

SUPPLEMENTARY INFORMATION (APPENDICES)

APPENDIX D – CHECKLIST FOR UPSS MINIMUM STANDARDS

The following is a summary of the minimum standards for the design and installation of UPSSs.

UPSS	Equipment requirement	Guidance documents	Meets requirements and standards (Yes/No)
Tanks	<ul style="list-style-type: none"> • Non-corrodible tanks • Double-walled and with an interstitial space between the 2 walls of the tank that is capable of being monitored for any breach of either the inner or outer wall of the tank • Installed in a tank pit 	<ul style="list-style-type: none"> • Section 4.2.1 of AS 4897-2008 	
Piping	<ul style="list-style-type: none"> • Non-corrodible and has cathodic protection • Double-walled piping and has an interstitial space between the 2 walls of the piping that is capable of being monitored for any breach of either the inner or outer wall of the piping • Leak detection for product piping 	<ul style="list-style-type: none"> • Sections 4.3.1 and 4.3.4 of AS 4897-2008 	
Fill points	<ul style="list-style-type: none"> • Dedicated to one tank only • Clearly labelled and identified • Provided with a spill containment device with a minimum capacity of 15 litres per fill point • Accessible from the vehicle unloading or loading position with a hose no longer than 6 metres • Accessible for visual inspection • Located in a position that is isolated from the stormwater system • Overflows and spills from the spill containment device are directed to an oil/water separator or a stormwater quality improvement device 	<ul style="list-style-type: none"> • Section 4.3.5 of AS 4897-2008 	

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Cathodic protection	<ul style="list-style-type: none"> • Cathodic protection system designed and installed by a corrosion specialist • Tanks and piping are coated with a suitable dielectric material • The cathodic protection system has permanent test points to enable maintenance and testing • The UPSS is electrically isolated from all components to which it is physically connected and for which cathodic protection is not intended, including being isolated from the electrical earth • Cathodic protection systems are inspected and tested within 6 to 12 weeks of installation and at least every year thereafter 	<ul style="list-style-type: none"> • Parts 1 and 2 of AS 2832.1-2015 • Section 4.3.2 of AS 4897-2008 • Maintenance documents and instructions from a corrosion specialist 	
Tank pit and groundwater monitoring wells	Refer to the 'UPSS Inspection and Monitoring' tab of this document	<ul style="list-style-type: none"> • Sections 4.4.3 and 4.5.7.2 of AS 4897-2008 • 'UPSS Inspection and Monitoring' tab of this document 	
Equipment integrity test	<ul style="list-style-type: none"> • It should be capable of detecting a leak of 0.38 litres per hour, with a probability of detection of at least 95% and probability of false detection of 5% or less • It should be conducted by a competent and experienced person, who must provide the person responsible for the UPSS with a certificate stating that the system passed the test, as well as the results of the test. These documents must be kept for the life of the UPSS • Should be a nationally approved and certified method of equipment integrity testing that meets, at a minimum, the requirements or certification standards of the United States Environment Protection Agency 	<ul style="list-style-type: none"> • AS 4897-2008 	

Note: UPSS = underground petroleum storage system. AS 4897-2008 is *The Design, Installation and Operation of Underground Petroleum Systems*. AS 2832.1-2015 is *Cathodic Protection of Metals. Part 1: Pipes and Cables*.