

*Institute of Environmental Sciences and Technology*

**IEST-RP-CC046.1**

Contamination Control Division  
Recommended Practice 046.1

**Controlled Environments  
(Aerospace, Non-cleanroom)**



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This Recommended Practice was prepared by and is under the jurisdiction of Working Group CC046 of the IEST Contamination Control Division.

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Second printing, July 2017

ISBN: 978-1-937280-10-9 (Electronic Format)

ISBN: 978-1-937280-11-6 (Print Format)

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### CONTENTS

#### SECTION

1	SCOPE AND LIMITATIONS .....	7
2	REFERENCES .....	7
3	TERMS AND DEFINITIONS .....	8
4	BACKGROUND AND PURPOSE .....	10
5	CONTAMINATION AND FOD CONTROL PROGRAM .....	10
6	CLASSIFICATION OF CONTROLLED ENVIRONMENTS .....	10
7	FACILITIES REQUIREMENTS .....	10
8	EQUIPMENT REQUIREMENTS .....	11
9	PROCESS REQUIREMENTS .....	12
10	OPERATION OF CONTROLLED AREAS .....	12
11	PRODUCT CLEANLINESS .....	15
12	MONITORING OF CONTROLLED AREAS AND RECORD KEEPING .....	15

#### TABLE

1	RECORD OF MAINTENANCE PROCEDURES .....	13
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### 1 SCOPE AND LIMITATIONS

#### 1.1 Scope

This Recommended Practice (RP) provides non-cleanroom contamination control criteria to support successful performance of products and associated subassemblies, targeted for suppliers of aerospace products. The criteria discussed are intended to assist manufacturers in implementing production methods and process controls, including minimum facility environmental controls, not including room airborne particle fallout quantification. This includes production operations from piece-part acquisition through delivery of the final product. This RP is not associated with cleanroom requirements or related documentation.

#### 1.2 Limitations

This document provides a minimum set of requirements and controls for processes and facilities associated with the assembly, integration, and testing of high-reliability aerospace products that are not required to be produced in cleanrooms. These requirements may be tailored as appropriate for specific products and processes. However, tailoring must be approved in writing by the contracting organization before work is performed. More stringent contamination control requirements imposed by the contracting documentation take precedence over this document.

This document does not address requirements and control features for regulated industries (e.g., pharmaceutical, food, medical). Where the requirements stated in this RP conflict with any requirement in a specification referenced in this RP, the requirements of this RP should apply.

### 2 REFERENCES

The cited editions of the following documents are incorporated into this RP to the extent specified herein. Subsequent revisions of these publications do not automatically supersede the cited editions. Users should investigate the applicability of revised editions of the references.

#### 2.1 American National Standards Institute (ANSI)

*ANSI/ESD S.20.20-2007: Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)*

#### 2.2 American Society for Testing and Materials (ASTM)

*ASTM E595: Standard Test Method for Total Mass Loss and Collected Volatile Condensable Materials from Outgassing in a Vacuum Environment*

*ASTM E1548: Standard Practice for Preparation of Aerospace Contamination Control Plans*

#### 2.3 Federal and Military Documents

*MIL-HDBK-406: Contamination Control Technology: Cleaning Materials for Precision Pre-Cleaning and Use in Cleanrooms and Clean Work Stations*

*MIL-HDBK-407: Contamination Control Technology: Precision Cleaning Methods and Procedures*

*TO 00-25-203: Contamination Control of Aerospace Facilities, U.S. Air Force*