



**INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
IAPMO UNIFORM EVALUATION SERVICE**

**EVALUATION CRITERIA FOR
FIELD-APPLIED FIRE PROTECTIVE COATINGS
(Editorially Revised March 2015)**

**EC017-2014
(Adopted - February 2014)**

1.0 INTRODUCTION

1.1 Purpose: The purpose of this criteria is to establish requirements for field-applied fire protective coatings to be recognized in an evaluation report under the 2015, 2012, 2009 and 2006 International Building Code (IBC®) and the 2015, 2012, 2009 and 2006 International Residential Code® (IRC®). The bases of recognition are IBC® Section 104.11, IRC® Section R104.11 and IEBC® Section 603.1. The applicable code sections are listed in Section 1.2.

1.2 Scope: This evaluation criteria is limited to field-applied fire protective coatings used in accordance with Sections 1.2.1 and 1.2.2, provided the product complies with Test and Performance Requirements of Section 5.0 of this criteria. Field-applied fire protective coatings used in fire-resistive assemblies shall comply with Sections 5.2 and 6.2 of this document. Field-applied fire protective coatings that require periodic maintenance or renewal of the coating are outside the scope of this criteria. Factory-applied paints, coatings or treatments are outside the scope of this criteria.

1.2.1 Fire protective coatings complying with Sections 803.11 of the 2015 IBC®, 803.9 of the 2012 and 2009 IBC®, 803.5 of the 2006 IBC®, R316.5.3 and R316.5.4 of the 2015, 2012 and 2009 IRC®, R314.5.3 and R314.5.4 of the 2006 IRC®, 2603.9 of the 2015 IBC®, 2603.10 of the 2012 IBC®, 2603.4 of the 2009 and 2006 IBC®, R316.6 of the 2015 and 2012 IRC®, R316.4 of the 2009 IRC®, and R314.4 of the 2006 IRC® that are field-applied to the exposed surfaces of substrates for dry-use conditions.

1.2.2 Fire protective coatings that are field-applied demonstrating equivalency to the prescriptive materials in the charging Section of R302.13 of the 2015 IRC®, Exception 4 of R302.13 of the 2015 IRC®, the charging Section of R501.3 of the 2012 IRC®, and Exception 4 of R501.3 of the 2012 IRC®.

2.0 REFERENCE STANDARDS:

Where standards are referenced in this criteria, the edition of these standards either shall be as indicated or shall be consistent with the code (IBC, IRC or IEBC) upon which compliance is based.

International Code Council

2015 International Residential Code® (IRC®), International Code Council

2012 International Residential Code® (IRC®), International Code Council





2009 International Residential Code® (IRC®), International Code Council
2006 International Residential Code® (IRC®), International Code Council
2015 International Building Code® (IBC®), International Code Council

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2006 International Building Code® (IBC®), International Code Council
2015 International Existing Building Code® (IEBC®), International Code Council
2012 International Existing Building Code® (IEBC®), International Code Council
2009 International Existing Building Code® (IEBC®), International Code Council
2006 International Existing Building Code® (IEBC®), International Code Council

American Wood Council

ANSI/AWC NDS National Design Specification for Wood Construction

ASTM International

ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM D2915-10 Standard Practice for Sampling and Data-Analysis for Structural Wood and Wood Based Products

ASTM D5055 Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-joists

ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM E119 Standard Test Methods for Fire Test of Building Construction and Materials

National Fire Protection Association

NFPA 255-06 Standard Method of Test of Surface Burning Characteristics of Building Materials

NFPA 286 Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

Underwriter’s Laboratories, Inc.

UL 263 Fire Tests of Building Construction and Materials

UL 723 Test for Surface Burning Characteristics of Building Materials

UL 1715 Fire Test of Interior Finish Material

International Code Council Evaluation Service



ICC-ES AC257

Acceptance Criteria for Corrosion-resistant Fasteners and
Evaluation of Corrosion effects of Wood Treatment Chemicals
(Approved October 2009, editorially revised August 2013)

3.0 DEFINITIONS:

- 3.1 Fire protective coatings: Proprietary coatings applied to substrates by brush, roller or spray, which provides field-applied fire protection to the substrates when exposed to flame or intense heat.
- 3.2 Interior: Areas within the weatherproofing membrane or surfaces not exposed to weather, where the substrate's in-service, dry-use moisture content conditions are expected to be at or less than the fire-protective coating manufacturer's recommended levels, as applicable in accordance with Section 8.2.
- 3.3 Substrates: Materials for which performance has been established are identified in the form of a list or table in accordance with Section 8.6.

4.0 BASIC INFORMATION:

4.1 **General:** Each submittal shall include the following information for an evaluation report:

- 4.1.1 Product Description: Complete information concerning material specifications, and the manufacturing process for the field-applied fire protective coating.
- 4.1.2 Applicator Responsibilities and Application Instructions: Responsibilities and Instructions shall include the following items:
 - 4.1.2.1 The applicator shall be trained and qualified in the proper application procedures by the field-applied fire protective coating manufacturer before starting the first application. The applicator shall be a company or individual acceptable to the fire protective coating manufacturer and shall have received the fire protective coating manufacturer's training and certification.
 - 4.1.2.2 Application shall not commence until the applicator inspects all substrates to receive protection and they are found to comply with the manufacturer's instructions.
 - 4.1.2.3 Equipment, mixing and application parameters shall be in accordance with the fire protective coating manufacturer's instructions.
 - 4.1.2.4 Application of the fire protective coating is limited to interior assemblies where the substrate's moisture content is at or less than the fire-protective coating manufacturer's recommended levels, verified by the certified applicator in accordance with Section 8.2. Relative humidity and ambient temperature limitations, during and after the application of the fire protective coating, shall be indicated in the report, as applicable.
 - 4.1.2.5 The frequency of thickness measurements with a wet film gauge during the application of each coat shall be specified in the evaluation report and be sufficient to determine that the minimum required coating thickness has been applied to the substrate necessary to ensure uniform thickness.

4.1.2.6 Details of the surface preparation in accordance with manufacturer's instructions.

4.1.2.7 Product handling and storage requirements.

4.1.2.8 Other restrictions or limitations on use of the field-applied fire protective coating shall be indicated in the report.

4.1.2.9 Procedures for reporting refer to Sections 7.2.

4.2 Testing Laboratories: Testing laboratories shall be accredited for the applicable testing procedures in accordance with ISO/IEC 17025 by a recognized accreditation body conforming to ISO/IEC 17011. Testing at a non-accredited laboratory shall be permitted by IAPMO UES, provided the testing is conducted under the supervision of an accredited laboratory and the supervising laboratory issues the test report.

4.3 Packaging and Identification: Method(s) of packaging and product identification shall be included in the evaluation report. Identification shall include the manufacturer's name and address, product name, and the IAPMO UES evaluation report number.

4.4 Test Reports: Test reports shall comply with Annex A of this criteria.

4.5 Product Sampling: Sampling of the materials for tests under this criteria shall comply with Annex A of this criteria.

5.0 TEST AND PERFORMANCE REQUIREMENTS

5.1 Interior Finish: Documentation shall be submitted of fire testing performed in accordance with one of the following; NFPA 286, UL 1715, ASTM E84, UL 723 or NFPA 255. The conditions of evaluation are as referenced in Section 1.2.1 and Section 6.1.

5.2 Fire-Resistance: Testing shall be conducted in accordance with Section 6.2.1, Section 6.2.2 or Section 6.2.3. Where recognition is sought for establishment of equivalent fire performance to the materials in Section 703 of the IBC, the charging Section of R302.13 per the 2015 IRC®, Exception 4 of Section R302.13 per the 2015 IRC®, the charging Section of R501.3 of the 2012 IRC®, or Exception 4 of Section R501.3 per the 2012 IRC®, a test plan shall be submitted to the evaluation agency for review and acceptance prior to testing.

5.2.1 Mechanical Properties: Documentation shall be submitted to support that the mechanical properties of the substrate are not negatively affected by the application of field-applied fire protective coatings. Testing shall be conducted in accordance with Section 6.3.

5.2.2 Corrosion Effects: Corrosion effects of fire protection materials shall be evaluated in accordance with Section 6.4.

6.0 TEST METHODS

6.1 Interior Finish: Fire testing shall be performed in accordance with one of the following: NFPA 286, UL 1715, ASTM E84, UL 723 or NFPA 255.

6.1.1 The tests shall be conducted at the minimum application rate for which recognition is sought.

6.1.2 Test reports shall specify the coating application rate, including the wet and dry film thickness, the method of application and the substrate.

- 6.1.3 The substrate when of wood, to which the coating is applied, shall be identified by species or type.
- 6.1.4 Recognition of overcoating with paint shall be based on tests conducted using the overcoat, fire protective coating and substrate for which recognition is sought.
- 6.1.5 **Conditions of Evaluation:** Documentation shall be submitted demonstrating compliance with NFPA 286, UL 1715, ASTM E84, UL 723 or NFPA 255.

6.2 Fire Resistance: Fire-resistance tests on assemblies with the fire-protective coatings are required where recognition is sought for establishment of equivalent fire performance to the materials in Section 703 of the IBC, the charging Section of R302.13 per the 2015 IRC®, Exception 4 of Section R302.13 per the 2015 IRC®, the charging Section of R501.3 of the 2012 IRC®, or Exception 4 of Section R501.3 per the 2012 IRC®. The substrates used in the tests shall conservatively represent the substrates for which equivalence is sought. Fire testing shall be performed in accordance with Section 6.2.1, Section 6.2.2 or Section 6.2.3.

- 6.2.1 Testing shall be conducted in accordance with ASTM E119 or UL 263, Tests of Floors and Roofs. Throughout the fire-resistance test, a superimposed load shall be applied to the test specimen simulating a maximum-load condition. This load shall be the maximum-load condition allowed under nationally recognized structural design criteria unless limited design criteria are specified and a corresponding reduced load is applied.

Conditions of Evaluation: To obtain an unrestrained assembly classification the following conditions shall be met.

- a. The test specimen shall have sustained the applied load during its classification period without developing unexposed surface conditions which will ignite cotton waste.
- b. Transmission of heat through the test specimen during its classification period shall not raise the average temperature of its unexposed surface more than 250° F (139° C) above its initial temperature.

- 6.2.2 Testing shall be conducted in accordance with ASTM E119 or UL 263, Loaded Unrestrained Beams Supporting Floors and Roofs. Throughout the fire-resistance test, a superimposed load shall be applied to the test specimen simulating a maximum-load condition. This load shall be the maximum-load condition allowed under nationally recognized structural design criteria unless limited design criteria are specified and a corresponding reduced load is applied.

Conditions of Evaluation: To obtain an unrestrained beam fire-resistance rating this specimen shall have sustained the applied load during the rating period. The specimen shall be deemed as not sustaining the applied load when both of the following conditions are exceeded:

A maximum total deflection of: $(L_c^2) / (400 d)$ and after the maximum total deflection has been exceeded, a maximum deflection rate per minute as determined over 1 min intervals of:

$$(L_c^2) / (9000 d)$$

where:

L_c = the clear span of the beam, and

d = the distance between the extreme fiber of the beam in the compression zone and the extreme fiber of the beam in the tensile zone.

The deflection L_c and d shall be expressed in the same units such as inches or millimeters.

- 6.2.3** Testing shall be conducted to establish equivalent fire performance of wood I-joists to the materials in Exception 4 of Section R302.13 per the 2015 IRC® or Exception 4 of Section R501.3 per the 2012 IRC®, in accordance with Sections 6.2.3.1-6.2.3.5. The wood I-joists with the minimum desired flange depth and width, web thickness, and I-joist depth that will share equivalence shall be used. The wood I-joists shall comply with ASTM D5055.

Conditions of Evaluation: For the purpose of determining equivalency, the test duration shall equal or exceed the required minimum duration calculated using the methodology specified in Chapter 16 of the National Design Specification (NDS), for Wood Construction assuming unprotected solid-sawn 2x10 floor joists, a 3-sided fire exposure, a nominal char rate of 1.5 inches/hr., a bending strength to ASD ratio of 2.85, and a load corresponding to 50% of the full ASD bending design load.

- 6.2.3.1** A test plan shall be submitted to the evaluation agency, prior to testing, defining which wood I-joists are proposed to be tested and the proposed fire-resistance recognition being sought.

- 6.2.3.2** Each framing member shall support a load corresponding to 50 percent of its full Allowable Stress Design (ASD) bending design load. Protection may be added to components not contributing to the load carrying capacity of the I-joists.

6.2.3.2.1 The test specimen shall be subjected to an ASTM E119 or UL 263 time-temperature exposure for the duration of the test, as noted in Section 6.2.3.5. Due to the combustibility and fuel load of the wood assembly, furnace temperatures exceeding those described in the ASTM E119 procedure are allowed.

6.2.3.2.2 The clear span (L_c) of wood I-joists exposed to the fire shall be not less than 12 feet (3.7 m) and the member shall be tested in a horizontal position.

6.2.3.2.3 The assembly shall be sufficiently wide to permit fire exposure to three sides of the wood I-joists and symmetrical in reference to the wood I-joists.

6.2.3.2.4 The use of single or multiple I-joist framing members is allowed.

6.2.3.2.5 Floor sheathing may be included for lateral support of the framing members, but shall not provide any vertical support, such as contact with any portion of the test apparatus. Protection may be added to components not contributing to the load carrying capacity of the I-joists.

6.2.3.2.6 Bearing and lateral support of wood I-joist ends by means of plates, rim boards, etc., shall be provided in a manner representative of typical installations.

- 6.2.3.2.7** Dimensioned drawings and other documentation specifying all components and materials used within the tested assembly, support conditions, thermocouple placement, deflection transducer placement, boundary conditions, and all other relevant details shall be included within the test plan and the test report.
- 6.2.3.2.8** Structural calculations shall also be included within the test plan and the test report.
- 6.2.3.2.9** Web holes shall be considered in the test plan and member design.
- 6.2.3.2.10** All components utilized in the manufacture of the framing members (fasteners, plates, hardware, etc.) shall be included in tested members and described, including location, in the test report.
- 6.2.3.2.11** Mechanically attached components that provide some or all of the required fire-resistance to the I-joist framing members shall be fully described, detailed and reviewed by IAPMO UES staff prior to any testing.
- 6.2.3.3** The use of field-applied fire protective coatings with prefabricated wood I-joists noted above shall be formally authorized in writing by the I-joist manufacturer.
- 6.2.3.4** The pre-fabricated wood I-joist manufacturer and series shall be identified in the field-applied fire protective coating manufacturer's evaluation report.
- 6.2.3.5** The test duration shall be defined as the time from the start of the test until structural member failure. A structural member is no longer supporting the applied load if any of the following occurs:
- An individual member within an assembly fails.
 - Multiple members within an assembly fail.
 - Deflection shall be measured and reported with a displacement transducer at center span of the center framing member. The minimum sampling rate shall be 0.1 Hz. A maximum total deflection of: $(L_c^2) / (400 d)$ and after the maximum total deflection has been exceeded, a maximum deflection rate per minute as determined over 1 min intervals of: $(L_c^2) / (9000 d)$
- where:
- L_c = the clear span of the beam, and
- d = the distance between the extreme fiber of the beam in the compression zone and the extreme fiber of the beam in the tensile zone.
- The deflection L_c and d shall be expressed in the same units such as inches or millimeters.
- The deflection rate of change decreases.

Exception: Item “d” does not apply when evidence is submitted to show that the decrease in deflection rate of change was not due to a change in the load-carrying mechanism.

6.3 Mechanical Properties: Documentation shall be submitted to support that the mechanical properties of the substrate are not negatively affected by the application of field-applied fire-protective coatings. If the fire protective coatings do not penetrate the substrate, the fire protective coatings do not negatively affect the mechanical properties of the engineered wood product. If the fire-protective coating is a penetrant, one of the following two test programs shall be followed:

- 6.3.1** Flange stiffness, flange tension, flange compression, and I-joist shear shall be evaluated per ASTM D5055.
- 6.3.2** I-joist stiffness, moment and shear shall be evaluated per ASTM D5055.

Evaluations shall be based on a comparison between a control group (unprotected) and a matched group (protected).

6.3.3 Conditions of Evaluation: The average mechanical property of the matched group (protected) under each conditioning environment shall not be less than the 95 percent lower confidence bound on the average mechanical property of the control group (unprotected) under the same conditioning environment, calculated as follows:

$$M_m \geq M_c \left(1 - \frac{t V}{\sqrt{N}}\right)$$

where:

M_m = average mechanical property (stiffness or strength) of matched group (protected) for the conditioning environment listed in this section.

M_c = average mechanical property (stiffness or strength) of the control group (unprotected) for the same conditioning environment as M_m .

T = student t statistic with 95 percent confidence (see Table 1 of ASTM D2915)

V = coefficient of variation for the mechanical property of the control group at the conditioning environment; $V \leq 0.2$ (when V is greater than 0.2, use 0.2 in the calculation).

N = sample size for the control group.

6.4 Corrosion Effects: Corrosion effects of fire protection materials shall be evaluated in accordance with those provisions of ICC-ES AC257 that are applicable to evaluation of corrosion effects of wood treatment chemicals, with the following exceptions and conditions:

- 6.4.1** Instead of evaluating the corrosion effects of a treatment chemical, the corrosion effects of the fire protection material shall be evaluated. Thus, the provisions relating to AWPA Use Categories (UCs) do not apply. Those provisions relating to minimum retention levels do not apply unless the fire protection is in the form of a wood-penetrating treatment chemical.

- 6.4.2 Control (benchmark) materials shall consist of unprotected flange materials from the same type of flange materials (i.e., lumber or structural composite lumber) on which the corrosion tests are performed.
- 6.4.3 Both the control and the protected materials shall be tested with steel coupons meeting ASTM A653 with a coating designation of G90 or less.
- 6.4.4 The control and protected materials shall be tested under Exposure Condition 5 (Dry Use).
- 6.4.5 **Conditions of Evaluation:** The corrosion effect of the fire protective coating shall not be significantly greater than that of the control materials (without the fire protective coating), as determined in accordance with Section 4.5.3.1 and 4.5.3.2 of AC257.

6.5 Durability: The fire protective coating manufacturer shall develop a test plan to address the following:

- a. Degradation of performance
- b. Service life
- c. Moisture movement
- d. Effects of indoor exposure (heat, moisture), for visual indications of degradation including loss of adhesion.

The test plan shall include applicable test references, conditions of acceptance, and resulting in-service limitations. The test plan shall be reviewed and approved by the evaluation body before commencing.

7.0 QUALITY CONTROL

7.1 Manufacturer's Quality Assurance System shall comply with the IAPMO UES Minimum Requirements for Listee's Quality Assurance System (IAPMO ES-010)

7.2 Reporting and Field Inspection: Reporting and field inspection shall include the following:

- 7.2.1 Application of the field-applied fire protective coating shall be by a company or individual acceptable to the field-applied fire protective coating manufacturer and a company or individual that has received the fire protective coating manufacturer's training or certification. A list containing the names and addresses of approved applicators shall be maintained by the field-applied fire protective coating manufacturer and shall be made available to code officials upon request.
- 7.2.2 An installation card or product application certificate provided by the field-applied fire protective coating manufacturer shall be completed by the applicator and shall be available for review by the code official at the completion of each project identifying the applicator, the property address, lot number, manufacturer, product name, date of manufacture, the location of the treated substrate, the size of the area treated and the application rate.
- 7.2.3 The applicator shall affix a fire protective coating manufacturer issued label to the substrate where the fire protective coating has been applied; one for every 10,000ft² (929.03m²) of floor area. The label shall contain as a minimum product name, company name and evaluation report number.



7.2.4 The finished application of the field-applied fire protective coating over the substrate in accordance with the minimum coating thickness shall be visually consistent without voids as required by UES and the reporting product application certificate.

7.3 Other Inspections:

7.3.1 In accordance with International Residential Code (IRC®), other inspections shall be in accordance with Sections R109.1.5 of the 2015, 2012, 2009 and 2006 IRC®.

7.3.2 In accordance with International Building Code (IBC®), special inspection shall be in accordance with Sections 1705.1.1 of the 2015 and 2012 IBC®, 1704.15 of the 2009 IBC® and 1704.13 of the 2006 IBC®.

7.3.3 In accordance with the International Building Code (IBC®), special inspection shall be in accordance with Sections 1705.15 of the 2015 IBC®, 1705.14 of the 2012 IBC®, 1704.13 of the 2009 IBC® and 1704.11 of the 2006 IBC®.

8.0 EVALUATION REPORT RECOGNITION

8.1 Field-applied fire protective coatings that are evaluated under this criteria, are limited to substrates tested in accordance with Sections 3.3.

8.2 The field-applied fire protective coating shall be applied to areas within the weatherproofing membrane or surfaces not exposed to weather, where the substrate's in-service, dry-use moisture content conditions, are expected to be at or less than the fire protective coating manufacturer's recommended levels and shall be indicated in the report.

8.3 When field-applied fire protective coatings are under the Scope of Section 1.2.2, the fire protective coating shall be applied prior to the installation of mechanical, electrical and plumbing components.

8.5 The IAPMO UES report shall specify the conditions under which the fire protective coating may be overcoated with paint in accordance with Section 1.2.1 and 6.1.4.

8.6 The IAPMO UES report shall identify in the form of a list or table the substrate including the species or type, wet film thickness of the field-applied fire protective coating and the application rate per gallon for which performance has been established.



Annex A

Test Report Content

- 1.0** The services performed by the testing laboratory shall be documented by a retrievable report that accurately, clearly, objectively, and unambiguously presents measurements, observations, examinations, and test results in accordance with the reporting requirements of test method(s). Each test or inspection report also shall include the following unless the code, evaluation criteria, or the test standard requirements specify otherwise:
 - 1.1** A title, for example, “Report of Fire Protective Coating Tests;”
 - 1.2** The name, address, and contact information of the laboratory.
 - 1.3** A unique identification of the report (such as report number), the issue date, a sequential number for each page, and the total number of pages.
 - 1.4** The name and address of client.
 - 1.5** Description of, condition of, and clear identification of the item tested.
 - 1.6** Date test(s) were conducted.
 - 1.7** Identification of test standards or description of any non-standard methods used.
 - 1.8** Any deviations from, additions to, or exclusions from, the test standard and any other information relevant to the specific test, such as environmental conditions;
 - 1.9** Measurements, observations, examinations, and test results, supported by tables, graphs, sketches, and photographs, as appropriate, including a description of the failure mode or condition of item at conclusion of the tests;
 - 1.10** Conclusions or summary statements, including, when applicable, a statement indicating whether the product passed or failed the test;
 - 1.11** A statement the results apply only to the items tested;
 - 1.12** A statement that the report shall not be reproduced, except in full, without the prior written approval of the laboratory; and
 - 1.13** Name(s) of individual(s) performing the tests;
 - 1.14** A signature and title, or an equivalent identification, of the person(s) accepting responsibility for the content of the report on behalf of the laboratory.
 - 1.15** Identification of results obtained from tests subcontracted by the laboratory to others. The laboratory shall not represent the services of others as its own.
- 2.0** In addition to the requirements of Sections 1.0, 2.0, and 3.0, each test report, where necessary for the proper interpretation or understanding of the report, shall include the following:
 - 2.1** Project title and reference designation.
 - 2.2** Reference to relevant code, evaluation criteria, or other requirement(s).
 - 2.3** A statement indicating compliance with relevant code, evaluation criteria, or other requirement(s).
 - 2.4** Other reporting requirements of the evaluation agency, the client, or relevant authority.
- 3.0** In addition to the requirements of Sections 1.0, 2.0, 3.0 and 4.0, test reports presenting results shall include the following with respect to sampling:
 - 3.1** Date of sampling or date sample received, as appropriate.
 - 3.2** Clear identification of the material sampled including manufacturer, brand name, lot number, source, or similar unique information, as applicable.
 - 3.3** Sampling location, where relevant, using an explicit description, diagram, sketch, or photograph, as applicable.
 - 3.4** Identification of sampling methods used, or sampling plan or procedure if a non-standard method was used.

- 3.5** Deviations from, additions to, or exclusions from standard sampling methods or predetermined sampling plans or procedures.
- 3.6** Details of environmental conditions present during the sampling such as rain or freezing weather that may have affected the testing of the sample or the interpretation of the test results.
- 3.7** If assemblies are tested (structural assemblies, fire-rated assemblies, etc.), identification of the assemblies, preferably with illustrations. The report shall identify the parties constructing the assemblies and shall also address witnessing and/or verifying the construction.
- 4.0** When interpretations of tests are included in the report, the basis for the interpretations shall be clearly explained. Interpretations commonly include determination of compliance or noncompliance of the results with requirements of the test method or evaluation criteria.
- 5.0** Material revisions or additions to a report after initial issue shall be made in a further document clearly indicating the revised information and clearly referencing the original report identification. Such revisions or additions shall meet the relevant requirements of Section 2.0.
- 6.0** Transmission of test reports by electronic means shall follow documented procedures to ensure that the requirements of this evaluation criteria are met and that confidentiality is preserved.