1 Scope

1.1 This recommended practice provides guidance in the preparation of control drawings for intrinsically safe apparatus, associated apparatus, and intrinsically safe systems.

1.2 This recommended practice is intended to be used in conjunction with ANSI/UL 913-1988, “Standard for Safety, Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations.”

1.3 This recommended practice is not intended to include guidance for the design or installation of intrinsically safe equipment or systems.

2 Purpose

2.1 This recommended practice has been formulated to provide guidance for and to promote the uniformity of manufacturers' control drawings for intrinsically safe apparatus, associated apparatus, and intrinsically safe systems.

2.2 Article 504 of the *National Electrical Code*® and Canadian Electrical Code, Part 1, Appendix F, requires that documentation for intrinsically safe apparatus and associated apparatus include a control drawing. This recommended practice is intended to provide guidance for the content of control drawings.

3 Definitions

3.1 control drawing: A drawing or other document provided by the manufacturer of the intrinsically safe or associated apparatus that details the allowed interconnections between the intrinsically safe and associated apparatus.

3.2 entity concept (also known as entity evaluation): A method used to determine acceptable combinations of intrinsically safe apparatus and connected associated apparatus that have not been previously investigated in such combination.

NOTE — ISA-TR12.2-1995 provides more information on the use of the entity concept.

3.3 entity parameters for intrinsically safe apparatus:

C_i: total equivalent internal capacitance that must be considered as appearing across the terminals of the intrinsically safe apparatus.