RECOMMENDED PRACTICE

# ISA–RP92.0.02, Part II–1998 (R2013)

# Installation, Operation, and Maintenance of Toxic Gas-Detection Instruments: Hydrogen Sulfide

**Reaffirmed 16 January 2013**

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Installation, Operation, and Maintenance of Toxic Gas Detection Instruments: Hydrogen Sulfide

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## 1 Purpose

ISA-RP92.0.02, Part II, establishes user criteria for the installation, operation, and maintenance of toxic gas detection instruments.

Its companion standard, ISA-S92.0.01, Part I, "Performance Requirements for Toxic Gas Detection Instruments," has been prepared to provide minimum requirements for the performance of toxic gas detection instruments.

## 2 Scope

**2.1** This recommended practice applies to all toxic gas detection instruments that satisfy the performance requirements in ISA-S92.0.01, Part I.

**2.2** Refer to Clause 3 of ANSI/ISA-S92.0.01, Part I, for definitions of terms as used herein.

**2.3** References useful in the installation, operation, and maintenance of toxic gas detection instruments are listed in Annex C. These references are not considered to be part of this document except for those specific sections of documents referenced elsewhere in this Recommended Practice.

## 3 General requirements

To assure that the instrument is suitable for the application and is compatible with its operating environment:

a) the user should provide the potential supplier with detailed information on the conditions that exist in the area(s) in which the instrument is to be used;

b) the instrument must meet the requirements of the applicable regulating agency having jurisdiction; and

c) the instrument must be compatible with the environmental conditions, e.g., relative humidity, temperature, atmospheric contaminants, etc., in which the instrument is to operate. A typical "Environmental and Application Checklist" is included as Annex A and is intended to aid users in properly specifying requirements for their specific applications.


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## 4 Unpacking

**4.1** Unpack the shipping carton(s) and determine whether the order is complete "as received." Check for main assembly, accessories, spare parts, and instruction manual. Understanding the manufacturer's instruction manual is of vital importance to the future operation and maintenance of the toxic gas detection instrument.

**4.2** In the event of shipment damage, or for purposes of future correspondence, record the following:

a) user's purchase order number and manufacturer's order number, and their respective dates;

b) carrier waybill number and date received in case of transit claim; and

c) instrument serial number and user identification (ID) number, if assigned.

## 5 Storage

**5.1** When storing toxic gas detection instruments, leave them in their original containers or provide suitable protective covers.

**5.2** Select a location that is in accordance with the manufacturer's recommendations. Store toxic gas detection instruments where environmental conditions (temperature, humidity, etc.) are within the manufacturer's storage specifications.

**5.3** Before storage, inspect the instruments and remove any internal batteries that could cause corrosion. If the instruments have rechargeable or "permanent" batteries, consult the manufacturer's instructions for battery maintenance during this period.

**5.4** Prepare toxic gas detection instruments for long-term storage per the manufacturer's instruction manual.

## 6 User record keeping

It is recommended that the user:

a) assign an equipment identification (control) number to each instrument; and

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b) maintain complete records including periodic performance, calibration, and maintenance checks (see Annex B).

## 7 Maintenance

**7.1** To maintain the reliability of toxic gas detection instruments, it is recommended that the user assign responsibility for their initial inspection and subsequent use, including maintenance, to a specific qualified individual or group.

**7.2** It is important that the Checkout Procedures (refer to Clause 10) be performed by qualified personnel trained in the operation, maintenance, and repair of toxic gas detection instruments, and that the personnel responsible for maintenance be defined clearly.

**7.3** The user should establish responsibility for obtaining the gas mixture recommended by the instrument manufacturer for calibrating and testing.

**7.4** It is recommended that when instruments are first put into use, the calibration be checked on a routine basis as prescribed by the manufacturer, but at least monthly. If experience shows minimal calibration deviation, then the period between calibration checks may be extended. Likewise, if routine checks indicate an increasing need for calibration, the period should be shortened, and the cause should be investigated and the manufacturer consulted.

## 8 Preparing instruments for use

**8.1** Read and understand the manufacturer-provided instruction manual. Particular attention should be paid to the locations and functions of all controls and readout devices.

**8.2** A calibration test of the type described in 13.7 is recommended before the initial use of any toxic gas detection instrument.

## 9 Installation of stationary instruments

It is extremely important that the equipment manufacturer-provided instruction manual be read thoroughly and followed completely.

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