



## **DD Host Test and Registration Procedure**

HCF\_PROC-016, Revision 1.1

Release Date: 23 July 2013

**Release Date: 23 July 2013**

Document Distribution / Maintenance Control / Document Approval

To obtain information concerning document distribution control, maintenance control and document approval, please contact the HART Communication Foundation at the address shown below.

**Copyright** © 2013, 2012, 2010 HART Communication Foundation

This document contains copyrighted material and may not be reproduced in any fashion without the written permission of the HART Communication Foundation.

**Trademark Information**

HART® is a registered trademark of the HART Communication Foundation, Austin, Texas, USA. Any use of the term HART hereafter in this document, or in any document referenced by this document, implies the registered trademark. *WirelessHART*® is a trademark of the HART Communication Foundation. All other trademarks used in this or referenced documents are trademarks of their respective companies. For more information contact the HCF Staff at the address below.



Attention: Foundation Director  
HART Communication Foundation  
9390 Research Boulevard  
Suite I-350  
Austin, TX 78759, USA

Voice: (512) 794-0369  
FAX: (512) 794-3904

<http://www.hartcomm.org>

**Intellectual Property Rights**

The HCF does not knowingly use or incorporate any information or data into the HART Protocol Standards which the HCF does not own or have lawful rights to use. Should the HCF receive any notification regarding the existence of any conflicting Private IPR, the HCF will review the disclosure and either (a) determine there is no conflict; (b) resolve the conflict with the IPR owner; or (c) modify this specification to remove the conflicting requirement. In no case does the HCF encourage implementors to infringe on any individual's or organization's IPR.

## Table of Contents

Preface .....	5
Introduction .....	7
1. Scope .....	9
1.1 Registration Policy .....	9
2. References .....	10
2.1 HART Communications Protocol Specification .....	10
2.2 HART Device Description Language Specification .....	10
2.3 Other Relevant HCF Documents .....	10
2.4 Relevant Non-HCF Reference Documents .....	11
3. Definitions, Acronyms And Symbols .....	11
3.1 Definitions .....	11
3.2 Acronyms and Symbols .....	11
4. Device Registration Packages .....	12
4.1 Registration Requirements .....	12
5. Required DD Host Tests .....	13
5.1 <i>DD Host: Basic Operations Test Specification</i> .....	13
5.1.1 Command Dispatching .....	13
5.1.2 Forward Compatibility Test .....	13
5.1.3 Basic User Interface Test .....	13
5.2 <i>DD Host: User Interface Test Specification</i> .....	13
5.2.1 Menu Style Entry Test .....	13
5.2.2 Menu Style(Defaults)Test .....	13
5.2.3 Menu Style Test (6 level Complex Test) .....	13
5.2.4 Menu Layout Test .....	14
5.2.5 Method Environment Test .....	14
5.2.6 Edit Display Test .....	14
5.3 <i>DD Host: Data Modeling Test Specification</i> .....	14
5.3.1 Variable Test .....	14
5.3.2 Collection Test .....	14
5.3.3 Reference Array Test .....	14
5.3.4 Value Array Test .....	14
5.3.5 List Test .....	14
5.3.6 File Test .....	14
5.3.7 Image Test .....	15
5.3.8 Grid Test .....	15

5.3.9	Chart Test .....	15
5.3.10	Graph Test .....	15
5.4	<i>DD Host: Methods Test Specification</i> .....	15
5.4.1	Method Abort Builtin Test .....	15
5.4.2	Method UI Builtin Test .....	15
5.4.3	Method DD Variable Builtin Test .....	15
5.4.4	Method Scaling Builtin Test .....	15
5.4.5	Method Communication Builtin Test .....	15
5.4.6	Method Math Builtin Test .....	15
5.4.7	Method String Builtin Test .....	16
5.4.8	Method Time Builtin Test .....	16
5.5	Additional DD Host Tests .....	16
5.5.1	Physical Layer Tests .....	16
5.5.2	Token-Passing Master Data-Link Layer Tests .....	16
5.5.3	WirelessHART-Based DD Hosts .....	16
5.5.4	Complex Reference Test .....	16
5.5.5	Critical Devices Test .....	16
6.	Reports Of Product Non-Conformance .....	17
Annex A.	Product Registration Form .....	18
Annex B.	Revision History .....	19
B.1.	Revision 1.1 .....	19
B.2.	Revision 1.0 .....	19

## **Preface**

This preface is included for informational purposes only.

The guide is part of the overall HCF Quality Assurance, and Registration Program.

The DD Host Test and Registration Procedure ensures that DD Hosts which are registered with the HART Communication Foundation meet the requirements outlined in the DDL Specifications. All DD hosts must be validated against the Specification requirements.

This test procedure outlines the procedures for testing a DD Host against the DDL Specification requirements. This procedure is intended to guide members through the testing process. All DD Hosts must be tested by the supplier prior to submittal to the HCF for testing.

Testing by the HCF validates that the DD Host meets DDL requirements. Manufacturers successfully completing the registration process will be provided with and are encouraged to use the “HART Registered” mark on their registered products.

Both Manufacturers and Users rely on the HCF to confirm that the Protocol requirements are implemented in a conforming way, thus ensuring quality and interoperability of all devices and hosts that claim to be HART compliant.

EDDL Technology is an essential element Field Device Integration (FDI) Host Applications and Device Packages. Consequently, FDI Host Applications must successfully complete the test procedures and registration requirement in the document. Successful demonstration of compliance to EDDL requirements, while a subset of the overall FDI Host conformance assessment, is a prerequisite for establishing FDI Host Conformance.



## Introduction

This introduction is included for informational purposes only.

The Enhanced DDL capabilities of the HART specifications marks a significant enhancement to the HART technology. It is essential that all manufacturers ensure their DD hosts are compliant to the DDL Specifications, passing all conformance tests and registering products with the Foundation.

The DD enabled Universal Host Application provides the maximum support for HART devices of any Host. "Universal Hosts" must support all capabilities of all HART-enabled field devices. To be classified as a "Universal Host", the DD Host must support the encoded EDD files registered in the HCF DD Library without requiring any additional files, modification or other information.

The DDL Host Test Program verifies compliance of EDDL-enabled Host Products to the HART Device Description Language Standard (HCF\_SPEC-500/IEC61804-HART Profile). The Test Program verifies compliance and ensures the interoperability expected by users of EDD-enabled products. The actual test requirements are outlined in the EDDL/DDL Host Test (HCF\_KIT-228) and the Test Specifications:

- *DD Host: Basic Operations Test Specification* (HCF\_TEST-510)
- *DD Host: User Interface Test Specification* (HCF\_TEST-511)
- *DD Host: Data Modeling Test Specification* (HCF\_TEST-512)
- *DD Host: Methods Test Specification* (HCF\_TEST-513)

Manufacturers must perform the tests and certify the results before submitting the DD Host to the HCF for independent testing. A manufacturer may elect to contract with the HCF to perform the tests. After completing the registration procedure manufacturers are granted permission to use a special "HART Registered" mark, their product is listed on the HCF website and they are provided a Certificate of Registration.

Registration of a DD Host assures end users that the product has been tested and validated against the specifications.





## 1. SCOPE

This document defines the procedures and requirements for testing, validation and registration of DD-enabled Host Applications. This Procedure is designed to assure the high standards of interoperability and performance expected of HART products in the field. All DD Hosts claiming to be HART compatible must successfully complete the testing, validation and registration process defined in this Procedure. The testing, validation and registration of DD Hosts must adhere to the requirements and procedures in this document.

HART is a trademark of HART Communication Foundation (HCF). The HCF is committed to protecting and ensuring the integrity of its trademarks. Products that do not comply with HART Communication Protocol requirements and HART DDL requirements will not be allowed to represent themselves as HART compatible.

This Procedure:

- Provides an overview of the DD Hosts Specific test specifications;
- Identifies additional tests that may need to be performed (e.g., Physical Layer testing);
- Defines the procedure that must be followed in registering a DD Host;
- Specifies the deliverables that must be included in the Registration Package.

### 1.1 Registration Policy

HCF Board of Directors set timeline for testing and registration

Process industry users have selected HART technology as their standard for sensor level field communication. Every year 2 to 3 million HART enabled devices are shipped for new projects or to replace existing 4-20mA only devices.

Due to the volume of HART-enabled Field Devices being produced and installed, the number and diversity of DD-enabled Host Applications is growing. DD-enabled Host Applications include (for example) Handhelds, calibrators, simple configuration Applications and complete Plant Asset Management (PAM) systems. Consequently it is imperative that DD Host Registration program be established to ensure a consistent user experience and to eliminate the need for Field Device developers to provide a different DD for different hosts.

In recognition of this trend, the HCF Board of Directors passed a resolution increasing the strength of the HCF Compliance Testing and DD Host Registration program to include Mandatory Testing and Registration with independent verification by HCF. In addition, host systems submitted for registration shall support HART 5, 6 and 7. The program DD Host Registrations shall

- Be accepted beginning upon release of the following four DD Host Test Specifications:

*DD Host: Basic Operations Test Specification. HCF\_TEST-510*

*DD Host: User Interface Test Specification. HCF\_TEST-511*

*DD Host: Data Modeling Test Specification. HCF\_TEST-512*

*DD Host: Methods Test Specification. HCF\_TEST-513*

- Become mandatory on 01 January 2015

## **2. REFERENCES**

### **2.1 HART Communications Protocol Specification**

These documents published by the HART Communication Foundation are referenced throughout this specification:

*HART Communication Protocol Specification.* HCF\_SPEC-013

### **2.2 HART Device Description Language Specification**

These documents published by the HART Communication Foundation are referenced throughout this specification:

*Device Description Language Specification.* HCF\_SPEC-500

*Device Description Language - Method Builtins Library Specification.* HCF\_SPEC-501

### **2.3 Other Relevant HCF Documents**

The following HCF documents supplement the HART Communication Protocol Specifications in defining test procedures and requirements relevant to the testing, validation and registration of WirelessHART devices.

*DD Host: Basic Operations Test Specification.* HCF\_TEST-510

*DD Host: User Interface Test Specification.* HCF\_TEST-511

*DD Host: Data Modeling Test Specification.* HCF\_TEST-512

*DD Host: Methods Test Specification.* HCF\_TEST-513

*HCF Quality Assurance and Device Registration Procedure.* HCF\_PROC-012

*FSK Physical Layer Test Specification.* HCF\_TEST-002

*WirelessHART Device Registration Procedure.* HCF\_PROC-014

*Token-Passing Master Data Link Layer Test Specification.* HCF\_TEST-005

## 2.4 Relevant Non-HCF Reference Documents

The following are applicable IEC documents:

Function Blocks (FB) For Process Control –Part 3: Electronic Device Description Language (EDDL).  
IEC61804-3 (HART Profile)

## 3. DEFINITIONS, ACRONYMS AND SYMBOLS

### 3.1 Definitions

<b>DD Developer</b>	The writer of the DD.
<b>DD Host Application</b>	A host application utilizing DDs and understanding the DDL
<b>Device DD</b>	A DD that models a device.
<b>Device Description</b>	A text-based object model of a device written using the Device Description Language.
<b>Host Application</b>	A computer program interacting with a device and providing functionality to the user. May include master functions or depend on others for the master function.
<b>Master</b>	A Data Link Layer entity that initiates communications and controls access to the HART Physical Layer.

### 3.2 Acronyms and Symbols

The following tests and its abbreviations will be used in the tests below

<b>DUT</b>	<b>Device Under Test</b> , except when using wired FSK maintenance link (e.g., when using wireless TDMA data link or no communications at all)
<b>DD</b>	Device Description
<b>DDL</b>	Device Description Language
<b>HCF</b>	<b>HART Communication Foundation</b>

## **4. DEVICE REGISTRATION PACKAGES**

System components that can be sold individually must be registered separately. Products sold as a system may be registered as a system.

A registration form (ANNEX A) shall be supplied affirming HART compliance for each product being registered. Test results providing objective evidence of adherence to the Protocol shall be provided with all product registrations. Specific registration package content is as follows.

### **4.1 Registration Requirements**

DD-enabled Hosts must meet all Host Application requirements outlined by the test specifications and must support all encoded DDs distributed from the HCF DD Library. The EDDs shall not be modified and no additional files shall be required by a compliant EDD Host Application.

A EDD Host Application Registration Package must consist of:

- Product registration form (see ANNEX A);
- The completed, HCF approved test package including all sheets of all spreadsheets/test records (see HCF\_KIT-228);
- A working device (if required), documentation and software to reproduce the tests;
- The test data sheets (spreadsheets), records, and reports for the product;

A demonstration of DD Host Application compliance must be witnessed by Foundation personnel prior to finalization of the registration. HCF Personnel shall, during the course of this demonstration, randomly reproduce a subset of the test results to audit the Host Application compliance results.

## **5. REQUIRED DD HOST TESTS**

### **5.1 *DD Host: Basic Operations Test Specification***

The first major portion of DD host testing is to check that the host is capable of the basic functionality necessary in order to send and receive HART commands, load the proper device description, and minimally interpret each of the basic DD constructs specified in HCF DDL Spec 500 (A). These basic capabilities are necessary in order to conduct the more detailed testing specified in section 5. The 3 categories of Basic DDL testing are described below:

#### **5.1.1 Command Dispatching**

The purpose of the command dispatching test is to verify that the host has basic hart command knowledge. To execute this test, open the Command Dispatch Test Procedure and perform the test steps as described.

#### **5.1.2 Forward Compatibility Test**

The purpose of the forward compatibility test is to verify that the host is able to load the correct DD for a given device under various conditions. To execute this test, open the Forward Compatibility Test Procedure and perform the test steps as described.

#### **5.1.3 Basic User Interface Test**

The purpose of the basic user interface test is to verify that the host is able to successfully display each of the basic DD constructs at a minimum level of complexity. If a host does not fully support a certain DD construct, it is acceptable (at this level of testing) for the host to indicate non-support of the DD item, but must at a minimum display the label of the item. The detailed DD testing described in section 5 will add criteria for testing each DD construct to its fullest detail. To execute this test, open the Basic User Interface Test Procedure and perform the test steps as described.

### **5.2 *DD Host: User Interface Test Specification***

After basic DD testing has proven the correct basic functionality of the DD host, the detailed DD testing is performed. DD detailed testing will verify proper operation of all constructs of the DD language and any applicable default values as specified in HCF DDL Spec 500 (A). The categories of DDL Detailed testing are described below:

#### **5.2.1 Menu Style Entry Test**

The purpose of the menu style entry test is to verify that the host properly displays the defined styles for the entry (root) menus defined in the DD. In some cases, the host must render the root menu in a format other than the style explicitly defined in the DD. To execute this test, open the Menu Style Entry Test Procedure and perform the test steps as described.

#### **5.2.2 Menu Style(Defaults)Test**

The purpose of the menu style default test is to verify that the host properly displays child menus using the proper style when the style of the child menu is not explicitly defined in the DD. To execute this test, open the Menu Style Defaults Test Procedure and perform the test steps as described.

#### **5.2.3 Menu Style Test (6 level Complex Test)**

The purpose of the complex menu style test is to verify that the host properly displays menus and child menus using the proper styles. In some cases, the host must render the menu using a style other than the explicitly defined style in the DD. To execute this test, open the Menu Style Test Procedure and perform the test steps as described.

#### **5.2.4 Menu Layout Test**

The purpose of the menu layout test is to verify that the host properly organizes items on graphical menus and child menus defined in the DD. This test does not apply to limited display hosts that handle only the TABLE style. To execute this test, open the Menu Layout Test Procedure and perform the test steps as described.

#### **5.2.5 Method Environment Test**

The purpose of the method environment test is to verify that the host creates the proper environment for which to execute a DD method. To execute this test, open the Method Environment Test Procedure and perform the test steps as described.

#### **5.2.6 Edit Display Test**

The purpose of the edit display test is to verify that the host properly handles the detailed attributes associated with Edit Displays. The basic functionality of edit displays is verified in the Basic User Interface test, and Pre/Post actions for edit displays are handled in the Method Environment test. Additional test cases centered around the EDIT\_DISPLAY functionality may be defined in future versions of the test specification, and will be added to this section.

### **5.3 DD Host: Data Modeling Test Specification**

The purpose of the data management test is to verify that the detailed characteristics of data management in the DD host meets the specifications. The Basic User Interface testing in section 4 touches on the most basic handling of the various DD data types. The test cases in this section will verify more detailed aspects of the various DD items.

#### **5.3.1 Variable Test**

The purpose of the variable test is to verify that the host properly implements the various attributes for DD variables. To execute this test, open the Variable Test Procedure and perform the test steps as described.

#### **5.3.2 Collection Test**

The purpose of the collection test is to verify that the host properly implements all of the attributes of a DD collection properly. To execute this test, open the Collection Test Procedure and perform the test steps as described.

#### **5.3.3 Reference Array Test**

The purpose of the reference array test is to verify that the host properly implements all of the attributes and functionality of a reference array properly. To execute this test, open the Reference Array Test Procedure and perform the test steps as described.

#### **5.3.4 Value Array Test**

The purpose of the value array test is to ensure that the host properly implements all of the attributes and functionality of a value array properly. To execute this test, open the Value Array Test Procedure and perform the test steps as described.

#### **5.3.5 List Test**

The purpose of the list test is to verify that the host properly implements all of the attributes and functionality of lists properly. To execute this test, open the List Test Procedure and perform the test steps as described.

#### **5.3.6 File Test**

The purpose of the file test is to verify that the host properly implements all of the attributes and functionality of files properly. To execute this test, open the File Test Procedure and perform the test steps as described.

#### **5.3.7 Image Test**

The purpose of the image test is to verify that the host properly implements all of the attributes and functionality of images properly. To execute this test, open the Image Test Procedure and perform the test steps as described.

#### **5.3.8 Grid Test**

The purpose of the grid test is to verify that the host properly implements all of the attributes and functionality of grids properly. To execute this test, open the Grid Test Procedure and perform the test steps as described.

#### **5.3.9 Chart Test**

The purpose of the chart test is to verify that the host properly implements all of the attributes and functionality of charts properly. To execute this test, open the Chart Test Procedure and perform the test steps as described.

#### **5.3.10 Graph Test**

The purpose of the graph test is to verify that the host properly implements all of the attributes and functionality of graphs properly. To execute this test, open the Graph Test Procedure and perform the test steps as described.

### **5.4 DD Host: Methods Test Specification**

The purpose of the method built-in test is to verify that the host properly implements all of the method built-ins properly. At this time, only the most commonly used built-ins will be validated. Verification of more method built-ins will be added in the future. The following criteria will be evaluated in this category:

#### **5.4.1 Method Abort Builtin Test**

The purpose of the Method Abort Builtin test is to verify that all the aspects of executing and manipulating abort methods are handled properly. To execute this test, open the Method Abort Builtin Test Procedure and perform the test steps as described.

#### **5.4.2 Method UI Builtin Test**

The purpose of the Method UI Builtin test is to verify that all aspects of executing and manipulating the built-ins related to user interface are handled properly. To execute this test, open the Method UI Builtin Test Procedure and perform the test steps as described.

#### **5.4.3 Method DD Variable Builtin Test**

The purpose of the Method DD Variable Builtin test is to verify that all aspects of executing and manipulating the built-ins related to DD variables are handled properly. To execute this test, open the Method DD Variable Builtin Test Procedure and perform the test steps as described.

#### **5.4.4 Method Scaling Builtin Test**

The purpose of the Method Scaling Builtin test is to verify that all aspects of executing and manipulating the built-ins related to DD scaling functions are handled properly. To execute this test, open the Method Scaling Builtin Test Procedure and perform the test steps as described.

#### **5.4.5 Method Communication Builtin Test**

The purpose of the Method Communication Builtin test is to verify that all aspects of executing and manipulating the built-ins related to device communication functions are handled properly. To execute this test, open the Method Communication Builtin Test Procedure and perform the test steps as described.

#### **5.4.6 Method Math Builtin Test**

The purpose of the Method Math Builtin test is to verify that all aspects of executing and manipulating the built-ins related to mathematical computation functions are handled properly. To execute this test, open the Method Math Builtin Test Procedure and perform the test steps as described. This test will be defined in the future.

#### **5.4.7 Method String Builtin Test**

The purpose of the Method String Builtin test is to verify that all aspects of executing and manipulating the built-ins related to string handling functions are handled properly. To execute this test, open the Method String Builtin Test Procedure and perform the test steps as described. This test will be defined in the future.

#### **5.4.8 Method Time Builtin Test**

The purpose of the Method Time Builtin test is to verify that all aspects of executing and manipulating the built-ins related to date and time functions are handled properly. To execute this test, open the Method Time Builtin Test Procedure and perform the test steps as described. This test will be defined in the future.

### **5.5 Additional DD Host Tests**

#### **5.5.1 Physical Layer Tests**

All DD hosts must be registered either by using a Register Physical Layer Interface or (if the Physical Layer connection is embedded in the DD Host) by completing the appropriate Physical Layer tests. For FSK-based Hosts the test found in the *FSK Physical Layer Test Specification* must be performed.

#### **5.5.2 Token-Passing Master Data-Link Layer Tests**

For DD Hosts supporting the FSK, PSK, or RS-485 Physical Layers, the test found in the *Token-Passing Master Data Link Layer Test Specification* must be performed. Since test automation does not exist for this test specifications the equipment and software used to perform these test must be identified and made available to the HCF. In addition, Analys log files must be provided as part of the test documentation.

#### **5.5.3 WirelessHART-Based DD Hosts**

WirelessHART-based DD Hosts must demonstrate compliance with all WirelessHART Requirements. Prior to performing DD Host testing, WirelessHART registration must be completed (see *WirelessHART Device Registration Procedure*)

#### **5.5.4 Complex Reference Test**

The purpose of the complex reference test is to verify that the host properly handles complex references to DD items (e.g. List of Collection of Lists, etc). Each of the possible DD reference tests have been defined individually in other sections. This section deals with nesting these references in ever complex levels of indirection. Complex reference tests will be defined in the future.

#### **5.5.5 Critical Devices Test**

The purpose of the critical device test is to verify that the host properly handles DDs for field devices that have been identified as being more complex than typical field devices. All aspects of the DDL host testing have been defined individually in other sections. This section deals with combining multiple DD items (some of more complex nature than others) into a single DD to verify that the host can handle the DD in total. Complex device DDs will be identified in the future.



## **6. REPORTS OF PRODUCT NON-CONFORMANCE**

In the event that HART Communication Foundation receives information that a product asserted by a manufacturer as compliant to the Protocol does not comply with the HART specifications, the Foundation will notify the manufacturer and present any data substantiating the claim. The manufacturer will have 60 days to respond to the Foundation. Based on the response from the manufacturer the HCF Executive Committee will make a recommendation to the Board of Directors.

The recommendation would be to either remove the Device Registration from the HCF files or not to take further action. Should a manufacturer indicate that it is not willing to make the necessary changes to the product found to be non-conformant; the issue will be sent to the Foundation Board of Directors for further action.

In such case, if the Board reasonably decides that the product is not conforming to the HART Protocol and conformance test specifications, upon such Board decision the manufacturer agrees; (a) to cease all representation that the product is HART conforming, (b) that HCF may remove the Host Registration from its files, and (c) that the Board may take other actions as the Board deems necessary. The Foundation retains the right to prohibit any company from claiming conformance, if products are found to be non-conforming, in order to protect the HART trademark.

## ANNEX A. PRODUCT REGISTRATION FORM

### 1. Manufacturer and Device Information

Manufacturer Name:			
Product Name/Model:		HART Protocol Revision:	
Product Application:			
File Format Revision:			
Software Revision:			

### 2. Type of Device and Tests Required

Product Test Requirements	Physical	TPDLLTPD	Application	DDL*	Submitted Device Type
Master/Host/DD Application	✓	✓	✓	✓	<input type="checkbox"/>

### 3. Confirm tests conducted and attach data sheets, log files and device specific documentation.

The manufacturer certifies that product being registered has met all requirements outlined in the HART Protocol specification and has passed the appropriate tests for the type of device being submitted. All test documentation must accompany the device being registered, this form and copy of the purchase order covering registration costs. Failure to provide appropriate documentation/files will result in registration delay.

Tests Completed		Specification No.	Comments
<input type="checkbox"/>	Physical Layer	HCF_TEST-2	
<input type="checkbox"/>	Master Data Link Layer	HCF_TEST-5	
<input type="checkbox"/>	DD Host: Basic Operations Test Specification	HCF_TEST-510	
<input type="checkbox"/>	DD Host: User Interface Test Specification	HCF_TEST-511	
<input type="checkbox"/>	DD Host: Data Modeling Test Specification	HCF_TEST-512	
<input type="checkbox"/>	DD Host:Methods Test Specification	HCF_TEST-513	

Should the HART Communication Foundation determine that this product is not in conformance with the HART Protocol Specification, the Manufacturer agrees not to represent the product as HART conforming until the device demonstrates compliance.

Manufacturer Representative:		Manufacturer's Address:	
Print Name			
		Phone:	Fax:
Signature	Date	E-mail:	

HCF Use Only			
Reg. Date: _____	Reg.#: _____	Verification: _____	Reviewed by: _____

## **ANNEX B. REVISION HISTORY**

### **B.1. Revision 1.1**

Subsection 1.1. Corrected date for mandatory registration to read 2015 (was misstated as 2014 in revision 1.0)

### **B.2. Revision 1.0**

Initial revision.