DATA ITEM DESCRIPTION
Title: STORE SEPARATION METHODOLOGY PLAN

Number: DI-SESS-82230
AMSC Number: N9959
DTIC Applicable: N/A
Preparing Activity: AS
Applicable Forms: N/A

Approval Date: 20180710
Limitation: N/A
GIDEP Applicable: No
Project Number: SESS-2018-036

Use/relationship: The Store Separation Methodology Plan will be used to establish the contractor's plan for accomplishing store separation analysis, predictions, and recommendations identified in the MIL-HDBK-1763, Aircraft/Stores Compatibility: Systems Engineering Data Requirements and Test Procedures.

This Data Item Description (DID) contains the format, content, and intended use information for the data product resulting from the work task described by the contract SOW.

Requirements:

1. Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.

2. Format. The Store Separation Methodology Plan shall be in the contractor's format.

3. Content. The Store Separation Methodology Plan shall contain the following:

3.1 Freestream Database: This section shall describe the development of a freestream database to include the method of data collection, data ranges, data smoothing, and the use of tie-in runs.

3.2 Aircraft Proximity (Grid) Database: This section shall describe the development of an aircraft proximity (grid) database to include the method of data collection, database build-up procedure, symmetry assumptions, methods used, and sample comparison plots.

3.3 Six-Degree-Of-Freedom (6DOF) Model:

3.3.1 6DOF Model Development: This section shall describe the development of the 6DOF model to include use of data inputs, such as freestream database, grid database, ejector modeling, and mass property information, to create the integrated trajectory modeling capability.

3.3.2 6DOF Predictions to CTS Trajectories: This section shall describe the generation of trajectories to include database comparison, verification of critical 6DOF input data, validation of database assumptions, adjustments made to the grid database, and sample comparison plots.

3.4 Flight Envelope Analysis: This section shall describe the analysis of the flight envelope to include the range of flight conditions, store configurations, aircraft configurations, assumptions and interpolation methods, and sample flight condition plots.

3.5 Miss Distance Analysis and Predictions: This section shall describe the analysis of miss distances in the

flight envelope to include the method of calculation and assumptions, sample miss distance plots, and the definition of critical minimum miss distance criteria.

3.6 Recommendation of Flight Test Points: This section shall describe the recommendations of flight test points to include the method of comparison for flight conditions and criteria for test point selection.

3.7 Recommendation of Safe and Acceptable Separation Envelope: This section shall describe the generation of the clearance envelope to include the definition of safe and acceptable separation criteria, use of miss distance conclusions, method of envelope generation, and sample clearance envelope plots.

End of DI-SESS-82230