- Perform body repair, corrosion control, rust proofing and painting on CCAFS and PAFB vehicle and equipment fleet. (Mod 470)

3.2.2.3 Locomotives and Railroad Facilities. The contractor shall:

- Operate government-furnished locomotives to accomplish the movement of railcars on KSC tracks;
- Perform maintenance, repair, and modifications of government-furnished locomotives and railcars. All railcars and locomotives shall have semi-annual and annual preventive maintenance performed. Railcars that enter the KSC railroad and require repairs in accordance with the American Association of Railroads interchange rules shall also be repaired as required. Note: The contractor has no repair responsibility for government-owned railcars when operation is off KSC/CCAFS in interchange service; NASA will handle all such repairs in accordance with the Interchange Agreement of the American Association of Railroads (AAR). The contractor shall allow designated railcars to be used by other activities and organizations and shall ensure that such cars are properly maintained.
- Perform annual corrosion control of rails and fittings on all KSC Beachline tracks using spray application of an appropriate corrosion resisting material.

3.2.3 Laboratories

The contractor shall perform the nondestructive evaluation of various kinds of hardware, standards and calibration services at KSC, calibration services at CCAFS and PAFB, sampling and analysis of waste and propellant commodities at KSC, sampling services at CCAFS and PAFB, component cleaning and refurbishment services, and other related services, including the following:

- Permeability and compatibility studies of materials used in conjunction with hypergolic fluids;
- Developmental and sustaining engineering support in the science of hypergolic Toxic Vapor Detectors (TVDs);
- Sustaining engineering services for existing non-CFC (chlorofluorocarbons) cleaning and verification processes; and
- Development and maintenance of capabilities manuals for all laboratories

Laboratory services are provided to the following, with exceptions noted below for SPOC, CAPPs, and ISS: **(Mod 402)**

- AF 45th Space Wing;
- AF 45th Space Wing contractors with J-BOSC support clauses in their contracts;
- Other government agencies with Host Tenant Agreements with the AF 45th Space Wing;
- NASA-KSC;
- NASA-KSC contractors with J-BOSC support clauses in their contracts;
- CAPPs (J-BOSC only provides Standards and Calibration);
- SPOC (J-BOSC only provides NDE Radiography support); and **(Mod 402)**
- Allied Signal (J-BOSC only provides Standards support)

3.2.3.1 Nondestructive Evaluation Laboratory. The contractor shall be responsible for providing Nondestructive Evaluation (NDE) examination and related engineering/administrative support services for NASA, Air Force and their contractors at KSC, CCAFS and PAFB. These services shall also be provided for off-site locations or agencies where incidental and authorized by NASA. The contractor shall be responsible for providing only radiographic services and associated engineering support for the SPOC, ISS and CAPPs. **(Mod 402)**

The contractor shall provide laboratory and/or on-site NDE services for evaluating the quality and integrity of components/parts, systems, and structures related to facilities, ground support equipment, payloads and flight vehicles. The services fall into two basic categories: surface and near-surface inspections by Visual, Magnetic Particle, Liquid Penetrant, Eddy Current, and Infrared Testing; and Volumetric Inspections using Leak Testing, Radiography (computed tomography, gamma, x-ray, microfocus real-time), and Ultrasonic inspection methods. Computed Tomography and Microfocus Realtime Radiography are only provided in the Lab.

The contractor shall conduct pre-inspection meetings with the customer when necessary to define the requirements and objectives of the inspection, the physical and design features of the item, the test acceptance criteria, and the NDE methods to be employed. Individual items scheduled for NDE shall be received, inspected, and evaluated (or alternately, inspected in-situ). The contractor shall prepare a report presenting the inspection results and appropriate recommendations. The report shall be reviewed and approved internally by engineering or supervision, then forwarded to the customer. NDE examinations shall be conducted in accordance with applicable American Standard for Testing Materials, (ASTM), American Welding Society (AWS), American Society for Mechanical Engineering (ASME), and NASA-KSC specifications or contractor specifications where requirements are consistent with industry standards identified. NDE shall coordinate with the customer to inform them of required secondary support elements that are required for access or safing of the work area.

The contractor shall operate and maintain a current electronic NDE Work Control System which incorporates provisions for creating/processing/archiving external and internal jobs. This work control system shall be available for engineering review, personnel assignment, and job status. The database shall be maintained for tracking/reporting level of effort, personnel qualification/certification status, and equipment maintenance.

The contractor shall implement and maintain a NDE personnel certification program including developing and conducting formal training courses, examinations and maintenance of qualification/certification records. NDE personnel qualification and certification requirements shall be in accordance with NAS-410, ASNT-SNT-TC-1A, ANSI/ASNT CP-189 and related regulatory requirements. NDE Level III Engineers shall be qualified for certification by American Society for Non-Destructive Testing (ASNT) National examination. The contractor shall provide Level III certified personnel in each NDE method. At least one Level II (minimum) certified individual shall be utilized in the performance of all NDE examinations of critical Ground Support Equipment (GSE) or flight hardware.

The contractor shall implement an equipment preventive/corrective maintenance program IAW equipment manufacturer's recommendations and in compliance with requirements of State and Federal regulations where applicable.

The contractor shall implement and administer a Radiation Safety Program for conducting industrial radiography with gamma and x-ray sources which complies with NASA, USAF, State of Florida, the US Nuclear Regulatory Commission, and the Department of Transportation requirements. A qualified Radiation Safety Officer shall be staffed with administrative responsibility for maintaining licenses/authorizations, supporting regulatory audits, maintenance of current rules and regulations, and oversight of the Radiation Safety Program per the following requirement documents:

Document Number	Document Title
	Dept. of Transportation
	Title 49, Chapter 1, Code of Federal Regulations
	Part 100-185
KHB 1860.1	KSC Ionizing Radiation Protection Program
AFI 40-201	Radiation Protection Program
	Florida Administrative Code (FAC)
	Control of Radiation Hazards Regulations
	Chapter 64E-5.434
	US Nuclear Regulatory Commission
	Title 10, Chapter 1, Code of Federal Regulations
	Part 34.43

3.2.3.2 Standards and Calibration. The contractor shall provide calibration service for Standards and Test, Measurement and Diagnostic Equipment (TMDE), including related repairs, to NASA-KSC, PAFB, CCAFS, JDTMA, and Down Range to Ascension Island and Antiqua. NASA-KSC customers entitled to calibration service include NASA-KSC, CAPPS, SPOC, Allied Signal, and other NASA contractors with the appropriate calibration support clause in their contracts. Allied Signal is entitled to Standards Calibration only. AF customers entitled to support include the 45th Space Wing, 45th Space Wing contractors with the appropriate calibration support clauses in their contracts, JSTARS, and other government agencies with Host Tenant Agreements which specify calibration support. Services shall be provided in accordance with Technical Order 00-20-14 or ANSI/NCSL Z540. The requirements for all Standards and Calibration services are as listed in J-BOSC **Section J-12** and Technical Exhibit 7.0-113 and 3.2.2.2-01. (Mod 348, 402, 451)

The contractor shall comply with following documents:

Document Number	Document Title
45 SWI 21-101	Repair, Calibration, and Certification of Test, Measurement, and Diagnostic Equipment (Option 3A and 3B)
ANSI/NCSL Z540-1-1994	Calibration Laboratories and Measuring & Test Equipment - General Requirements
T.O. 33K-1-100	TMDE Interval, Calibration and Repair, T.O. Reference Guide and Work Unit Code Manual (Option 3A and 3B Requirement Only) (Mod 79)

The contractor shall provide reference standards calibration and maintenance to NASA-KSC. Cleaning incidental to calibration shall be provided to NASA-KSC. Metrology engineering services shall be provided to NASA-KSC. Engineering services shall be provided to AF PMEL customer's Non-TMDE, assets as listed in **Section J-12**.

The contractor shall provide pick-up and delivery service for JSTARS equipment from/to Melbourne Airport. Repair of JSTARS equipment shall be performed up to \$100 without prior approval. JSTARS authorization shall be obtained for repairs expected to exceed

\$100. The contractor shall maintain a repair authorization log to track JSTARS repair authorizations exceeding \$100. (Mod 451)

The contractor's primary tasks include the following:

- Provide laboratory and in-place calibrations for required technical disciplines and instruments. In-place calibration is provided only for items embedded in systems too large to move or whose accuracy would be affected by movement after calibration;
- Provide equipment repair as listed in **Section J-12**;
- Provide cleaning incidental to calibration for NASA and NASA contractors with the appropriate J-BOSC clause in their contracts;
- Maintain KSC reference standards and provide working standard measurement data traceable to National Institute of Standards and Technology (NIST) or intrinsic standards for KSC;
- Serve as pivot laboratory for Measurement Assurance Programs (MAPs) and participate and support other MAPs as required;
- Prepare and maintain the Standards and Calibration Measurement Capabilities Report that defines the measurement parameters supported by the labs; the range, media, accuracy, and uncertainty; and the technique, system, and equipment associated with each parameter;
- Maintain existing and develop new laboratory procedures;
- Operate and maintain a Metrology Information System to recall and control standards and test equipment systems;
- Operate and maintain the Shared Resources Management System used to control automated calibration work stations; and
- Operate the Air Force provided data collection system in support of Air Force requirements to provide appropriate information to Air Force Metrology and Calibration (AFMETCAL)

The contractor shall provide 45th Space Wing launch contractors information regarding action taken and out-of-tolerance data for TMDE when requested by the user. The contractor shall notify the user when out-of-tolerance conditions are 200 percent or more. The contractor shall provide calibration data sheets or charts for TMDE as a result of an out-of-tolerance condition or on other TMDE as required by the user. The contractor shall prepare and implement a Quality Assurance Program (QAP) that ensures the quality of the calibrations performed on reference and working standards and on the test equipment in the inventory.

The contractor shall develop and maintain laboratory procedures including the following standard operating procedures: equipment receiving, storage, distribution, issue, accounting, and control; procedures governing the individual calibration and test processes; government access to facilities and equipment; equipment and systems maintenance; and property management and disposal.

3.2.3.3 Sampling and Analysis. The contractor shall provide sampling services and related engineering support to customers at KSC, CCAFS and PAFB. The contractor shall provide analysis services to NASA-KSC customers only. These services include sampling and analysis of non-hazardous and hazardous waste, gases, fuels, oxidizers, cryogenics, hypergols, coolants, solvents, delivering controlled samples; compatibility studies for hypergolic fluids; TVD

calibration and repair; and HAZWASTE characterization and environmental regulations compliance.

The contractor shall perform specifications analyses on propellants and other chemical commodities per the requirements of SE-S-0073 Space Shuttle Specification for Fluid Procurement and Use Control. An Aspect Listing shall be maintained on file in the laboratory detailing each particular analyte in a specification matrix along with its minimum and maximum reporting limits and minimum and maximum specification limits. The contractor shall provide other laboratory and in-field analytical tests such as moisture, pH, conductivity, dissolved oxygen, temperature, airflow rate, particulate and fallout counts, and Non-Volatile Residue (NVR) determinations.

The contractor shall perform sampling and analysis of waste in support of non-hazardous and hazardous waste determinations. Sampling and analysis activities shall be conducted in accordance with sample chain of custody documentation and control as required by the National Environmental Laboratories Accreditation Conference (NELAC) for Toxicity CLP and other requested samples as detailed in the Lab's NELAC approved Comprehensive Quality Plan. The Lab shall perform TCLP analyses (excluding pesticides) per EPA Solid Waste Manual SW 846. NELAC certified methods under SW 846 shall include:

- 1311 TCLP Extraction;
- 6010 Metals Analysis;
- 8270 Semi Volatile Organic Analysis;
- 8260 Volatile Organic Analysis; and
- 7470/71 Mercury Analysis.

Flash point determinations shall be performed per ASTM D93. The Lab shall perform annual Method Detection Limit determination studies to determine minimum detection and reporting limits for each NELAC certified analyte. This data shall be included in the required annual update to the NELAC Comprehensive Quality Plan.

The contractor shall provide TVD calibration and minor repair for instrumentation used in detecting hypergol fuel and oxidizer, Freon-21, Dimethylethoxysilane (DMES), ammonia, oxygen, hydrogen/combustibles, carbon monoxide, and carbon dioxide. The contractor shall support developmental efforts such as evaluation or acceptance testing of new support developmental efforts such as evaluation or acceptance testing of new instruments and the development of new calibration or detection methodologies.

Other principle subtasks include:

- Assisting Range users in drawing samples of materials under their control;
- Maintaining sampling equipment in a certified, ready to support posture;
- Developing and maintaining sampling and analytical procedures;
- Returning sample residuals, when appropriate, to the requesting agency for disposal;
- Preparing laboratory analysis reports documenting sample history, analytical results versus specification limits by sample control number and maintaining records in accordance with regulatory and quality requirements;
- Collecting, managing, and disposing of all Laboratory generated wastes in accordance with regulatory requirements; and
- Performing mercury spill cleanup under the direction of Environmental Health.

3.2.3.4 Component Cleaning and Refurbishment. The contractor shall provide cleaning and refurbishment services for fluid mechanical systems hardware and components used in both GSE and Flight systems. In-Lab support shall be provided for component hardware delivered to the Component Refurbishment and Chemical Analysis (CRCA) facility (K6-1696) by customers at KSC, CCAFS and PAFB. In-Place cleaning support shall be provided to customers at KSC and CCAFS.

Primary component cleaning and refurbishment services include:

- Disassembly of functional components to allow for inspection for damaged parts, to better facilitate cleaning, and to allow for the removal of standard replacement parts and soft goods;
- Decontamination of hypergol system components;
- Rough cleaning to facilitate degreasing along with corrosion, scale and smut removal. Rough cleaning shall result in essentially a visually clean item;
- Surface treatment such as passivation, pickling, and electropolishing;
- Precision cleaning in a clean room environment using approved fluids. Testing shall be performed to ensure particulate and non-volatile residue (NVR) levels are in conformance with the Cleanliness level specified on the customers work order. Cleanliness levels vary from visually clean to the extremely stringent 10A;
- Refurbishment of functional components to a “like new” condition in conformance with government, contractor or vendor drawings, specifications, and standards. Component modification shall be performed, upon request, in compliance with approved drawings;
- Functional testing of components to ensure performance standards specified in government, contractor or vendor drawings are met. Testing can be performed hydraulically (0-6000 psi) and pneumatically (0-14000 psi). In special circumstances cryogenic (LN2) testing shall be performed;
- Packaging of cleaned components and hardware to ensure cleanliness shall be maintained;
- Cleaning of large bore hoses, tubing and piping at the cleaning facility and in the field; and
- Hydrostat and pneumostat testing of tubing, hoses, and compressed gas cylinders

All cleaning and packaging operations shall be performed using non-ozone depleting substances, and in compliance with KSC-C-123H, Specification for Surface Cleanliness of Fluid Systems. Upon request, cleanliness shall be certified to levels specified in Military or Contractor specifications that are comparable to KSC-C-123H.

Other principal subtasks include:

- Developing and maintaining procedures required for component cleaning, refurbishment, inspection, and testing;
- Providing sustaining engineering services for existing non-CFC cleaning and verification processes;
- Coordinating with all on-site agencies in the vicinity of the cleaning operations area before initiating field cleaning operations

3.2.4 Propellant and Life Support Services

The contractor shall provide the following propellant and life support services: manage and provide propellants and related resources for KSC, CCAFS, and PAFB, including scheduling,

acquisition, planning, engineering, storage, processing, certification, delivery, pick-up, recovery, excessing, disposal, and/or recycling; provide on-site management of the Defense Energy Support Center (DESC) controlled storage functions; and provide life support services supporting NASA-KSC, CCAFS, and PAFB.

The contractor shall comply with the following documents:

Document Number	Document Title
AFM 23-110, Volume 1, part 3, chapter 4	Missile Fuels
BB-F-1421, Revision B	Refrigerant 21
J-BOSC Tech Exhibit 7.0-021	Types of Propellants
JSC SE-S-0073, Revision G	Space Shuttle Fluid Procurement & Use Control, Specification for
KSC-SPEC-P-0017	Propellants, Recovered Hydrazine Family Fuels, Specifications for
KSC-SPEC-P-0018	Propellants, Recovered Nitrogen Tetroxide Solutions, Specifications for
KSC-STD-Z-0006, Revision B	Design of Hypergolic Propellants Ground Support Equipment, Standard for
KSC-STD-Z-0008, Revision C	Design of Ground Life Support Systems and Equipment, Standard for
KSC-STD-Z-0009, Revision C	Design of Cryogenic Ground Support Equipment, Standard for
MIL-M-12218, Revision C, Notice 1	Monobromotrifluoromethane (Liquefied), Technical Grade for Fire Extinguishers (MIL-M-12281C has been canceled without replacement)
MIL-P-25576, Revision C, Amendment 2	Propellant, Kerosene (RP-1)
MIL-P-26536, Revision E, Amendment 1	Propellant, Hydrazine
MIL-P-26539, Revision E, Amendment 2	Propellant, Nitrogen Tetroxide
MIL-P-27402, Revision C, Amendment 1	Propellant, Hydrazine-uns-Dimethylhydrazine (Aerozine-50)
MIL-P-27404, Revision C	Propellant, Monomethylhydrazine
MIL-P-27407, Revision B,	Propellant, Pressurizing Agent, Helium
MIL-P-27415A, Amendment 1	Propellant, Pressurizing Agent, Argon
MIL-PRF-25508, Revision F	Propellant, Oxygen
MIL-PRF-27201, Revision C	Propellant, Hydrogen
MIL-PRF-27210, Revision G	Oxygen, Aviator's Breathing, Liquid and Gas
MIL-PRF-27401, Revision D	Propellant, Pressurizing Agent, Nitrogen

MIL-T-83133, Revision D, Amendment 1	Turbine Fuel, Aviation, Kerosene Types, NATO F-34 (JP-8) and NATO F-35
NASA-STD-6001	Flammability, Odor, Offgassing, and Compatibility Requirements and Test Procedures for Materials in Environments That Support Combustion
O-A-445, Revision B, Amendment 1	Ammonia, Technical (Shuttle Grade)
TT-I-735, Revision A, Amendment 3, Notice 2	Isopropyl Alcohol

The contractor shall serve as the point of contact (POC) between designated supplier/supply agencies and various KSC, CCAFS, and PAFB uses, and shall be the on-site manager of the controlled storage functions. The contractor shall use the Space Shuttle, Military/DoD, or other referenced specification for fluid procurements and use. Particular subtasks include:

- Providing procurement information to government procuring activities such as DESC, to establish propellant contracts; collecting consumption and cost information and updating database for major propellants (helium, hydrogen, hypergols, nitrogen, oxygen, and solvents); analyzing "cradle to grave" propellant logistics; developing, recommending, and implementing reliable and cost-effective support procedures; and methodologies for current and future programs.
- Documenting pre- and post-shipment anomalies involving vendor equipment and equipment of KSC, CCAFS, and PAFB to the equipment owners and the propellant services organization.

The contractor shall function as a controlled storage point for receiving, storing, issuing, reporting, forecasting, and accounting for propellants, oxidizers, pressurants, and other related inventory. The contractor shall maintain, control, and inventory missile fuels including commodity sampling and implementing procedures to ensure contamination control and product integrity.

The contractor shall serve as the focal point for propellant ordering information (including pricing, available containers, and commodity specifications). The contractor shall implement a Product Integrity Program to ensure that commodities issued to KSC, CCAFS, and PAFB meet specifications.

The contractor shall establish, maintain, and implement a process to collect and consolidate user requirements, identify requirements to the various supply sources, and coordinate all Spaceport deliveries with the respective supply vendors. The work scope includes management of the controlled storage of items.

The contractor shall provide engineering services for propellant and life support related facilities, systems, and utilities.

The contractor shall provide propellant and life support engineering in support of approved J-BOSC customers.

3.2.4.1 Propellant Operations, Maintenance and Engineering. The work to be performed by the contractor includes the following subtasks:

- Coordinating, identifying, and reporting deficiencies, and inspecting supplier deliveries for government-procured, direct-delivery propellants; the contractor shall document all anomalies, coordinate with appropriate organizations, determine and implement corrective action, and follow up on the implementation process;

- Providing propellant billing validations for government-procured propellants; the contractor shall process all acquisition, receipt, and inventory documents;
- Developing 3-year propellant forecasts to support government propellant procurement planning; commodity projections shall be derived from usage estimates obtained from NASA/45th Space Wing and other Spaceport entities;
- Providing technical assistance (engineering, safety, environmental, and operations and maintenance) in propellant deliveries to systems operated and maintained by others;
- Operating customer servicing equipment to support customer servicing/de-servicing operations (such as Orbiter refrigerant 21 servicing);
- Providing thermal conditioning of Delta hypergolic propellant and Nitrogen Oxide (NO) enrichment of Nitrogen Tetroxide;
- Inspecting and servicing non-Spaceport equipment staged at KSC and CCAFS, inspecting and certifying (pre- and post-shipping) equipment loaned off base, draining propellant systems, weighing cargo tanks, and storing and moving customer- owned hypergolic equipment;
- Supplying propellant handling equipment to accommodate facility on-site storage, anomaly and malfunction testing, and off-center hardware re-certification and overhaul;
- Documenting and reporting to the government on all Department of Transportation (DOT) compliance waiver/deviation issues associated with propellant fleet operation before propellant equipment is used for propellant handling;
- Maintaining the fluids handbook to provide current information on the management of various types of propellants. The handbook can be web-based and shall be updated at a minimum of every 3 years.
- Maintaining the existing fluids sampling plan and analyzing trends to ensure the integrity of the plan and the sampling frequency; and
- Preparing Propellant Cost Estimate Reports and Cost Tracking Reports in accordance with DRD 3.2.4-01, Reports, Propellant Analysis.

The contractor shall provide services to Spaceport customers including operating, maintaining, and constructing assigned fixed and portable propellant facilities, systems, and utilities. The contractor shall establish and maintain an ongoing maintenance, refurbishment, and overhaul program that ensures the safety and operational readiness of propellant equipment and facilities. The contractor shall ensure that related certifications and exemptions are maintained.

The contractor shall provide propellant logistics services (such as deliveries and processing) to customers in accordance with customers' quality, quantity, and schedule requirements and contained within conveyances appropriate for the intended use.

The contractor shall provide operational statements, progress reviews, and periodic mission support reviews (KSC/CCAFS launches) to NASA. The contractor shall provide pre-launch propellant readiness status, GSPN/anomaly post-launch debriefing, and post-launch summary for Shuttle Operations.

The contractor shall provide support at Port Canaveral. Port activity includes pumping bilges of ships and missile tubes, providing compressed air to submarines.

The contractor shall support 45th Space Wing downrange activity including delivery and pick up of compressed gas cylinders to the Port Canaveral Wharf for shipment downrange by others.

The contractor shall provide Spaceport vacuum pump overhaul and vacuum system servicing support. The contractor shall maintain the PAFB flight line LOX carts.

In addition to KSC Shuttle Landing Facility (SLF) support, the contractor shall provide refueling at the Occupational Health Helipad and contingency refueling at the CCAFS Skid Strip to support NASA aircraft and helicopter requirements.

The contractor shall support commercial customers as directed by the government and as in accordance with the Air Force Base Support Policy (BSP).

The contractor shall provide operations and maintenance support of propellant systems and equipment as required in the O/M/E/U Matrix. For critical and mission essential propellants and life support equipment, the contractor shall perform 100% of scheduled preventive/predictive maintenance (PM) tasks including all applicable maintenance/validation steps contained therein. Any PM not performed or completed in its entirety for critical or mission essential systems and equipment shall be briefed or reported to the responsible government functional subject matter expert (e.g. TA, CES) and to the contracting officer's technical representative (COTR) on a weekly basis. Reductions in PM requirements or frequency shall require pre-approval of the responsible government functional subject matter expert.

The contractor shall provide problem reporting for all anomalies and off-nominal configuration changes for critical and mission essential propellants and life support systems and equipment. Problem documentation shall include anomaly description and findings, critical and/or mission essential impacts, operational constraints, troubleshooting steps and findings, and corrective actions performed leading to closure of the anomaly. Problem documentation shall be readily accessible to responsible government functional subject matter experts. All open problem reports shall be briefed to the Government on a regular basis. The formats and frequencies of the reports shall be partnered with the Government. (MOD 436)

The contractor shall:

- Maintain records/documentation files including specifications, drawings, standards, manuals, and guidelines for all systems and equipment;
- Maintain a system to record total inventory, provide equipment utilization assessment, document inventory problems, and predict required inventory levels;
- Conduct a requirements assessment for each specific launch-related mission or project to include contingency planning and post-launch operational assessment, and conduct System Level Reviews for each Space Shuttle mission;
- Maintain and implement support and contingency plans; and
- Provide certification for propellant packaging to ensure compliance with DOT and shipping requirements when equipment is shipped off government installations.
- Monitor the condition of propellant equipment on loan to other agencies.

3.2.4.2 Deleted.

3.2.4.3 Deleted.

3.2.4.4 Life Support Services. The contractor shall establish and maintain an ongoing operations, maintenance, refurbishment, and overhaul program that ensures the safety and operational readiness of life support equipment and facilities. The contractor shall provide life support services to the Space Shuttle and Payload Contractor Programs at KSC, the Titan, Delta, Atlas/Centaur Programs at CCAFS, airline operations, and the spacecraft/payload processing facilities at KSC and CCAFS. The contractor shall maintain all related certifications. Particular subtasks include the following:

- Inspecting and testing hazardous material suits, to include those provided by others as described in Tech Exhibit J-5 3.2.4-01. **(Mod 279)**
- Fabricating, maintaining, managing, inspecting, testing, certifying, and issuing life support equipment, PPE, and respiratory equipment to personnel working in hostile environments such as in propellant- or oxygen-deficient atmospheres or during emergency breathing operations;
- Providing and maintaining personnel protection and respiratory equipment; setting up required support equipment at KSC, CCAFS, and PAFB; and training personnel in the use of such equipment (services rendered shall include assisting user personnel in donning protective gear, filling backpacks, manning communications equipment, and operating various support equipment used in life support operations);
- Providing actions testing and minor maintenance/Modification services for life preserver units used on KSC aircraft;
- Maintaining the Emergency Life Support Apparatus (ELSA) items in the inventory in such condition that they can reliably perform their respective functions under extreme environmental and emergency conditions; and

3.2.5 Airfield Services

The contractor shall provide airfield services at the CCAFS Skid Strip and the KSC Shuttle Landing Facility and comply with regulations listed in 45SW13-201, Eastern Range Air Space Management Procedures. The contractor shall maintain at the airfield the appropriate firefighting equipment and agents required to sustain the required Airfield Index as specified in FAR part 139, and shall maintain the facilities, equipment, personnel, and procedures for meeting rescue and firefighting requirements. The contractor shall perform Air Traffic Control at the SLF. The contractor shall provide fully qualified, certified, and experienced Air Traffic Controllers to respond to SLF requirements. **(Mod 232) (CCR 06-60, Mod 398)**

The contractor shall:

- Support astronaut flight crew rescue and emergency medical response training activities at KSC;
- Provide documentation and assistance required to support government procurement and/or acquisition efforts relating to major overhaul or repair of components for KSC assigned aircraft;
- Pilot the G-1159 aircraft and the UH-1H helicopters safely and efficiently, ensuring that the aircraft are operated within the performance limits prescribed by the aircraft manufacturer, DOD, FAA, or established by a formal NASA airworthiness review;
- Employ FAAO 7220.2, Operational Position Standards (The OPS Handbook), in Air Traffic Operations, to achieve the desired standardization of position operation at the SLF; (CCR 06-60, **Mod 398**)

- Provide airfield services to all 45th Space Wing and NASA-KSC customers to include airfield management, control tower operations, flight operations, and ground operations;
- Ensure that airfield services are available during all requested periods for aircraft arrivals, departures, servicing periods based on Prior Permission Required (PPR), and as mission requirements dictate;
- Support unique mission requirements such as shuttle launches/landings, Shuttle Training Aircraft (STA) activities, and handling of classified payloads;
- Maintain a flight planning room by providing applicable aeronautical publications and notices to airmen (NOTAM) to assist aircrews in their flight planning duties at the SLF, and NASA Flight Operations at PAFB; and (CCR 06-60, **Mod 398**)
- Provide an aircrew/passenger waiting area and adequate facilities to accommodate arrivals/departures

3.2.5.1 KSC Aircraft Operations and Maintenance. The contractor shall perform maintenance on NASA aircraft operating out of KSC, CCAFS, and PAFB, and pilot NASA aircraft assigned to KSC. The contractor shall provide day-to-day scheduled and unscheduled diagnostic checks and preventive maintenance to ensure airworthiness and availability of NASA-KSC Mission Management Aircraft and helicopters. The contractor shall perform all required work at PAFB except for repairs at off-site locations required to allow for the safe continuation of flight mission or return to home station.

The contractor shall support daily flight missions. Aircraft services on all aircraft may occasionally be required at irregular work hours to meet scheduled flights. A flight mechanic shall be aboard the G-1159 during each mission flight. The contractor shall arrange for and pick up food or meals for use on missions as requested and shall provide requested general services. The contractor shall provide ground services as directed by NASA Air Operations on NASA related business to ensure the scheduled departure and minimize impact to flight mission.

The contractor shall:

- Provide a helicopter mechanic to all launch and landing operations and other times as requested; and
- Submit timely and detailed written requests to the government including recommended course of action, analyses, cost estimate, schedule, options, and list of vendor sources, for required major overhaul and/or repair to preclude over flight of a component, meet component time-change requirements, and minimize impact to scheduled mission flight; in emergencies this request may be verbal, but it shall be subsequently documented in writing.

The contractor shall establish and maintain a training program that ensures trained, qualified, and certified personnel. Training records shall be maintained and shall include, at a minimum, the following: certified record of ratings held; certified record of all formal training; record indicating that the maintenance and inspection procedures have been read and understood; other pertinent records relating to maintenance enrichment training; and a copy of FAA Medical Certificate.

The contractor shall provide fully qualified, certified, and experienced personnel to perform maintenance, preventive maintenance, rebuilding, Quality Assurance insight, and alterations. The contractor shall implement controls to ensure that only authorized personnel approve aircraft components, for return to service after maintenance, preventive maintenance, rebuilding, or alteration.

At off-site locations, the contractor shall perform required repairs to the aircraft to allow the safe continuation of flight mission or return to home station.

The contractor shall use manufacturer maintenance requirements and manuals as well as the current FAA-approved inspection program as guidance to provide aircraft services. The contractor shall maintain the FAA Airworthiness Certificate for the G-1159 current. The contractor shall comply with the following documents:

Document Number	Document Title
FAA Approval Letter	Definition of NASA 4 Maintenance Program
FAR Part 43	Maintenance, Preventative Maintenance, Rebuilding , and Alteration
FAR Part 65	Certification: Airmen Other Than Flight Crewmembers
NPR 7900-3	Aircraft operations management

3.2.5.2 Shuttle Landing Facility. The contractor shall operate and maintain the KSC Shuttle Landing Facility. Current airfield operating hours are as follows: SLF 0600-2230 daily. The contractor shall evaluate and prepare for outside evaluations of air traffic system safety in accordance with FAAO 7110.65P, Air Traffic Control. **(Mod 232)**

The contractor shall perform the duties of a Military Radar Unit (MRU) in accordance with FAAO 7610.4K, Special Military Operations, 24 hours a day/seven days a week. MRU functions would require performance at either the Range Operations Control Center (ROCC) or the Shuttle Landing Facility (SLF). **(Mod 232)**

The contractor shall comply with the following documents:

Document Number	Document Title
FAAO 7210.3T	Facility Operation and Administration (Mod 232)
FAR Part 1	Definitions and Abbreviations
FAR Part 73	Special Use Airspace
FAR Part 139	Certification and Operations: Land Airports Serving Certain Carriers

3.2.5.3 Cape Canaveral Air Force Station. The contractor shall provide transient alert services at the CCAFS Skid Strip. Current airfield operating hours are as follows: 0730-1600 Monday - Friday. The Government must pre-coordinate, at least 24 hours in advance, any requests for transient alert support outside normal working hours. (CCR 06-60, **Mod 398**)

The contractor shall comply with the following documents:

Document Number	Document Title
45SWI 13-202	Use of Cape Canaveral Air Force Station (CCAFS)
AFI 13-213	Airfield Management (Chapters 1-6 & 8)
FAAH 7110.10R	Flight Services (Mod 232)
FAAO 6850.5C	Maintenance of Lighted Navigational Aids

(CCR 06-60, **Mod 398**)

3.2.5.4 PAFB Transient Alert Services. The contractor shall also provide transient aircraft ground services at PAFB including minor maintenance for aircraft visiting KSC on NASA-related business:

- Provide transient alert services at PAFB to all non-assigned aircraft from 0800–1800L Monday through Friday. The Government must pre-coordinate, at least 24 hours in advance, any requests for transient alert support outside normal working hours; (CCR 06-61, **Mod 398**)
- Provide transient alert services at PAFB to aircraft supporting the 920th RQW which the 920th specifically approves;
- Perform all aspects of aircraft launch/recovery support, follow-me service, Foreign Object Debris (FOD) control, crash recovery, and marshaling;
- Service transient aircraft including fuels, oils, hydraulics, pneumatics, liquid/gaseous oxygen, nitrogen, and water;
- Maintain transient aircraft documentation and coordinate maintenance activities with home base if required;
- Provide 24-hour on-call capability for crash recovery and contingency operations at PAFB with a response time no more than one hour after notification; (CCR 06-61, **Mod 398**)
- Maintain Aerospace Ground Equipment (AGE) assigned to PAFB;
- Ensure AGE is available to support transient aircraft, off base support requests as approved by 45th Space Wing/CC; and
- Operate and maintain liquid/gaseous oxygen and gaseous nitrogen carts and associated equipment; and maintain historical records, supply records, and technical operating data.
- Provide water/waste support to the National Airborne Operation Center (NAOC) aircraft at PAFB and chiller cart maintenance. (CCR 06-39, **Mod 398**)

3.2.6 Hazardous and Controlled Waste

3.2.6.1 Hazardous and Controlled Waste Management. The contractor shall provide hazardous and controlled waste management for KSC, CCAFS and PAFB, and mainland annexes including hazard determination, pick up, storage, <90 day treatment options, and manifesting; and off-site shipment for treatment and disposal of hazardous and controlled waste.

The contractor shall provide characterization and disposal of investigation-derived wastes from NASA remediation sites. The contractor shall operate and ensure compliance of the NASA-KSC hazardous waste Treatment/Storage and Disposal Facility (TSDF).

Controlled wastes include materials which cannot be disposed of as domestic sewage or without constraints in a Resource Conservation & Recovery Act (RCRA) Subtitle D Landfill. Radioactive materials and sanitary wastes are excluded from support under this WBS.

The contractor shall handle, store, transport, consolidate, and dispose of all bulk industrial liquid waste generated at KSC/CCAFS.

3.2.6.2 Post-Emergency. The contractor shall provide and coordinate post-emergency clean-up, decontamination, neutralization, and disposal of regulated wastes at KSC, CCAFS, and Florida Annexes per OPlan 32-3 Vol. 111A, 111B, Vol. V-VIII, and KHB 8800.7 as referenced in

Section J, Attachment J-4. Post-emergency spill clean-up at PAFB shall be done only at the request of the 45th Space Wing.

The contractor shall provide maritime spill prevention and clean-up services. This includes maintaining preventive oil booms for the Naval Ordnance Test Unit (NOTU) to ensure available immediate notice support to the Disaster Response Plan. Equipment includes NOTU boats, trucks, trailers, and the containment boom, and must be used for no other purpose.

3.3 INFORMATION TECHNOLOGY

SGS shall provide computer and designated communications support for KSC as described below; this includes preparing an IT Investment and Purchase Plan, as specified by Data Requirement Item 3.3-01.

3.3.1 Computer Systems. SGS shall provide operations and maintenance, sustaining engineering (SE), configuration management, database administration, and user support for existing and/or new automated applications/systems supporting KSC institutional and other base operation disciplines (such as KIMS and CMDS).

3.3.1.1 General Requirements. SGS shall perform the following tasks:

- Provide coordination, SE, and configuration control board support (including demonstrating systems enhancements) for the KSC-led, multi-agency SPECSINTACT;
- Support planning and implementation of new/re-engineered NASA wide and KSC systems/applications (such as IFMP);
- Provide client/server and database management capability and systems, plus functional and physical interface to external providers of mainframe, desktop, and communication services;
- Ensure year 2000 compliance for all existing and/or new applications/systems (including COTS products), and provide quarterly input for Center report to Office of Management and Budget (OMB);
- Support NASA in reviewing and implementing Chief Information Officer (CIO) directives and standards, and comply with those directives after they have been adopted;
- Provide a semi-annual Information Technology Plan that identifies priorities and schedules for IT systems support and re-engineering efforts; and
Perform risk management, disaster recovery, and security for supported systems/applications.

Performance Standard		
3.3.1-1	(PS)	Computer systems and applications shall be operational and/or available 99% of the time, with unscheduled downtime not exceeding four hours for critical systems or 12 hours for non-critical systems for each incident.
3.3.1-2	(PS)	Unauthorized actions that result in system access, denial of service, loss of data, loss of system or data integrity, or disclosure of sensitive information shall be reported to the Government within two hours of detection.
3.3.1-3	(PS)	Year 2000 Compliance Metrics shall be maintained, met, and reported.
3.3.1-4	(PS)	98% of IT milestones and products shall be provided as scheduled or as negotiated with the customer.
3.3.1-5	(PS)	98% of software deliverables shall run without error two weeks of delivery to the customer.
3.3.1-6	(PS)	System up-time and maintenance response shall be complied with 100% of the time.
3.3.1-7	(PS)	The IT Security Plan shall be complied with 100% of the time.

3.3.2 Communications. SGS shall operate and maintain the administrative/institutional computer and data communication systems and their associated equipment and data communications circuits/cables, and provide end user computer/workstation support. In accomplishing these activities, SGS shall ensure the end-to-end integrity of all communications equipment, and provide resources required to support J-BOSC responsibility.

3.3.2.1 General Requirements. SGS shall provide communication support for NASA administrative and institutional management, including:

- Local area networking and administrative communications;
- Provide network management, planning and requirements coordination, operation and maintenance, SE, and upgrade of the Kennedy Data Network;
- Interface with the KSC cable plant, backbone, and other communication systems and providers;
- Provide low bandwidth video, pagers, and Video Teleconferencing Systems (VITS) operation and administration. **(Mod 506)**

3.3.2.2 IT Inside Cable Plant Support. The contractor shall provide the following communications network support for J-BOSC personnel located at CCAFS and PAFB:

- Provide all inside cable plant infrastructure up to the 45th Space Wing Local Area Network/Metropolitan Area Network (LAN/MAN) demarcation point;
- Ensure Local Area Network/Wide Area Network (LAN/MAN) connectivity;
- Support major/minor moves and/or in-house personal computer moves;
- Provide installations, troubleshooting, repairs, and/or removals of CAT-5 and fiber cable, hubs, switches, routers, Modems and associated accessories;
- Provide trend analysis to determine network growth, and verify the need for planned network expansion; and
- Manage IP database

3.4 ADMINISTRATIVE SERVICES

The contractor shall provide support services to NASA-KSC and the 45th Space Wing to include publications development and reproduction, printing, microimaging, engineering document control, graphic services, forms control, information support, External Relations and Business Development writing support, technical library administration, mail processing and distribution, and training certification for safety, health, skills, and operational area access.

3.4.1 Publications

The contractor shall provide printing and microimaging reproduction services to NASA-KSC. Services include printing/duplicating, color copying, engineering drawing reproduction, multicolor digital printing, aperture card plotting, document scanning, and CD-ROM mastering. The contractor shall coordinate with the KSC Printing Management Officer on jobs that require printing by Government Printing Office (GPO) contract. The PAMIS (Printing and Micrographics Information System) database, or equivalent, shall be maintained to provide customer and workload accountability. The contractor shall meet printing quality standards of GPO Publication 310.1, Level III quality standards for color copying, and Level IV, quality standards for printing/duplicating.

3.4.1.1 Printing. The contractor shall perform the following:

- Comply with NPD 1490.1G, NASA Printing, Duplicating, and Copy Management Directive; (CCR 07-25, Mod 407)
- Provide Center wide duplicating, networked electronic publishing and color copying;
- Electronically transfer and publish Launch, Landing, Orbiter Processing, and Payload Operating and Maintenance Instructions (OMIs);
- Electronically receive and publish Integrated Control Schedules for Shuttle Orbiters, Shuttle Payload, and Space Station processing;
- Electronically receive and publish NASA Payroll, NASA Personnel documentation, Shuttle, Payloads, and J-BOSC ~~NEMS SAP/N-PROP~~ (MOD 511) reports;
- Provide controlled color copying support Center wide;
- Provide Electronic Document Distribution to other NASA Centers;
- Operate printing and microimaging Information System (PAMIS) (SI07) for printing reporting;
- Provide copying, duplicating, electronic publishing, remote mainframe computer printing, and document finishing;
- Provide engineering drawing reproductions from originals, electronic, and microfilm;
- Provide multi-color digital printing, including folding and document finishing, and provide reproductions containing as many as three colors; and
- Provide Aperture card and microfiche prints (8.5x11 to 18x24 inches)
- Provide support for the procurement function of NASA-KSC's commercial printing requirements through the Government Printing Office (GPO), by preparing requisitions/print orders for program and one-time-bid orders. Assist the NASA-KSC Printing Management Officer with verification of color proofs, communicate with GPO customers and coordinate approval of GPO tasks through the KSC Printing Management Officer. Maintain an up-to-date database of GPO printing orders and a hard copy of all GOP orders, by program and year.

3.4.1.2 Microimaging. The contractor shall perform the following:

- Provide Center wide microimaging support;
- Provide document conversion;
- Provide CD-ROM mastering and duplicating;
- Provide scanning and indexing of documents to include Shuttle Quality Data, NASA Spares Logistics Depot (NSLD), ~~NEMS SAP/N-PROP~~ (MOD 511), NASA Accounting, Boeing Configuration Management Data, NASA Payload, and other NASA documentation for placement on film, CD's, or PC file servers for web access;
- Operate Printing and Microimaging Information System (PAMIS) (SI07) for microimaging reporting;
- Operate Kennedy Electronic Documents System (KEDS);
- Operate Computer Output Laser Disk System (COLD);
- Manufacture 35mm Aperture cards of all NASA-KSC engineering drawings; and
- Support Kennedy Electronic Document System (KEDS), aperture card scanning for KEDS master files.

The contractor shall provide the following microform products and services:

- 35mm Aperture cards encoded, interpreted, and printed; and
- 35mm Aperture card duplicates

3.4.1.3 Engineering Document Control. The contractor shall perform the following:

- Operate and maintain Engineering Drawing Original Repository, Technical Records Center (TRC), (M6-489);
- Operate and maintain climate controlled records microfilm/computer tape storage facility (M6-639);
- Provide on-site customer access 4 hours daily, except weekends and contractor holidays, and at other times, as necessary, to support special requirements;
- Provide Engineering Technical Records management to transition records to Federal Records Center or the National Archive and Records Administration (NARA);
- Provide over-the-counter customer service support to the engineering community;
- Provide CAD networked workstation for viewing, plotting of electronic digitized raster/vector images of engineering documentation;
- Officially release KSC Facilities and ground support equipment via Document Release Authorizations and input racking information into the Configuration Management Data System (CMD5);
- Operate PAMIS (SI07) for engineering documentation reporting; and
- Maintain a central microform/imaging repository of NASA-KSC released drawings, including duplicate microforms as required for viewing and printing

3.4.1.4 Graphics and Other Services. The contractor shall:

Graphics Services.

Provide graphics illustration support and document composition to all NASA organizational elements:

- Provide audio visual presentation services to NASA and support contractors on KSC and NASA supported off-center events;
- Provide projectionist support for viewgraph, motion picture, slide projector, video projection equipment, and VCR audiovisual presentations in KSC conference rooms, the KSC Auditorium (M7-351), the O&C Mission Briefing Room in M7-355, and NASA-supported off-center events;
- Provide audio visual equipment loans to all NASA-KSC personnel;
- Provide NASA space program video cassette recording loans;
- Prepare, edit, and provide Portable Document Format (PDF) file for weekly electronic publication of KSC Bulletin;
- Prepare Scientific and Technical Information (STI) for placement on NASA STI Homepage;
- Produce the following graphics products for NASA KSC organizations;
 - Graphics illustrations (art renderings, cartooning, logo design, photo-retouching, and technical drawings);
 - Presentation aides (hardcopies and Power Point slide shows);

- Displays and posters;
 - Graphics charts, graphs, and diagrams;
 - Graphics support elements and processes (badges, certificates, labels, lettering, name plates, tent cards, signage, sign-out boards, dry mounting, laminating, matting, framing, and scanning of graphic elements); and
 - Support NASA-KSC functional requirements including production of the KSC Bulletin; publications design and development services and Web page maintenance for External Relations; Design and update documents and general and educational publications produced for NASA-KSC organizations including brochures, manuals, programs, document covers, fact sheets, flyers, title pages, photos, certificates, newsletters, and KSC countdown
- Provide desktop publishing services including scanning, composition, and text processing;
 - Provide document file conversions to enable electronic publishing by the KSC duplicating facility and GPO contractors; and
 - Provide office copier reports in accordance with DRD 3.4.1-01, Reports, Office Copier Justification to Install, Move or Upgrade

Forms Control. Provide development, acquisition, and dissemination of NASA-KSC forms (hardcopy and electronic), and government publications/forms acquisition to meet customer requirements:

- Analyze and design new and revised NASA-KSC and contractor forms;
- Design and maintain electronic forms to include a current list of all KSC Forms on the KSC Forms Web Site, with links to NASA and other government forms;
- Design forms requiring hardcopy for GPO Printing;
- Requisition government forms and publications via both printed in-house and through the Government Printing Office (GPO);
- Maintain Forms inventory using the Forms Automated Tracking and Reporting System database (FF10);
- Provide center-wide analysis, development, and electronic dissemination of forms for NASA-KSC operations as follows:
 - Analyze and develop forms as required by Center customers for hardcopy and electronic use;
 - Analyze and develop "intelligent" electronic forms; and
 - Provide electronic forms to NASA-KSC personnel via forms server and Center networks
- Prepare GPO requisitions and NASA-KSC Printing Work Orders for KSC forms and publications; and
- Requisition government forms and publications

Information Support. The contractor shall:

- Respond to public inquiries received through fan mail and External Relations Office, in accordance with NASA-KSC guidance;
- Issue all General Public Launch Passes when required;
- Operate and maintain the Fan Mail Inventory Tracking System (SI11) for the NASA External Relations Education Office;

- Select, package, and mail out External Relations and other informational literature in response to written requests from students, teachers, and other requesters in accordance with External Relations Guidelines; and
- Receive, schedule, and mail out launch passes to the general public when required

External Relations and Business Development (XA) Information Analysis Support. The contractor shall:

- Develop and maintain monthly metric statistics and charts relative to Web site workload, public accesses and visitor satisfaction, to allow government to assess efficiency of the program;
- Oversee studies relating to the identification of outdated content, broken links, informational gaps, reordering of content, and improving informational delivery methods;
- Establish priorities and deadlines, and develop a manual or automated tracking system to track status and activation of all ongoing media, mission, Public Affairs Office (PAO), and XA Web workload;
- Monitor all Web content to ensure compliance with government and NASA Web related Chief Information Office (CIO), Security, and PAO informational release policies and procedures;
- Develop and conduct Web related surveys;
- Conduct Web related trend analysis and related studies to identify patterns, and devise appropriate improvement methods;
- Oversee, review, and recommend approval of all Web related writing requirements;
- Develop new web site and page layouts for new projects and web site modifications, which includes, identifying, coordinating, and integrating graphics, video, flash, forms, and other web elements;
- Train new internal/external web site curators and ensure they understand and carry out assignments and responsibilities;
- Troubleshoot web site problems and complaints, and determine whether problems are caused by technical, delivery, content, or other issues; and
- Respond to inquiries and investigate and develop corrective actions related to public web site issues

External Relations and Business Development Writing Support. The contractor shall:

- Provide dedicated writing and publication dissemination (hardcopy and Web) services in support of NASA-KSC External Relations and Business Development operations and document monthly transactions.
- Assure that all submitted written material shall be in compliance with the current NASA style requirements;
- Provide creative, technical feature, and speech writing for External Relations and Business Development and the External Relations Education Division;
- Produce Spaceport News, KSC's internal news, and information publications;
 - Prepare, edit, and provide camera-ready copy (electronic and hardcopy), for each Spaceport News edition, to the GPO contract printer

- Operate and maintain External Relations Media Reference Library and Distribution Center located at the NASA Press site;
 - Maintain reference materials provided in the External Relations Media Reference Library to support media and External Relations Education Division
- Write, edit, and produce Bi-Weekly Countdown document;
- Maintain External Relations Home Page, and associated lower level pages;
 - Update and maintain Web pages to include the External Relations Information Series Server and the KSC Bulletin, and electronic forms;
 - Provide web curator services, web page development coordinator support, and real time web page updates; prepare narratives relative to KSC individual Web pages and video streaming activities, in support of web page expansion initiatives;
 - Provide web cast development and support for static and recurring mission related pages to include: script writing, video selection, and interface with specialists involving video, photographic, and audio products; and
 - Provide on-line shuttle processing updates to major pre-launch events pages during the final 6 hours prior to launch
- Provide External Relations and Business Development escort and tour support;
 - Provide escorts and tours for news media, VIPs, and other visitors, and assist in preparing news, education, and guest activities
- Support all Launch and Landing activities;
 - Write scripts, photo captions, news releases, press kits, speeches, fact sheets, and provide information summaries (such as Space Shuttle wall charts);
- Produce KSC Annual Report;
- Provide writing support for KSC Annual Open House, KSC VIP events, Combined Federal Campaign, Disability Awareness Month, NASA Savings Bond Drive, and Mission Chronology Reports;
- Update electronic versions of the Mission Chronology and Spaceport News;
- Prepare briefing scripts and slides, car pass and news media fact sheets, mission chronology, and posters;
- Perform Web curator services for External Relations and Business Development public and internal Web pages and sites such as the:
 - XA Internal Home Page;
 - History Program Web site;
 - Shuttle Reference Manual;
 - Payload Processing Web site;
 - TAL Sites Web site;
 - International Space Station (ISS) Web site; and
 - Other Web pages and sites as required
- The contractor shall develop and deploy site content, and maintain the web site. This includes:
 - Writing and/or editing site content;
 - Coordinating with other persons and/or organizations, to elicit site content information;

- Making, or assist in making, decisions relative to content propriety and usage;
 - Researching, selecting, and/or reviewing audio, videography, photography, or imagery to be incorporated with other content elements;
 - Reviewing and validating links, site content and updating information periodically;
 - Coordinating and/or troubleshooting site issues with Web development; video production; server personnel, and other sources, as necessary;
 - Producing ad hoc reports or metrics relative to site content; and
 - Uploading textual; audio, video, photo, and/or graphical content to the development and/or production servers
- In support of KSC Direct! Web Broadcast programming and video productions:
 - Research subject matter and produce scripts, transitions, and related writing assignments;
 - Perform Question Board Moderation duties to include categorizing, editing, and uploading public submissions, and developing topical question lists and coordinating reviews with program participants;
 - Prepare Answer Board transcriptions; and
 - Coordinate activities with Web development; video production; server personnel, and other sources, as necessary
 - Provide support to all ELV missions and to the NASA Portal Web Site, in accordance with Technical Exhibit J3-3.4.1.4-01, Support to all ELV Missions and the NASA Portal Web Site **(Mod 208)**

3.4.2 Library

The contractor shall provide technical library services to KSC to include other NASA-KSC contractor personnel. These services include reference services, acquisitions, cataloging/processing, circulation, publications, NASA-KSC archives, online reference service, and Scientific and Technical Information (STI) Program support.

3.4.2.1 Specific Requirements. The contractor shall:

- Provide reference service to library patrons in Reader Services, Documents, Acquisitions, and Archives Departments by responding to requests for information and assisting in searches (public areas shall be available to patrons a minimum of 8 hours a day, Monday through Friday, except contractor holidays and NASA directed closings);
- Maintain the KSC Law Library, room 2408A, KSC Headquarters Building (M6-399) to include receiving, updating, filing, shelving, and posting of revisions within 2 days of receipt. Perform shelf maintenance, indexing, and labeling, to support efficient access of reference materials by legal staff;
- Order/acquire library and office copy materials including archival material, books, specifications, standards, serials, documents, photographs, interlibrary loans, and other media necessary to meet information requirements of library patrons;
- Catalog and process library and office copy materials in accordance with AACR2 and Library of Congress Classification Schedules;
- Maintain library shelves and currency of library materials; maintain records of KSC Library holdings in the Agency-wide integrated library system and OCLC, library WWW pages, or local databases; evaluate and catalog archival materials; maintain a physical shelf list of all library holdings; and prepare library materials to be bound;

- Circulate library and office copy materials; maintain records on automated circulation, document distribution, and serials management systems; provide exit clearances; and maintain a prospective and bidder collection;
- Prepare and issue annual indexes and publications including Index of KSC Specifications and Standards, Index to the Spaceport News, and Annual Chronology of NASA-KSC and NASA-KSC Related Events (these items shall be issued no later than the 10th working day of February);
- Provide access to on-line computer terminal service for patrons during library hours of operation including access to the NASA library system electronic catalog, KSC Library CD-ROMs, the Internet, and STI Program systems;
- Acquire serials and publications for NASA-KSC;
- Provide on-site distribution of external shuttle/payload program documentation and maintain a documents repository;
- Maintain currency of the NASA library network (GALAXIE) with NASA-KSC holdings and bibliographic listings;
- Provide electronic document support to the NASA Scientific and Technical Information (STI) Program; and
- Provide support to NASA-KSC History Projects, as requested by External Relations and Business Development. This support shall include oral history interviews, history funded research, support to History contractors, visiting summer Historians, and other special projects

3.4.3 Mail

The contractor shall consolidate mail operations between the CCAFS and KSC. The contractor shall provide mail and distribution services (documents and parcels under 70 pounds) to KSC, CCAFS, JDMTA, Malabar, selected stops at PAFB, and the highway A1A connecting route. These services shall be performed in compliance with the U.S. Postal Service Domestic and International Mail Manuals and include timely external mail processing, NASA mail metering, classified mail handling, dedicated shuttle program courier service, and ADP delivery runs on a daily basis. Mail requirements include the pick up and delivery of mail, messages, and other related items (such as boxes and film canisters) to NASA-KSC and NASA contractors, and every other workday to Air Force and Air Force contractors, except for the following organizations/locations listed below who shall continue to receive single drop mail service daily, Monday through Friday, according to the contractor-provided schedule.

- AF located at Building 60740;
- 45th Space Wing/JP located at Building 55150;
- 45th OG located at Building 1704;
- 45 LCG, 1 SLS, 3 SLS and 5 SLS located in Building 44410;
- SGS-6380 located at Building 1708;
- Sverdrup located at Building 1613;
- Coast Guard Station located at Port Canaveral;
- Navy located at NOTU Headquarters Building 68220; and
- Lockheed Martin located at Building 54915 (Mailroom)

The contractor shall distribute routine and priority documentation between organizational elements to include mission-critical OMLs and mission control schedules. Customer mail services shall be provided during first shift, from 7:30 a.m. to 4:00 p.m., except on designated contractor holidays, weekends, and during NASA directed closings, unless otherwise noted.

The contractor shall operate a Contract Branch Post Office (including remote postage machines and letter drop boxes); maintain KSC Official bulletin boards and building directories and Public Affairs newsletter holders; operate and maintain the KSC Personnel Locator Service to include the RCO2 database or equivalent; support preparation of the KSC Telephone Directory, to include receiving input from Administrative Officers (AOs), who will be going on line to verify and update the organization name, mailcode, and employee name; and furnish bond to the U.S. Postal Service as required to maintain U.S. Postal Service Contract Branch Office.

The contractor shall provide preparation, staging, and plane-side delivery for packages (including U.S. mail, internal mail, and mail size parcels) to be shuttled downrange to Antigua and Ascension Island.

3.4.3.1 Specific Requirements. The contractor shall provide special distribution support for NASA mission O&M, scheduling, and readiness review documentation to meet customer schedules. In addition, the contractor shall perform the following tasks:

- Provide NASA procurement document packaging, distribution, and mailing support;
- Maintain monthly accountability of postal expenses;
- Pick up, process, and deliver mail, including packages up to 70 pounds, at KSC and designated areas of CCAFS, PAFB, Titusville, and Orlando;
- Provide mail drop box collection service twice daily, Monday through Friday;
- Transport mail between the Orlando Post Office Sectional Center, twice daily, Monday through Friday, with an additional early pick up trip on Monday mornings;
- Provide for next business day delivery of pouch mail to NASA Centers as designated by the government and use Priority Pouch Mail to all other NASA Centers on a daily basis;
- Coordinate with postal authorities in Orlando, Titusville, Cape Canaveral, and Cocoa Beach, FL, and other NASA installations pertaining to mail schedules, pick up, delivery, lost/misdirected mail, and other comparable items affecting a postal and distribution facility;
- Address and deliver the Kennedy Integrated Control Schedule (KICS) and the Payloads Operations Support Schedule (POSS) daily (distribution shall be expedited no later than 6:30 a.m.);
- Provide special pick up and delivery courier service from the NASA-KSC Duplicating Center for major Space Shuttle Operations and Payload Operations Readiness Reviews;
- Provide special courier service once a day, excluding holidays, for NASA-KSC Shuttle Operations Directorate per customer schedule requirements;
- Hand-carry sensitive mail (such as bids or proposals) erroneously routed to the mail room to the NASA-KSC Acquisition Management Office (OP-AMO);
- Screen, X-ray, and handle suspect mail, as appropriate;
- Provide special ADP pickups/deliveries daily;
- Provide manual and automated addressing of documents and package for distribution, and maintain database listings, per customer requirements;
- Readdress and forward misdirected mail;
- Provide PAO courier support and launch event philatelic services per the NASA Public Affairs Support Plan;
- Open and screen all public correspondence "fan mail," and forward it to the proper office;

- Obtain service for postage meters within the NASA-KSC registry that are used by NASA-KSC and several NASA-KSC contractor organizations;
- Provide metering service for NASA Official mail;
- Provide reproduction and mailing of procurement packages, including:
 - Coordinating and mailing out of jobs daily per the government's schedule, including customer coordination, document staging, distribution, and mail metering of bid packages, amendments and purchase orders;
 - Receiving and storing drawings and specifications;
 - Preparing all certified return receipts and overnight express mail for NASA-KSC procurement;
 - Maintaining an up-to-date prospective bidders lists;
 - Providing priority distribution of bid packages to the Central Industry Assistance Office (CIAO); and
 - Providing support for recycling of the NASA-KSC and Brevard County telephone directories
- Provide preparation, staging, and plane-side delivery for packages (including U.S. mail, internal mail, and mail size parcels) to be shuttled downrange to Antigua and Ascension Island

3.4.4 Technical Training

The contractor shall provide safety, health, skills, and operational area access training and certification for NASA-KSC, such as hazardous materials/emergency response, respirator training, SCAPE/hypergol training, heavy equipment training, firefighting training, skills type training, area access to controlled sites, and astronaut training. The contractor shall provide selected training for CCAFS and PAFB to include environmental, safety, and NASA facility area familiarization and walkdown training. The contractor shall administer a certification program and maintain training and certification records using the NASA PM50 Training, Certification, and Record System (TCRS), and shall document training course content and associated certification requirements of all training to be performed as listed in J-BOSC Technical Exhibits 7.0-074, 7.0-075, and 7.0-076.

The contractor shall use the J-BOSC Intranet to provide motivation for desktop, self-paced training for re-certification, emergency training, security training, and other areas.

3.5 MEDICAL, ENVIRONMENTAL HEALTH AND ENVIRONMENTAL SERVICES

The contractor shall provide comprehensive medical and environmental support to maintain a healthful and productive workforce and to ensure regulatory compliant resource stewardship of KSC and 45th Space Wing environmental assets. This includes complying with all applicable environmental permits in accordance with 5.5-362.

The services under this contract shall be made available to all personnel at KSC and CCAFS and to specified personnel described in specific paragraphs below and to tenant personnel (as per base support agreements) resident at KSC/CCAFS. All services shall be performed within the limitations contained in their respective contracts and other agreements.

3.5.1 Medical

The contractor shall provide medical services consistent with the highest standards of practice in this field. The contractor shall provide occupational health examinations, treatments, medical reviews, laboratory, Emergency Medical Services (EMS), Employee Assistance Program (EAP),

health education and wellness, health training, and administrative management for KSC and CCAFS. The contractor shall conduct medical treatments and first aid for occupational illnesses and injuries, and team with the NASA and AF medical officers to develop and maintain NASA-KSC physical examination standards and waiver procedures. Services shall be in accordance with current NASA-KSC and DOD physical examination standards. Excluding emergency medical services, only medical treatment identified by AF medical officers will be administered to military or AF civil service (Mod 451)

Certification and Licensures. All medical services shall be performed by certified/licensed medical staff. Contractor personnel supporting the Occupational Medicine (OM) program shall possess licensure, certification, training, credentials, experience, and qualifications commensurate with their functional areas. The contractor shall maintain all required certifications and licensures. The Director, Deputy Director and the Internist/Cardiologist shall be a physician, Board certified, in a preventive medicine or primary care specialty. These physicians shall be graduates of accredited schools of medicine or osteopathy and shall be licensed to practice medicine/surgery in one of the 50 states, the District of Columbia, or one of the U.S. territories. All other physicians shall be Florida Licensed and Board Certified in or have completed residency in either a preventive medicine or primary care specialty or have completed residency training in a non-preventive medicine or non-primary care specialty, and have a minimum of 2 years experience in occupational medicine or other preventive or primary care field. Board certification in occupational medicine is encouraged. A Florida license to practice medicine is required. All physicians shall maintain current American Heart Association (AHA) Basic Cardiac Life Support (BCLS), Course C; AHA ACLS provider, and Advanced Trauma Life Support (ATLS) certifications. All staff nurses shall be a registered nurse and maintain a current State of Florida license, maintain current AHA BCLS, Course C and ACLS provider certifications and obtain certification in Occupational Health Nursing within two years of becoming eligible by criteria established by the American Board of Occupational Health Nurses. All Emergency Medical Technicians shall maintain current State of Florida certifications as an EMT; maintain current AHA Basic Cardiac Life support (BCLS).

3.5.1.1 General Requirements. The contractor shall:

- Implement emergency medical services at all facilities consistent with current NASA and AF directives (e.g., JHB 2000 Rev A-1, KBM PL -1.2F, and KBM PL-1.3) and provide certified emergency medical services on all shifts; (Mod 232)
- Include OM Program activities that minimize sick leave and reduced productivity caused by marginal physical disability, and to reduce permanent disability and premature death;
- Provide an Environmental Health (EH) Program for operational support, and consultation services that permit KSC, CCAFS, PAFB and its mainland annexes and their centers, tenants, and visitors to provide a safe and healthful work environment through regulatory compliance and the implementation of an integrated OMEH Program;
- Provide support to activities, personnel, and facilities on KSC and CCAFS including ships/boats, when moored to the dock that are operated by the U.S. Government. OM services (excluding emergency medical services) and EH services, as deemed necessary by appropriate NASA/AF OM or EH personnel to support the OM services, shall also be provided to KSC/CCAFS contractors in vicinity of KSC/CCAFS;
- Provide support at certain shuttle landing sites other than KSC (such as TAL sites and emergency landing sites). Support shall be provided to specific activities when requested through appropriate authority at NASA, KSC, or the 45th Space Wing;

- Operate the medical facilities to meet customer needs, for the administrative and technical management of Occupational Medicine (OM) and Environmental Health (EH) functions, as specified in KNPD 1810.1, KSC Occupational Medicine Program; (Mod 297)
- The contractor shall use a health information management system for storage of medical records and data analysis of medical information;
- Provide certified medical laboratory services;
- Provide counseling and intervention services as part of the Employee Assistance Program including ongoing and new initiatives;
- Provide support to NASA and Air Force launches and landings, including staffing for TAL sites;
- Provide support to NASA and AF travel medicine program;
- Operate the first aid station at the KSC visitors complex;
- Provide medical oversight, logistical and consultative support to Solid Rocket Boosters (SRBs) recovery ships;
- Provide performance metrics and data requirements to meet government initiatives;
- Provide clinical and field experience in occupational health for medical clerks rotating through the KSC Medical Education Program;
- Comply with the NASA Agency requirements for quality assurance of health care organizations as described in NPR 1800.1, NASA Occupational Health Program Procedures;
- Comply with the applicable requirements of the Health Information Portability and Accountability Act (HIPPA); and
- Supply pharmaceuticals to the Life Sciences Contractor in support of the Astronaut Health Program for Space Shuttle launch and landing
- Implement the KSC Automated External Defibrillator (AED) Policy (TA-POLICY-012); Public Law 106-505 Public Health Improvement Act, Sections 401-404 Cardiac Arrest Survival; Guidelines for Public Access Defibrillation Programs in Federal Facilities (66 FR 28495); and NASA Occupational Health Program Guidelines for Implementing a Center Automatic External Defibrillator Program, Interim Guidance from the NASA Chief Health and Medical Officer. **(Mod 348 (CCR 04-28))**

3.5.1.2 Specific Work Requirements. The contractor shall provide a preventive medicine program to promote the physical and psychological well being of the worker in the work place and the maintenance and improvement of the health of employees. The contractor shall not provide medical treatment to include preventative medical treatment not regulatory required to military, AF civil service and AF contract personnel. (Mod 451)

Health Examinations. Health examinations shall be administered in accordance with KBM-ST-2.1, Medical Standards. The contractor shall not provide health examinations to military and AF civil service employees except for those requiring SCAPE Suit certification. (Mod 451)

Emergency Medical Services. The contractor shall assure appropriate certifications for those providing emergency medical care and maintain ambulance emergency equipment and

supplies. A physician with emergency training shall be available either on-site (KSC/CCAFS) or on-call at all times.

The contractor shall:

- Provide emergency response services for all areas of the Cape Canaveral Spaceport. This emergency response capability shall be provided on a 24 hours a day 7 days a week basis by Advance Cardiac Life Support (ACLS) qualified firefighters/paramedics who shall perform fire fighting duties/medical response, as deemed necessary;
- Provide a Triage Vehicle capable of bringing basic emergency provisions to a contingency scene and the vehicle shall be maintained in a ready condition by the contractor;
- Provide ACLS emergency medical coverage including ambulance service. Ambulance response times shall meet community ambulance response standards;
- Provide on-site treatment directed at the relief of pain; preservation of life, limb, and function; and stabilization. Transportation to on-site medical facilities or evacuation to local hospitals for evaluation and definitive and/or continuing treatment will be determined by the on-site physician or on duty registered nurse in consultation with a physician;
- Provide emergency medical services, including flight crew contingency care and first aid coverage for visitors, during launch and landing operations;
- Coordinate with local medical resources as listed in J-BOSC Technical Exhibit 7.0-036, Memorandum of Understanding, in the event of mass casualties or operational contingencies; and
- Complete and forward to the 45th Medical Group one copy of an approved documentation form for each Air Force employee (military or civilian) treated for injuries.

Occupational Medicine Services. The contractor shall provide clinical services in K6-1145 (Launch Area Clinic) (minimum of a registered nurse), first shift Monday through Friday, except holidays, and in M6-495 (Occupational Health Facility) 10 hours a day, 5 days a week, Monday through Friday, except holidays. Occupational injuries and illnesses shall be evaluated and treated, and appropriate recommendations shall be made for disposition. The contractor shall only treat military and AF civil service employees with emergency related occupational injuries and illnesses. The contractor shall provide a comprehensive Worker's Compensation Program for NASA civil Servants that are permanently assigned, or while on temporary assignment to KSC/CCAFS, to ensure injured workers receive appropriate medical services as quickly as possible in order to reduce time lost from work. The disposition, depending upon severity, may include the following: (Mod 451)

- Treat and return the individual to work with a minimum time away from the job, stating appropriate work limitations, if any; the single point of contact (to be designated by the employer) at the employee's assigned work site shall be advised of any limitations;
- Treat and recommend release from duty to return to the on-site medical facility for follow-up care; this disposition shall apply in those cases of relatively minor injuries that require no specialty examinations, consultations, or treatment beyond the capability of the staff at the on-site medical facility; the contractor shall complete the proper forms and notify the designated single point of contact;
- Provide first care evaluation, treatment, and referral for further physician care; and
- Complete and forward to the 45th Medical Group one copy of an approved documentation form for each Air Force employee (military or civilian) that received a physical exam

The contractor shall provide a registered nurse to support visitor and employee activities at the KSC Visitor Center Complex (VCC). The support provided shall be one shift per day during the open hours of the VCC, not to exceed 10 hours per day. This nursing support, operating under the direction of the contractor medical director and by protocols established within the J-BOSC medical department, shall provide evaluation of medical problems and treatment/disposition of minor medical problems for visitors at the Visitor Center. The nursing support shall also provide occupational medicine (OM) services to the Visitor's Center employees at levels comparable to that provided by nurses at other KSC OM facilities. The nurses shall also provide OM consultative services to the Visitor's Center management.

The contractor shall identify trends associated with minor or major injuries or illnesses that may be related to the work environment investigate the causes of these injuries and illnesses and recommend actions required for prevention. Minor non-occupational illnesses that develop on the job shall be evaluated. If the diagnosis is apparent and minimal treatment without release from work is appropriate, requiring no follow-up, that treatment shall be rendered and the individual returned to duty. If these conditions warrant diagnostic or consultative services beyond that available at the on-site medical facility, or if a private physician's services shall be necessary to ensure comprehensive evaluation and/or treatment following first care necessary for stabilization and transport, the individual shall be referred to the private physician rather than being given further treatment at the on-site medical facility.

Minor non-occupational illnesses or injuries that develop or occur during non-working hours, and can be treated without lost time and additional follow-up visits, are to be treated by the on-site medical facility. Those non-occupational illnesses or injuries that will result in the individual's release from duty, duty limitation, or referral to a private physician, whether initially or in follow-up shall not be at the on-site medical facility, with the exception of first care necessary for stabilization and transport.

For all patients returning to work through the OM facilities after illnesses or lost time injuries, J-BOSC shall ensure that appropriate clearance or duty limitations are specified to their employers.

Laboratory, x-ray, or other tests within the scope and capability of the on-site medical facility may be performed at the request of a private physician if the conditions under evaluation or treatment are job related.

For non-occupational related illnesses or injuries, requests for laboratory or x-ray procedures that are received from private physicians shall only be conducted at the time of scheduled physical examinations and within scope and capability of the clinic. Other exceptions may include NASA retirees with medical disabilities whose continued surveillance by NASA physicians is considered of special interest to the government. [\(Mod 451\)](#)

The on-site medical facility shall administer treatments or medications (such as shots, blood pressure checks, and hormonal therapy) prescribed by the employee's private physician (or other treatments specifically requested by designated NASA or Air Force officials) if these on-site activities enable the employee to remain at work for the balance of the normal work shift or are otherwise in the best interest of the government. Services requested by the employee's private physician must be in writing. A contractor physician shall evaluate and approve, as appropriate, the written request. The employee shall furnish the necessary medications and required specialized equipment.

When significant abnormal conditions are discovered at the time of scheduled certification physical examinations or in the course of treatment for occupational illnesses or injuries, but which in themselves are not related to the patient's employment, patients will generally be referred to their private physician. Information on the evaluation and treatment shall be

requested from the private physician to determine any effect on employment or need for work limitations.

Preventive Services. The contractor shall provide an Employee Assistance Program (EAP). Employee Assistance Program Administrator(s) and/or Counselor(s) shall possess a Masters Degree in Social Sciences, Psychology, or a related field, or the equivalent education/experience; and achieve EAP certification within 1 year after becoming eligible. The EAP shall include services related to alcohol and drug abuse prevention. It shall also focus on initial management training and education in the identification and treatment of employee stress including Critical Incident Stress Management (CISM) and Critical Incident Stress Debriefing (CISD). This will be followed by emphasis on a consultation, evaluation and referral approach to the services provided. The contractor shall not provide medical treatment to include preventative medical treatment not regulatory required to military, AF civil service and AF contract personnel. (Mod 451)

The contractor shall make health maintenance examinations available to all NASA civil service employees. The scope and schedule of these Federal Employee Health Program (FEHP) examinations shall be in accordance with KBM-ST-2.1 Examinations or reasonable tests (including, but not limited to, serum thyroid studies and lipoprotein fractionation) may be required by designated officials of NASA or Air Force. The contractor shall also provide annual physical examinations to certain authorized personnel (including National Park Services, Defense Contract Audit Agency), who reside in regional KSC communities for whom KSC is geographically more expedient than other federal facilities. These physical examinations shall be completed according to the directives and benefits prescribed by their agency or department policies. **(Mod 269)**

The contractor shall provide a Health Education Program in coordination with NASA and Air Force medical programs.

The contractor shall provide on-site Health Training Programs for NASA employees and Air Force and NASA contractors to include, but not be limited, to the following services: (Mod 451)

- First aid for KSC job certification requirements;
- Job required basic life support (BLS), including cardiopulmonary resuscitation (CPR) skills per American Heart Association National Standards;
- Advanced Cardiac Life Support (ACLS) for physicians, nurses, and emergency service personnel in accordance with state and local governmental requirements;
- OSHA directed programs for physicians, nurses, and emergency service personnel and other health care providers; and
- Other services as required by applicable state and federal standards and regulations

Clinical Laboratory Services. All Radiological-Laboratory Technologists shall maintain State of Florida licensure. The contractor shall provide collection of medical samples, CLIA (Clinical Laboratory Improvement Act) exempt laboratory procedures, x-rays (interpreted by certified radiologist), and other tests as appropriate to support the OM and Preventive Health Programs. With a valid physician's prescription, JBOSC shall provide additional laboratory services to include: clotting factor studies (INR values), glucose monitoring (fasting blood sugar and glycosolated hemoglobin), and fasting lipid profiles. **(Mod 269)**

Medical Support to SRB Retrieval Ships. The contractor shall provide medical supplies and materials for use on the SRB retrieval ships as directed by the government. The contractor medical director, in consultation with the government, and in conjunction with the SRB ship Captains, shall determine which medications and items will be supplied. This will include over-

the-counter medications as well as prescription items. The designated ship authority (the ship's Captain) will have responsibility for storage, security, disposition, inspection, and inventory. The contractor shall conduct annual inventories of all ships controlled medications and supplies. Between annual inventories, the ship's Captain will conduct inspections of supplies and medications to determine expiration status and quality, returning any questionable supplies and medications to the contractor for verification and replacement.

Medical Administrative Support. The contractor shall provide administrative support through the use of a Health Information Management System that supports physical examination management, patient scheduling and notification, front desk operations, and records management with capability for statistical and analytical data collection and retention. The system shall interface with the NASA Training Computer (PM50) for the automatic upload of medical certification data.

OMEHS Support to Transatlantic Abort Landing (TAL) Sites. The contractor shall provide a comprehensive travel medicine program, to include a physician, as part of the TAL site team pre-deployed to a TAL site, as required. The prime responsibility of this individual shall be to provide emergency medical and occupational medical care to the team and to communicate with and provide liaison between the pre-deployed team and local health care providers.

In the event of an actual TAL, the contractor shall provide a team headed by a physician that will be deployed to the site as part of the Rapid Response Team. The specific composition of the team shall be determined prior to each launch and coordinated with the government. The contractor shall be responsible for providing and maintaining the appropriate medications, equipment, and supplies for contractor provided health care and Environmental Health (EH) support at TAL sites.

Consulting Services. The contractor shall provide OM consulting services, within existing resources, to approved government and government contractor organizations. A Board certified physician (in an appropriate preventive medicine or clinical specialty) shall provide this service, assisted as needed by any other members of the medical and environmental health staff. Responsibilities include the evaluation of the workplace to make recommendations with regard to physical examination requirements for specific jobs or generic job categories based on assessment of the demands of the job and the environment in which it is accomplished. Such recommendations shall be made through the government to the requesting agency/contractor. Such evaluations also address specific health and safety concerns of the agency/contractor that are unique to the job or work area and supplemented by environmental studies accomplished by Environmental Health (EH) specialists to support appropriate OM recommendations.

3.5.2 Environmental Health Services

The contractor shall provide Industrial Hygiene (IH), Health Physics (HP), Public Health (PH) and Environmental Sampling, Analysis and Monitoring (ESAM) services, laboratory support, and operation of associated computer management systems. Environmental Health (EH) shall include both scheduled and nonscheduled surveys of all KSC and CCAFS facilities and inspection of corresponding activities. Surveys are also provided at PAFB as specified in the subsequent paragraphs. The contractor shall identify, evaluate and recommend corrective actions for health hazards and non-compliance conditions. The contractor shall analyze past data and perform trend analysis to develop exposure and environmental assessment strategies. Prioritized schedules of surveys and inspections shall be determined by operational requirements, hazards, regulatory compliance or customer coordination.

The contractor shall generate and maintain documentation for the EH program including reports for compliance requirements, and shall ensure that reports to customers clearly describe the work performed, including observations, findings, and recommendations.

Routine support shall be provided on-site at KSC, CCAFS, PAFB, and Florida annexes on a first shift basis, excluding contractor holidays. Additional support during other shifts shall be required where operations dictate.

The contractor shall operate the KSC Material Safety Data Sheets (MSDS) Management System and the Facility Asbestos Management System and shall publish the KSC Index of MSDS quarterly.

EH support shall include participation in emergency response activities and exercises at KSC and CCAFS (such as Hazardous Material Response Teams and weapons of mass destruction/terrorist attacks). Support to PAFB shall be on an as needed basis as determined by the 45th Space Wing. Support to community response activities shall be in accordance with mutual aid agreements. All operational elements of EH shall maintain a 24-hour on-call capability to support operations including emergency response requirements.

The contractor shall maintain EH program documents. The contractor shall review the following documents and shall comply with the requirements as they relate to contractor required operations: (Mod 297)

Document Number	Document Title
KNPD 1800.1	KSC Environmental Health Program
KNPR 1820.3	KSC Hearing Loss Prevention Program
KNPR 1820.4	KSC Respiratory Protection Program
KNPR 1840.19	KSC Industrial Hygiene Programs
KNPR 1860.1	KSC Radiation Protection Program
KNPD 1800.2	KSC Hazard Communication Program
KSC-PLN-1903	Radiological Controls for Major Radiological Sources (MRS)
KNPR 1870.1	KSC Sanitation Program

3.5.2.1 Industrial Hygiene Program. The contractor shall provide comprehensive IH Services to NASA civil servants and contractors and AF civil servants, military and contractors at KSC and CCAFS and NASA Shuttle Logistics Depot (NSLD) facilities. The program shall include consultation, compliance assistance, support to operations, assessments of various IH related program elements, and follow up investigations. **(Mod 244)**

The contractor shall:

- Provide baseline IH evaluations of operations and procedures that involve the use and potential exposure to hazardous chemical and physical agents; follow-up surveys shall be conducted at least annually when baseline data show significant potential for exposures to hazardous agents or when the contractor becomes aware of process or operation changes that may affect the potential or type of exposure;
- Investigate employee potential exposures to hazardous materials following employee visits to OH facilities;
- Investigate employee complaints of potential workplace hazards and coordinate with safety, medical, facilities management, and engineering (staff as appropriate) to resolve issues;
- Investigate reported indoor air quality complaints;
- Evaluate work conducted in confined spaces;
- Provide specialized support services to launch, landing, and processing operations;

- Review identified hazardous operations and procedures to determine and document the adequacy of preventive measures and controls, and ensure compliance with applicable federal OSHA, NASA, and Air Force regulations and requirements; field audits shall be conducted: as a follow-up when noncompliance conditions were previously identified; by random inspection; on notification of possible noncompliance conditions through employee complaints; as part of mishap investigations; or as scheduled by appropriate government officials;
- In compliance with exposure standards, provide IH monitoring services to sample and analyze air contaminants (gases, vapors, dusts, fumes, mists, fibers, and smoke);
- Provide IH laboratory services to support IH surveys and audits; the laboratory shall be accredited by the American Industrial Hygiene Association (AIHA). Perform polarized light microscopy (PLM) evaluation of bulk materials that contain or are suspected of containing asbestos; the asbestos PLM turnaround time shall be 10 days, and the analytical laboratory shall be accredited by the National Institute of Standards and Technology/National Volunteer Laboratory Accreditation Program to analyze asbestos by PLM; The contractor shall ensure a follow-on evaluation of questionable bulk samples by other appropriate analytical techniques;
- In accordance with AHERA or per industry practices perform analysis services for phase contrast microscopy (PCM) and conduct follow-up analysis of questionable samples and final asbestos abatement air samples;
- In compliance with American Conference of Government Industrial Hygienists (ACGIH) and OSHA 1910.1000 exposure standards provide IH consultations that include monitoring to evaluate and analyze hazardous temperature extremes, illumination, ventilation systems, ergonomic issues, and noise;
- Perform annual IH walk-through inspections or consultations of all KSC and CCAFS facilities to identify potential health risks/hazards or vulnerabilities;
- Implement an exhaust ventilation system testing program to include an inventory of all ventilation systems used to control hazardous air contaminants generated by hazardous operations and processes;
- Implement a breathing air system testing program, to include an inventory of all KSC/CCAFS-operated compressor-supplied breathing air systems and inspections and testing of supplied air to meet OSHA, Air Force, and NASA requirements;
- Implement a confined space program to include an inventory of all confined spaces, hazard assessments for each type of confined space, specific requirements for entry and work based on the hazards identified, and management of the confined space permit entry system for KSC/CCAFS;
- Implement an asbestos abatement monitoring program to include bulk sampling and analysis of suspect Asbestos Containing Materials (ACM) facility surveys to support scheduled on-going operations and maintenance work;
- Perform inspections to identify suspect ACM, hazard (risk) analysis of scheduled facilities operations and maintenance where ACM is present, assessment of written asbestos abatement procedures, pre-abatement inspections, surveys and audits of asbestos abatement operations, clearance level air monitoring for all abatement projects; operate the KSC Facility Asbestos Management System database; provide asbestos abatement monitoring support to KSC, CCAFS, PAFB, and its Florida annexes. Abatement monitoring support is defined above (e.g. assessment of procedures, pre-abatement inspections, surveys/audits of operations, clearance level monitoring).

- Work with OM to provide employee exposure monitoring data, including individual dosimeter monitoring results, for incorporation into employee medical records;
- Provide supportive, advisory services to NASA, Air Force, and their resident contractors in fulfillment of their federal and state regulatory obligations;

Each professional and technical member of the IH staff shall possess an academic degree in the discipline or an equivalent combination of education and experience suitable to the responsibilities of their position.

IH work shall be under the technical direction of an ABIH Certified Industrial Hygienist(s). The IH staff shall include a State of Florida licensed Asbestos Consultant. All industrial hygienists working under the direction of the licensed asbestos consultant shall meet the State of Florida asbestos training requirements.

3.5.2.2 Environmental Compliance Sampling, Analysis and Monitoring (ECSAM) Program.

The contractor shall develop and implement an Environmental Compliance Sampling, Analysis, and Monitoring Program. The contractor shall:

- Provide Environmental Sampling, Analysis, and Monitoring (ESAM) for all pollution sources to evaluate permit and/or regulatory compliance; for permitted facilities covered by site specific monitoring plans, parameter analytical data shall be maintained for each site. Generated parameter data shall be submitted on the appropriate permit analytical report form. Evaluate environmental monitoring data to identify trends in environmental quality and environmental compliance, and preparation of associated reports; ESAM activities shall include, but not be limited to:
 - Potable water supplies;
 - Air pollution sources;
 - Surface water, and groundwater;
 - Domestic waste water;
 - Storm water;
 - Industrial waste water; and
 - Sediment, soil and sludge
- Provide sampling and analysis support to perform RCRA assessments of NASA-KSC potential contamination sites in accordance with U.S. EPA and FDEP protocols. The program support includes identification of Potential Release Locations (PRLs), background investigations and reports, field investigation work plan development and implementation, draft report preparation and submittal, presentation and discussion of findings with the KSC Remediation Team, Long Term Monitoring, and preparation, certification and submittal of final reports. Sampling site priorities shall be conducted in accordance with KSC permit provisions and regulatory agreements;
- Provide supportive and advisory services to resident NASA, Air Force, and their resident contractors in fulfillment of their federal and state regulatory obligations/compliance;
- Develop, maintain and coordinate an environmental compliance sampling plan annually with NASA-KSC and Air Force 45th Space Wing Environmental points of contact. Plan shall include sampling locations, frequency, analytes, and required sampling protocols;
- Each professional and technical member of the ESAM staff shall possess an academic degree in their discipline, or an equivalent combination of education and experience suitable to the responsibilities of their position;

- Staff performing environmental media sampling must be trained and be required to utilize State of Florida Standard Operating Procedures;
- At least two members of the staff shall be certified as visible emissions evaluators by the State of Florida;
- At least one member of the staff shall be registered by the State of Florida as a Professional Geologist;
- At least one member of the staff shall be registered as a certified hazardous waste site manager.

3.5.2.3 Laboratory Analysis. The contractor shall ensure that comprehensive EH laboratory services are provided. The laboratory services shall be fully accredited/certified by the State of Florida and by AIHA and meet all regulatory format requirements. In addition, the contractor shall ensure that all other accreditations/certifications required for laboratory operations are maintained.

3.5.2.4 Public Health Program. The contractor shall provide a Public Health program, which includes surveillance and inspections, to evaluate compliance with Air Force, NASA, federal, and state standards for issues related to sanitation and public health that shall include:

- Sanitary surveys of food (including vending machines), day care (when requested), barber shops, recreation facilities and exercise facilities, special events, and the KSC Astronaut crew quarters;
- Bottled water at NASA facilities where this is the sole drinking water source;
- Animal care facilities;
- Mosquito surveillance (CCAFS only);
- Chemical toilets;
- Disease vector investigations;
- Identification of training and certification requirements in the EH aspects of food service sanitation for all food service employees; these training requirements shall be identified for both NASA and Air Force Contractors;
- Consultative services to resident NASA, Air Force, and their resident contractors in fulfillment of their federal and state regulatory obligations/compliance;
- Specialized investigative, sampling and analysis, and advisory support to real-time incidents, and/or complaints;
- Coordinate food recall to affected KSC/CCAFS facilities; and
- Investigate animal bite incidents; ensure appropriate treatment of victim, and coordination with appropriate local authorities.

Each professional and technical member of the Public Health Program staff shall possess an academic degree in their discipline, or an equivalent combination of education and experience suitable to the responsibilities of their position.

At least two members of the staff shall be registered sanitarians.

The contractor shall interface with the Florida State Regulatory Agencies and the Department of Professional Regulation for licensures, certification, and maintenance.

3.5.2.5 Health Physics (Radiation Protection) Program. The contractor shall:

- Implement a comprehensive Radiation Protection Program for KSC/CCAFS and NASA Shuttle Logistics Depot (NSLD) facilities to identify, assess and control radiological health hazards relating to all potentially hazardous sources of ionizing radiation and non-ionizing electromagnetic radiation; **(Mod 244)**
- Assess personnel hazards in all government and contractor radiation use areas (including launch payloads and launch support activities at KSC and CCAFS; and at radiation use areas at PAFB as requested by the 45th Space Wing Radiation Protection Officer (RPO));
- Maintain a current inventory (to meet regulatory requirements) for all identified radiation sources and radiation producing devices in use or in storage at KSC and CCAFS;
- Perform radiation surveys, evaluations, sampling, analysis, and audits as directed by AF and NASA RPO to ensure compliance with Air Force, NASA, and applicable state and federal regulations;
- Maintain the KSC/CCAFS personnel ionizing radiation dosimetry program for radiation workers requiring dosimetry identify personnel to be monitored, issue appropriate dosimeter, assess and assign radiation dose, and maintain exposure histories as required by applicable regulations. Provide technical expertise and support for special dosimetry applications;
- Process Radiation Use Requests/Authorization (RUR/A) and associated documents, and draft a RUA for appropriate RPO approval for all potentially hazardous radiation sources and devices at KSC/CCAFS;
- Collect, monitor and store low-level radioactive waste, and maintain and operate a dedicated storage area pending material disposal or transfer;
- Provide maintenance and operation of a health physics laboratory in accordance with applicable USNRC, State of Florida, and other consensus standards, with the following analytical capabilities:
 - Low level alpha/beta counting capable of detecting less than 0.005 microCuries of radioactive material;
 - Gamma spectroscopy analysis with portable field data collection capability; and
 - Liquid scintillation analysis capability
- Advise resident NASA, Air Force, and their respective contractors regarding compliance with federal and state regulatory requirements;
- Provide a radiological emergency response capability including participation in training exercises, and maintain trained personnel, equipment, instrumentation, and supplies consistent with the level of potential radiation emergencies possible at KSC, CCAFS, and PAFB;
- Maintain appropriate State of Florida and USNRC licenses and registrations as referenced in J-BOSC Tech Exhibit 7.0-039 for radioactive materials and radiation producing machines; and support federal and state inspection visits;
- Provide administration and support of the CCAFS/KSC USNRC Broad Scope Radioactive Materials License; submit renewal applications; and support NRC inspection visits; and
- Support the Government Radiation Protection Committee meetings.

Each professional and technical member of the Health Physics staff shall possess an academic degree in the discipline or an equivalent combination of education and experience suitable to the responsibilities of their position.

At least one health physicist shall have American Board of Health Physics (ABHP) certification (comprehensive practice) or an equivalent level of training, education, and experience. Each professional and technical member of the Health Physics staff (these are job titles) shall be National Registry of Radiation Protection Technologist (NRRPT) certified or possess an equivalent level of training, education, and experience.

3.5.2.6 Material Safety Data Sheet (MSDS) Repository. The contractor shall operate the Material Safety Data Sheets Management System and make it available to all organizations at the Cape Canaveral Spaceport.

3.5.2.7 Investigative Environmental Services. The contractor shall provide the following services:

Specialized investigative, monitoring, sampling and laboratory analysis, and advisory support to real-time requests, incidents, and/or complaints, to include but not limited to:

- Drinking water complaints;
- Potable water line breaks;
- Potable water construction line monitoring;
- Operational investigations;
- Evaluation of environmental monitoring data to identify trends in environmental quality;
- Spill response and investigations; and
- Suspect environmental contamination.

3.5.3 Environmental Management

The contractor shall ensure that J-BOSC operations and facilities are in compliance with applicable federal, state and local environmental regulations and executive orders, and NASA and Air Force directives and instructions per KHB 8800.6 and KHB 8800.7 as listed in Section J, Attachment J-4.

The contractor shall comply with the following documents:

Document Number	Document Title
KHB 8800.6	KSC Environmental Control Handbook
KHB 8800.7	KSC Waste Management Handbook
AFI 32-7001	Environmental Budgeting
AFI 32-7045	Environmental Compliance Assessment and Management Program
32CFR 989	Environmental Impact Analysis Process

3.5.3.1 General Requirements. The contractor shall support NASA and AF environmental program requirements applicable to the J-BOSC. This support includes response to environmental data calls, support inspections and audits, providing support to permit applications and environmental permits, and providing technical support to meet environmental permit and regulatory requirements.

3.5.3.2 Specific Requirements. The contractor shall ensure compliance with Federal, State and local regulatory requirements and designated NASA and Air Force directives and instructions for all elements of the J-BOSC. Responsibilities include:

- Preparation of environmental reports for permitted activities and regulatory requirements;
- Promotion of environmental awareness and identification of environmental requirements to all J-BOSC elements;
- Natural resource awareness and protection;
- Waste minimization and pollution prevention opportunity assessments such as reducing TRI chemical releases and hazardous waste;
- Affirmative procurement;
- Cultural resources awareness and protection;
- Environmental permit compliance;
- Identification, interpretation, and application of new regulatory requirements;
- Hazardous waste management support;
- Environmental expertise in support of engineering design packages;
- Development support for environmental requirements identification documents, interpretation of environmental requirements, integration of environmental requirements with design packages and monitoring of construction for proper implementation of environmental requirements;
- Identification of environmental permit strategies;
- Environmental permit development and implementation;
- Development and implementation support for hazardous materials management and tracking system; and
- Environmental program support for:
 - Tank systems;
 - Asbestos abatement, reporting, tracking;
 - Stormwater management systems;
 - Solid waste and landfill operations;
 - Air emission sources;
 - Wastewater treatment plant operations;
 - Potable water sources;
 - Pesticide management;
 - Toxic substances including asbestos and Polychlorinated Bi-phenyls (PCB) management; and
 - Permit data integration;
- Environmental budget support; planning, programming, tracking;
 - Integration of environmental requirements with emergency response requirements inherent to Protective Services;
 - Technical training development support; and
 - Environmental management system implementation and continual improvement support.
 - Pickup, palletize, prepare and dispose of 55 gallon drums to the Ransom Road Facility. (**Mod 348** (CCR 05-12))

3.5.3.3 NASA Environmental Program Support. The contractor shall provide technical support to NASA in the preparation and review of National Environmental Policy Act (NEPA) documentation, wetlands related projects, and threatened and endangered species issues.

The contractor shall provide environmental support to NASA facility, equipment and Program projects as required. ~~Construction of Facilities (COF) projects.~~ The contractor shall provide environmental consulting expertise and coordination throughout the project delivery~~COF~~ process. The primary tasks include providing consulting services at the Project Concept, Preliminary Engineering Report, Engineering Design and Project Construction phases. The tasks to be performed include: (Mod 374) **(Mod 481)**

1. Providing input to the preparation of National Environmental Policy Act (NEPA) documentation (Environmental Checklist), identifying potential environmental compliance requirements, and document requirements necessary to ensure that~~COF~~ environmental requirements are adequately scoped in applicable contracts. (Mod 374) **(Mod 481)**
2. Participating at design review and pre-work meetings to ensure that environmental requirements are communicated to all ~~A&E and COF~~ contractors. This includes reviewing of designs, providing comments, coordinating between the NASA ~~COF~~ Project Manager and the NASA Environmental Program Branch, and building of pre-work work packages to further communicate environmental requirements. (Mod 374) **(Mod 481)**
3. Tracking the environmental requirements for each project assigned and tracking the transfer of data between the NASA Project Manager and the Environmental Program Branch. (Mod 374)
4. Supplementing inputs from other environmental subject matter experts from NASA, consulting engineers, and various J-BOSC organizations to support the planning and design engineering phases of facility, equipment, and Program ~~COF~~ projects and serving as the principle Environmental point of contact for the NASA Project Manager. This support will also include project field implementation consultation for environmental requirements such as waste management, storm water pollution prevention plans, etc. and the monitoring of field compliance with KSC/regulatory requirements and best practices. (Mod 374) **(Mod 388) (Mod 481)**

4.0 INSTALLATION IMPROVEMENT PROGRAM

The contractor, based on project tasking, shall track scope, cost, and schedule, requirements for facility projects associated with Article B-12 projects. This shall be accomplished to ensure performance within agreed parameters. The contractor shall address these items monthly and report on variances from agreed upon cost and schedule, including an explanation of the variances.

APPENDIX A – TAILORED DOCUMENTS

SOW Paragraph	Document Number or Description	Document Title	Description of Tailoring to be Performed
1.2	EWR 127-1(T)	Eastern and Western Range Safety Policies and Processes	In tailoring these documents, SGS proposes to adopt all sections of both the Eastern and Western Range Safety Policies and Processes and the KSC Safety Practices Procedural Requirements for integration into a single SGS internal Safety Plan. Our process will be to first develop an outline consisting of similar safety requirements from both documents, supplement the outline with unique items from both documents, and then fill the outline using material from both documents. We will clearly specify agency applicability throughout the merged document. (Mod 334) (Mod 362)
1.2 1.2.1.2 1.4.3 2.1.2.3.1	KNPR 8715.3(T)	KSC Safety Practices Procedural Requirements	
2.1.1.3	UFC 3-260-1	Design: Airfield and Heliport Planning and Design	
	AFPAM 90-902	Operational risk management (ORM) guidelines and tools	
3.1.1	NFPA 1561	Fire Department Incident Management	In tailoring this document, the Fire Department proposes to use NFPA 1561 as the basis for managing all types of emergency incidents. NFPA 1561 is the basis for the nationally accepted system for incident management.
3.1.1	NFPA 1	Fire Prevention Code	In tailoring this document the Fire Department will use this code as the basis for its fire prevention program.
3.1.1	NFPA 1500	Fire Department Occupational Safety and Health Program	In tailoring this document, the Fire Department will use NFPA 1500 as the base document to support the health and safety program for its employees. This code will be applied on a daily basis to ensure that the Fire Department maintains a safe work environment.
3.1.1.1	FAA Part 139	Federal Aviation Administration Document Guiding Aircraft Rescue and Fire Fighting Services	The Fire Department will use this as a tailorable document to insure that all aircraft Rescue and Fire Fighting services, training, and operations meet the needs of the air fields serviced.

SOW Paragraph	Document Number or Description	Document Title	Description of Tailoring to be Performed
3.1.1.2	NFPA 403	Aircraft Rescue and Fire Fighting Services at Airports	The Fire Department will use this as a tailorable document to ensure that Aircraft Rescue and Fire Fighting services meet the needs of the airport and landing strip facilities at KSC and CCAFS.
3.1.1.2	NFPA 1911	Service Tests of Fire Pump Systems on Fire Apparatus	The Fire Department will use this as a tailorable document to ensure that all fire department pumping apparatus are fully functional and reliable.
3.1.1.2	NFPA 1914	Fire Department Aerial Devices, Testing	The Fire Department will use this as a tailorable document to ensure that the fire department's aerial ladder unit is tested annually, and fully functional and safe for use during emergencies.
3.1.1.2	NFPA 1931	Design Of and Verification Tests for Fire Department Ground Ladders	The Fire Department will use this as a tailorable document to ensure that all ground ladders purchased for use by the Fire Department are constructed and tested in compliance with established safety standards.
3.1.1.2	NFPA 1404	Fire Services Respiratory Protection Training	In tailoring the document, the Fire Department will use NFPA 1404 to establish the use, care, maintenance, and training to SCBA.
3.1.1.2	NFPA 1962	Care, Use, and Service Testing of Fire Hose Including Connections	The Fire Department will use this as a tailorable document to ensure that all Fire Department hose is maintained properly and tested annually to ensure its reliability.
3.1.1.5	NFPA 1971	Protective Ensemble for Structural Fire Fighting	The Fire Department will use this as a tailorable document to ensure that all Fire Department personnel responding to structural fire situations are wearing protective clothing that is designed and tested to ensure full body protection from fire, heat, hot liquids, and gases.
3.1.1.5	NFPA 1976	Protective Clothing for Proximity Fire Fighting	The Fire Department will use this as a tailorable document to ensure that all Fire Department personnel engaged in Aircraft Rescue and Fire Fighting operations have protective clothing that is specifically designed and tested to ensure their safety.
3.1.1.9	NFPA 10	Portable Fire Extinguishers	The Fire Department will use this as a tailorable document to ensure that all extinguishers at KSC, CCAFS, and the Florida Annexes are inspected to ensure operability and have maintenance performed to ensure reliability.

SOW Paragraph	Document Number or Description	Document Title	Description of Tailoring to be Performed
3.1.1.14	29 CFR 1910.120	Hazardous Waste Operations and Emergency Response	This document will be used to ensure compliance with OSHA regulations pertaining to entry into a structure or area to perform rescue services for IDLH atmospheres.
3.2.1	AFI 32-7086	Hazardous Material Management	<p>Chapter 1: Retain Chapter 1, Paragraph 1.1.2.2. only- Describes the HMMP Team Composition. JBOSC currently supports this.</p> <p>Chapter 2: Retain Chapter 2, except, 2.1(All), 2.2.5, 2.2.6, 2.3(All), 2.4(All), 2.5(All),2.6.1 (All), 2.6.2 (All),2.6.3 (All), 2.6.4 (All),2.6.5.2, 2.6.5.5, 2.6.5.6, 2.6.6. (All), 2.6.7 (All), 2.6.8.4, 2.6.8.5,2.6.8.6, 2.6.8.7, 2.6.8.8, "AF Form 55" from 2.6.8.9, 2.6.8.10, 2.6.9 (All), 2.6.10 (All), 2.6.7 (All)</p> <p>Chapter 3: Delete</p> <p>Chapter 4: Retain Chapter 4; include only, 4.1, 4.2.1, 4.2.3, 4.8.3</p>
3.2.2	AFI 24-301(T)	Vehicle Operations	DELETED (Mod 410)
3.2.2	AFI 23-302	Vehicle Management	Comply with provisions as defined in Technical Exhibit J5-3.2.2-04 (Mod 502)
3.2.2	T.O. 36-1-191	Technical and Managerial Reference for Motor Vehicle Maintenance	Comply with provisions as defined in Technical Exhibit J5-3.2.2-04 (Mod 502)
3.2.5.3	AFI 13-218	Air Traffic System Evaluation Program (Mod 269)	Chapter 4, Section 4.2 indicates that Evaluators will use the downloadable Functional Area Checklists (FAC) available on the AFFSA Airfield Operations Directorate website to evaluate compliance with established guidance and standards. However, for Skid Strip purposes, the contractor shall refer to tailored Airfield Management (AM), Airfield Operations Management (AOM), and Air Traffic Control (ATC) checklists as of 28 June, 2004. A hard copy of the tailored checklist is available at the Airfield Services IPT Lead's office.

SOW Paragraph	Document Number or Description	Document Title	Description of Tailoring to be Performed
3.5.2	KNPR 1820.3 KNPR 1820.4 KNPR 1840.19 KNPR 1860.1 KHB 1870.1	KSC Hearing Loss Prevention Program KSC Respiratory Protection Program KSC Industrial Hygiene Program KSC Radiation Protection Program KSC Sanitation Program	Following our discussions at the contract site and consideration of purpose for merging these documents, SGS concluded that the only tailoring required for these documents is to make them applicable to both KSC and the 45 th Space Wing. SGS will, therefore, develop this health program as individual documents, which apply to both agencies. (Mod 297)
3.5.3	KHB 8800.6(T)	KSC Environmental Control Handbook	Since the general guidance for this document was derived from Presidential Executive Orders, Federal Congressional Acts, the Code of Federal Regulations, and State and Regional Documents and since mission requirements for KSC and CCAFS are similar, the Environmental Control guidance can likewise be similar. No 45th Space Wing environmental control compliance document was provided. To provide a single document for management and guidance for both 45th Space Wing and KSC, SGS will prepare a general modification of KHB 8800.6 to integrate CCAFS. The modification will also include any unique CCAFS environmental issuances as a separate presentation within the document. SGS will number and title this tailored document in accordance with the scheme selected following contract award.

APPENDIX B – (RESERVED)

APPENDIX C – PERFORMANCE STANDARDS

Number	Performance Description
1.1-1	No mission milestone schedule impact due to action or inaction of the contractor shall occur.
1.2-1	Vehicle Accident Rate will not exceed the prior 4 award fee period averages. Rate will be updated at the beginning of the fiscal year. (CCR 06-31, Mod 398)
1.3-1	Reserved
1.3-2	Monthly accrual estimates shall be 95% accurate to actual reported costs for the same period.
1.3-3	Reserved
1.3-4	Reserved
1.3-5	Minimize and fully reconcile the gap between Negotiated Estimated Cost (NEC) and actual cost per period and minimize and fully reconcile the gap between NEC and Operating Plan.
2.1.1-1	Reserved
2.1.1-2	Reserved
2.1.1-3	Reserved
2.1.1-4	97% of siting request packages shall be prepared within ten working days of receipt.
2.1.2-1	99% of the changes and additions to the SPECSINTACT NASA Mastertext shall be completed correctly the first time. Not more than 1% re-submission for correction of a previously completed Criteria Change Request (CCR) or addition to a NASA SpecsIntact Mastertext section. (Mod 484)
2.1.2-2	75% of all technical support questions shall be resolved within eight working hours. The remaining 25% of technical support calls shall be resolved within 24 working hours.
2.1.2-3	The services provided (EDC) for critical and mission essential documentation shall be available to the user 100% of the time when essential to the user's activities as determined by the user. (Mod 484)
2.1.2-4	(EDC) 99% of requests shall be completed as negotiated between SGS and the requester, but in no case shall impact major program schedule milestones. (Mod 484)
2.1.2-5	90% of EDC master file shall be kept current, with no products later than 30 calendar days. (Mod 484)
2.1.2-6	Engineering design completion rate shall be 90% of program schedule. (Mod 232)
2.1.3-1	Engineering design cost estimates shall be accurate to 90% of actual acquisition costs. Deleted, in original request (Mod 232)
2.1.2-6	Engineering design completion rate shall be 90% of program schedule. (Mod 232)
2.1.3-3	Reserved
2.1.3-4	Reserved

Number	Performance Description
3.1.3-5	Reserved
2.1.4-1	Energy reduction goals for all NASA J-BOSC Facilities shall be in accordance with the Energy Use Index (EUI in BTU/sf/yr) of 1.5% annual reduction for Standard Facilities and 0.67% annual reduction for Energy Intensive Facilities. (Mod 137) Metric on Engineering Website
2.2.1-1	Critical and/or Mission Essential F/S/E/U shall be ready to the user 100% of the time from Call to Station until the mission milestone is completed or cancelled. (MOD 436)
2.2.1-2a (Mod 482)	<p>No Unplanned System Outages on critical and mission essential F/S/E/U shall result from an action or inaction by the contractor.</p> <p>Notes:</p> <ul style="list-style-type: none"> ▪ A list of "Avoidable" (attributable to action or inaction by the contractor) outages is provided in Section J, Attachment J-9 of this SOW ▪ Program Metric # 6a is used to validate the contractor's compliance with this Performance Standard
2.2.1-2b (Mod 482)	<p>Not more than one Unplanned System Outages on non-critical and non-mission essential F/S/E/U shall result from an action or inaction by the contractor.</p> <p>Notes:</p> <ul style="list-style-type: none"> ▪ A list of "Avoidable" (attributable to action or inaction by the contractor) outages is provided in Section J, Attachment J-9 of this SOW ▪ Program Metric # 6b is used to validate the contractor's compliance with this Performance Standard
2.2.1-3	<p>No more than 20 false fire alarms per month or 13 facility evacuations shall occur per month resulting from O/M/E attributed action/inaction of the contractor.</p> <p>Exceptions (Mod 482):</p> <ul style="list-style-type: none"> ▪ Weather intrusion that could not have been prevented by base operation maintenance ▪ Outside contractor influence not controlled through base operation construction monitors ▪ Accidental activation by others (not on base operations contract) ▪ An alarm that occurs during off hours and does not impact personnel is not counted as an evacuation.

Number	Performance Description
2.2.1-4	<p>100% of Type 2 emergency work orders shall be mitigated within 24 hours, 99% completed within 10 calendar days, and 100% completed within 60 calendar days of the original call.</p> <p>Exceptions for completion time requirements (Mod 482):</p> <ul style="list-style-type: none"> ■ <u>Access</u>: Customer denies access to premises for completion of work ■ <u>Asbestos Plans</u>: Asbestos testing takes approximately 2-Weeks and then an Asbestos plan must be written and approved prior to commencing work ■ <u>Long Lead Materials</u>: Materials that cannot be received in time to complete the work within the Metric requirements ■ <u>Weather</u>: Work cannot be completed due to weather constraints (rain, high winds, etc.) ■ (AF Customer 2 Only) P& E Support: Work orders needing planning and estimating support for activities associated with Type 2, corrosion control planning, asbestos plans, silica plans, lead plans as well as environmental reviews ■ Work orders placed on dollar hold or on execution hold by customers
2.2.1-5	<p>100% of Type 2 urgent work orders shall be mitigated within 72 hours, 98% completed within 20 calendar days, and 100% completed within 60 calendar days of the original call.</p> <p>Exceptions for completion time requirements (Mod 482):</p> <ul style="list-style-type: none"> ■ <u>Access</u>: Customer denies access to premises for completion of work ■ <u>Asbestos Plans</u>: Asbestos testing takes approximately 2-Weeks and then an Asbestos plan must be written and approved prior to commencing work ■ <u>Long Lead Materials</u>: Materials that cannot be received in time to complete the work within the Metric requirements ■ <u>Weather</u>: Work cannot be completed due to weather constraints (rain, high winds, etc.) ■ (AF Customer 2 Only) P& E Support: Work orders needing planning and estimating support for activities associated with Type 2, corrosion control planning, asbestos plans, silica plans, lead plans as well as environmental reviews ■ Work orders placed on dollar hold or on execution hold by customers

Number	Performance Description
2.2.1-6	<p>NASA and Air Force: 90% of Type 2 routine work orders shall be completed within 30 calendar days, 97%98% completed within 60 calendar days, and 98%100% completed within 180 calendar days of the original call. (Mod 492)</p> <p>Exceptions for completion time requirements (Mod 482):</p> <ul style="list-style-type: none"> ■ Access: Customer denies access to premises for completion of work ■ Asbestos Plans: Asbestos testing takes approximately 2-Weeks and then an Asbestos plan must be written and approved prior to commencing work ■ Long Lead Materials: Materials that cannot be received in time to complete the work within the Metric requirements ■ Weather: Work cannot be completed due to weather constraints (rain, high winds, etc.) ■ (AF Customer 2 Only) P& E Support: Work orders needing planning and estimating support for activities associated with Type 2, corrosion control planning, asbestos plans, silica plans, lead plans as well as environmental reviews ■ Work orders placed on dollar hold or on execution hold by customers <p>SGS will expend 74% of the Air Force Type 2C routine work order historical cost average each month. When that limit is reached, SGS will decline further requests for the remainder of that month and advise the customers that: a) SGS has reached the limit of the Wing’s monthly budget; and b) the request may be resubmitted in a subsequent month. (Mod 286)</p>
2.2.1-7	<p>90% of Type 3C work orders shall be completed on or before the original negotiated completion date unless the customer initiates a change to the work. (Mod 232)</p> <p>Exceptions (Mod 482):</p> <ul style="list-style-type: none"> ■ Customer requests a date change. ■ Material issues not associated with lack of identification ■ Manpower needed to support a Launch that was not on the schedule when the Target Completion Date (TCD) was agreed to. ■ Access denied or equipment needed to support a Launch that was not on the schedule when the TCD was agreed to. ■ Scope Change due to customer request ■ Unforeseen Site Conditions; environment issues, weather issue, etc.
2.2.1-8	85% completion of schedule preventive predictive maintenance for Air Force F/S/E/U (Mod 219) (Mod 286) (MOD 436) (Mod 492)
2.2.1-9	100% completion of scheduled preventive/predictive maintenance for critical and/or mission essential F/S/E as defined in CMDS
2.2.1-10	95 % completion rate for NASA routine (non-critical, non-mission-essential) Type 1 work orders. (Mod 492)
2.2.1-12	Deleted (482)

Number	Performance Description
2.2.1-13	100% Completions of all NFPA code-required <i>and life safety</i> maintenance. (MOD 436)
2.2.1-15	100% of in-work Air Force Type 3C Work Orders shall be resubmitted to the Air Force for continued work approval prior to expending funds beyond the approved FDE level. This will include all work for Air Force customers, (e.g., NOTU) (Mod 232) (Mod 482)
2.2.1-16	90% of Type 3C Work Orders shall have actual completion costs less than or equal to the original final design cost estimate, and additional addendum completion costs shall be less than or equal to the original addendum design cost estimate. (Mod 232) Exceptions (Mod 482): <ul style="list-style-type: none"> ▪ Labor rates and/or load rate increases ▪ Material cost increases
2.2.1-17	No utility damage shall result from contractor failure to properly locate or mark identifiable utility systems.
2.2.2-1	No dumpsters shall be visibly overflowing
2.2.2.2	Reserved
2.2.3-1	Reserved
2.2.3-2	Reserved
2.2.3-3	Reserved
2.2.4-1	Provide response for spills/glass breakage/overflows, and blood-borne pathogen cleaning, within 20 minutes of notification for assistance during normal work hours and within two hours at other times.

2.2.4-2	Areas should be clear of trash and debris, and be clean in appearance, with no more than eight validated customer complaints per month.
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3.1.1-1	<p>Fire and ambulance services will respond to all emergency calls within their designated zones within their allotted time 90% of the time. Per Mod 159</p> <ul style="list-style-type: none"> √ Fire Rescue will respond to all emergency calls in the Green Zone within 6 minutes or less. √ Fire Rescue will respond to all emergency calls in the Yellow Zone within 10 minutes or less. √ Fire Rescue will respond to all emergency calls in the Blue Zone within 12 minutes or less. √ Fire Rescue will respond to all emergency calls in the Red Zone in greater than 12 minutes. √ ALS Ambulance will respond to all emergency medical calls in the Green Zone within 6 minutes or less. √ ALS Ambulance will respond to all emergency medical calls in the Yellow Zone within 10 minutes or less. √ ALS Ambulance will respond to all emergency medical calls in the Blue Zone within 12 minutes or less. √ ALS Ambulance will respond to all emergency medical calls in the Red Zone in greater than 12 minutes.
3.1.2-1	Reserved
3.1.2-2	Reserved
3.1.2-3	Maintain accurate security programming guidance, plans, and directives maintained by updating items within 90 calendar days of the event that caused the item to become outdated
3.1.2-4	Reserved
3.1.3-1	Command and control Emergency Operations Center (EOC) shall be activated within 30 minutes of notification of an emergency or emergency exercise during normal duty hours, otherwise within two hours.
3.1.3-2	Reserved
3.2.1-1	Reserved (Mod 445)
3.2.1.2	Reserved
3.2.1-3	90% of Equipment Receipt records (ERR) will be loaded into NEMS SAP/N-PROP within 5 business days after receipt from Receiving Dock. (Mod 445) (MOD 511)
3.2.1.4	90% priority shipments requiring next day delivery service, received before 2:00 p.m. will be packaged & shipped the same day (excluding shipments containing hazardous materials, international shipments, or items that require extensive packaging).
3.2.1.5 (NEW PS)	90% of NASA packages shall be delivered to the customer within 15 days.
3.2.1.6 (NEW PS)	90% of direct freight packages shall be delivered to customer within 5 days.
3.2.1.7	Reserved (Mod 445)
3.2.1.7 (NEW PS)	90% of Excess documents shall be processed within 30 days.
3.2.2-1	Reserved
3.2.2-2	Reserved
3.2.2-3	Reserved
3.2.2-4	Reserved

3.2.2-5 (NEW PS)	Air Force Mission Critical Emergency Vehicle In-Commission Rate shall be available 88% of the time. Vehicles in corrosion and depot maintenance are excluded from calculating this percentage. (Mod 470)
3.2.2-6 (NEW PS)	(Mod 470)
3.2.2-7 (NEW PS)	Air Force Registered/Owned Equipment shall be available 84% of the time. Vehicles in corrosion and depot maintenance are excluded from calculating this percentage. (Mod 470)
3.2.2-8 (NEW PS)	KSC Launch Critical Vehicle In-Commission Rate shall be available 85% of the time.
3.2.3-1	At least 90% of priority laboratory work orders shall be completed as scheduled with the customer.
3.2.3-2	At least 90% of NASA calibrations not requiring repair shall be completed within 20 calendar days or as scheduled with the customer.
3.2.3-3	At least 90% of NASA standard actions not requiring repair shall be completed within 30 calendar days or as scheduled with the customer. Reference standards to be characterized for drift overtime are exempt from turnaround time requirement.
3.2.3-4	Reserved
3.2.3-5	Reserved
3.2.3-6 (NEW PS)	At least 90% of NASA calibrations laboratory priority work orders shall be completed as negotiated with customer.
3.2.3-7 (NEW PS)	At least 90% of AF calibrations not requiring repair shall be completed within 60 calendar days or as scheduled with the customer.
3.2.3-8 (NEW PS)	At least 90% of AF PMEL Priority work orders shall be completed as scheduled with the customer.
3.2.4-1	Commodities delivered shall meet customer specifications.
3.2.4-2	Propellants and Life Support services are delivered as scheduled or as negotiated with the customer 95% of the time.
3.2.4-3	100% completion of preventive/predictive maintenance for critical and/or mission essential Propellants and Life Support equipment. (MOD 436)
3.2.4.4 New PS	93% aggregate annual completion rate of preventive/predictive maintenance for all Propellants and Life Support equipment. (MOD 436)
3.2.5-1	100% Anomaly free flights. No aircraft in flight anomalies as a result of inadequate maintenance. No anomalies during flights caused by scheduled/unscheduled maintenance. (Mod 484)
3.2.5-2	Aircraft shall be available and ready to meet scheduled departure 95% of the time. Should deviations occur, an assessment of the situation, including estimated time to complete the repair, shall be required within one hour.
3.2.5-3	Reserved
3.2.5-4	Reserved
3.2.5-5	Aircraft servicing shall be provided within 60 minutes of the pilots request 92% of the time.
3.2.5-6	Reserved
3.2.5-7	100% of aircrew evaluations rated satisfactory or above.
3.2.6-1	Wastes shall be picked up within 15 calendar days of request.

3.2.6-2	Hazard determinations completed within 30 calendar days.
3.2.6-3	Post emergency spill clean-up shall commence within one work day of notification.
3.3.1-1	Computer systems and applications shall be operational and/or available 99% of the time, with unscheduled downtime not exceeding four hours for critical systems or 12 hours for non-critical systems for each incident.
3.3.1-2	Unauthorized actions that result in systems access, denial of services, loss of data integrity, or disclosure of sensitive information shall be reported to the Government within two hours upon detection.
3.3.1-3	Reserved
3.3.1-4	95% of IT milestones and products shall be provided as scheduled or as negotiated with the customer.
3.3.1-5	The Reportable software deliverable success rate will not be lower than 70% for the award fee period.
3.3.1-6	Servers shall be operational and/or available 99% of the time.
3.3.1-7	LPS, PMS/GMS, and MADS Minus-Time data shall be made available with a 90 % or better delivery time for each launch or launch event. Telemetry launch data shall be processed with the following delivery target hours: GMS/PMS – 72, LPS – 36, MADS SSME – 24, MADS SSME Ascent – 36.
3.3.2-1	Deleted Mod 203
3.3.2-2	Reserved
3.3.2-3	Reserved
3.3.2-4	Deleted Mod 203
3.4.1-1	Provide 95% on-time completion of jobs as negotiated between the contractor and the customer, but no jobs later than five (5) work days after the negotiated completion date.
3.4.2-1	Meet need dates as negotiated with customers for 90% of all material acquisitions.
3.4.2-2	Reserved
3.4.3-1	Provide 80% accurate and consistent mail pickup and delivery within one hour of contractor-documented schedule on days where one or more personnel experience an unscheduled absence. Provide 100% accuracy on all other occasions.
3.4.3-2	Post Office Box postings meet contractor's documented schedule.
3.4.4-1	90% of primary or alternate training dates requested are met, unless prevented by mitigating circumstances.
3.4.4-2	85% of training courses are conducted as scheduled.
3.4.4-3	90% of training records are entered accurately into Training Certification Record System (TCRS) within 7 days from date training is completed.
3.5.1-1	Medical services shall be initiated within 15 minutes of patient check-in for scheduled appointments unless pre-empted by emergency actions.
3.5.1-2	60% intervention of high risk patients voluntarily participating in the Wellness Intervention Cardiovascular Program
3.5.1-3	Patient satisfaction shall have an average mean of 3.0 or better.
3.5.1-4	The average post-test score for the Employee Assistance Program should be higher than the pre-test score.

3.5.2-1	95% of non-recurring work shall be performed per schedule negotiated with customer.
3.5.2-2	95% of recurring work shall be conducted in accordance with contractor documented schedules.
3.5.2-3	At least 95% of reviewed reports shall be free of technical errors and omissions.
3.5.2-4	Reports to customers shall be delivered within two weeks of the survey completion date.
3.5.2-5	Reserved
3.5.2-6	Reserved
4.0-1	Assigned tasks completed on budget and on schedule.