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To all operators of dangerous goods sites  
that store or handle chlorine gas in  
Western Australia

Dear Sir/Madam,

**New AS2927:2019 The storage and handling of liquefied chlorine gas**

Standards Australia published the updated version of the Australian Standard 2927 on 20 December 2019.

The new Standard is available for purchase from SAI Global (<https://infostore.saiglobal.com>). Alternatively, you can view a copy of the Standard from the DMIRS office at 1 Adelaide Tce, East Perth WA 6004.

Some of the key changes in the new AS2927 are as follows:

1. Incorporation of a requirement for a management of change process for chlorine facilities (Section 8.10.3);
2. Updated separation distances tables (see Tables 4.1, 5.1 and 6.1) from chlorine storage and installations to various occupancies, including sensitive use areas (e.g. aged-care facility, child care etc.), residences and commercial areas/public places;

The separation distances reflect the types of risk control measures that are applied to chlorine installations, such as vacuum regulators, leak detectors, auto shut-down as well as scrubber systems.

3. The separation distance Table 6.1 (Notes 2&3) suggests the adoption of additional risk mitigation measures where containers are located in close proximity to sensitive land uses;
4. New Section 3 on Transit storage and Section 4 on storage and handling areas for chlorine gas;

5. New Section 5 with specific requirements for chlorine installations at public swimming pools;

A chlorine installation at a public swimming pool must have the following:

- (a) Vapour withdrawal vacuum regulator system;
- (b) chlorine leak detector system; and
- (c) auto shut-off devices that can effectively shut off the chlorine drum or cylinder valve on detection of a leak.

Specifying this equipment level for all public swimming pools minimises the impact from possible chlorine leaks to the community.

Most public pools already have this equipment in place. However, a small number of public pools in WA country areas may not have this equipment installed.

Should this be the case, the installations should be upgraded to the new AS2927 requirements, or alternatives to chlorine gas should be considered, for example, calcium hypochlorite or hypochlorite solutions etc. for water treatment.

6. Leak detectors are now mandated for chlorination rooms and where chlorine is connected for use. Associated with this, offsite alarming requirements are detailed further;
7. Dry (solid media) scrubbers are now addressed by the Standard;
8. Testing requirements for leak detectors, scrubbers and automatic shutoff devices have been clarified and strengthened;
9. Requirements for medical examination of personnel working on chlorine systems has been revised;
10. The provision of safety showers at all installations be considered (i.e. risk assessed); and,
11. Advice is provided (Appendix M) concerning impact protection measures for chlorine containers.

## **Impacts of the new AS2927**

### **1. Adoption of new AS2927 as an Approved Code of Practice**

Plans are underway to adopt the new AS2927 as an approved code of practice under the *Dangerous Goods Safety Act 2004*. It will replace the current AS/NZS2927-2001 as the approved code for chlorine gas.

### **2. New Chlorine Gas Facilities**

New gas facilities should be designed, built, maintained and operated to the new AS2927:2019 as a way of minimising risk from the storage and handling of chlorine gas.

### **3. Existing Chlorine Gas Facilities**

Where a chlorine gas facility at a site was designed and installed to the superseded AS/NZS2927-2001, the site operator should ensure that the chlorine facility is upgraded to comply with the new AS2927.

A gap analysis should be conducted against the requirements of the new Standard to identify areas that need improvement.

Any deviation from new AS2927 may require changes to be made to the existing installation(s). Alternatively, other risk controls may be applied to demonstrate that the risk on site is not more than what would have existed, had the change not been made.

The Department expects that the transition time for compliance with the new Standard should be in the timeframe of 12 to 18 months. However, items such as maintenance schedules as recommended in the Standard should be applied now.

If you have any queries concerning the new AS2927, please email [dgsb@dmirs.wa.gov.au](mailto:dgsb@dmirs.wa.gov.au) or phone our Customer Service team on 6251-2300.

Yours sincerely



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