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# Appendix 2
# Abbreviations and Acronyms

# For

# Information Management and
# Communications Support (IMCS)

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1  Certain terms, acronyms, and abbreviations used in this contract are listed and defined
2  below.  This section is informational only.  If and to the extent any definition contained
3  below conflicts with any other portion of the contract, the other portion of the contract
4  shall prevail.
5

| | |
|---|---|
| 45 SW | 45th Space Wing |
| A&E | Architectural and Engineering |
| A/G | Air-to-Ground |
| aAAO | Associate Account Authorization Official |
| AACR2 | Anglo-American Cataloguing Rules |
| AC | Access Control |
| ACA | Associate Contractor Agreement |
| ACL | Access Control List |
| AEC | Automatic Exposure Control |
| AER | Azimuth, Elevation, and Range |
| AF | Air Force |
| AFB | Award Fee Board |
| AFFARS | Air Force Federal Acquisition Regulation Supplement |
| AFMAN | Air Force Manual |
| AFMC | Air Force Material Command |
| AFSPC | Air Force Space Command |
| AMS | Acquisition Management System |
| ANI/ALI | Automatic Number Identification/Automatic Location Identification |
| ANSI | American National Standards Institute |
| AO | Authorizing Official |
| AOE | Area of Emphasis |
| ARC | Ames Research Center |
| ARF | Assembly and Refurbishment Facility |
| ARRI | Arriflex Camera |
| ARS | Administrative Radio System |
| ASA | American Standards Association |
| ASI | Asynchronous Serial Interface |
| ASCII | American Standard Code for Information Interchange |
| ASCS | Agency Security Configuration Standards |
| ASQ | American Society for Quality |
| ASQC | American Society for Quality Control |
| ASRS | Automated Support Requirements System |
| ASUS | Agency Security Update System |
| ATM | Asynchronous Transfer Mode |
| ATOTS | Advanced Transportable Optical Tracking System |
| ATSC | Advanced Television Systems Committee |
| ATV | Asset Transition Value |
| ATXS | ATM Transmission System |
| A/V | Audio/Visual |
| AWG | American Wire Gage |
| AZ | Azimuth |

| B/U | Back Up |
|---|---|
| BCDS | Broadband Communications Distribution System |
| BCI | Baseline Configuration Imaging |
| BICSI | Building Industry Consulting Service International |
| BIM | Base Interface Module |
| bps | Bits Per Second |
| BSP | Betacam Superior Play |
| | |
| C&A | Certification and Accreditation |
| C&T | Communications and Tracking |
| CAD | Computer Aided Design |
| | Computer Aided Drafting |
| CAD-RMS | Computer Aided Dispatch - Report Management System |
| CAM | Control and Acquisition Module |
| CAMS | Circuit Assignment Management System |
| CAS | Code Activated Switch |
| CASB-CMA | Cost Accounting Standards Board – Cost of Money - Facilities |
| CBA | Collective Bargaining Agreement |
| CBACS | Common Badging and Access Control System |
| CBT | Computer Based Training |
| CCAFS | Cape Canaveral Air Force Station |
| CCB | Configuration Control Board Change Control Board |
| CCC | Complex Control Center |
| CCD | Charged Coupled Device |
| CCF | Converter Compressor Facility |
| CCSMO | Cape Canaveral Space Management Office |
| CCTV | Closed-circuit television |
| CCU | Camera Control Unit |
| CD | Compact Disk |
| CD&SC | Central Distribution and Switching Center |
| CDL | Commercial Driver's License |
| CDR | Critical Design Review |
| CDVS | Combined Data/Video Switch |
| CEE | Collaborative Engineering Environment |
| CES/CEV | Civil Engineering Squadron / Environmental Flight |
| CFP | Customer Face Plate |
| CFR | Code of Federal Regulations |
| CIAO | Central Industry Administrative Office |
| CID | Configuration Identification Document |
| CIF | Central Instrumentation Facility |
| CIL | Critical Items List |
| CIO | Chief Information Officer |
| CITE | Cargo Integrated Test Equipment |
| CITSM | Center IT Security Manager |
| CLASS | Custom Local Area Signaling Service |

| | |
|---|---|
| CLIN | Contract Line Item Number |
| CLS | Contingency Landing Site |
| CM | Configuration Management |
| Cm | Centimeters |
| CM&S | Communications Maintenance and Storage |
| CMDS | Configuration Management Data System |
| CMM | Capability Maturity Model |
| CMR | Communications Material Review |
| CO | Central Office |
| CO | Contracting Officer |
| COAM | Customer Owned and Maintained |
| CoF | Construction of Facilities |
| COF | Center Operations Facility |
| CoFR | Certificate of Flight Readiness |
| COLD | Computer Output Laser Disk |
| COMSEC | Communications Security |
| CONUS | Continental United States |
| CORRS | CWDM Optical Remultiplexer and Regenerating System |
| COTR | Contracting Officer's Technical Representative |
| COTS | Commercial Off-the-Shelf |
| CP | Check Print (no color or density corrections) |
| CR | Change Request |
| CRF | Canister Rotation Facility |
| CSLA | Contract Service Level Agreement |
| CSN | Central Summing Network |
| CSR | Customer Service Request |
| CSR | Computer Sciences Raytheon |
| CSC | Customer Support Center |
| CSU | Customer Service Unit |
| CT | Crawler Transporter |
| CTC | Camera Terminal Cabinet |
| CTV | Compatibility Test Van |
| CV | Contract Value |
| CWDM | Course Wave Division Multiplexers |
| CX | Complex |
| CXT | Cross Connect Terminal |
| CY | Calendar Year |
| CYS | Copies |
| | |
| D/N | Dupe Negative |
| DBM | Milliken Camera |
| DCAA | Defense Contract Audit Agency |
| DCMA | Defense Contract Management Agency |
| DD | Data Depository |
| DEG | Degree |
| DFRC | Dryden Flight Research Center |

| | |
|---|---|
| DFUM | Directorate Facilities Utilization Manager |
| DHCP | Dynamic Host Configuration Protocol |
| DNS | Domain Name Server |
| DO | Delivery Order |
| DOAMS | Distant Objective Attitude Measurement System |
| DoD | Department of Defense |
| DOE | Department of Energy |
| DOL | Day of Launch |
| DOL | Department of Labor |
| DOLILU | Day-Of-Launch Initialization Load Update |
| DOT | Department of Transportation |
| DPAS | Defense Priorities and Allocation System |
| dpi | Dots per Inch |
| DR | Disaster Recovery |
| DR | Data Requirement |
| DR | Discrepancy Report |
| DRA | Document Release Authorization |
| DRD | Data Requirement Description |
| DRL | Data Requirements List |
| DRS | Direct Radio System |
| DS | Digital Signal |
| DSL | Digital Subscriber Line |
| DSU | Data Service Unit |
| DTE | Data Transmission Equipment |
| DTMF | Dual Tone Multi-Frequency |
| DTV | Digital Television |
| DV | Digital Video |
| DVD | Digital Versatile Disc |
| DVR | Digital Video Recorder |
| DVTS | Digital Video Transmission System |
| | |
| ECN | Equipment Control Number |
| ECWG | Export Control Working Group |
| EDC | Engineering Data Center |
| EDRS | Electronic Drawing Review System |
| EDW | Employee Data Warehouse |
| EET | End-to-End Test |
| EI | End Instrument |
| EIADD | Engineering Imagery Acquisition Distribution Document |
| ELF | Extremely Low Frequency |
| ELV | Expendable Launch Vehicle |
| EMA | Electromagnetic Measurement and Analysis |
| EMC | Electromagnetic Compatibility |
| EMI | Electromagnetic Interference |
| EML | Electromagnetic Laboratory |
| EMS | Electronic Meeting System |

ENG             Engineering News Gathering
Eng.            Engineering
EO              Engineering Order
                Executive Order
EOM             End of Mission
EP              Engineering Print (with timing)
EPA             Environmental Protection Agency
ER              Eastern Range
ESMD            Exploration Systems Mission Directorate
ESR             Engineering Support Request
ESS             Electronic Security Surveillance
EUT             Equipment Under Test
EWSD            Electronicious Whal System Digital
EXP             Exposure
Ext.            Extension

f/s             Frames per Second
FAA             Federal Aviation Administration
FAR             Federal Acquisition Regulation
FAST            Federal Automotive Statistical Tool
FBI             Federal Bureau of Investigations
FCA             Frequency Control and Analysis
FCO             Flight Control Officer
FDDI            Fiber Data Distribution Interface
FDO             Fee Determination Official
FEP             Front-End Processor
FICA            Federal Insurance Contributions Act
FIPS            Federal Information Processing Standard
FIRMR           Federal Information Resources Management Regulations
FISMA           Federal Information Security Management Act
FLSA            Fair Labor Standards Act
FMEA            Failure Modes and Effects Analysis
FOD             Foreign Object Debris
FOT             Fiber Optic Terminal
FOTS            Fiber Optic Transmission System
FOV             Field of View
FOWB            Fiber Optic Wideband
FP              Film Productions
FPL             Florida Power and Light
fps             Frames Per Second
FR              Frame Relay
FRC             Federal Record Center
FRR             Flight Readiness Review
FSUA            Facility Space Utilization Database
FTS             Federal Telecommunications System
FUTA/SUTA       Federal and State Unemployment Tax Act

| | |
|---|---|
| FY | Fiscal Year |
| | |
| G&A | General and Administrative |
| GAO | General Accounting Office |
| GB | Gigabyte |
| GBL | Government Bill of Lading |
| Gbps | Gigabit Per Second |
| GCAIP | Ground Camera Ascent Imagery Project |
| GDC | General DataComm |
| GFE | Government Furnished Equipment |
| GFP | Government Furnished Property |
| GFY | Government Fiscal Year |
| GH2 | Gaseous Hydrogen |
| GHz | Gigahertz |
| GIDEP | Government/Industry Data Exchange Program |
| GIS | Geographic Information System |
| GMIP | Government Mandatory Inspection Point |
| GMT | Greenwich Mean Time |
| GORR | Ground Operations Readiness Review |
| GOTS | Government off the Shelf |
| GOWG | Ground Operations Working Group |
| GPA | Group Processor Assembly |
| GPC | Government Purchase Card |
| GPO | Government Printing Office |
| GPS | Global Positioning System |
| GSA | General Services Administration |
| GSE | Ground Support Equipment |
| GSFC | Goddard Space Flight Center |
| GSI | Government Source Inspection |
| GSTDN | Ground Spaceflight Tracking and Data Network |
| GUI | Graphical User Interface |
| | |
| HASBL | Hasselblad Camera |
| HASBL EL | Hasselblad Camera, Electric |
| HD | High Definition |
| HDRS | High Data Rate System |
| HDSL | High Bit Rate Digital Subscriber Line |
| HDTV | High-Definition Television |
| He | Helium |
| HEDS | Human Exploration and Development of Space |
| HMA | Hypergol Maintenance Area |
| HMF | Hypergolic Maintenance Facility |
| HOSC | Huntsville Operations Support Center |
| HP | Hewlett Packard |
| HQ | Headquarters |
| HSB | Hypergolic Support Building |

| HSBLD | Hasselblad Camera |
|---|---|
| HSBLD EL | Hasselblad Camera, Electric |
| HTML | Hyper-Text Markup Language |
| HUL | Hulcher Camera |
| HUL DF | Hulcher Camera Double Frame |
| HVAC | Heating, Ventilation, and Air Conditioning |
| | |
| I/F | Interface |
| I/F | Image to Frame |
| I/O | Input/Output |
| IAF | Image Analysis Facility |
| IATO | Initial Authority to Operate |
| ICAS | Institutional Computerized Archival System |
| ICD | Interface Control Document |
| ICE | Integrated Collaborative Environment |
| ID/IQ | Indefinite Delivery/Indefinite Quantity |
| IDNX | Integrated Digital Network Exchange |
| IDS | Intrusion Detection System |
| IEEE | Institute of Electrical and Electronic Engineers |
| IEMP | Integrated Enterprise Management Program |
| IF | Intermediate Frequency |
| IFLOT | Intermediate Focal Length Optical Tracker |
| IFMP | Integrated Financial Management Program |
| IG | Inspector General |
| IGOR | Intercept Ground Optical Recorder |
| IMCS | Information Management and Communications Support |
| IMS | Inventory Management System |
| IN | Internegative Print |
| IOC | Initial Operational Capability |
| IOMI | Integrated Operations and Maintenance Instruction |
| IOP | Internal Operating Procedure |
| IP | Internet Protocol |
| IP | Interpositive Film Print |
| IPA | Interpositive Film Print, A-Wind |
| IPO | Integration Project Office |
| IPSEC | Internet Protocol Security |
| IPT | Integrated Product Team |
| IRIG | Inter-Range Instrumentation Group |
| IS | Information Security |
| ISBN | International Standard Book Number |
| ISC | Institutional Services Contract |
| ISDN | Integrated Switched Digital Network |
| ISO | International Organization for Standardization |
| IT | Information Technology |
| IT&C | Information Technology and Communications Directorate |
| ITAR | International Traffic in Arms Regulations |

ITSM                    IT Security Manager

JDMTA                   Jonathan Dickinson Missile Tracking Annex
JDP                     Joint Documented Procedure
JHB                     Joint Handbook
JOP                     Joint Operating Procedure
JOSA                    Joint Operating and Support Agreement
JPL                     Jet Propulsion Laboratory
JSC                     Johnson Space Center

KARS                    Kennedy Area Recreational Services
KAS                     KSC Applications System
Kbps                    Kilobit per Second
KCCS                    Kennedy Complex Control System
KEDS                    Kennedy Engineering Documentation System
KFRL                    Kennedy Forward Return Link
KICS                    KSC Integrated Console Schedule
KIIS                    Kennedy Integrated Imagery System
KIS                     KSC Internet System
KMAN                    Kennedy Metropolitan Area Network
KNET                    Kennedy Institutional Network
KNPD                    Kennedy NASA Policy Directive
KNPR                    Kennedy NASA Procedural Requirements
KPRD                    Kennedy Program Requirements Document
KSC                     Kennedy Space Center
KSCNF                   KSC News Facility
KSCTV                   KSC Public Affairs Television
KSERP                   Kennedy System Engineering Review Panel
KTM                     Kineto Tracking Mount
Ku                      Ku frequency band
kW                      Kilowatt

LACB                    Landing Aids Control Building
LAN                     Local Area Network
LaRC                    Langley Research Center
LBV                     Low Bandwidth Video
LC                      Launch Complex
LCC                     Launch Control Center
                        Launch Commit Criteria
LCCWG                   Launch Commit Criteria Working Group
LCWG                    Launch Countdown Working Group
LED                     Light Emitting Diode
LETF                    Launch Equipment Test Facility
LOA                     Launch Operations Area
LOCC                    Launch Operations Control Center
LOS                     Loss of Signal

| | |
|---|---|
| LOV | Limit/Loss of View |
| LPLWS | Launch Pad Lightning Warning System |
| LPS | Launch Processing System |
| LRR | Launch Readiness Review |
| LSE | Launch Support Equipment |
| LSP | Launch Services Program |
| | |
| MAC | Move, add, or change |
| MAN | Metropolitan Area Network |
| MB | Megabyte |
| Mb (Mbit) | Megabit |
| Mbps | Megabits per Second |
| MDF | Main Distribution Frame |
| MESC | Medical and Environmental Support Contract |
| MHz | Megahertz |
| MIDDS | Meteorological Interactive Data Display System |
| MILA | Merritt Island Launch Area |
| MIP | Mandatory Inspection Point |
| MIS | Management Information System |
| ML | Mobile Launcher |
| MLP | Mobile Launch Platform |
| mm | Millimeter |
| MOA | Memorandum of Agreement |
| MOD | Mission Operations Directorate |
| MOPIC | Motion Picture |
| MOSB | Multi Operations Support Building |
| MOTS | Mobile Optical Tracking System |
| MOU | Memorandum of Understanding |
| MPL | Motion Picture Laboratory |
| MPN | Manufacturer Part Number |
| MPPF | Multi-Payload Processing Facility |
| MS | Microsoft |
| MSDS | Material Safety Data Sheet |
| MSFC | Marshall Space Flight Center |
| MSR | Multi-service Switch Routing |
| MWO | Maintenance Work Order |
| | |
| N/A | Not Applicable |
| N/R | Not Required |
| NAIS | NASA Acquisition Internet Services |
| NAMS | NASA Account Management System |
| NARA | National Archives and Records Administration |
| NASA | National Aeronautics and Space Administration |
| NASCOM | NASA Communications Network |
| NASCOP | NASA Communications Operating Procedures |
| NASIRC | NASA Incident Response Center |

| NCAD | NASA Consolidated Active Directory |
|---|---|
| NCB | Network Control Board |
| NCCB | Network Configuration Control Board |
| NCC | Network Control Center |
| NDC | NASA Data Center |
| NDE | Non-Destructive Evaluation |
| NE | Non Exempt |
| NEC | Negotiated Estimated Cost |
| | National Electrical Code |
| NEF | NASA Electronic Forms |
| NEFS | NASA Electronic Forms System |
| NEMS | NASA Equipment Management System |
| NESS | NF1018 Electronic Submission System |
| NF | NASA Form |
| NFPA | National Fire Protection Association |
| NFS | NASA FAR Supplement |
| NIMS | Network Information Management System |
| NISN | NASA Integrated Services Network |
| NIST | National Institute of Standards and Technology |
| NITR | NASA IT Requirement |
| nm | Nanometer |
| NOMAD | NASA Operational Messaging and Directory |
| NORS | NASA On-line Registration System |
| NOSC | NASA On-line Supply Catalog |
| NPD | NASA Policy and Directives |
| NPDMS | NASA Property Disposal Management System |
| NPPS | NASA Payroll/Personnel System |
| NPR | NASA Procedural Requirements |
| NRZ-L | No Return Zero-Level |
| NSAP1 | Network Services Assurance Plan1 |
| NSAP2 | Network Services Assurance Plan2 |
| NSMS | NASA Supply Management System |
| NSN | National Stock Number |
| NSP | Network Security Perimeter |
| NSP-CCB | Network Security Perimeter Configuration Control Board |
| NSR | NISN Service Request |
| NSSTC | National Space Science and Technology Center |
| NSTS | National Space Transportation System |
| NTE | Not To Exceed |
| NTP | Network Time Protocol |
| NTSC | National Television Standards Committee |
| | |
| O&C | Operations and Checkout |
| O&M | Operations and Maintenance |
| O/E | Optical to Electrical |
| OASIS | Reference Model for an Open Archival Information System |

| | |
|---|---|
| OC | Optical Carrier |
| OCC | Operations Control Center |
| OCI | Operations Control Instructions |
| OCLC | On-Line Computer Library Center |
| OCSO | Organization Computer Security Official |
| OD | Operations Document |
| ODC | Other Direct Cost |
| ODIN | Outsourcing Desktop Initiative for NASA |
| OEO | Optical to Electrical to Optical |
| OHF | Occupational Health Facility |
| OIG | Office of the Inspector General |
| OIS | Operational Intercommunications System |
| OIS-D | Operational Intercommunications System Digital |
| OIS-Q | Operational Intercommunications System Quintron |
| OJT | On-the-Job Training |
| OMB | Office of Management and Budget |
| OMD | Operations and Maintenance Documentation |
| OMI | Operation and Maintenance Instruction |
| OMRSD | Operations Maintenance Requirements Specification Document |
| OPF | Orbiter Processing Facility |
| OPR | Office of Primary Responsibility |
| OPS | Offnet Processor Subsystem |
| OR | Operations Requirements |
| OSB | Operational Support Building |
| OSB2 | Operational Support Building Number 2 |
| OSCU | Optic System Control Unit |
| OSHA | Occupational Safety and Health Administration |
| OTV | Operational Television |
| OTV-D | Operational Television Digital |
| | |
| PADD | Photographic Acquisition Distribution Document |
| PAFB | Patrick Air Force Base |
| PAMIS | Printing and Microimaging Information System |
| PAO | Public Affairs Office |
| PAWS | Paging and Area Warning System |
| PBR | Policy Based Routing |
| PC | Personal Computer |
| PCC | Processing Control Center |
| | Photo Control Center |
| PCO | Program Controlled Output |
| PCO | Plessy Corning Optronics |
| PCM | Pulse Code Modulation |
| PDF | Portable Document Format |
| PDL | Ponce DeLeon |
| PDS | Premise Distribution System |
| PHSF | Payload Hazardous Servicing Facility |

| PIA | Privacy Impact Analysis |
|---|---|
| PIV | Personnel Identity Verification |
| PM | Program Manager |
| PMN | Program Model Number |
| PMS | Performance Measurement System |
| POA&M | Plan of Action & Milestones |
| POCC | Payload Operations Control Centers |
| POCS | Photo Optical Control System |
| POP | Program Operating Plan |
| POTS | Plain Old Telephone Service |
| PPBE | Program, Planning and Budget Execution |
| PRCB | Program Requirements Control Board |
| PRD | Program Requirements Document |
| PRI | Primary Rate Interface |
| PRP | Personnel Reliability Program |
| PRR | Payload Readiness Review |
| PS | Photosonic Camera |
| PSAP | Public Safety Answering Point |
| PSCN | Program Support Communications Network |
| PSCRD | Program Support Communications Requirements Document |
| psi | Pounds Per Square Inch |
| PSLA | Project Service Level Agreement |
| PTCR | Pad Terminal Connection Room |
| PTP | Point-to-Point |
| PTZ | Pan, Tilt, Zoom |
| PWS | Performance Work Statement |
| | |
| QA | Quality Assurance |
| QAE | Quality Assurance Evaluator |
| QC | Quality Control |
| QMS | Quality Management System |
| | |
| R&D | Research and Development |
| R&M | Reliability and Maintainability |
| RAB | Registration Accreditation Board. |
| RADIUS | Remote Authentication Dial In User Service |
| RAID | Redundant Array Inexpensive Disks |
| RAM | Random Access Memory |
| RAS | Reradiating Antenna System |
| RCDD | Registered Communication Distribution Designer |
| RCP | Radio Control Panel |
| RCRA | Resource Conservation and Recovery Act |
| RCU | Remote Control Unit |
| REV | Revision |
| RF | Radio Frequency |
| RFI | Radio Frequency Interference |

| RFIC | Request For Information/Clarification |
|---|---|
| RFID | Radio Frequency Identification |
| RFP | Request For Proposal |
| RFQ | Request for Quotation |
| RFS | Request for Service |
| RMAS | Remote Monitoring and Alarm System |
| RMS | Report Management System |
| ROCC | Range Operations Control Center |
| ROI | Range Operating Instruction |
| ROM | Read-Only Memory |
| | Rough Order of Magnitude |
| RPS | Record and Playback Subsystem |
| RPSF | Rotation, Processing and Surge Facility |
| RRB | Risk Review Board |
| RS | Recommended Standard |
| RSA | Records Staging Area |
| RSU | Remote Service Unit |
| RTLS | Return To Launch Site |
| RTU | Remote Terminal Unit |
| RX | Receiver |
| | |
| S&MA | Safety and Mission Assurance |
| S/W | Software |
| SAA | System Assurance Analysis |
| SAN | Storage Area Network |
| SATERN | System for Administration, Training, and Educational Resources for NASA |
| SBIR | Small Business Innovative Research |
| SBU | Sensitive But Unclassified |
| SCA | Service Contract Act |
| SCADA | Supervisory Control And Data Acquistion |
| SCAPE | Self-Contained Atmospheric Protective Ensemble |
| SD | Standard Definition |
| SDI | Serial Data Interface |
| SDTI | Serial Digital Transport Interface |
| SE | Sustaining Engineering |
| SEI | Software Engineering Institute |
| SE&I | System Engineering and Integration |
| SF | Standard Form |
| SLF | Shuttle Landing Facility |
| SLSL | Space Life Sciences Lab |
| SNMP | Simple Network Management Protocol |
| SOLAR | Site for On-line and Learning Resources |
| SONET | Synchronous Optical Network |
| SOP | Standard Operating Procedure |
| SOW | Statement of Work |
| SP | Special Publications |

| | |
|---|---|
| SPA | Shuttle Processing Area |
| SPECSINTACT | Specifications-Kept-Intact |
| SPOC | Space Processing Operations Contract |
| SR | Service Request |
| SR&QA | Safety, Reliability, and Quality Assurance |
| SRAS | Secure Remote Access Services |
| SRB | Solid Rocket Booster |
| SSC | Stennis Space Center |
| SSL | Secure Sockets Layer |
| SSME | Space Shuttle Main Engine |
| SSPF | Space Station Processing Facility |
| STD. | Standard |
| STDN | Spaceflight Tracking and Data Network |
| STI | Scientific and Technical Information |
| STS | Space Transportation System |
| S-VHS | Super Video Home System |
| | |
| TAL | Transoceanic Abort Landing |
| TB | Test Board |
| TBD | To Be Determined |
| TC | Technical Control |
| TCC | Television Control Center |
| TCDT | Terminal Count Demonstration Test |
| TCRS | Training and Certification Record System |
| TCS | Transportable Communication System |
| TIFF/.tif | Tag Image File Format |
| TIM | Technical Interchange Meeting |
| TO | Technical Order |
| | Task Order |
| TPS | Thermal Protection System |
| TSR | Telephone Service Request |
| TT | Trouble Ticket |
| TTC | Telephone Terminal Cabinet |
| | Temporary Test Configuration |
| TV | Television |
| TX | Transmitter |
| | |
| U.S.C. | United States Code |
| UHF | Ultra-High Frequency |
| um | Micrometer |
| UPS | Uninterruptible Power Supply |
| | United Parcel Service |
| USB | Unified S-Band |
| UTC | Universal Time Code |
| | |
| VAA | Vehicle Assembly Area |

| | |
|---|---|
| VAB | Vehicle Assembly Building |
| VABR | Vertical Assembly Building Repeater |
| VAFB | Vandenberg Air Force Base |
| VASS | ViTS Automated Scheduling System |
| VAX | Virtual Address Extension |
| VCR | Video Cassette Recorder |
| VDL | VHF Data Link |
| VDMS | Voice Distribution Management System |
| VHF | Very High Frequency |
| VIP | Very Important Person |
| VITC | Video Teleconference |
| ViTS | Video Teleconferencing System |
| VLAN | Virtual Local Area Network |
| VoIP (VOIP) | Voice Over Internet Protocol |
| VoTS | Voice Teleconferencing System |
| VPF | Vertical Processing Facility |
| VPN | Virtual Private Network |
| VPP | Voluntary Protection Program |
| | |
| WAN | Wide Area Network |
| WBS | Work Breakdown Structure |
| WBTS | Wideband Transmission System |
| WDM | Wavelength Division Multiplexer |
| WebTADS | Web Time and Attendance Distribution System |
| WFF | Wallops Flight Facility |
| WINS | Windows Internet Naming Service |
| WLI | Workload Indicator |
| WR | Western Range |
| WSC | White Sands Complex |
| WUC | Work Unit Code |
| WYE | Work Year Equivalent |

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7 **Appendix 3**

8 **Definitions**

9

10 **For**

11

12 **Information Management and**

13 **Communications Services (IMCS)**

14

1   **45th Space Wing (45 SW)** - The Air Force's 45 SW is the DoD executive agent and
2   single manager of Range facilities at Cape Canaveral Air Force Station, Patrick Air Force
3   Base, and downrange stations.  The 45 SW's mission is to develop, operate and manage
4   Eastern Range facilities and, as host agency, provide support services to all launch/user
5   activities.
6
7   **Acceptance Testing** - The testing of a system, subsystem, assembly or subassembly in an
8   operating environment, to ensure that the performance of the aggregate is not
9   compromised by the integration of the newly developed or modified asset.
10
11  **Accreditation –** The official management decision given by a senior agency official to
12  authorize operation of an information system and to explicitly accept the risk to agency
13  operations (including mission, functions, image, or reputation), agency assets, or
14  individuals, based on the implementation of an agreed-upon set of criteria.
15
16  **Availability** - The percentage of a scheduled service delivered to the user.  Availability is
17  measured as: $100 *$ (number of scheduled service time in a reporting period $-$ the time the
18  scheduled service was not provided during a reporting period) / (number of scheduled
19  minutes in a reporting period).  This equals the percentage of scheduled service delivered
20  to the user during a reporting period.
21
22  **Cape Canaveral Air Force Station (CCAFS)** – The geographic area of the station
23  encompasses approximately 24.7 square miles (15,804 acres) and is located on the
24  Atlantic Coast between Port Canaveral, Florida and the National Aeronautics and Space
25  Administration (NASA), Kennedy Space Center (KSC).  It includes Air Force, NASA,
26  NOTU, and other tenants/customers.
27
28  **Certification -** The process of determining and attesting to a required level of value,
29  performance and readiness.
30
31  **Charging Rule Set –** Instructions and guidelines for the contractor to help in assigning
32  the correct customer fund source to the work being performed.
33
34  **Commercial Off the Shelf (COTS) Software** - Software that is commercially available
35  and maintained by a vendor.  Custom software maintained by the Government or the
36  contractor is not COTS software.
37
38  **Configuration Control -** The discipline of processing changes to the configuration
39  baseline to ensure that the changes are adequately described, assessed,
40  approved by a proper authority, and closed upon verification of implementation.
41
42  **Configuration Control Board (CCB)** - A functional body whose chairperson is solely
43  responsible for the approval or disapproval of configuration changes within the limits of
44  the Board's authority.
45

1   **Configuration Management Data System (CMDS)** - A KSC centralized computer data
2   system for maintaining the design configuration identification and change tracking for
3   ground support facilities, systems, and equipment end-items.
4
5   **Contracting Officer (CO)** - The individual appointed by the contracting activity for
6   procuring and/or administering a contract.  The CO is the only person authorized to direct
7   contractor performance, execute amendments to the contract, and contractually obligate
8   the Government.
9
10  **Contracting Officer Technical Representative (COTR)** - A Government official who
11  has been appointed by the Contracting Officer (CO) who has the responsibility in
12  managing the technical aspects of the contract and monitor the contractor's technical
13  performance and delivery of the final products and/or services.  Pursuant to NFS
14  1842.270, the COTR is not authorized to initiate procurement actions or in any way that
15  cause a change to the contract or increase the Government's financial obligations.  The
16  CO is the only Government official authorized to direct contractor performance, execute
17  modifications to the contract, and contractually obligate the Government.
18
19  **Contract Specialist -** The individual within the contracting office, who performs the
20  day-to-day administration of the contract.  The contract specialist may also be the CO.
21
22  **Coordination -** This definition contains typical functions associated with the interaction
23  with the internal and external service providers, other contractors, and the customer as
24  necessary to meet customer service requirements.  These functions include:

25  a)    Supporting the development of customer requirements.

26  b)    Providing service status.

27  c)    Obtaining customer feedback.

28  d)    Providing consultation for reporting and resolving service problems.

29  e)    Operations coordination (e.g., airspace interference, radio-frequency interference).

30  f)    Interagency coordination.
31
32  **Contractor** - The term "contractor" as used herein refers to both the prime contractor and
33  any subcontractors.  The prime contractor has a contract with the Government directly.
34  The prime shall ensure that subcontractors comply with the provision of this contract.
35
36  **Corrective Action** - Action taken to correct or prevent the recurrence of a
37  nonconformance.
38
39  **Countdown (Range Users)** - The detailed Range User countdown is prepared by the
40  Range User to supplement the general countdown in the Operation Requirements (OR).
41  The countdown is used by operations support people during the operation.
42

1    **Critical Item** - A Category 1, 1S, or 2 single failure point (See NSTS 22206).
2
3    **Critical Items List (CIL)** - A listing comprised of all critical items, meeting the
4    requirements of NSTS 22206, identified as a result of performing the Failure Modes and
5    Effects Analysis (FMEA). Also see *Criticality Categories*.
6
7    **Criticality Level 1S** – A single failure in a safety or hazard monitoring system that could
8    cause the system to fail to detect, combat, or operate when needed during the existence of
9    a hazardous condition and could result in loss of life or flight hardware.
10
11   **Customer** - Anyone who receives a service or product from this contract.
12
13   **Customer Fund Source** - A unique category of funding associated with a specific
14   customer.
15
16   **Customer Owned And Managed (COAM)** – A computer network built, operated,
17   maintained, and/or managed by a KSC Government or contractor organization, outside of
18   the existing KNET institutional network system.
19
20   **Customer Owned And Managed Network** – A computer network built, operated,
21   maintained, and/or managed by a KSC Government or contractor organization, outside of
22   the existing KNET institutional network system.
23
24   **Data Center** – A central facility that contains a number of computers that host IT
25   applications.  Typically this type of facility has redundant power, air conditioning, and
26   network connections.  At KSC, the data center currently only has limited redundancy.
27
28   **Data Requirement Description** - A detailed description of a required data item
29   including purpose, content, format, references, maintenance requirements, submittal
30   requirements, and other pertinent information.
31
32   **Demarcation** – KSC shared interface with internal or external customers.
33
34   **Design Review** – Review of a configuration end-item’s actual design to ensure that the
35   design satisfies the authorized configuration requirements before design release for
36   procurement and implementation commitments.
37
38   **Development -** The process whereby new hardware and software capability is introduced
39   into a system. Development encompasses those activities required to create new systems
40   or enhance existing systems beyond their as-built capabilities and performance.   It
41   includes the functions of product design, product fabrication or programming, product
42   specification testing and acceptance, and product integration and test.
43

1   **Documentation** - This definition contains typical functions associated with the
2   preparation of technical documents.  This information shall be available in both a hard
3   copy and electronic format and comply with the policies and requirements set forth by
4   NASA.  These functions include:
5
6       (a)    Configuration control of document changes.
7
8       (b)    Record and provide change processing and implementation status of services.
9
10      (c)    Providing technical reports and requirements documents.
11
12      (d)    Providing design documents.
13
14      (e)    Providing system configuration documents.
15
16      (f)    Providing technical plans and procedures.
17
18      (g)    Storing technical documentation.
19
20      (h)    Providing documentation services for Government generated documents.
21
22  **Electronic Security System (ESS)** - The system that manages the surveillance, access
23  control, and alarm systems for KSCfacilities.
24
25  **Emergency Request** - A request for service or services by a requestor who has
26  determined that the request warrants having expedited handling.
27
28  **End-to-End** - Used to delineate the boundaries of a system.  In the context of this
29  contract, end-to-end means the two-way path from the spacecraft to the ground antenna
30  through the ground systems, the communications systems, to the user system, such as a
31  control center or payload processing facility.
32
33  **End-to-End Testing -** The testing, in an operational environment, to ensure that data
34  flows from each one end to the other end of a defined end-to-end system and meets
35  documented performance and data flow and data accuracy requirements and data
36  interface agreements.
37
38  **Excess** - A classification assigned to Government property for which there is no
39  requirement at a particular operational level.
40
41  **Facility -** The location where various mission services, data services, and center unique
42  services are performed.
43
44  **Failure Modes and Effect Analysis (FMEA)** - The analysis of the potential failure
45  modes in a system to determine effects on system operation, personnel safety, and flight
46  hardware; and to classify each failure mode according to severity.

1
2   **First Level Troubleshooting** - Receipt of trouble calls, problem isolation and resolution
3   of minor problems (e.g., lost password, software question), dispatch of problem reports to
4   the proper maintenance agency, and customer follow-up.
5
6   **Functional Area** - The organization having responsibility for the actual performance of a
7   given service, whether it is performed in-house or by contract.
8
9   **Geographic Information System (GIS)** - A computerized relational database
10  management system for capture, storage, retrieval, analysis, and display of spatial
11  (locationally defined) data.  GIS software applications allow users to develop linkages
12  between graphical and non-graphical data.
13
14  **Government-Furnished Equipment (GFE)** - Equipment or property in the possession
15  of, or directly acquired by, the Government and subsequently made available to the
16  contractor.  This includes all property or equipment owned by or leased to the
17  Government, acquired by the Government, or acquired with Government funds.
18
19  **Government-Industry Data Exchange Program (GIDEP)** – A cooperative effort to
20  exchange research, development, design, testing, acquisition, and logistics information
21  among Government and industry participants.  Used to notify GIDEP participants of
22  actual or potential problems on discrete parts, components, materials, manufacturing
23  processes, test equipment, or safety conditions.  Includes the use of ALERT and SAFE-
24  ALERT Reports.
25
26  **Hazard** - The presence of a potential risk situation whereby environment, personnel
27  errors, design characteristics, procedural deficiencies, or subsystem malfunctions may
28  result in loss of personnel capability, loss of system, or loss of life. (See NSTS 5300.4)
29
30  **Hazardous Operation (Hazardous Tasks)** - Any operation involving activities that
31  could result in exposure/injury/loss of life to operating personnel and/or damage to
32  systems/equipment or have an environmental impact.
33
34  **In-Family –** Term for classifying work to be performed by the contractor that does not
35  need Government approval prior to implementation.  In-family work is routine and
36  repetitive in nature.  It is normally associated with a provisioning of a standard service.
37
38  **Integration** -The addition of a hardware, firmware or software product to an existing
39  system, subsystem, assembly or subassembly.
40
41  **Interface** - The point or area where a relationship exists between two or more parts,
42  systems, programs, functions, persons, or procedures where physical and/or functional
43  compatibility is required.
44
45  **KSC Integrated Control Schedule (KICS)** - The implementing schedule for Shuttle
46  operations that occur for all missions.  Published Monday through Friday (weekends as

1  required) in a 96-hour/11-day format to include, but not be limited to, all work in the
2  following categories: hazardous tasks, current and near term flow critical path activities,
3  tasks requiring non-dedicated support, tasks requiring Launch Processing System (LPS)
4  support, and management visibility items as specified by ISC/NASA management.
5
6  **Launch Scrub** - A failed launch attempt or launch delay, which occurs after the Range
7  terminal count (launch minus 360 minutes) is initiated.  The duration of the delay is not
8  considered, one change of date is considered one scrub, regardless of the delay.
9
10  **Launch Slip** - A change in launch date, which occurs prior to the initiation of the Range
11  terminal count.
12
13  **Life-Cycle Costs** – A form of economic analysis that considers the total cost of owning,
14  operating, and maintaining a building over its useful life.  Life-cycle costs are the sum of
15  the present value of the following: investment costs, less salvage value, at the end of the
16  study period; non-fuel operation and maintenance costs; replacement costs, less salvage
17  costs, of the replaced building systems; and energy costs.
18
19  **Lockout** - The placement of a device in accordance with an established procedure to
20  ensure the equipment being controlled cannot be operated until the device is removed.
21
22  **Logistics -** This definition contains typical functions associated with the provision of
23  logistics support used to deliver services listed in the statement of work.
24
25  **Maintenance** - Actions taken to ensure system longevity of the telecommunications and
26  computing assets used to deliver the services in the statement of work.
27
28  **Maintainability** - The measure of the ability of an item to be retained in, or restored to, a
29  specified condition when the maintenance is performed by personnel having specified
30  skill levels, using prescribed procedures and resources, at each prescribed level of
31  maintenance and repair. A characteristic of design that permits hardware to be serviced,
32  inspected, and repaired with a minimum expenditure of maintenance resources.
33
34  **Material** - Property that may be consumed or expended during the performance of a
35  contract, component parts of a higher assembly, or items that lose their individual identity
36  through incorporation into an end-item.  Material does not include equipment, special
37  tooling, and special test equipment. (See FAR 45.101)
38
39  **Material Safety Data Sheet (MSDS)** - Written or printed material that provides the
40  health and safety information about a specific item; i.e., chemical composition, physical
41  properties, fire and explosion hazards, health hazards, reactivity data, spill or leak
42  procedures, occupational protective measures, special precautions, and transportation
43  data.  As a minimum, contains all information required by the Occupational Safety and
44  Health Administration (OSHA).
45

1   **Mishap** - An unplanned event involving (or potentially involving) injury or death to
2   persons, damage to or loss of property or equipment, or mission failure; categorized (in
3   accordance with NPR 8621.1) as follows:
4
5       (a)    **Close Call.**  An undesirable and unexpected event resulting in no personal
6              injury or illness, personal injury or illness requiring only first aid, and/or
7              minor damage (of less than $1,000) but with potential for causing a more
8              serious mishap (see below) or negative mission impact.
9
10      (b)    **Type A Mishap.**  A mishap causing death, hospitalization (within 30 days
11             from the same mishap) of three or more persons for other than observation,
12             and/or damage to equipment or property resulting in a loss of $1,000,000 or
13             more*.
14
15      (c)    **Type B Mishap.**  A mishap resulting in permanent disability to one or more
16             persons, inpatient hospitalization of one or two persons, and/or property
17             damage or mission failure resulting in a loss of $250,000 or more but less
18             than $1,000,000*.
19
20      (d)    **Type C Mishap.**  A mishap causing occupational injury or illness that results
21             in a case involving day(s) away from work and/or damage to equipment or
22             property or mission failure resulting in loss of $25,000 or more but less than
23             $250,000*.
24
25      (e)    **Type D Mishap.**  A mishap consisting of personal injury requiring medical
26             treatment of more than first aid but without any property damage or mission
27             failure costing $1,000 or more but less than $25,000. (Personal occupational
28             hearing loss in excess of 25 decibels in either ear is classified as an incident.)
29
30              * Mishaps resulting in damage to aircraft, space hardware, or ground
31                support equipment that meet these criteria are included, as are test failures
32                in which the damage was unanticipated.
33
34  **Moves, Adds or Changes (MAC)** – A Request to move, add to or change a service.   It
35  is a type of work order.
36
37  **National Institute of Standards and Technology (NIST)** – An organizational element
38  of the Department of Commerce (DOC) responsible for custody, maintenance, and
39  development of the national standards of measurement and provision of the means and
40  methods for making measurements consistent with those standards.
41
42  **Network Interface** - The point of demarcation for outbound data (e.g., telemetry data),
43  between a tracking complex and the NASA Integrated Services Network (NISN).  Also
44  the point of demarcation for inbound data (e.g., command data) between the user and
45  NISN.
46

1   **NISN Service Request (NSR)** - a Request for Service initiates the NISN to provide a
2   service that was forecasted in the PSCRD.
3
4   **Nominal Support Requirement –** The nominal timeframe in which IMCS personnel are
5   expected to provide active, live support for services.
6
7   **Office of Primary Responsibility (OPR)** - An organization with overall responsibility
8   for the development of, and subsequent changes to, a designated documentor function.
9
10  **On-Time Launch** - A launch, which takes place within the established launch window
11  on the date published on the Range schedule.
12
13  **Operations Analysis** - This definition contains typical functions associated with the
14  assessment of the current performance of the ground systems and the impacts of
15  additional loading to those services as listed in the statement of work.  These functions
16  include:

17      (a)     End-to-end system performance monitoring, recommending appropriate
18              changes to eliminate potential system bottlenecks and overloads; and short-
19              term and long-term trend analysis.

20      (b)     Risk analysis and management.

21      (c)     Assessment of technical, schedule, and cost factors involved with the
22              operation of systems.

23      (d)     Analysis and evaluation of tracking resource, spacecraft, and
24              telecommunications parameters and recommending ground system
25              configurations to improve link margins.

26      (e)     System operability and review of operation procedures, recommending or
27              effecting changes to minimize data, voice, or video outages.
28
29  **Operations Directive (OD)** - The OD is prepared by 45 SW according to 45 SWI 99-101
30  and UDS Handbook and is the official support that will be provided the Range User to
31  meet the requirements of the OR.  The OD provides (1) a basis for test scheduling, (2) a
32  commitment of Range support, (3) support operating instructions, and (4) a briefing
33  document for supervisory persons.
34
35  **Operations Directive Annex** - The OD annex is prepared by the 45 SW and is the
36  official 45 SW answer to the OR annex.  The OD annex is a complete detailed
37  description of the support that will be provided the Range User to meet the requirements
38  in the OR annex.
39
40  **Operations Requirements (OR)** - The OR is prepared by the Range User as outlined in
41  45 SWI 99-101 and is a complete detailed description of the requirements necessary to
42  accomplish a specific test or series of tests in the program described in the PRD.  When

1    support is required from another Range, the appropriate number of copies is added to the
2    distribution page of the OR by the Program Support Management Division.
3
4    **Operations Requirements Annex** - The OR annex is prepared by the Range User and is
5    a complete detailed description of the requirements necessary to accomplish a subsystem
6    test or a special minor test related to the overall test in the OR.  Reference to the OR may
7    be made in the annex.  An annex may not refer to another annex.  The OR annex may be
8    submitted with the OR at any time subsequent to submission of the OR.
9
10   **Operations Requirements Extract (ORE)** - The ORE is prepared by the 45 SW and is a
11   complete detailed description of the requirements in the OR to be supported by another
12   national or service Range.
13   **Out-of-Family –** Out-of-family work is any changes that affect the system baseline
14   design and/or system architecture.  An architecture change is the addition of new
15   capability, change in system topology, system modification, or system software change.
16   Changes in topology include first-time provision of a standard service to a facility.
17
18   **Performance Work Statement (PWS)** - The performance-based description of tasks or
19   services to be performed and/or end products to be delivered by the contractor.  The PWS
20   also defines facilities, property, and support to be provided to the contractor by the
21   Government.
22
23   **Photo Acquisition Disposition Document (PADD)** - A plan that is generated by the
24   contractor for each operation or minor support test.  The document identifies all
25   requirements and provides internal instructions to other DOD technical multi-media
26   support functional technicians on how to plan, meet, and execute support.
27
28   **Program Planning, Budget and Execution (PPBE) Plan**– An annual plan developed by
29   the Government, which provides budget and workforce estimates, along with an outline
30   of the work on which the estimates are based.  Generally the plan covers the succeeding
31   five years with the first year having a monthly cost phasing plan and the remaining four
32   years having only annual estimates.
33
34   **Program Requirements Document (PRD)** - The PRD is prepared by the Range user,
35   according to 45 SWI 99-101, 45 SW Mission Program Documents, and/or is a
36   combination of more than 90 standard forms common to all national and service ranges.
37   The PRD is a detailed description of the requirements of the total program and is used for
38   Range support planning.
39
40   **Program Support Plan (PSP)** - The PSP is prepared by the 45 SW according to the
41   UDS Handbook, Document 501-89, and 45 SWI 99-101, and is the official answer to the
42   PRD.  The PSP outlines the planned support that will be provided the Range User to meet
43   the requirements in the PRD.
44
45   **Project Manager (PM**) -   The Government technical representative having overall
46   responsibility for budgeting for and funding contract support, defining technical

1   requirements, identifying priorities, and providing this information to the CO.  The
2   contractor's counterpart is responsible for the overall management and coordination of
3   the contract and acts as the central point of contact for the Government.
4
5   **Property Administrator (PA)** - An appointed representative of the CO authorized to
6   administer contract provisions pertaining to Government property.
7
8   **Property Control Program** - The contractor's written policies and procedures for
9   controlling each type of Government asset in its possession in accordance with FAR Part
10  45 and the provisions of the contract.
11
12  **Quality Assurance (QA)** - A planned and systematic pattern of all actions necessary to
13  provide confidence that adequate technical requirements are established; products and
14  services conform to established technical requirements; and satisfactory performance is
15  achieved.
16
17  **Quality Control (QC)** - Those actions taken by a contractor to control the production of
18  outputs to ensure that they conform to the contract requirements of timeliness, accuracy,
19  appearance, completeness, consistency, and conformity to appropriate standards and
20  specifications.
21
22  **Range Users** - Elements of the Department of Defense (DoD), other federal agencies, or
23  civilian organizations authorized to use Range resources.
24
25  **Real Time** – An event, test, task, operation, etc. is underway at the present time rather
26  than at some point in the future.
27
28  **Requirements Document -** A document that specifies the requirements that are to be
29  met.
30  **Risk** - The probability, severity, and uncertainties of experiencing an undesired event.
31
32  **Risk Assessment** - An engineering and operational analysis which identifies risks, failure
33  modes and potential hazards.
34
35  **Root Cause** - A fundamental deficiency that results in a nonconformance and must be
36  corrected to prevent recurrence of the same or a similar nonconformance.
37
38  **Rough Order of Magnitude (ROM)** - An estimate to accomplish a configuration change
39  or a project or task(s) based on minimal available data.
40
41  **Safety** – Freedom from those conditions that could cause injury to, or the death of,
42  personnel and/or damage to, or the loss of, equipment or property.
43
44  **Scheduling -** This definition contains typical functions associated with the commitment
45  of resources.  These functions include:
46

1         (a)     Scheduling of resources needed to provide a service.

2         (b)     Providing notification to customers of service availability and providing
3                       resolution of any conflicts.

4         (c)     Maintain schedule and resource utilization history databases.
5
6    **Sensitive Information** – Unclassified information that requires protection due to the risk
7    and magnitude of loss or harm that could result from the inadvertent or deliberate
8    disclosure, alteration, or destruction of information.  This includes information for which
9    improper use or disclosure could adversely affect the ability of an agency to accomplish
10   its mission, proprietary information, records about individuals requiring protection under
11   the Privacy Act, and information not releasable under the Freedom of Information Act.
12   This is not the same as the National Security Agency (NSA) term "Sensitive, But
13   Unclassified Information."
14
15   **Service -** The performance of all activities necessary to deliver customer products.
16
17   **Service Request –** A request made by a customer asking a service.
18
19   **SpecsIntact (Specifications Kept In Tact) -** An automated specification processing
20   system that uses standard master guide specifications for the preparation of facility
21   construction project specifications.
22
23   **Standards and Limits -** A file containing the upper and lower bounds of the system
24   configuration and system performance parameters.
25
26   **State-of-the-shelf  -** Technology **i**tems that are proven and readily available for purchase.
27   Generally these items are considered mainstream versus state-of-the-art.
28
29   **Subsystem -** A collection of hardware, software and procedures, which perform an
30   identifiable task in support of one or more systems.
31
32   **Supervisory Control and Data Acquisition (SCADA)** - SCADA systems are generally
33   used to perform data collection and control at a higher level.  Some SCADA systems only
34   monitor without doing control, these systems are still referred to as SCADA systems.  An
35   example would be a system that monitors equipment room parameters such as
36   temperature, under floor water, or power and initiates an action or auto-dials phone
37   numbers when preset limits are exceeded.
38
39   **Support Products** - Sets of data containing time-ordered parameters used to configure
40   link equipment.  These data sets consist of telemetry, radiometric, antenna pointing, and
41   command parameters.  Support products also include software support files containing
42   project files, configuration files, site unique files, and equipment setup tables.
43

1   **Surveillance Plan** - The plan defining the process, reviews, and documentation used to
2   monitor technical performance metrics and to report the cause, impact, and corrective
3   action required to resolve variations form contracted technical performance.
4
5   **Sustaining Engineering** - Sustaining engineering includes changes and modifications to
6   systems to provide additional service capacity, add features to software, reduce
7   operational risk, replace obsolete hardware and software, or consolidate services
8
9   **System** - Any combination of components, assemblies, or sets joined together to perform
10  a specific operational function(s).
11
12  **System Assurance Analysis (SAA)** - An integrated reliability and safety analysis that
13  combines criticality assessment, Failure Modes and Effects Analysis (FMEA), Single
14  Failure Point Analysis (SFPA), Critical Items List (CIL), and Hazard Analysis (HA) into
15  one document.
16
17  **Systems Engineering** - Systems engineering is the management of engineering processes
18  to ensure end-to-end integration and improve service delivery
19
20  **System Maintainability -** The implementation of a design which improves the
21  identification of a failure and eases the replacement of the faulty assembly.
22
23  **System Operability -** The implementation of the human-machine interface, which
24  minimizes operator errors and equipment setup time.
25
26  **Tagout** - The placement of a device in accordance with an established procedure to
27  ensure the equipment being controlled cannot be operated until the device is removed
28
29  **Test Team** – A collection of personnel communicating via OIS, telephones, and radios to
30  accomplish a processing, launch, or landing function.  There are test teams at KSC, JSC,
31  GSFC, MSFC, MILA, and CCAFS.
32
33  **Testing**- The process by which the presence, quality, performance or genuineness is
34  determined
35
36  **Tool** - Hardware, firmware or software that serves as an aid to accomplishing a task.
37

1   **Training** - This definition contains typical functions associated with ensuring the
2   preparation of personnel to perform the functions necessary to provide the services as
3   listed in the statement of work.  These functions include:

4           (a)     Customer training on applications or services.

5           (b)     Certification of personnel on operational consoles.

6           (c)     Maintenance and operations training.

7           (d)     Mission-specific training.
8
9   **Universal Documentation System (UDS)** - The Range Commanders' Council (RCC)
10  Handbook 501-89 describes mandatory documentation to be used by the National Ranges
11  and their users.  The system provides a formal, common method of language and format
12  for stating requirements and preparing support responses.  The UDS encompasses
13  documentation generated by user agencies, which state program, mission or test
14  requirements and those response documents generated by the support agencies to define
15  the support to be provided.
16
17  **Validation Testing -** The testing of a newly developed or modified asset (system,
18  subsystem, assembly, subassembly or lowest replaceable element), to ensure that all
19  requirements of the specification have been met.   Additionally, this can mean testing
20  done for an item to prove or certify that it is ready to support.
21
22  **Verification Testing -** The testing of a newly developed or modified asset (system,
23  subsystem, assembly, subassembly or lowest replaceable element), to ensure that of the
24  asset conforms to the specification.
25
26  **Verify** – To confirm the accomplishment of an operation, either by witnessing the actual
27  operation or by inspecting the completed operation, depending on the nature of the work
28  being performed.
29
30  **Waiver/Deviation** – Granted use or acceptance of an article that does not meet specified
31  requirements.  A waiver is given or authorized after the fact; a deviation is given or
32  authorized before the fact.

# Appendix 4
# Applicable Policies and Procedures

# For

# Information Management and Communications Support (IMCS)

The contractor shall comply with the following documents in performance of the IMCS contract:

## NASA DIRECTIVES

| Document # | Title |
| --- | --- |
| NPD 1040.4A | NASA Continuity of Operations |
| NPD 1382.17G | NASA Privacy Policy |
| NPD 1383.1B | Release and Management of Audiovisual Products and Services |
| NPD 1383.2A | NASA Assistance to Non-Government, Entertainment-Oriented Motion Picture, Television, Video and Multimedia Productions/Enterprises, and Advertising |
| NPD 1420.1 | NASA Forms Management |
| NPD 1440.6G | NASA Records Management |
| NPD 1490.1G | NASA Printing, Duplicating, and Copy Management |
| NPD 1600.2D | NASA Security Policy |
| NPD 1820.1B | NASA Environmental Health Program |
| NPD 2190.1A | NASA Export Control Program |
| NPD 2200.2B | Management of NASA Scientific and Technical Information |
| NPD 2530.1E | Monitoring or Recording of Telephone or Other Conversations |
| NPD 2540.1F | Personal Use of Government Office Equipment Including Information Technology |
| NPD 2570.5D | NASA Electromagnetic (EM) Spectrum Management |
| NPD 2800.1A | Managing Information Technology |
| NPD 2810.1C | NASA Information Security Policy |
| NPD 2820.1C | NASA Software Policy |
| NPD 4100.1A | Supply Support and Material Management Policy |
| NPD 4200.1B | Equipment Management |
| NPD 4300.1B | NASA Personal Property Disposal Policy |
| NPD 6000.1B | Transportation Management |
| NPD 8500.1 | NASA Environmental Management |
| NPD 8700.1C | NASA Policy for Safety and Mission Success |
| NPD 8710.1D | Emergency Preparedness Program |
| NPD 8710.2D | NASA Safety and Health Program Policy |
| NPD 8710.5C | NASA Safety Policy for Pressure Vessels and Pressurized Systems |
| NPD 8720.1B | NASA Reliability and Maintainability (R&M) Program Policy |
| NPD 9501.1H | NASA Contractor Financial Management Reporting System |
| NPD 9501.2D | NASA Contractor Financial Management Reporting |

| NPR 1040.1 | NASA Continuity of Operations (COOP) Planning Procedure Requirements |
|---|---|
| NPR 1441.1D | NASA Records Retention Schedules |
| NPR 1450.10D | NASA Correspondence Management and Communications Standards and Style |
| NPR 1600.1 | NASA Security Program Procedural Requirements |
| NPR 1620.1 | NASA Security Procedural Requirements |
| NPR 2190.1 | NASA Export Control Program |
| NPR 2200.2B | Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information |
| NPR 2210.1A | External Release of NASA software |
| NPR 2570.1 | NASA Radio Frequency (RF) Spectrum Management Manual |
| NPR 2800.1 | Managing Information Technology |
| NPR 2810.1A | Security of Information |
| NPR 2820.1C | NASA Software Policy |
| NPR 4100.1D | NASA Materials Inventory Management Manual |
| NPR 4200.1D | NASA Materials Inventory Management Manual |
| NPR 4200.2B | Equipment Management Manual for Property Custodians |
| NPR 4300.1A | NASA Personal Property Disposal Procedural Requirements |
| NPR 6000.1G | Requirements for Packaging, Handling and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components |
| NPR 6200.1B | NASA Transportation and General Traffic Management |
| NPR 7120.5C | NASA Program and Project Management Processes and Requirements |
| NPR 7120.7 | NASA Institutional Infrastructure and Information Technology - Program and Project Management Requirements |
| NPR 7123.1A | NASA Systems Engineering Processes and Requirements |
| NPR 8000.4 | Risk Management Procedural Requirements |
| NPR 8553.1 | NASA Environmental Management System (EMS) |
| NPR 8621.1B | NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping |
| NPR 8715.2 | NASA Emergency Preparedness Plan Procedural Requirements |
| NPR 8715.3B | NASA General Safety Program Requirements |
| NPR 8735.1A | Procedures for Exchanging Parts, Materials, and Safety Problem Data Utilizing the Government-Industry Data Exchange Program and NASA Advisories |
| NPR 8735.2A | Management of Government Quality Assurance Functions for NASA Contracts |

**NASA STANDARDS**

| Document # | Title |
|---|---|
| NASA-GB-8719.13 | NASA Software Safety Guidebook |
| NASA-STD-2202 | Software Formal Inspections Standard |
| NASA-STD-2801 | NASA Strategy for Windows NT Domain |
| NASA-STD-2802 | Intracenter Networking Architecture, Standards and Products |
| NASA-STD-2803 | Intranet Strategy |
| NASA-STD-2804 (Rev.: K) | Minimum Interoperability Software Suit |
| NASA-STD-2805 (Rev.: K) | Minimum Hardware Configurations |
| NASA-STD-2806 | Network Protocol |
| NASA-STD-2807 | The NASA Directory Service Architecture, Standards, and Products |
| NASA-STD-2808 | Interoperability Profile for NASA E-Mail Clients |
| NASA-STD-2810 | UNIX Interoperability |
| NASA-STD-2812 | Intranet Functional Requirements |
| NASA-STD-2813 | NASA Firewall Strategy, Architecture, Standards and Products |
| NASA-STD-2814A | NASA Integrated Information Technology Architecture |
| NASA-STD-2815 | NASA Electronic Messaging Architecture, Standards and Products |
| NASA-STD-2817 | Computer-Aided Engineering, Design and Manufacturing Data Interchange Standard |
| NASA-STD-2818 | Digital Television Standards for NASA |
| NASA-STD-2819 | Collaborative Tools Standards |
| NASA-STD-2820 | Encryption and Digital Signature Standards |
| NASA-STD-5005 | Ground Support Equipment |
| NASA-STD-8719.11 (Rev.: Baseline (Change 3)) | NASA Safety Standard for Fire Protection |
| NASA-STD-8719.13 | NASA Software Safety Standard |
| NASA-STD-8719.7 | Facility System Safety Guidebook |
| NASA-STD-8719.9 | Standard for Lifting Devices and Equipment |
| NASA-STD-8729.1 (Rev.: Baseline) | Planning, Developing, and Managing an Effective Reliability and Maintainability (R&M) Program |
| NASA-STD-8739.5 | Fiber Optic Terminations, Cable Assemblies, and Installation |
| NASA-STD-8739.8 | Software Assurance Standard |

**KSC DIRECTIVES**

| Document # | Title |
|---|---|
| KNPD 1150.24 (Rev.: BASIC-1) | KSC Councils, Boards and Working Groups |
| KNPD 1216.1 (Rev.: A) | Smoke-Free Workplace |
| KNPD 1420.1 (Rev.: BASIC-1) | KSC Forms Management Program |
| KNPD 1440.1 (Rev.: B) | KSC Records Management and Vital Records Program |
| KNPD 1490.2 (Rev.: BASIC-1) | Printing, Duplication, Micrographics and Office Copier Services |
| KNPD 1590.2 (Rev.: BASIC-1) | KSC Bulletin, Bulletin Boards & Hallway Displays |
| KNPD 1600.3 | Use of Alcoholic Beverages on Kennedy Space Center (KSC) Property |
| KNPD 1800.1 (Rev.: BASIC-2) | Environmental Health Program |
| KNPD 1800.2 (Rev.: A-1) | KSC Hazard Communication Program |
| KNPD 1810.1 (Rev.: BASIC-1) | KSC Occupational Medicine Program |
| KNPD 1860.1 (Rev.: BASIC-1) | KSC Radiation Protection Program |
| KNPD 2240.1 (Rev.: BASIC-1) | KSC Library and Archives |
| KNPD 2810.1 (Rev.: BASIC) | Appropriate Use of NASA Information Technology (IT) Resources |
| KNPD 3792.1 (Rev.: BASIC-1) | KSC Employee Assistance Program (EAP) Policy |
| KNPD 6000.2 (Rev.: BASIC) | Commercial Transportation Corridors |
| KNPD 8500.1 (Rev.: BASIC) | KSC Environmental Management |
| KNPD 8700.1 (Rev.: A-1) | Safety and Mission Assurance Policy Directive |
| KNPD 8719.9 | Examination and Licensing of KSC Operators of Special, Heavy Equipment, Facility Cranes or Hoists |
| KNPD 9501.1 (Rev.: A) | Contractor Financial Management Reporting System |
| KNPD 9501.2 (Rev.: A-1) | KSC Earned Value Management |
| KNPR 1040.3 (Rev.: BASIC) | Continuity of Operations Planning (COOP) |
| KNPR 1600.1 | KSC Security Procedural Requirements |

| KNPR 1820.3<br>(Rev.: BASIC-1) | KSC Hearing Loss Prevention Program |
|---|---|
| KNPR 1820.4<br>(Rev.: A) | KSC Respiratory Protection Program |
| KNPR 1840.19<br>(Rev.: A) | KSC Industrial Hygiene Program |
| KNPR 1860.1<br>(Rev.: BASIC-1) | KSC Ionizing Radiation Protection Program |
| KNPR 1860.2<br>(Rev.: BASIC-1) | KSC Nonionizing Radiation Protection Program |
| KNPR 1870.1<br>(Rev.: BASIC-1) | KSC Sanitation Program |
| KNPR 2540.1<br>(Rev.: BASIC) | KSC Telecommunications Services |
| KNPR 2570.1<br>(Rev.: BASIC) | KSC Radio Frequency Spectrum Management |
| KNPR 4000.1<br>(Rev.: BASIC) | Supply and Equipment System Manual |
| KNPR 6000.1<br>(Rev.: BASIC) | Transportation Support System |
| KNPR 8040.1<br>(Rev.: BASIC) | KSC Configuration Management Procedural Requirements |
| KNPR 8040.4<br>(Rev.: A-2) | International Space Stations/Payload Processing Configuration Management Procedural Requirements |
| KNPR 8040.5<br>(Rev.: BASIC) | Shuttle Processing Level III Configuration Control Board Procedural Requirements |
| KNPR 8500.1<br>(Rev.: A) | KSC Environmental Requirements |
| KNPR 8715.3<br>(Rev.: C-1) | KSC Safety Practices Procedural Requirements |
| KNPR 8715.4 | KSC Lockout/Tagout Program Procedural Requirements |
| KNPR 8715.5 | KSC Personal Protective Equipment (PPE) Program Procedural Requirements |
| KNPR 8720.1<br>(Rev.: BASIC-1) | KSC Reliability, Maintainability, and Quality Assurance Procedural Requirements |
| KNPR 8730.2<br>(Rev.: BASIC) | Quality Assurance Procedural Requirements |
| KNPR 8830.1<br>(Rev.: A-1) | Facilities and Real Property Management Procedural Requirements |
| KDP-KSC-P-1280 | Government Printing Process |
| KDP-KSC-P-1311 | Major, High Impact and Minor Moves |
| KDP-KSC-P-1334 | KSC Network Scan Process |

| KDP-KSC-P-1376 | Information Technology (IT) directorate New Work Flow |
|---|---|
| KDP-KSC-P-1451 | NASA Safety Reporting System |
| KDP-KSC-P-1473 | KSC Mishap Reporting and Investigating |
| KDP-KSC-P-1474 | Mishap Investigation Board |
| KDP-KSC-P-1537 | Document Release Authorization (DRA) Process |
| KDP-KSC-P-1538 | NASA KSC Specifications and Standards Development Process |
| KDP-KSC-P-1833 | KSC Web Site Development and Maintenance |
| KDP-KSC-P-1836 | Removing Data and Licensed Software from Information Technology (IT) Storage Devices |
| KDP-KSC-P-1878 | Control and Use of Internal and External Documents |
| KDP-KSC-P-1881 | NASA Business Records Management |
| KDP-KSC-P-1899 | Obtaining Graphics Services |
| KDP-KSC-P-2111 | Reporting Close Calls |
| KDP-KSC-P-2117 | Deviating from KSC Maximum Work Time (MWT) Requirements |
| KDP-KSC-P-2123 | Reporting of Unsafe and/or Unhealthful Conditions or Acts |
| KDP-KSC-P-2139 | Advance notification of Workforce Reductions |
| KDP-KSC-P-2613 | KSC Export Process |
| KDP-KSC-P-3213 | KSC Web Site Registration and Approval |
| KDP-KSC-P-3313 | ODIN Waiver Process |
| KDP-KSC-P-3320 | Telecommunications Headset Acquisition Process |
| KDP-KSC-P-3323 | Non-ODIN Printers Vulnerability Process |
| KDP-KSC-P-3717 | Foreign National Visitor Badging and Access |

## INFORMATION TECHNOLOGY SECURITY DIRECTIVES

**National Institute of Standards and Technology (NIST) Special Publications (SP)**

| Document # | Title |
|---|---|
| SP–800-18 | Guide for Developing Security Plans |
| SP–800-26 | Security Self-Assessment Guide for IT Systems |
| SP–800-30 | Risk Management Guide |
| SP–800-34 | Contingency Planning Guide for IT System |
| SP–800-37 | Guide for the Security Certification & Accreditation of Federal Information Systems |
| SP–800-40 | Patch and Vulnerability Management |
| SP–800-53 | Recommended Security Controls for Federal Information Systems |
| SP-800-60, Vol. I & II | Guide for Mapping Types of Information to Security Categories |
| SP–800-64 | Security Considerations in the Information system Development Life Cycle |
| SP–800-70 | Security Configuration Checklists Program |
| SP–800-83 | Malware Incident Prevention and Handling |
| SP–800-85A | PIV Middleware and PIV Card Application Conformance Test |
| SP–800-86 | Computer and Network Data Analysis:  Applying Forensic Techniques to Incident Response |
| SP–800-87 | Codes for the ID of Federal and Federally-Assisted Orgs |
| SP–800-97 | Establishing Wireless Robust Security Networks A Guide to IEEE 802.11i |
| SP–800-94 | Guide to Intrusion Detection and Prevention Systems (IDPS) |
| SP–800-78 | Cryptographic Algorithms and Key Sizes for Personal Identity Verification |
| SP–800-72 | Guidelines on PDA forensics |
| SP–800-67 | Recommendation for the Triple Data Encryption Algorithm (TDEA) Block Cipher |

**Federal Information Processing Standards (FIPS)**

| Document # | Title |
|---|---|
| FIPS PUB 140-2 | Security Requirements for Cryptographic Modules |
| FIPS PUB 197 | Advanced Encryption Standard (AES) |
| FIPS PUB 199 | Standards for Security Categorization of Federal IT Systems |
| FIPS PUB 200 | Minimum Security Requirements for Federal Information and Information Systems |
| FIPS PUB 201 | Personal Identity Verification (PIV) of Federal Employees and Contractors |

**NASA IT Requirements (NITRS)**

| Document # | Title |
|---|---|
| NITR 2810-1 | Wireless Requirements |
| NITR 2810-2 | Risk Management and Security Plans |
| NITR 2810-3 | Internet Publishing Content Guidelines |
| NITR 2810-4 | Information Technology (IT) system Security Certification and Accreditation and Authorizing Systems for Operation |
| NITR 2810-5 | NASA Information Technology (IT) Security Patch Management System |

**NASA IT Security Standard Operating Procedures (SOPs)**

| Document # | Title |
|---|---|
| ITS-SOP-0002 | NASA's Target Vulnerability Selection Procedures |
| ITS-SOP-0003 | NASA's IT Security Emergency After-Hours Test Procedures |
| ITS-SOP-0004 | NASA's Information Technology Requirement (NITR) Procedures |
| ITS-SOP-0005-B | Procedure for Completing a NASA Information Technology (IT) Security Program or System Assessment |
| ITS-SOP-0006-C | Procedure for Extending an IT System Authorization to Operate |
| ITS-SOP-0007 | NASA Master and Subordinate System Security Plan Numbering Schema |
| ITS-SOP-0008 | Procedures for Initiating and Managing Targeted Monitoring of Electronic Data |
| ITS-SOP-0009 | Procedures for Updating and Managing NASA's Plan of Actions and Milestones |
| ITS-SOP-0012 | NASA Patch Selection & Reporting Procedures |
| ITS-SOP-0014 | Procedures for Approving Changes to NASA's Information Technology Baseline |
| ITS-SOP-0015 | Procedures for Agency IT Security Incident Classification and Reporting |
| ITS-SOP-0016-B | Subordinate IT Security Plan Template, Requirements, Guidance and Examples |
| ITS-SOP-0017 | IT Security Penetration Test Plan and Rules of Engagement |
| ITS-SOP-0018 | Contractor IT Security Program Plan Procedures |
| ITS-SOP-0019-B | Procedure for FIPS-199 Information Categorization for NASA IT Systems |
| ITS-SOP-0020 | Wireless Local Area Network Implementation |
| ITS-SOP-0021 | Network Security Vulnerability Scanning |
| ITS-SOP-0022 | Determining Cost Impact of Information Technology Security Incidents |
| ITS-SOP-0030B | IT System Certification and Accreditation Process for FIPS 199 Moderate and High Systems |

| ITS-SOP-0031B | IT System Certification and Accreditation Process for FIPS 199 Low Systems |
| ITS-SOP-0032 | Master IT Security Plan Template, requirements, Guidance and Examples |
| SOP No. CIOB-01 | Assignment of IT Actions |

**Office of Management and Budget Memorandums**

| Document # | Title |
|---|---|
| OMB M-06-15 | Safeguarding Personally Identifiable Information |
| OMB M-06-16 | Protection of Sensitive Agency Information |
| OMB M-07-16 | Safeguarding Against and Responding to the Breach of Personally Identifiable Information |

## AIR FORCE PUBLICATIONS

| Document # | Title |
|---|---|
| AFI 21-101 | Aircraft and Equipment Maintenance Management |
| AFI 32-9002 | Use of Real Property Facilities |
| AFI 33-103 | Communications and Information – Requirements Development and Processing |
| AFI 33-117 | Multimedia (MM) Management |
| AFI 91-204 | Safety Investigations and Reports |
| AFSPCMAN 91-710 V6 | Ground and Launch Personnel, Equipment, Systems, and Materials Operations Safety Requirements |

## 45th SPACE WING PUBLICATIONS

| Document # | Title |
|---|---|
| 45SW 13-206 | Eastern Range Scheduling |
| 45SW 33-104 | Multimedia (MM) Management |
| 45SWI40-201 | 45the Space Wing Instruction 40-201 Radiation Protection Program |

## RANGE OPERATING INSTRUCTIONS

| Document # | Title |
|---|---|
| ROI 01-01 | Range Operating Instructions |
| ROI 01-01-01 | Site Verification of ROI Mailing |
| ROI 01-02 | Reacceptance Procedures for Range Instrumentation |
| ROI 01-03 | Station Designators |
| ROI 01-04 | ER Range Conference Nets |
| ROI 01-05 | Operational Configuration Control Philosophy |
| ROI 01-06 | Range Time Standardization |
| ROI 01-07 | Minor Range Support |

| ROI 01-08 | Downgrading of Scheduling or Launch Information After DOD or NASA Release |
|---|---|
| ROI 01-10 | Coordination with Range Users During Operations |
| ROI 01-12 | Visits to Range Instrumentation Sites |
| ROI 01-13 | Instrumentation Coverage Plans |
| ROI 01-14 | Requesting Emergency Maintenance Assistance for Communications, Electronic, Meteorological Equipment |
| ROI 01-15 | Processed Data Delivery Schedules |
| ROI 01-16 | RTSC Instrumentation Launch Planning Process |
| ROI 01-19 | Orbital Network Duties and Responsibilities During Unmanned Space Flights |
| ROI 01-20 | Range Scheduling Operation Notification Responsibility |
| ROI 01-21 | System Access |
| ROI 01-23 | Scheduling Downtime for Maintenance |
| ROI 01-24 | Range Turnaround Time |
| ROI 01-25 | Relaying Countdown and Operations Information |
| ROI 01-29 | Range Control Officer (RCO) Responsibilities |
| ROI 01-30 | Expedite Operations Requirements Processing |
| ROI 01-32 | Range Instrumentation Systems Controllers |
| ROI 01-33 | Inflight Advisories of Vehicle Flight Performance |
| ROI 01-36 | Network Operating Procedures During Manned Space Flights |
| ROI 01-39 | Scheduling of Prelaunch Instrumentation Checkout Operations and Calibration Operations |
| ROI 01-40 | Control and Operation of Instrumentation Nets |
| ROI 01-44 | Use of Unaccepted Equipment, Systems, or Configurations |
| ROI 01-45 | Range Reconfiguration Time for Navy Missions |
| ROI 02-02 | Range Countdown |
| ROI 02-04 | Operations Control Instructions |
| ROI 03-01-01 | Operation Logs |
| ROI 03-01-04 | Reporting Range Instrumentation Status During an Operation |
| ROI 03-01-05 | Launch Performance Analysis |
| ROI 03-02-10 | Quick Look Operation Report |
| ROI 03-03-01 | Pre-Operational Instrumentation Checks |
| ROI 03-03-04 | Eastern Range Equipment Status Reporting System |
| ROI 03-04 | Notification of Weather Warnings and Weather Advisories |
| ROI 03-05 | Reporting Operation Termination/Extension Status |
| ROI 09-01 | Handling of Film Products for DOD Launch Operations Requiring Special Handling |
| ROI 09-02 | Handling of Film Products for DOD Launch Anomalies During Classified Operations |
| ROI 12-01-14 | Optical Tracking Central Computer (OTCC) Checkout Operating and Reporting Procedures |
| ROI 12-04-01 | Manual Audit Trails for Instrumentation Computers |

| ROI 14-08-01 | Closed-Circuit Television Unit Operating Procedures |
| ROI 14-08-02 | Range Safety Video and Vertical Wire Skyscreen Site Designations |

**OTHER POLICIES AND PROCEDURES**

| Document # | Title |
|---|---|
| | Americans with Disabilities Act of 1990, as amended |
| | Federal Acquisition Regulations (FAR) |
| | NASA FAR Supplement |
| | ISO 14000 Standards |
| | The Gregg Reference Manual |
| | Roget's Thesaurus |
| | Merriam Webster's Collegiate Dictionary |
| | U.S. Government Printing Office Style Manual (2000 Edition) |
| | NASA Chief Information Officer (CIO) Executive Notices |
| | IT Security Implementation Guide |
| | Library of Congress Classification Schedules |
| 29 CFR Part 1910 | Occupational Safety and Health Standards |
| 29 CFR Part 1925 | Safety and Health Standards for Federal Service Contracts |
| 29 CFR Part 1926 | Safety and Health Regulations for Construction |
| 29 CFR Part 1960 | Basic Program Elements for Federal Employees OSHA |
| 29 U.S.C. § 794(d) | Section 508 of the Rehabilitation Act of 1973, as amended |
| 7 CFR Part 1755.890 | RUS Specification for Filled Telephone Cables with Expanded Insulation |
| 7 CFR Part 1755.900 | RUS Specification for Filled Fiber Optic Cables |
| 79K28125 | Fiber Optic Cable Specification for KSC |
| AACR2 | Anglo-American Cataloguing Rules |
| AFSPCMAN 91-710 | Range Safety Manual (Volumes 1-7) |
| ANSI/ISO/ASQ Q9001-2000 | ISO 9000 Standards |
| CSP 03-01-002 [TED 8.4] | Voluntary Protection Programs (VPP): Policies and Procedures Manual & Directive |
| Executive Order (EO) 10290 | Prescribing Regulations Establishing Minimum Standards for the Classification Transmission and Handling of Official Information Which Requires Safeguarding in the Interests of Security |
| EO 10995 | Assigning Telecommunications Management Functions |
| EO 12046 | Relating to the Transfer of Telecommunications Functions |
| EO 12139 | Exercise of Certain Authority Respecting Electronic Surveillance |
| EO 12148 | Federal Emergency Management |
| EO 12356 | National Security Information |
| EO 12472 | Assignment Of National Security and Emergency |

| | Preparedness Telecommunication Functions |
|---|---|
| EO 13231 | Critical Infrastructure Protection in the Information Age |
| EO 13407 | Public Alert and Warning System |
| EO 13423 | Strengthening Federal Environmental, Energy, and Transportation Management |
| GP-435 Vol. 1 & 2 | Engineering Drawing Practices |
| HSPD-12 | Homeland Security Presidential Directive 12 |
| ISO 9001 | Quality Management Systems - Requirements |
| JDP-KSC-P-3014 (Rev.: C) | Generic Emergency Procedures Document (EDP) |
| JHB 2000 (Rev.: D) | Consolidated Comprehensive Emergency Management Plan |
| KCA 1308 | Joint Operating Procedure (JOP) Between 45th Space Wing (45 SW) and the John F. Kennedy Space Center (NASA-KSC) for Safety |
| KCA-1323 | Joint Operating Procedure (JOP) Between 45th Space Wing (45 SW) and NASA-KSC for Electromagnetic Laboratory (EML) Services |
| KPL-PLN-50007 | KSC Facility Contamination Control Requirement Plan |
| KSC-DE-512-SM | Facility, System, and Equipment General Design Requirements |
| KSC-DF-107 | Technical Document Style Guide |
| KSC-PLN-1912 | KSC Environmental Management Plan |
| KSC-PLN-3302 (Rev.: D) | Information Technology (IT) Security Awareness and Training Plan |
| KSC-STD-E-0021 | Telecommunications Premises Distribution Systems, Design of, Standard for (KSC) |
| NASA Communication Material Review System Website | Communication Material Review Team (CMRT) Policy Guidelines |
| NASA Communication Material Review System Website | NASA Logo/Insignia Guidelines |
| NASA-SP-2005-7602 (Rev. 1) | NASA Publications Guide for Authors |
| NASA-SP-7084 | Grammar, Punctuation, and Capitalization; A Handbook for Technical Writers and Editors |
| NF-1676 | NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA) |
| NSTS 07700, Volume V (Change No. 167) | Information Management Requirements |
| NSTS 08117 (Change No. 84) | Requirements and Procedures for Certification of Flight Readiness |
| NSTS 22206 (Change No. 39) | Requirements for Preparation and Approval of Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) |

| NSTS 22254 (Change No. 17) | Methodology for Conduct of Space Shuttle Program Hazard Analyses |
| NSTS 5300.4 (1D-2) (Change No. 9) | Safety, Reliability, Maintainability and Quality Provisions for the Space Shuttle Program |
| SF-298 | Report Documentation Page |

The following KSC Shelf-Master SPECSINTACT specifications should be used when performing work at KSC:

| Document # | Title |
| --- | --- |
| 16700 | Communications Termination Blocks and Patch Panels |
| 16701 | Communication/Equipment Room Fittings |
| 16702 | Communications Optical Fiber Backbone Cabling |
| 16703 | Communications Copper Backbone Cabling |
| 16704 | Communications Horizontal Cabling |
| 16705 | Clock systems |
| 16725 | Audio-Video Communications Horizontal Cabling |
| 16801 | Paging Systems |
| 16802 | Intermediate/Radio Frequency Communications Horizontal Cabling |

1

2

3

4

5

6

# Appendix 5

7
8

# Expectations, Performance Standards, and Metrics

9

10

11

# For

12

13

# Information Management and Communications Support (IMCS)

14

15

16

17

18

1    **Expectations, Performance Standards and Metrics**
2
3    This document describes expectations, performance standards and metrics for specific PWS tasks.
4    Additional performance metrics based upon areas of emphasis and specific task orders may be
5    included.  The existence and use of these tables in no way relieves the contractor of the obligation
6    to perform all PWS elements and delineated tasks.
7
8    Expectations, Performance standards, and metrics provided in this document will be incorporated
9    into the final Government performance surveillance and award fee evaluation plans.  The
10   Government has the unilateral right to revise this document as necessary, including revisions to
11   capture and incorporate methodologies, approaches, and levels of expected performance proposed
12   by the successful offeror and accepted by the Government.
13
14   **Level 1** – Performance Standards data will be collected by the contractor, reported to and evaluated
15   by the Government for Award Fee purposes.
16
17   **Level 2** – Performance Standards data will be collected by the contractor, reported to and evaluated
18   by the Government for trends and operational analysis.
19
20   **For the purpose of this document the following definitions shall be used:**
21
22   **Expectation –** The Government's and their customers' expected response and outcome by the
23   contractor to have work completed, to have problems resolved and to have systems available under
24   this contract.
25
26   **Performance Standards** - A representation of the actual performance levels that the contractor
27   achieves and to what degree those achievements meet or exceed the Governments expectations.
28
29   **Metrics –** The resultant pictorial view of the actual work performance by contractor to meet the
30   expectations and performance standards.

1
2  **Service Delivery**
3
4  **Service Delivery** is the performance of work orders by the contractor to meet customer submitted
5  requirements and delivery timeframes.
6
7

---

### Expectation – Service Delivery

Successfully complete all customer service requests by the scheduled completion dates that are in adherence with the timeframes established on pages 6-8 (Expectation – Service Delivery Standards).

---

8
9

---

### Performance Standard - Service Delivery [1]

---

**Level 1**

93.0% - 96.5% Completed by Scheduled Completion Date (SCD) – Meets Expectation

> 96.5% Completed by SCD -  Exceeds Expectation

< 93.0% Completed by SCD -  Does Not Meet Expectation

---

**Level 2**

97.5% Completed within 20 Working days of SCD

No more than 1% open for more than 40 Working days

---

10   [1]  In all cases, level of service shall not impact safety, mission success or major
11        program/project milestones.
12
13
14  **Metric - Service Delivery:**
15

| Does Not Meet Expectation | Meets Expectation | Exceeds Expectation |
|---|---|---|
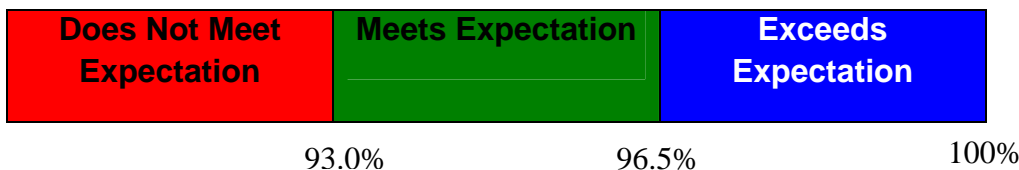
16                              93.0%                  96.5%              100%
17

1  **Problem Resolution**
2
3  **Problem Resolution** is the measured response of the contractor's performance to provide
4  corrective action to system, sub-system and/or component malfunction or failure.
5

| **Expectation - Problem Resolution** |
|---|
| Successfully resolve all service problems and return to service prior to the original receipt time of the service problem on the next work day. |

6
7

| **Performance Standard - Problem Resolution** |
|---|
| **Level 1** |
| 93.0-96.5% Completed within the performance standard timeframe – Meets Expectation |
| > 96.5% Completed within the performance standard timeframe -  Exceeds Expectation |
| < 93.0% Completed within the performance standard timeframe -  Does Not Meet Expectation |
| **Level 2** |
| No more that 2% open > 30 calendar days. |

8
9
10  **Metric - Problem Resolution:**
11

| Does Not Meet Expectation | Meets Expectation | Exceeds Expectation |
|---|---|---|

   93.0%                          96.5%                      100%

1    **System Availability**

2
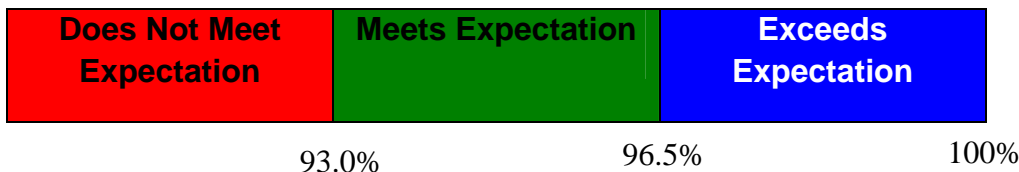
3    **System Availability** is the percent of time the system is available for use by the customer.  System
4    availability shall be reported to two or three decimal places as applicable.

5

6

| **Expectation -System Availability** |
| --- |
| The systems are to be functional, accessible and useable 24 hours per day 7 days per week and 365 days per year. |

7

8

| **Performance Standard - System Availability** |
| --- |
| **Group 1 Systems:**  Data Center, Cable Plant, Transmissions, Networks and Network Security Perimeter, Imaging, Voice Communications,  Engineering Data Center, Library (Online), Forms |
| 99.90 – 99.95%  Availability – Meets Expectation<br><br>> 99.95%  Availability - Exceeds Expectation<br><br>< 99.90%  Availability - Does Not Meet Expectation |
| **Group 2 Systems:**  Telephones and Timing |
| 99.999 – 99.9995%  Availability – Meets Expectation<br><br>> 99.9995%  Availability - Exceeds Expectation<br><br>< 99.999%  Availability - Does Not Meet Expectation |

9

10

11   **Metric - System Availability – Group 1**

12

| Does Not Meet Expectation | Meets Expectation | Exceeds Expectation |
| --- | --- | --- |

13              99.90%                    99.95%                    100%
14

15

16   **Metric - System Availability - Group 2**

17

| Does Not Meet Expectation | Meets Expectation | Exceeds Expectation |
| --- | --- | --- |

18              99.999%                  99.9995%                  100%
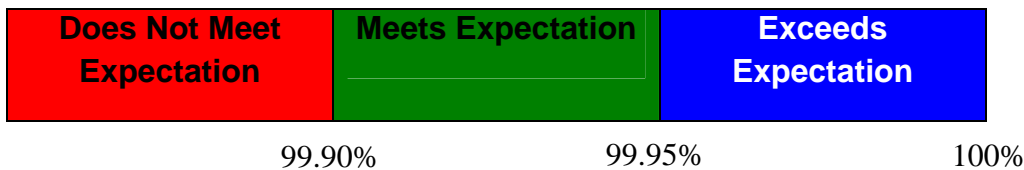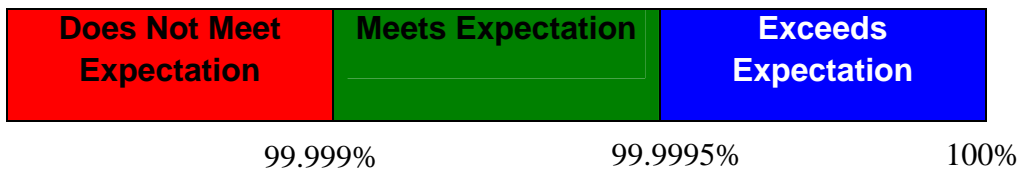
1 **Expectation – Service Delivery Standards**

2

3 **Service Delivery Standards Expectation Levels are delineated below for services to be**
4 **performed by the contractor.** The expectation level represent the time from receipt of customer
5 request until work completion**.**

6

| Expectation – Service Delivery Standards (** All metrics are in working days unless noted specifically in Hours or Minutes) | | | | |
|---|---|---|---|---|
| **PWS** | **Service Area** | **Service** | **Expectation for Services Infrastructure Available <= \*\*** | **Expectation for Services Infrastructure Not Available <= \*\*** |
| 3.0 | All Services | Answer Help Desk Call | < 15 Seconds | |
| 3.1.1 | Computer | Provide server space for new application | 5 | 20 |
| 3.1.1 | Computer | Perform software upgrade | 5 | 20 |
| 3.1.1 | Computer | Add account with specified permissions | 4 Hours | |
| 3.1.2 | Computer | Move New Applications to Production | 3 | 20 |
| 3.1.2 | Computer | Move New Development to Production | 2 | |
| 3.1.2 | Computer | Priority Data Changes | 1 | |
| 3.1.2 | Computer | Data Changes | 3 | |
| 3.1.2 | Computer | Priority Minor Software Changes | CCB | |
| 3.1.2 | Computer | Priority Medium Software Changes | CCB | |
| 3.1.2 | Computer | Priority Major Software Changes | CCB | |
| 3.1.2 | Computer | Minor Software Changes | CCB | |
| 3.1.2 | Computer | Medium Software Changes | CCB | |
| 3.1.2 | Computer | Major Software Changes | CCB | |
| 3.2.1 | Cable Plant | Install Copper pair | 2 | 15 |
| 3.3.1 | Transmission | Install Transmission Drop/Circuit | 5 | 15 |
| 3.4.1 | Networks | Install Network Drop Less than 20 | | 10 |
| 3.4.1 | Networks | Install Network Drop More than 20 | | 15 |

7 CCB denotes work must be completed by the CCB negotiated due date.

1

| **Expectation – Service Delivery Standards** (** All metrics are in working days unless noted specifically in Hours or Minutes) | | | | | |
|---|---|---|---|---|---|
| **PWS** | **Service Area** | **Service** | | **Expectation for Services Infrastructure Available** <= ** | **Expectation for Services Infrastructure Not Available** <= ** |
| 3.4.1 | Networks | Provide and activate IP address | | 1 | |
| 3.4.1 | Networks | Install Wireless Access points | | | 20* |
| 3.4.1 | Networks | Install Temporary Wireless Access points | | 2 | |
| 3.4.2 | Networks | Activation of Approved Perimeter Access Control Change Request  Standard Request | | 5 | |
| 3.4.2 | Networks | Activation of Approved Perimeter Access Control Change Request  Priority Request NTE 10% of total requests | | 2 | |
| 3.4.2 | Networks | Activation of Approved Perimeter Access Control Change Request  Priority Expedite Request  NTE 2% of total requests | | <4 Hours | |
| 3.4.3 | Networks | Install or MAC Telephone including Voicemail - Less than 20 | | 2 | 10 |
| 3.4.3 | Networks | Install or MAC Telephone including Voicemail  - More than 20 | | 5 | 30 |
| 3.4.3 | Networks | Telephone MAC -no field visit required | | 1 | |
| 3.4.4 | Networks | Issue Secure Remote Access Device | | 3 | |
| 3.5.1 | Imaging | Install Video Monitor | | 5 | 20 |
| 3.5.1 | Imaging | Install Perimeter Security Camera | | | 20 |
| 3.5.2 | Imaging | Install BCDS Drop | | 5 | 20 |
| 3.5.4 | Imaging | Digital Photo Print <25 prints | | 1 | |
| 3.5.4 | Imaging | Digital Photo Print >25 prints | | 3 | |
| 3.6 | Graphics | Perform Photo Editing | | 2 | |
| 3.6 | Graphics | Convert Graphic for Web Use | | 1 | |
| 3.6 | Graphics | Produce Graphics Products | | 5 | |
| 3.8 | Timing | Install countdown timing display | | 10 | 20 |

2     * Not including approval time for Master Planning

1

| **Expectation – Service Delivery Standards** (** All metrics are in working days unless noted specifically in Hours or Minutes) | | | | |
|---|---|---|---|---|
| **PWS** | **Service Area** | **Service** | **Expectation for Services Infrastructure Available** <= ** | **Expectation for Services Infrastructure Not Available** <= ** |
| 3.9.1 | Voice | Install Voice/PAWS Speaker | 10 | 20 |
| 3.9.3 | Voice | Replace Radio in Vehicle | 2 | |
| 3.9.3 | Voice | Remove Radio from Vehicle | 1 | |
| 3.9.3 | Voice | Install Radio at Fixed Location | 10 | 20 |
| 3.9.3 | Voice | Program Radio | 1 | |
| 3.9.4 | Voice | Install Voice/OIS-D End Instrument | 10 | 20 |
| 3.9.4 | Voice | Provide OIS Dub | 1 | |
| 3.9.4 | Voice | Provide OTV dub to DVD | 2 | |
| 3.9.4+3.12 | Voice & Print/ Repro | Provide  DVD/CD dub | 2 | |
| 3.11 | Publications | Provide Tech Written Document | 5 | |
| 3.11 | Publications | Respond to Public Inquiry- General | 5 | |
| 3.12 | Printing/Repro | Reproduction of Documents: <10,000 pages | 2 | |
| 3.12 | Printing/Repro | Reproduction of Documents: >10,000 pages (non-GPO) | 5 | |
| 3.13 | Engineering Data Center | Retrieve document, convert to electronic format and provide to customer | 3 | |
| 3.16 | Forms | Generate New Form | 5 | |
| 3.17 | IT Security | Initial Report of  Potential IT Security Incident | <1 Hours | |
| 3.17 | IT Security | Isolate IT Security Incident | <2 Hours | |
| 3.17 | IT Security | Provide Accurate Report of IT Security Incident | 1 | |

2
3

# Appendix 6

# Workload Indicators

# For

# Information Management and Communications Services (IMCS)

| | | WORKLOAD INDICATORS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Annual Workload Quantities by FY | | | | | | | | |
| **PWS Element** | | **Indicators** | **FY 09** | **FY 10** | **FY 11** | **FY 12** | **FY 13** | **FY 14** | **FY 15** | **FY 16** | **FY 17** |
| 1.4.8 | System Engineering and Integration | Systems in use | 50 | 50 | 50 | 50 | 50 | 50 | 45 | 45 | 45 |
| | | Document Generation / Document Reviews | 150 | 200 | 250 | 250 | 250 | 200 | 200 | 150 | 150 |
| | | | | | | | | | | | |
| 3.1.1 | Data Center | Number of hosts supported | 310 | 315 | 320 | 325 | 330 | 335 | 340 | 345 | 350 |
| | | Number of data center locations | 5 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 3 |
| | | Number of web sites/applications | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 |
| 3.1.2 | S/W Eng | Priority data changes | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| | | Data changes | 375 | 375 | 375 | 375 | 375 | 375 | 375 | 375 | 375 |
| | | Priority minor changes | 375 | 375 | 375 | 375 | 375 | 375 | 375 | 375 | 375 |
| | | Priority medium changes | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| | | Priority major changes | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| | | Minor change | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 |
| | | Medium change | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| | | Major change | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 3.2 | Cable Plant Services | Trouble Tickets | 400 | 400 | 280 | 280 | 300 | 320 | 340 | 340 | 340 |
| | | Support Requests | 175 | 180 | 120 | 120 | 130 | 140 | 150 | 150 | 150 |
| 3.3 | Transmission Services | Trouble Tickets | 250 | 250 | 180 | 180 | 190 | 200 | 210 | 210 | 210 |
| | | Support Requests | 100 | 100 | 70 | 70 | 75 | 80 | 85 | 85 | 85 |
| 3.4.1 | Network Services | Trouble Tickets | 1,300 | 1,300 | 910 | 910 | 975 | 1,050 | 1,100 | 1,100 | 1,100 |
| | | Support Requests | 1,300 | 1,300 | 910 | 910 | 975 | 1,050 | 1,100 | 1,100 | 1,100 |
| 3.4.2 | Network Security Perimeter | Access Request | 150 | 150 | 125 | 125 | 150 | 150 | 150 | 150 | 150 |
| | | Support Requests | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| 3.4.3 | Telephone Services | Trouble Tickets | 4,000 | 4,000 | 2,800 | 2,800 | 3,000 | 3,200 | 3,400 | 3,400 | 3,400 |
| | | Support Requests (TDM) | 3,900 | 3800 | 3500 | 2900 | 2800 | 2500 | 2200 | 2000 | 1800 |
| | | Support Requests (VoIP) | 100 | 130 | 170 | 200 | 270 | 400 | 530 | 670 | 800 |
| | | TDM Instruments (each) | 18,000 | 17,500 | 16,000 | 13,500 | 12,750 | 11,500 | 10,250 | 9,250 | 8,250 |
| | | VoIP Instruments (each) | 750 | 1,000 | 1,250 | 1,500 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 |
| 3.4.4 | Secure Remote Access | Account Request | 2,000 | 400 | 500 | 2,500 | 500 | 500 | 3,500 | 500 | 500 |
| | | Support Requests | 600 | 350 | 350 | 650 | 350 | 350 | 700 | 350 | 350 |
| 3.5 | Imaging Services | Trouble Tickets | 150 | 150 | 105 | 105 | 110 | 120 | 130 | 130 | 130 |
| | | Support Requests | 1,300 | 1,300 | 910 | 910 | 975 | 1,050 | 1,100 | 1,100 | 1,100 |
| 3.6 | Graphic Services | Basic products | 900 | 900 | 850 | 850 | 900 | 900 | 850 | 850 | 850 |
| | | Complex products requiring lengthy planning & frequent customer interface | 700 | 700 | 650 | 650 | 700 | 700 | 650 | 650 | 650 |

| | WORLOAD INDICATORS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Annual Workload Quantities by FY** | | | | | | | |
| **PWS Element** | | **Indicators** | **FY 09** | **FY 10** | **FY 11** | **FY 12** | **FY 13** | **FY 14** | **FY 15** | **FY 16** | **FY 17** |

| PWS Element | | Indicators | FY 09 | FY 10 | FY 11 | FY 12 | FY 13 | FY 14 | FY 15 | FY 16 | FY 17 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.7 | Audio Visual & Production Support Services | Videoconferences supported (events) | 1,500 | 1,650 | 1,650 | 1,500 | 1,500 | 1,350 | 1,350 | 1,200 | 1,200 |
| | | Assist with AV presentations (events) | 700 | 770 | 770 | 700 | 700 | 630 | 630 | 560 | 560 |
| | | Provide sound reinforcement (events) | 270 | 270 | 190 | 190 | 200 | 220 | 230 | 230 | 230 |
| | | AV equipment loans | 60 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |
| 3.8 | Timing Services | Trouble Tickets | 50 | 50 | 35 | 35 | 40 | 40 | 40 | 40 | 40 |
| | | Support Requests | 50 | 50 | 35 | 35 | 40 | 40 | 40 | 40 | 40 |
| 3.9 | Voice Comm Services | Trouble Tickets | 750 | 750 | 525 | 525 | 565 | 600 | 640 | 640 | 640 |
| | | Support Requests | 580 | 580 | 410 | 410 | 435 | 470 | 500 | 500 | 500 |
| 3.10 | Electromagnetic Measurement & Analysis Svcs | EMI Tests | n/a | n/a | n/a | n/a | 45 | 40 | 40 | 35 | 35 |
| | | Beacon Readouts | n/a | n/a | n/a | n/a | 10 | 14 | 18 | 20 | 20 |
| | | Launch Support | n/a | n/a | n/a | n/a | 10 | 12 | 14 | 15 | 15 |
| 3.11 | Publications Services | Research, write, edit, & post web videos & podcasts | 150 | 180 | 165 | 150 | 150 | 135 | 135 | 120 | 120 |
| | | Research, write, edit, & post web feature-length articles | 150 | 180 | 165 | 150 | 150 | 135 | 135 | 120 | 120 |
| | | Coordinate, write scripts, & post live web productions | 50 | 60 | 55 | 50 | 50 | 45 | 45 | 40 | 40 |
| | | Perform minor updates to web pages | 360 | 435 | 400 | 360 | 360 | 325 | 325 | 290 | 290 |
| | | Create new or modify existing web pages | 270 | 325 | 300 | 270 | 270 | 245 | 245 | 220 | 220 |
| | | Release and post press releases | 100 | 115 | 110 | 100 | 100 | 90 | 90 | 80 | 80 |
| | | Release and post status reports | 50 | 60 | 55 | 50 | 50 | 45 | 45 | 40 | 40 |
| | | Publish KSC internal newsletters | 80 | 95 | 85 | 80 | 80 | 70 | 70 | 65 | 65 |
| | | Writing assignments | 350 | 420 | 385 | 350 | 350 | 315 | 315 | 280 | 280 |
| | | Captions created for photos | 2,200 | 2,640 | 2,420 | 2,200 | 2,200 | 1,980 | 1,980 | 1,760 | 1,760 |
| 3.12 | Printing, Reproduction, and Microimaging Services | Printing / duplicating (8.5x11 page equiv) | 50,000,000 | 60,000,000 | 55,000,000 | 50,000,000 | 50,000,000 | 45,000,000 | 45,000,000 | 40,000,000 | 40,000,000 |
| | | Color copies (8.5x11 page equiv) | 1,500,000 | 1,800,000 | 1,650,000 | 1,500,000 | 1,500,000 | 1,350,000 | 1,350,000 | 1,200,000 | 1,200,000 |
| | | Drawing reproductions (sq. ft.) | 1,212,000 | 1,454,400 | 1,333,200 | 1,212,000 | 1,212,000 | 1,090,800 | 1,090,800 | 969,600 | 969,600 |
| | | Encode aperture cards | 50,000 | 60,000 | 55,000 | 50,000 | 50,000 | 45,000 | 45,000 | 40,000 | 40,000 |
| | | Aperture cards scanned to raster files | 120,000 | 144,000 | 132,000 | 120,000 | 120,000 | 108,000 | 108,000 | 96,000 | 96,000 |
| | | Documents scanned to CDROM | 3,366,000 | 4,040,000 | 3,703,000 | 3,366,000 | 3,366,000 | 3,030,000 | 3,030,000 | 2,693,000 | 2,693,000 |
| | | Microfiche scanned to CDROM | 65,000 | 78,000 | 71,500 | 65,000 | 65,000 | 58,500 | 58,500 | 52,000 | 52,000 |
| | | Prints created from aperture & microfiche | 30,000 | 30,000 | 30,000 | 30,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| | | Microforms inventory | 1,628,000 | 1,953,600 | 1,791,000 | 1,630,000 | 1,630,000 | 1,465,000 | 1,465,000 | 1,303,000 | 1,303,000 |
| | | Images indexed via hyperlinks | 1,700,000 | 2,040,000 | 1,870,000 | 1,700,000 | 1,700,000 | 1,530,000 | 1,530,000 | 1,360,000 | 1,360,000 |
| | | Images converted for Word format | 20,000 | 24,000 | 22,000 | 20,000 | 20,000 | 18,000 | 18,000 | 16,000 | 16,000 |

| WORKLOAD INDICATORS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Annual Workload Quantities by FY | | | | | | | | |
| PWS Element | | Indicators | FY 09 | FY 10 | FY 11 | FY 12 | FY 13 | FY 14 | FY 15 | FY 16 | FY 17 |
| 3.13 | Engineering Data Center | Engineering document sheets processed | 24,000 | 29,000 | 29,000 | 25,000 | 24,000 | 21,600 | 21,600 | 19,200 | 19,200 |
| | | Document Release Authorizations | 2,000 | 2,400 | 2,200 | 2,000 | 2,000 | 1,800 | 1,800 | 1,600 | 1,600 |
| 3.14 | Library Services | Acquistions | 38,900 | 46,700 | 43,800 | 39,000 | 39,000 | 35,000 | 35,000 | 31,150 | 31,150 |
| | | Items circulated | 87,000 | 104,400 | 95,700 | 87,000 | 87,000 | 78,300 | 78,300 | 69,600 | 69,600 |
| | | Updates to library online catalog | 45,000 | 54,000 | 49,500 | 45,000 | 45,000 | 40,500 | 40,500 | 36,000 | 36,000 |
| | | Reference requests | 140,000 | 168,000 | 154,000 | 140,000 | 140,000 | 126,000 | 126,000 | 112,000 | 112,000 |
| 3.16 | Forms Services | Forms created or revised | 800 | 960 | 880 | 800 | 800 | 720 | 720 | 640 | 640 |
| | | Requests for stock forms | 2,000 | 2,400 | 2,200 | 2,000 | 2,000 | 1,800 | 1,800 | 1,600 | 1,600 |
| 3.17 | IT Security Services | Incident investigations | 70 | 75 | 80 | 100 | 100 | 100 | 125 | 125 | 125 |
| 3.18 | Center Managed Services | Fan Mail kits & special items distributed | 33,000 | 31,000 | 31,000 | 32,000 | 33,000 | 33,000 | 31,000 | 26,400 | 26,400 |
| Unless otherwise noted, quantities indicate the number of times the service was performed. | | | | | | | | | | | |