

DATA ITEM DESCRIPTION			Form Approved OMB No 0704-0188 Exp Date Jun 30, 1986	
1 TITLE Range Safety Data for Dispensers (RSDD)		2. IDENTIFICATION NUMBER DI-SAFT-80180		
3 DESCRIPTION/PURPOSE The RSDD package provides the information on the launch vehicle, the submunitions, the desired trajectory, and the expected deviation from the desired trajectory. This data item meets the requirements of ADR 127-1, Chap 4.6.				
4 APPROVAL DATE (YYMMDD) 860612	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) F/AFSC-AD	6a. DTIC REQUIRED	6b. GIDEP REQUIRED	
7 APPLICATION/INTERRELATIONSHIP 7.1 This data item description contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement for this data included in the contract. 7.2 This data item is applicable to all contracts for dispensers and their submunitions issued at Armament Division or programs which plan to conduct testing using the Eglin Test Ranges.				
8 APPROVAL LIMITATION		9a. APPLICABLE FORMS	9b. AMSC NUMBER F3869	
10 PREPARATION INSTRUCTIONS 10.1 <u>Contract</u> . This data item is generated by the contract which contains a specific and discrete work task to develop this data product. 10.2 <u>RSDD Package</u> . The RSDD package shall contain technical information on the test item (dispenser and submunitions), theoretical trajectory and dispersion, and explosive warhead. Where applicable, previously furnished documentation may be referenced throughout the package. The RSDD shall contain a table of contents and glossary and shall include the following information: 10.2.1 <u>Introduction</u> . The nature of the program and scope and test phase covered by this submission. 10.2.2 <u>Vehicle Description</u> . General information describing the objects to be tested and a detailed scale vehicle drawing. Special emphasis shall be placed upon retardation devices, dispersion mechanisms and other functioning parts of the system. 10.2.2.1 General information concerning the purpose of the test, data to be obtained, description of objects to be tested, number of tests in the program, and proposed testing dates. 10.2.2.2 Scaled diagram of vehicle. 10.2.2.3 Latitude and longitude of the desired drop or launch point and impact or target point.				

DI- SAFT-80180

7. APPLICATION/INTERRELATIONSHIP (CONT'D)

7.3. This data item supersedes DI-R-30523.

10. PREPARATION INSTRUCTIONS (CONT'D)

10.2.2.4 Coefficient of drag (C_D) vs Mach number, giving reference area (A) and weight (W) for each object being dropped or tested. If the body descends on a parachute or other device, drag data both before and after chute opening shall be provided. For pieces which can possibly stabilize during free flight, drag coefficient curves shall be provided for the stability angle of attack. If the stability angle of attack is other than zero degrees, both a coefficient of lift (C_L) vs Mach number and C_D vs Mach number curve shall be provided.

10.2.2.5 Launch aircraft data. For air-dropped bodies, the following launch or release parameters shall be provided:

10.2.2.5.1 The desired launch point preferably in geodetic latitude, longitude, altitude, and launch/flight azimuth.

10.2.2.5.2 Launch elevation angle or aircraft flight path angle at launch.

10.2.2.5.3 The type of launch aircraft to be used.

10.2.2.5.4 Launch velocity in feet or meters per second or mach number.

10.2.2.5.5 Launch altitude in feet or meters.

10.2.2.5.6 A description of how the aircraft flight path angle and launch azimuth will be determined for which launch or release.

10.2.2.6 Impact dispersion data. Estimates of the three-sigma downrange and crossrange impact dispersions are required for each impacting body. A brief discussion of the computation methods and assumptions shall be included.

10.2.2.7 Wind data. The effects of a headwind, tailwind, and crosswind on the impact point location shall be given in terms of displacement distance (NM/ft/KM) per knot (ft/sec or KM/Hr) of wind.

10.2.3 Trajectory Data. Include the desired launch conditions, a graph or table of the nominal trajectory, a graph or table of the worse case (i.e., if a malfunction occurred), trajectory, impact dispersion data, and a graph or table of wind effects on the test item(s).

10.2.3.1 A graph of the nominal test trajectory plotting altitude (ft/M) vs downrange distance (ft/KM/NM). Separate graphs shall be provided for each planned drop altitude or test condition. Timing marks (sec), including the impact time, shall be indicated along the trajectory.

DI-SAFT-80180

10. PREPARATION INSTRUCTIONS (CONT'D)

10.2.3.2 The maximum horizontal distance which can be traveled by the test object from the drop or launch point to impact.

10.2.3.3 If the test object descends on a parachute, an altitude (ft/M) vs range (ft/KM/NM) plot shall be provided for those cases where the chute fails to open.

10.2.4 Ordnance Systems Data. A description of the explosive:

10.2.4.1 Manufacturer's part number, chemical composition, and characteristics.

10.2.4.2 Physical location, function, description of operation, and mechanical electrical drawings.

10.2.4.3 Bridge wire resistance and tolerance.

10.2.4.4 Power and current values for maximum no-fire, minimum-fire, and all-fire for all detonators/initiators. For exploding bridge wire (EBW) systems, information on capacitor charging, discharging, and readout, and EBW dudding, firing, and no-fire characteristics are required.

10.2.4.5 RF susceptibility. Data indicating that electro-explosive devices (EEDs) will be insensitive to electromagnetic radiation to the maximum extent practical. (Reference AFR 127-100, paragraph 6-22, and guidelines presented in AFSC Design Handbook 2-5, Chapter 4, Section 4A, design note 4A1, paragraph 3.4.)

10.2.4.6 Complete electrical schematics of all ordnance initiating circuitry. This is to include all control circuits, safe/arm circuits, voltage source resistance/continuity circuits, programmers/sequencers, TM pick-off circuits, all connectors (with designation), and designation of ordnance end item.

10.2.4.7 Drawings, sufficient in size, showing location of access ports through which shorting and physical removal of each ordnance item can be accomplished, including type, size, and quantity of hardware involved in gaining access.

10.2.4.8 Checkout and test specifications, handling, installation and electrical connection procedures, and recommended render safe procedures.

10.2.4.9 The identity and location of ordnance and radioactive material requiring payload and stage de-mating to safe and remove. The location of hazardous pressur vessels, emergency bleed points, and all other hazards which might be encountered in safing and removing ordnance.

DI-SAFT-80180

10. PREPARATION INSTRUCTIONS (CONT'D)

10.2.4.10 All changes or proposed modifications of previously evaluated items.

10.2.4.11 Validation procedures of electro-explosive devices.

10.2.4.12 Military hazard class (Reference AFR 127-100 and TO 11A-1-47).

10.2.4.13 A list of all RF radiating sources aboard the vehicle and within the launch complex. Include the following information concerning each source:

10.2.4.14 Transmitter power.

10.2.4.15 Frequency.

10.2.4.16 Antenna gain and location.

10.2.4.17 Duty cycle, pulse repetition rate, pulse duration.

10.2.4.18 Antenna dimensions.

10.2.4.19 Vertical and horizontal beam width.

10.2.5 Test Data. Documentation of the following subjects shall be included for test items as indicated below:

(a) Color Coding - Description of Markings IAW MTL-STD-709 or T.O. 11A-1-53 .

(b) Recovery of Test Residue - Plans for recovery.

10.2.6 Fuze Description. Nomenclature, physical characteristics, nominal and planned settings (time from release to event, proximity, height of burst), arming time, safety feature to prevent premature arming and functioning.