

TO: Customers, Electrical Contractors and EnergyAustralia Staff

Document and Amendment History

Issue No.	Date	Summary of Changes
3	7 July 2006	This CIA 1050B supersedes CIA 1050A (30/6/99). This amendment updates several references to Australian Standards, referred to in the Advice, to the latest versions.

Hazardous Area Verification Dossier

This Customer Installations Advice is provided for the information of EnergyAustralia staff and electrical contractors carrying out electrical installation work in hazardous areas as defined in [AS/NZS 60079.10:2004](#).

Australian Standards [AS/NZS 2381.1:2005](#) and [AS/NZS 61241.1.2:2000](#) state that a 'Hazardous Area Verification Dossier' shall be prepared for all electrical installations located in a defined hazardous area.

- [AS/NZS 2381.1:2005](#), Electrical Equipment for explosive atmospheres - Selection, installation and maintenance, Part 1: General requirements
- [AS/NZS 61241.1.2:2000](#), Electrical Equipment for explosive atmospheres - Selection, installation and maintenance, Part 10: Equipment in combustible dust areas.

A hazardous area is one in which an explosive atmosphere is present, or may be expected to be present, in a quantity that necessitates special precautions for the construction, installation and use of electrical equipment.

A Flammable Gas Atmosphere, a Combustible Dust Atmosphere, or a combination of both atmospheres may cause the explosive atmosphere.

EnergyAustralia will only carry out an inspection in a defined hazardous location if the Hazardous Area Dossier is available from the occupier at the time of inspection.

For large installations, the dossier may be required prior to inspection.

[AS/NZS 2381.1:2005](#) and [AS/NZS 61241.1.2:2000](#), both state in part that, 'It is necessary to ensure that any installation complies with the appropriate documents, this standard and any other requirements specific to the plant on which the installation takes place.'

A verification dossier **shall be prepared** for every hazardous area installation and kept on the premises. The dossier should contain the information detailed in the [relevant Australian Standard](#) for the type of protection concerned.

It is the responsibility of the occupier to ensure that the relevant information is produced, but it is recognised that the preparation of the document may be delegated to others.

Documentation required in the Verification Dossier

The Verification Dossier must contain the following documentation where applicable:

Hazardous Area Documentation

1. A schematic diagram of the zonal area classification. The diagram must identify the areas per the following (as applicable):
 - Zone 0, Zone 1, Zone 2 and Non hazardous for flammable Gas/Vapour Atmospheres
 - Zone 20, Zone 21, Zone 22 and Non hazardous for Combustible Dust Atmospheres.
2. The classification of the hazardous areas, and the standards used for the classification.
3. Equipment Group and Temperature Class of equipment.

A Material Safety Data Sheet (or other form of product characteristic identification), for the product causing the hazardous area environment must be included in the Verification Dossier. This information is used to ascertain the appropriate Equipment Grouping and the Temperature Class, e.g. Equipment Group viz. 1, 11A, 11B, or 11C and Temperature Class viz. T1, T2, T3, T4, T5 and T6.

Equipment Identification

1. A legend must be provided that identifies the specific item of equipment, and the Australian Standard Approval Number (e.g. Aus Ex 1234X).
2. Documentation certifying that the equipment is rated for the voltage and frequency applied during normal operation.
3. Detailed reference to any item of **uncertified equipment** including type, number, manufacturer, and justification for its use.
4. Documentation relating to the suitability of the equipment for the area and environment to which it is exposed, e.g. T rating, Ex rating, IP rating and corrosion resistance (see [AS/NZS 2381.1:2005](#) for further details).
5. Complete Certificates of Conformity for every item of Ex rated electrical equipment, electrical accessories, and ancillary equipment installed in the defined hazardous location.
6. Documentation confirming the selection criteria for cable within the specific requirements of [AS/NZS 2381.1:2005](#).
7. Documentation confirming the selection criteria for Cable Glands (see [AS 2381.2:2006](#) clause 3.6 for further information).

Special Attention

- (a) The Certificates of Conformity must be obtained from the provider of the equipment at the time of purchase.
 - (b) Particular attention is required by the installer of the equipment where the Documentation/Certificates of Conformity for electrical equipment have the suffix "X" denoting a special condition, ("U" denotes a Certified component)
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Installation Documentation

1. Installation instructions and technical drawings for the Ex rated equipment as provided by the manufacturer. Descriptive system document for Intrinsically Safe Systems. (If applicable these documents must contain all appropriate requirements for compliance with AS 2381.7.).
2. The Intrinsically Safe documentation must provide all necessary calculations and confirm the Intrinsically Safe rating of equipment (e.g. Ex ib 11C T4).

Maintenance Documentation

- Records sufficient to enable the explosion protected equipment to be maintained in accordance with its type of protection.
- Records of maintenance, overhaul, and repair of the equipment. Overhaul of Ex rated equipment shall comply with the relevant requirements of AS/NZS 3800-2005.

Inspection Checklist:

- Inspection Schedule as per appropriate Australian Standard for the type of protection in use.

Records of Equipment Selection Criteria:

- The records must demonstrate that the selected equipment satisfies the requirements for the particular explosion technique being used.

Note:

Service Station Installations

- ❖ Where Maintenance Schedules and Records Documentation are provided in the Forecourt Dossier, **and held on site by the management** the electrical contractor does not have to reproduce such documentation.

Management Documentation

- A statement of identity of the person(s) having legal ownership of the installation or parts thereof and where the verification dossier is located.
- A **Declaration of Conformity** signed by the person responsible stating that the documents contained in the dossier are a true and accurate description of the equipment installed in the defined hazardous location.

The dossier may be kept as a hard copy or in electronic form. A hard copy of the dossier must be available for examination by the inspecting authority.

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