DATA ITEM DESCRIPTION

Form Approved
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Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. TITLE	2. IDENTIFICATION NUMBER
System Safety Hazard Analysis Report (SSHA)	DI-SAFT-80101B

3. DESCRIPTION/PURPOSE

3.1 Hazard Analyses are used to systematically identify and evaluate hazards, both real and potential, for their elimination or control. The System Safety Hazard Analysis Report documents these hazard analyses.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
950731	F/AFMC-SE		

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the content and format preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

7.2 Data items which relate to this DID are DI-SAFT-80102B, Safety Assessment Report; DI-SAFT-80105B, System Safety Program Progress Report; and DI-SAFT-80106B, Health Hazard Assessment Report.

7.3 This DID supersedes DI-SAFT-80101A.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		F7138

10. PREPARATION INSTRUCTIONS

10.1 Source document. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments and revisions, shall be as reflected in the contract.

10.2 Contents. Hazard analysis reports shall contain the following:

10.2.1 System description. This will consist of summary descriptions of the physical and functional characteristics of the system and its components. Reference to more detailed system and component descriptions, including specifications and detailed review documentation shall be supplied when such documentation is available. The capabilities, limitations and interdependence of these components shall be expressed in terms relevant to safety. The system and components shall be addressed in relation to its mission and its operational environment. System block diagrams or functional flow diagrams may be used to clarify system descriptions. Software and its role(s) shall be included in this description.

10.2.2 Data. This will consist of summaries of data used to determine the safety aspects of design features.

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11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

Block 10. Preparation Instructions (Continued)

10.2.3 Hazard analysis results. This will consist of a summary or a total listing of the results of hazard analysis. The following are the content and format requirements:

a. A summary of the results.

b. A listing of identified hazards, in narrative or matrix (sometimes called columnar or tabular) format, to include the following information:

(1) System/subsystem/unit. The particular part of the system that this analysis is concerned with. For example, if this item(s) applies to a radar system modulator, use "modulator." If there are several modulators in the system, be sure to clearly specify which one the analysis pertains to.

(2) Component(s) failure mode(s). All component failure modes which can result in a hazard. Failure modes generally answer the question of "how" it fails.

(3) Subsystem failure mode(s). The subsystem failure mode descriptions for the system hazard analysis (SHA) are similar to the component descriptions provided in the Sub-System Hazard Analysis (SSHA). However, emphasis is now placed on failure affecting interfacing subsystem operations.

(4) System component/phase. The particular phase/component that the analysis is concerned with. This could be a system, subsystem, component, software, operating/maintenance procedure or environmental condition.

(5) System event(s) phase. The configuration or phase of the mission the system is in when the hazard is encountered; for example, during maintenance, during flight, during pre-flight, full-power applied, etc., or it could be encountered in all system events.

(6) System operation description. A description of what is normally expected to occur as the result of operating the component/subsystem or performing the operating/maintenance action.

(7) Hazard description.

(a) A brief description of the hazard or hazardous material; for example, "Radiation leakage from radar set waveguide."

(b) A complete description of the potential/actual hazards inherent in the item being analyzed, or resulting from normal actions or equipment failure, or handling of hazardous materials.

(8) Hazard identification/indication. A description of operator/crew indications which include all means of identifying the hazard to operational/maintenance personnel.

(9) Effect of hazard. The detrimental effects which could be inflicted on the subsystem, system, other equipment, facilities or personnel, resulting from this hazard. Possible upstream and downstream effects shall also be described.

(10) Risk assessment. A risk assessment for each hazard (classification of severity and probability of occurrence). This is the assessment of the risk prior to taking any action to eliminate or control the hazard.

Block 10, Preparation Instructions (Continued)

(11) Recommended action. The recommended action required to eliminate or control the hazard. Sufficient technical detail is required in order to permit the design engineers and the customer to adequately develop and assess design criteria resulting from the analysis. Include alternative designs and life cycle cost impact where appropriate.

(12) Effect of recommended action. The effect of the recommended action on the assigned risk assessment. This is the risk assessment after taking action to eliminate or control each hazard. If the recommended action will result in cost/schedule/performance penalties to the extent that the contractor requires government approval prior to incorporation, then these considerations shall be addressed.

(13) Remarks. Any information relating to the hazard not covered in other blocks; for example, applicable documents, previous failure data on similar systems, or administrative directions.

(14) Status. The status of actions to implement the recommended, or other, hazard controls. The status shall include not only an indication of "open" or "closed," but also reference to the drawing(s), specification(s), procedure(s), etc., that support closure of the particular hazard.

(15) Caution and warning notes. A complete list of warnings, cautions, and procedures required in operating and maintenance manuals and for training courses.