

**STRATEGIC WARNING EXECUTION ANALYSIS REPLANNING SYSTEM
(SWEARS) TECHNICAL DIRECTION DOCUMENT**

1.0 Purpose. The purpose of the Strategic Warning Execution Analysis Replanning System (SWEARS) Technical Direction Document (TDD) is to provide direction for the ongoing SWEARS software operations and sustainment effort.

2.0 Requirements. The software maintenance contractor shall provide, during the period of performance of this contract, the system engineering and support services as specified in this TDD for daily operations and software maintenance of the SWEARS.

3.0 Objectives/Justification. The SWEARS requires a software maintenance contractor to perform the specific tasks identified in this TDD to meet the operational requirements as identified in the SWEARS Operational Requirements Document (ORD). SWEARS will be managed as a separate WBS project, under a separate CLIN, within the overall Program effort. In addition to the references listed below, the SWEARS project may receive direction affecting required capabilities through the Joint Strategic Capabilities Plan (JSCP), CJCSI 3110.04A (Nuclear Supplement to JSCP), Emergency Action Procedures (EAP)-CJCS Vols IR, VII, & VIII, the C2 Modernization ORD, and the NPES (SWEARS) ORD, none of which are releasable to the contractor.

3.1 References.

- 3.1.1 Nuclear Planning and Execution System (NPES) Required Operational Capability (ROC)
- 3.1.2 National Security Decision Directive (NSDD) 281
- 3.1.1 USSTRATCOM Technical Profile (STP)
- 3.1.2 ISPAN Production Schedule
- 3.1.3 Testing and Evaluation Master Plan (TEMP)
- 3.1.4 System Engineering Master Plan (SEMP)

4.0 Specific tasks.

4.1 SWEARS maintenance tasks. The software contractor shall perform the following maintenance work efforts:

- 4.1.1 Maintain utilities and tools required to support the current SWEARS suite of software.
- 4.1.2 Provide provisions to maintain reusability features.
- 4.1.3 Perform routine corrective, adaptive, and perfective maintenance on the SWEARS family of products to include the SIOP Data Loader, Nudet Detection System (NDS), and Spooler.

Nuclear Retention

4.2 Corrective maintenance tasks. The software contractor shall provide corrective software engineering support that includes the following work efforts:

- 4.2.1 Eliminate program deficiencies and errors uncovered by program users, testers, or developers.
- 4.2.2 Provide technical assistance in troubleshooting existing programs.

4.3 Adaptive maintenance tasks. The software contractor shall perform the following adaptive maintenance work efforts:

- 4.3.1 Provide adaptation support for adapting the SWEARS Computer Software Configuration Items (CSCIs) to support the SWEARS Battlestaff in day-to-day operations and overarching requirements directives (e.g., Operational Requirements, CJCSI, etc.).
- 4.3.2 Perform ongoing adaptive maintenance support consisting of the following activities:
 - 4.3.3 SWEARS database integration and sustainment maintenance.
 - 4.3.4 Existing external interface maintenance and enhancements.
 - 4.3.5 Implementation of minor functional enhancements.
 - 4.3.6 Adoption of new technologies as appropriate.
 - 4.3.7 Support the server and client operating system/applications as appropriate.

4.4 Perfective maintenance activities. The software contractor shall provide ongoing perfective software engineering to optimize the functionality of existing SWEARS software as directed by the SWEARS IPT, coordinated, as necessary, with the Systems IPT, to meet program users' needs. The perfective maintenance shall also include "ease of use" enhancements.

4.5 SWEARS software update tasks. The software contractor shall perform the following SWEARS software update tasks in accordance with the SWEARS IPT directions:

- 4.5.1 Incorporate planning guidance updates to support SIOP production.
- 4.5.2 Modify SWEARS functions on an annual basis to incorporate new planning guidance capabilities into the system.
- 4.5.3 Incorporate operator change requests and deficiencies into a minimum of 2 software releases per year for SWEARS and NSDL and not more than 1 release per year for Spooler, NDS, and Communications Simulator.
- 4.5.4 Support the installation and maintenance of emergency software releases as required.
- 4.5.5 Monitor progress on the functional evolution, planning methodology advancements, and system performance in the planning environment; and make recommendations to the SWEARS IPT to enhance SWEARS adaptability. Recommendations of this type will include:
 - 4.5.5.1 Minor Electronic Database (EDB)access methodology updates.
 - 4.5.5.2 Algorithm design and implementation updates.
 - 4.5.5.3 System utilities and tools.
- 4.5.6 Integrate GOTS and COTS products in the existing system baseline when available and applicable in lieu of developing and maintaining SWEARS unique software.
- 4.5.7 Integrate ISPAN adaptive planning tools. /

4.6 SWEARS interface tasks. The contractor shall manage, integrate, and ensure interoperability with all required external interfaces. These interfaces currently include Missile Graphics Planning System (MGPS), Probability of Damage

Calculator (PDCALC), and Submarine Launched Ballistic Missile (SLBM) worksheet applications. The evolution of these products shall be monitored by the software development and maintenance contractor and SWEARS upgrades shall be implemented and coordinated in accordance with the directions provided by the SWEARS IPT.

- 4.7 Software release maintenance task.** The software contractor shall provide configuration management support in managing the master library of software versions and releases, to include the associated documentation. Software accounting and control shall encompass migration tools, as well as incremental versions and releases of the operational and development SWEARS baselines. The contractor shall prepare the required software installation media and installation instructions. In addition, the contractor shall package and ship the software media and installation instructions IAW applicable government instructions, directives, and regulations.
- 4.8 Other maintenance and management support tasks.** The software contractor shall maintain the SWEARS maintenance environment and will provide NPES, NSDL, CSP Spooler, and NDS gateway system management support as directed by the SWEARS IPT.
- 4.9 System security accreditation support.** The contractor shall update, maintain, and deliver the required IAVA patches to all NPES sites. The contractor shall provide necessary documentation for the SSAA.
- 4.10 Network centric implementation support tasks.** The software maintenance contractor shall provide support to the SWEARS IPT on network centric environment implementation analysis/investigation, planning, and applicable implementation support.
- 4.11 Performance Period.** The contractors shall perform the specified tasks and generate the deliverable products during the performance period as identified in the SWEARS contract.
- 4.12 Product Deliveries.**
- 4.12.1 Documentation.** The software developer develops and delivers documentation in accordance with the contract Exhibit A, Contract Deliverables Requirements List (CDRL). Those items not included in Exhibit A may be provided in a contractor format acceptable to the government. The software developer may suggest, to the government, the tailoring (or elimination) of any document, or the use of CDRL A019 in place of the equivalent Exhibit A CDRL. Such recommendations shall occur in coordination with the SWEARS IPT, coordinated through the Systems IPT. Recommended actions, as agreed upon by the CL15 Program Management Office, the SWEARS IPT Functional Manager, the SWEARS IPT PM, and the software contractor, shall be implemented. The CDRL items required for the SWEARS software subsystem are listed below. Each shall be delivered separately from the program CDRL, until such time as the contractor proposes, and the

government agrees, to incorporate them into equivalent program (framework function) CDRLs.

- 4.12.1.1 System/Subsystem Specification (SSS)
- 4.12.1.2 Software Requirements Specification (SRS)
- 4.12.1.3 Software Test Plan (STP)
- 4.12.1.4 Software Test Description (STD)
- 4.12.1.5 Software Test Report (STR)
- 4.12.1.6 Software Version Description (SVD)
- 4.12.1.7 Software User Manual (SUM)
- 4.12.1.8 On-line Help
- 4.12.1.9 Trusted Facility Manual (TFM)
- 4.12.1.10 Software Quality Metrics
- 4.12.1.11 IPT and FM Working Group (FMWG) meeting minutes and reports
- 4.12.1.12 Studies, briefings, and reports, as required.

4.12.2 Software. The software contractor shall develop and deliver the incremental versions and releases of the operational and development software baselines for NPES, Spooler, NDS, and NSDL as directed by the SWEARS IPT and the approved software requirements specifications. The delivered software shall be tested in accordance with the test documentation identified in paragraph 6.1. This shall include but not be limited to:

- 4.12.2.1 Executables
- 4.12.2.2 Source code
- 4.12.2.3 Utilities

4.13 Program events and milestones. The software contract shall deliver the following products in accordance with the schedule:

- 4.13.1 SWEARS - March and September software and documentation delivery.
- 4.13.2 NSDL - March and September software and documentation delivery.
- 4.13.3 NDS - One release per year, to include documentation, determined by the IPT.
- 4.13.4 Spooler - Not more than one release per year determined by the IPT.

5.0 Manpower/resources estimates.

5.1 The following are the manpower estimates for the work efforts to support this effort:

- 5.1.1 Estimated 28 man-years of effort per year for the maintenance effort.
- 5.1.2 Estimated 8 man-years of effort per year for re-engineering and other task efforts.

5.2 SWEARS maintenance tasks manpower/resources estimates.

- 5.2.1 Corrective maintenance tasks manpower/resources estimates: 10 man years of effort per year.

5.2.2 Adaptive maintenance tasks manpower/resources estimates: 10 man years of effort per year

5.2.3 Perfective maintenance tasks manpower/resources estimates: 8 man-years of effort per year

5.3 SWEARS software tasks manpower/resources estimates. These estimates are included in the corrective, adaptive, and perfective maintenance estimates.

5.4 SWEARS interface tasks manpower/resources estimates. These estimates are included in the corrective, adaptive, and perfective maintenance estimates.

5.5 Software release maintenance task manpower/resources estimates: 2 man-year of effort per year.

5.6 Other maintenance and management support tasks manpower/resources estimates: 2 man-year of effort per year.

5.7 Network centric implementation support tasks manpower/resources estimates: 4 man-years of effort per year.

5.8 The historical and projected funding for this project is as outlined in Table 5.1, provided for informational purposes only.

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
2.289	2.294	5.012	4.991	5.237	5.007	3.078	3.268	3.977	4.086	3.705	3.895

6.0 Critical dependencies. The following is a list of critical software dependencies for this work effort:

6.1 Hazardous Prediction and Assessment Capability (HPAC) software from the Defense Threat Reduction Agency (DTRA).

6.2 MGPS software from ISPAN legacy contractor.

6.3 Overall ISPAN adaptive planning integration.

7.0 Risks. A risk management plan, which may be incorporated into program CDRL A006, should provide real time access to the contractor's risk items, their status, mitigation strategies, OPR's, and related information.