Excavating near gas lines – for all Gas, Plumbing & Electrical workers

This applies to all contractors and workers. If you are excavating near suspected gas inlet pipes in domestic or commercial premises, take care and evaluate your work by checking for plans.

These drawings are generally found inside gas meter boxes and show the direction and depth of gas inlet piping from the gas main in the street to the customer meter position whilst referencing it to buildings, boundaries or landmarks within the property.

If there is no drawing or you are unsure contact APA Group on 1300 001 001 or 8159 1661 for confirmation. Gas meter inlet piping is nominally 300 mm + in depth, however in some cases the pipes may be shallower if the top soil has been removed as part of landscaping after the inlet was laid.

If in doubt dig exploration holes carefully by hand before using excavators, as you have a better chance of finding a pipe by hand than by a machine.

If an inlet gas pipe is found to be leaking or accidentally damaged then it is advisable to clear a safe exclusion zone to prevent interactions with bystanders and ignition sources. You should then contact APA Gas Leak Emergency Service on 1800 427 532 for immediate attention.

If the leakage is significant, keep the area clear of any ignition sources, including mobile phones, until APA emergency crews arrive. Obviously if a fire, explosion or personal injury occurs then ring 000 for immediate attention.

If the incident occurs in a work environment, contact the OTR on 1800 558 811 and SafeWork SA on 1800 777 209.

On newer installations ‘Dial Before You Dig’ (ph: 1100) may also have information regarding these gas line locations.

Message from the Technical Regulator: Electronic CoC update

Welcome to the 37th edition of Regulation Roundup.

The Office of the Technical Regulator (OTR) has welcomed an opportunity to improve business operations for both industry and government through a change from the current, paper-based process for the Certificate of Compliance (CoC), to an automated, electronic self-service model.

CoC’s will soon be managed via a new electronic portal and form, called the e-CoC. The OTR has consulted with representatives from the electricity, gas and plumbing industries to determine the merits and the requirements for transacting business electronically.

An assessment has been prepared which highlights that the impact of this change on both industry and the OTR is significant, and will mean major changes to the way we currently do business.

This change will benefit both industry and government as it means greater efficiency through a more streamlined administrative process. This will result in an overall improvement in the quality of service and communication between industry and government in relation to the regulatory program.

There will be regular updates provided to industry stakeholders and an opportunity for users to provide feedback on the new e-CoC system.

The OTR will commence the transition to the new e-CoC system in July 2016 and will consult with industry concerning a future plan to phase out the current CoC paper version.

If you would like to be informed as the transition progresses, please go to sa.gov.au/otr and register your email address.

I trust you will find this edition of Regulation Roundup of interest.

Robert Faunt, Technical Regulator
Apple AC Wall Plug Adapter Exchange Program

This recall covers the two prong plug portion of the Apple AC power supply (wall plug adapters) designed for use in Continental Europe, Australia, New Zealand, Argentina, South Korea and Brazil. These wall plug adapters shipped from 2003 to 2015 with Mac and certain iOS devices, and were also included in the Apple World Travel Adapter Kit.

Customers can identify whether their adaptors are affected by looking at the inside slot where they attach to the adapter. Affected adapters have four or five characters or no characters displayed vertically inside the slot. Please see the images for further instruction.

In some cases, certain adapters may break and create a risk of electrical shock if touched.

These products were supplied by Apple and sold nationally via Apple online sales, Apple shop fronts and authorised resellers.

Customers should stop using affected adapters and exchange them at no charge for a new redesigned model that is currently shipping.

Customers should visit http://www.apple.com/au/support/ac-wallplug-adapter/ for information about how to identify the affected adapters and the exchange process. Customers can fill out a web form with their shipping address, email and product serial number and Apple will send the new adapter to the customer. The package will also contain a postage pre-paid package, which the customer can use to return the affected adapter to Apple.

Customers can also visit an Apple Retail or an Apple Authorised Service Provider location to exchange their affected adapters.

IMPORTANT INFORMATION - Have You Changed Your Address?

Contact Consumer and Business Services (CBS) for any change of address or licence details. Level 3, 91-97 Grenfell Street, Adelaide 5000, phone 131 882, email pge.bos@agd.sa.gov.au

Only contact the Office of the Technical Regulator for change of address notification if you receive Regulation Roundup but do not hold a trade licence.

Registration of Gas and Electrical CoC books

You can register your CoC books online by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page.

The link will bring you to a page where you can enter your details for the CoC book you are registering. Remember to enter the prefix letter of the book you are registering e.g. G200251.
NECA Wiring Rules Seminars
Calling all electricians – find out the significant changes to the new Wiring Rules!

NECA South Australia will be hosting seminars throughout the state over the months of April and May 2016 to provide electricians with information on the new AS/NZS 3000 Wiring Rules. This is an event not to be missed! Find out all the upcoming significant changes of the new Wiring Rules before the book is released later this year.

SA Power Networks will also be presenting at the seminars on the updates to the Service and Installation Rules.

Thanks to the Office of the Technical Regulator and SA Power Networks for their support and involvement in this initiative.

Suppliers, manufacturers and wholesalers will be on location with their new products and service displays and NECA SA staff will also be on hand to answer your questions in regard to what NECA can do for you and your business.

NECA have once again nominated Mates in Construction to be our charity of choice for the 2016 Wiring Rules Seminars. There will be donation tins available at each seminar, and more information will be provided on MIC, the fantastic work they are doing for the construction industry and why they need our help.

To attend the NECA 2016 Wiring Rules Seminar, please complete and return the registration form enclosed in this edition of the Regulation Roundup to NECA SA via fax on (08) 8373 1528 or email neca@necasa.asn.au at least 7 days prior to your chosen event. Alternatively, visit our website for further details on how you can sign up online.

For further information please phone NECA SA on (08) 8272 2966 or visit www.neca.asn.au/sa.

New clause from the AS/NZS 5601 Gas Standard
A new clause is being introduced into the next edition of AS/NZS 3000, which should go to print later this year.

Clause 4.18.4 provides the hazardous area exclusion zone for gas regulators with high capacity relief. Under fault conditions these regulators may discharge gas to atmosphere in order to limit downstream fault pressures and protect gas appliances and pipework.

This new clause provides the exclusion zone around a vent terminal from electrical equipment deemed to be a source of ignition. The vent terminal on a gas regulator with high capacity relief is shown in Figure (c). This may, however, include a vent pipe connected to a gas regulator to vent gas safely away from other equipment or openings into a building, to comply with the AS/NZS 5601.1 Gas Installation Standard.

The left hand cylindrical Figure (a) shows the exclusion zone around a vent terminal facing open air, and the right hand circular Figure (b) shows the zone where there is a wall or other obstruction in front of the open end of the vent terminal or regulator vent.

The clause says “Electrical equipment that is a source of ignition, such as socket outlets, switches, luminaires, switchboards, meter boxes and air conditioners, shall not be installed within the hazardous areas shown in Figure 4.11 for gas relief vent terminals.”

This clause is additional to clause 4.18.2 which is the exclusion zone around the gas cylinders.

(a) Vent terminal exclusion zone with no object in the discharge direction
(b) Vent terminal exclusion zone with an object in the discharge direction

<table>
<thead>
<tr>
<th>Vent terminal diameter (not shown)</th>
<th>Exclusion zone, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 50mm</td>
<td>L = 1.5, D = 1, r = 0.5</td>
</tr>
<tr>
<td>Exceeding 50mm</td>
<td>L = 1.5T, D = T, r = 0.5T</td>
</tr>
</tbody>
</table>

Notes:
1. T = Vent terminal diameter (mm) / 50, in metres
2. The exclusion zone shown in Figure (a) depicts a space consisting of a cylinder in the discharge direction and a hemisphere in the opposite direction of discharge from the vent terminal discharge point.
3. The exclusion zone only applies up to 200 kPa.

Register Online
You can register online to receive Regulation Roundup electronically by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page. Requests for electronic versions of Regulation Roundup can also be emailed to dsd.otr@sa.gov.au include your name, licence number (if you hold a trade licence) and a contact phone number in case there are any difficulties with emailing. You will also see in this box a link where you can register your Electrical and Gas Certificate of Compliance books. Remember to contact us if you change your email address!
Wiring on fences
We have recently received a number of enquiries regarding the installation of wiring on a dividing boundary fence.

Any installation must comply with the following AS/NZS 3000:2007 clauses:

1.5.14 Protection against external influences
All parts of an electrical installation shall be designed to be adequately protected against damage that might reasonably be expected from environmental and other external influences to which the electrical installation may be exposed under the conditions of its use. These conditions would be those that would be expected during normal operation.

Damage from such influences may include mechanical damage, and damage because of exposure to weather, water, flora, fauna, seismic activity, excessive dampness, corrosive fumes, galvanic action, accumulation of dust, steam, oil, temperature, explosive atmospheres, vibration or any other influence to which the electrical installation may be exposed under the conditions of its use.

1.6 DESIGN OF AN ELECTRICAL INSTALLATION
1.6.1 General
An electrical installation shall be designed to:
(a) protect persons, livestock and property from harmful effects;
(b) function correctly as intended;
(c) connect, operate safely and be compatible with the electricity distribution system, or other source of supply, to which the electrical installation is to be connected;
(d) minimise inconvenience in the event of a fault; and
(e) facilitate safe operation, inspection, testing and maintenance.

1.7 SELECTION AND INSTALLATION OF ELECTRICAL EQUIPMENT
1.7.1 Essential requirement
Electrical equipment, forming part of an electrical installation, shall be selected and installed to—
(a) operate in a safe and reliable manner in the course of normal operating conditions; and
(b) not cause a danger from electric shock, fire, high temperature or physical injury in the event of reasonably expected conditions of abnormal operation, overload, fault or external influences that may apply in the electrical installation;

If the cable is a Final Sub Circuit, installing in rigid PVC conduit, protected by an RCD, may give the necessary protection.

If the cable is a Sub Circuit to a garage, for instance, installation in a thick wall metal pipe may be required to fulfil the requirements.

In all cases, because the fence is ‘shared property’ the adjoining neighbour or neighbours must be consulted to ensure they are both aware of, and consent to, the cable being installed on the boundary fence.

The danger occurs where a neighbour, unaware of cabling installed on a fence, may carry out some work to their side of the fence, and consequently damage the conduit/cable, (1.5.14) resulting in a possible electric shock (1.7.1 b) which could also cause a problem for the adjoining electrical installation. (1.6.1 d)

Some councils may also have restrictions on services attached to a fence.

Protection from direct contact with live parts
During recent months the OTR has investigated several incidents where persons have been exposed to contact with live parts associated with electrical work being carried out and in some cases an electric shock has been reported. These are either reported to our office through incident reporting from external parties or through our own auditing process.

The alarming concern is that testing had been neglected or not fully carried out. In the majority of cases these incidents would have been avoided if a visual inspection had been carried out as per 1.8 Verification (Inspection and Testing) of AS/NZS 3000:2007.

These incidents have occurred where circuits have been completed in switchboards during a second fix with the circuit breaker in the off position but the cable has not been completed or terminated at the other end. For whatever reason the circuit has become energised exposing persons to live conductors.

This is in breach of clause 1.5.4 of AS/NZS 3000:2007 – Basic protection (protection against direct contact).

Placing tape over the end of the cable or connectors alone does not provide adequate protection. Methods of protection are outlined in clause 1.5.4.2 of AS/NZS 3000:2007. Remember RCD’s are not recognised as a sole means of basic protection against contact with live parts.

Although not completing the circuit in the switchboard in the first instance or removing the conductor tail from the circuit breaker is the ideal solution there is also the possibility of induced voltages if associated cables remain connected. Therefore as per clause 1.5.11.4 of AS/NZS 3000:2007 – Voltages in unused conductors - the cable would have to be protected at both ends in the same manner as is required for live conductors.

The Office of the Technical regulator is concerned because several recent incidents resulted in shocks to other workers. Fortunately none of these shocks resulted in hospitalisation or worse. For the electrical contractors directly involved they have incurred expiations under section 61 of the Electricity Act 1996 for work not carried out as required and failing to carry out examinations and tests as required under the regulations.

Rescue and Resuscitation training – Reminder
As of 1st September 2014
Electrical contractors and workers (including safety observers for electrical situations) should be competent in CPR and Rescue from a live situation.

Regulation 68 now states that “persons required to carry out, or help in carrying out, electrical work must be suitably trained in rescue and resuscitation in accordance with the requirements of the Technical Regulator”

To align with recognised industry practices in the electrical industry and the requirements of Regulation 161(1) & (4) of the Work Health and Safety Regulations 2012 for safety observers, the Technical Regulator requires workers to be assessed every 12 months as competent to rescue and resuscitate a person.

The two national training modules required are:

- Perform CPR.
- Perform Rescue from a live LV panel.
### Electric Shock Report Incidents

<table>
<thead>
<tr>
<th>Shock Source</th>
<th>Cause</th>
<th>Contributing Factors</th>
<th>Injuries</th>
<th>Action to make safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling light fitting.</td>
<td>Lack of protective earthing at light fitting.</td>
<td>Live conductor had contacted conductive light fitting surround.</td>
<td>Occupier received electric shock between hands and feet.</td>
<td>Electrical contractor connected earthing conductor to light fitting.</td>
</tr>
<tr>
<td>Fence gate and carport.</td>
<td>High impedance of main neutral conductor.</td>
<td>Underground cable supplying service pillar had been damaged.</td>
<td>Occupier received electric shock between hands.</td>
<td>Network operator repaired underground neutral conductor.</td>
</tr>
<tr>
<td>Photo electric cell controlling flood light.</td>
<td>Water had entered the PE cell.</td>
<td>Relocating the PE cell without disconnecting the circuit first.</td>
<td>Electrical worker received electric shock to hands.</td>
<td>Electrical contractor replaced damaged PE cell once circuit safely isolated.</td>
</tr>
<tr>
<td>Wet and Dry vacuum cleaner.</td>
<td>Vacuum cleaner had fallen over on to its side.</td>
<td>Water entered motor terminations when it was lying on its side.</td>
<td>Operator received electric shock to hands.</td>
<td>Remove unit from service and advise worker in correct usage.</td>
</tr>
<tr>
<td>Water taps throughout house.</td>
<td>Tree contacting service line.</td>
<td>Tree branch had rubbed through and damaged neutral screened cable.</td>
<td>Home owner received electric shocks to hands.</td>
<td>Network operator replaced overhead service line.</td>
</tr>
<tr>
<td>Hand held electric grinder.</td>
<td>Damaged supply cord.</td>
<td>Worker lowered grinder from elevated work site by hanging on to its supply cord.</td>
<td>Worker received electric shock to hands.</td>
<td>Repair grinder supply cord and worker advised on appropriate power tool handling procedures.</td>
</tr>
<tr>
<td>Light switch.</td>
<td>Area had just been cleaned.</td>
<td>Disabled restroom had just been cleaned including light switch with copious amounts of water.</td>
<td>Occupant received electric shock to hand.</td>
<td>Light switch location dried and switch replaced, cleaners advised how to appropriately wipe down electrical switches.</td>
</tr>
<tr>
<td>Socket outlet supplying washing machine.</td>
<td>Laundry had been soaked in water when the owner was attempting to install a new washing machine.</td>
<td>An attempt had been made to clean up water but the socket outlet was still water damaged.</td>
<td>Occupier received electric shock to hand when turning on socket outlet.</td>
<td>Electrical contractor cleaned up water in laundry including replacing socket outlet after isolating circuit.</td>
</tr>
<tr>
<td>Cable tray adjacent cold-rooms.</td>
<td>Insulation of cable damaged exposing bare conductors.</td>
<td>Worker installing cold room rested hand on cable tray where cable had been damaged by vermin.</td>
<td>Worker received electric shock to hand.</td>
<td>Electrical contractor repaired damaged cable. Owner of premise to assess electrical installation for possible further vermin damage.</td>
</tr>
<tr>
<td>Hair straightener.</td>
<td>Bathroom product had leaked into hair appliance.</td>
<td>Continued use of hair straightener after having body wash lotion spilt on to it.</td>
<td>Occupier received electric shock between right hand and left foot.</td>
<td>Network operator investigator advised home owner to discard damaged appliance.</td>
</tr>
<tr>
<td>Underground cable.</td>
<td>Electric cable damaged while leaking underground water pipe was being repaired.</td>
<td>Workers tried to locate leaking water pipes exact location by pushing metal bar into ground, not realising they had damaged an underground electric cable in the process.</td>
<td>Worker received electric shock to hands.</td>
<td>Work group advised to locate underground services first before excavating.</td>
</tr>
<tr>
<td>Cordless kettle.</td>
<td>Kettle base located adjacent to sink.</td>
<td>Kettle base flooded with water after home owner had washed dishes.</td>
<td>Home owner received electric shock to hand.</td>
<td>Cordless kettle removed from service, advice given to owner about dangers of water and electricity.</td>
</tr>
<tr>
<td>Commercial air-conditioning unit.</td>
<td>Printed circuit board.</td>
<td>Refrigeration worker was tasked with replacing control board but did not allow for residual charge of electronic components to dissipate.</td>
<td>Refrigeration worker received electric shock to hands.</td>
<td>Instruction of work group in correct isolation procedures undertaken by manager.</td>
</tr>
<tr>
<td>Lighting final sub circuit.</td>
<td>Final sub circuit neutral conductors.</td>
<td>Electrical worker isolated circuit and attempted to install RCD before realising that another circuit was sharing the same neutral conductor.</td>
<td>Electrical worker received electric shock to hands.</td>
<td>Isolation procedure to be reviewed to eliminate risk in the future.</td>
</tr>
<tr>
<td>Overhead service line.</td>
<td>Gutter installer contacted live conductor.</td>
<td>Gutter installer leaned against live overhead bare service line conductors.</td>
<td>Worker received electric shock between neck and hands.</td>
<td>Network operator replaced open wire service line with insulated and screened cable.</td>
</tr>
</tbody>
</table>


Gas Roadshows 2016

The OTR will again partner with the Master Plumbers Association to provide combined Gas and Plumbing Roadshows in 2016. The dates and final content are yet to be finalised but when they are they will be posted on the OTR and MPA websites. Please see the Plumbing Bulletin of this issue for more information.

Common gas definitions

**EOP = Emergency Over-Pressure** - the maximum pressure that an installation can be subjected to under a fault condition. The gas pipework and equipment downstream must be protected from such fault pressure and this is usually achieved by a combination of over-pressure devices or regulators.

The EOP value must be provided to the OTR when applying for elevated consumer installation pressures above 3 kPa.

**OPP = Over-Pressure Protection** - A device or system for preventing the pressure in the gas pipework or in a gas appliance from exceeding a predetermined safe value.

**OPSO = Over-Pressure Shut-Off** - A device to prevent over-pressurisation of an installation above a nominated safe pressure and which will require manual reset to restore normal operation.

**MAOP = Maximum Allowable Operating Pressure** - The maximum pressure that can be sustained with a factor of safety, by the type or class of pipe or pipe fitting for its estimated useful life under the anticipated operating conditions.

**RWP = Rated Working Pressure** - The maximum allowable inlet pressure of any gas appliance, or pipe fitting, or any section of gas pipework.

**OTR = Office of the Technical Regulator**

**CBS = Consumer and Business Services**

**SWSA = SafeWork SA**

Test points on regulators

**Clause 5.11.4 Pressure Test Points (in Part)**

In the last edition of RR we featured an article on pressure test points. This time we are expanding the information to include self-sealing test points and adaptors, see photographs below:

**Requirement:**

Pressure test points shall be accessible and provided at, or adjacent to, the—

(a) outlet of gas pressure regulators installed in the gas pipework;

For pressures up to 7 kPa – You have 2 alternatives –

- Remove the 6 mm or 8 mm (¼” or ¼” BSP) plug on the regulator and fit a test point or
- Install a test point as part of a socket immediately downstream of the regulator outlet.

See photos below of LPG examples which also apply to NG.

Please note – this requirement also applies to replacement regulators.

For pressures above 7 kPa you are required to use self-sealing test points, (similar to the valve on a basketball).

The most popular of these is the ‘Pete’s Plug’. These require a special probe fitting to sample the gas pressure known as a ‘Pete’s Plug Adaptor’. The adaptor should be connected to your pressure gauge or instrument via a suitable flexible tube and mechanical fittings.

See photos below in this column.
Installing replacement hotplates

Take care when installing replacement hotplates, particularly if the existing hole in the bench is larger than required for the new unit. Most manufacturers’ instructions mention the effective sealing of the hole in the bench to the hotplate.

You may need to trim the opening with timber strips or similar to reduce the hole to the required cut out size so that the sealing strips/gaskets are effective.

When you have commissioned the hotplate, try opening and closing the cupboard doors below the hotplate, with the burners set to the simmer position. If the burners go out, then the bench opening may not be effectively sealed from the hotplate, ie air is drawn through the hotplate and results in the burner being extinguished.

There have been a few cases where hotplates have been unnecessarily replaced when in fact it was the problem as described above. A possible solution to this problem is to fit relief vents within the cupboard to reduce the suction effect when the cupboard doors are opened.

**Install to manufacturer’s instructions**

Besides obtaining certification, manufacturers go to great lengths to ensure their appliances are safe, reliable and efficient by providing installation and operating instructions. An increasing number of appliances have specifically designed proprietary flue systems and location requirements. These instructions must be followed to ensure that the appliance operates safely and as intended. The OTR has found that some installers do not heed manufacturer’s instructions or safety warnings for installations. This applies especially to inbuilt appliances where other factors may come into play, ie flueing, temperature hazards and correct air supply.

**Do not take short cuts with installations.** Using old flue offcuts and installing appliances in locations that vary from the manufacturer’s requirements may get you into trouble.

If an incident were to occur, the appliance warranty or insurance may be void, leaving you legally responsible.
Outlet service pressure testing

APA Group and OTR inspectors have noted that some gasfitters are still incorrectly testing consumer outlet services with the meter connected. This may result in the assumption that the installation is sound when in fact it is not.

Currently a number of Adelaide suburbs are having the gas mains and inlets services upgraded. This work often requires disconnecting the gas supply to consumer installations while the system is remediated. Prior to reconnection APA or their contractors test all consumer installations for soundness as required by the Gas Act.

Note: this also occurs with periodical meter changes.

If a gas leak is detected the owner / operator is advised to get their own gasfitter to attend and rectify the leakage, test the installation and certify it as sound to enable restoration of the gas supply.

The correct method of testing for soundness is to disconnect the outlet meter connection and attach a testing tee and test instrument directly to the outlet standpipe before pressurising and testing the installation with air.

Refer to Appendix E, E4 and E5 of AS/NZS 5601.1 for the test procedures.

Having the meter and regulator disconnected will eliminate any possible leakage from this equipment. Remember to soapy water test the meter and connections when you reconnect them after the soundness test.

Where a service regulator is fitted, and you have no alternative but to test the service with the meter connected, you must bleed down the high pressure gas trapped on the inlet side of the regulator before testing begins.

Typically, on a 2.75 kPa system, the lockup (no-flow pressure) would be around 3.2 kPa. The trapped high pressure gas between the isolation valve and the service regulator can feed a small leak on the outlet and give the impression that the installation is sound.

The trick is to bleed the lockup (no-flow) pressure down to approximately 2.5 kPa, then pressure test the installation. The same principle must be applied to testing LPG services as well: bleed down the high pressure gas trapped in the pigtails so that the pressure on the manometer level drops.

Be aware that as inlet services are changed the prevalence of 10 light fittings is increasing. You may need to acquire a 10 light (25mm MI BSP to 2K meter) nipple adaptor for adapting your test tee directly on the outlet service without having to disturb the fittings.

2K / 25mm test nipple adaptors can be purchased from RC Williams Pty Ltd, ph: (08) 8297 9599.

Test equipment should be kept in good condition and regularly checked to ensure that it operates satisfactorily. If the installation you are testing has a gas leak immediately test your test equipment to rule out any faults with it.

If you leave a gas leak on a new installation, APA and its contractors will not connect a gas meter. The gas consumer will be advised why the meter connection is refused, and they will be instructed to contact you to arrange repairs. Save yourself the embarrassment and stress of having to go back and find / repair gas leaks at short notice by properly testing your work and noting it on your gas CoC.

Leaving a gas leak is the quickest way to join the Expiation Club, don’t become a member, test your work thoroughly and note the results on the gas CoC.

Portable butane gas stove safety

Portable butane (lunchbox) gas stoves with integrated gas canisters can pose significant safety risks: if the butane gas canister overheats and the shut-off valve fails, the stove is likely to explode and cause injuries. There have been a number of incidents reported across Australia resulting in scalding, serious burns and shrapnel injuries.

As a result, substantial testing for a range of portable butane gas stoves with integrated canisters was undertaken. This revealed that many of them did not fully comply with the applicable Australian safety Standards. Consequently, all single and dual-burner gas stoves had their safety compliance certificate cancelled and they were removed from display and sale.

Following the nationwide removal from display and sale, a number of these appliances were officially recalled by the Australian Competition and Consumer Commission (ACCC). Visit the Product Safety Recalls Australia website for information.

Pressure test tee with 2K/25 mm test nipple

Following a recent series of extensive testing by Testing Laboratories, there are a number of new, certified portable gas stoves coming back on the market.

More information on which appliances are affected and how to use existing appliances safely can be found on the OTR website: www.sa.gov.au/otr or by doing an internet search on Portable butane gas stove safety.

GTRC National Certification Database up and running

The GTRC (Gas Technical Regulators Committee) National Certification Database provides a listing of gas appliances and components that are or have been previously certified by the five certification bodies (AGA, SAI Global, IAPMO, Global-Mark and Vipac) that are recognized individually by the GTRC members.

The GTRC National Certification Database provides all stakeholders with information in relation to certified product as well as the certification status of the product. This information is updated typically on a monthly basis.

If you have any doubts regarding the information in the certification database contact the applicable certifier from the list below.

GTRC: equipment.gtrc.gov.au
AGA: www.agas asn.au/complete_product_directory
SAI Global: register.saiglobal.com
IAPMO: forms.iapmo.org/ocna/listing
Global Mark: www.global-mark.com.au
Vipac: www.vipac.com.au

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Identifying certified appliances

Identifying that an appliance is certified prior to installation is a requirement for gasfitters under the Gas Installation Standard. There are now 5 approved Type A appliance certifiers and all are required to provide a badge or sticker on the appliances they certify.

You should check by looking for an approval number – these are generally located on the data plate of the appliance and sometimes on the packaging.

The certifiers are: AGA, SAIGLOBAL, GLOBAL MARK, IAPMO and VIPAC.

See their symbols on the right:

To help in determining whether appliances or components are certified you can search on the National Database of Certified Gas Appliances and Components: www.gtrc.gov.au

Type B appliances will have a marking plate fitted by APA, Select Solutions or TG Certifications, with some having a Safety Certificate badge. If in doubt about the certification the owner should have a copy of the CoC letter produced by the same.

In all cases with installations, modifications, relocation or servicing of any appliances, you must ensure the appliance is certified before connecting a gas supply to it or conducting a service. Otherwise, you may be in breach of the Gas Act and as a result you may be expiated.

Gas Regulations 2012

43—Installing or commissioning Type B appliances

(1) For the purposes of section 56 of the Gas Act—

(a) a person who installs, commissions or modifies a Type B appliance must ensure that the work is carried out, and examinations and tests are carried out, in accordance with AS 3814 and AS/NZS 5601; and

(b) a person who carries out work, or examinations or tests, related to moving a Type B appliance to a different location (whether on the same premises or otherwise) must ensure that the work is carried out, and examinations and tests are carried out, in accordance with AS 3814.

(2) A person must not commence supplying gas for use in a Type B appliance following installation of the appliance unless the appliance has been approved as complying with the requirements of AS 3814.

Important Safety Reminder
Gas Storage Water Heaters

As someone working with gas, you already understand the importance of following the appliance’s operating instructions precisely. We now seek your assistance in making sure your customers are aware of the correct procedure for re-lighting a gas water heater. Obviously the best time to discuss this with your customer is during the initial installation, however any calls you make to a household with a gas storage water heater are opportunities to reinforce the safety message.

All water heaters operate slightly differently, so it is important to familiarise the customer with the correct relighting instructions for their particular model. These are contained in the Owner’s Guide and also applied as a sticker to the water heater inside the access panel (see examples below).

If these instructions are unavailable or unclear, videos on how to re-light a gas water heater, and downloadable copies of the Owner’s Guide, are available from our website at http://www.rheem.com.au

Following the correct procedures is important, so if your customer is still in doubt as to how to go about the re-lighting process, ask them to call you, or us if you prefer, on 13 10 31 for assistance.

Gas storage water heaters are widely used throughout Australia and are safe as long as they are operated and maintained correctly. If you have any queries regarding this advice do not hesitate to call us.

RHEEM AUSTRALIA - ABN 21 098 823 511 1 Alan St Rydalmere NSW 2116 Ph: 13 10 31
2016 Plumbing and Gas Roadshows

The OTR conducts a number of plumbing and gas related information sessions in various locations throughout the State to keep plumbers and gasfitters informed of any changes to Standards, installation requirements and to seek feedback from the industry. Unfortunately some of the information sessions conducted in 2015 were poorly attended.

The OTR’s plumbing section recently conducted a successful information session on Non-Drinking Water which was attended by over 100 industry stakeholders. This unprecedented level of support is mainly attributed to plumbers and builders wanting to be kept updated as to the OTR’s requirements with respect to regulating non-drinking water installations. Plumbers were also keen to be informed of their responsibilities when installing non-drinking water installations.

It is proposed to conduct more sessions in 2016 which you are strongly encouraged to attend. These sessions will be tailored to your specific requirements and suggestions.

In order for the OTR to develop a suitable training package, we request that you fill in the attached survey card and send it back to us. The survey card is postage paid so all you need do is select the topics you’d like to hear about and put it into a post box – no stamp required!

Final audits of on-site plumbing installations

Plumbing Advisory Note – Issued December 2015

The Office of the Technical Regulator (OTR) conducts final audits of on-site plumbing installations to ensure they comply with the plumbing Standard published under section 66 of the Water Industry Act 2012.

Once a plumbing installation is completed, plumbing contractors must book a final audit for:
- commercial/industrial plumbing installations
- any plumbing installations incorporating an alternative plumbing solution
- grey water systems
- documentation associated with a grey water system, (including relevant authority approvals) must be available on-site at the final audit.

Final audit bookings for residential properties are not required. The OTR will contact plumbing contractors as required for a sample of work for final auditing.

Plumbing contractors or their representatives must be present on-site during a final audit. All documentation associated with the plumbing installation (including certificates of compliance and sanitary as-constructed drawings) must be submitted to the OTR within seven days of completing the work.

What’s included in an audit?

Final plumbing and equipment audits may include:
- overall compliance with the relevant sections of the Plumbing Code of Australia
- flood gullies
- backflow prevention (where required)
- heated water services (including temperature control devices and energy efficiency requirements)
- venting
- non-drinking water installations (including signage, cross-connection and separation test, identification, loop and valves installed in the correct locations where required)
- inspection openings (including where required to be raised to surface level)
- water industry entity water meters and sewer connection points for visibility.

Booking a final audit

Final audits must be booked by 3pm the working day before the audit is required. Bookings can be made online at plumbbooking.sa.gov.au or by calling 1300 884 055.

Developing non-drinking water guidelines

The Technical Regulator is developing non-drinking water guidelines for the water industry for all non-drinking water installations in South Australia.

The guidelines will outline requirements and responsibilities for installing, operating and maintaining non-drinking water systems in accordance with the Water Industry Act 2012, Water Industry Regulations 2012, and appropriate technical Standards, and will be used by the plumbing and water industries, water industry entities and property owners with a non-drinking water supply.

As the Office of the Technical Regulator develops the guidelines, we will be consulting with water and plumbing industries. If you would like to be involved in the process and/or kept up-to-date with the progress of the guidelines, please email your expression of interest to dsd.otr.winfrastructure@sa.gov.au

Testing and commissioning backflow prevention devices

All new installations of backflow prevention devices must be tested and commissioned by a licensed plumber. Results must be recorded on the OTR’s ‘Commission, inspection and maintenance’ report.

All testable backflow prevention devices must also be tested annually by a licensed plumber and the results recorded on the OTR’s ‘Commission, inspection and maintenance’ report.

Reports must be completed and forwarded to the OTR within seven days of testing.

Completed reports can be emailed to: otr.plumbbackflow@sa.gov.au or posted to: Office of the Technical Regulator – Plumbing, GPO Box 320, Adelaide SA 5001.

Legislative requirements


AS/NZS 3500.1.2015, Part 1 Water Services, Clause 4.2.2 states ‘no device or system that may cause contamination of a water supply shall be connected directly or indirectly to any part of a water service without appropriate cross-connection or backflow prevention control suitable for the degree of hazard’.

Completed plumbing installations that comply with AS/NZS 3500.1.2015 are deemed to satisfy the performance requirements of the PCA in relation to water services.
**Backflow prevention requirements for toilet seat douche outlets and flexible hoses**

**Plumbing Advisory Note – Issued December 2015**

The OTR has determined the cross-connection hazard rating as "high hazard" for:

- toilet seat douches or bidets that are either integrated into or installed in conjunction with a toilet seat;
- flexible hoses installed adjacent to a toilet.

Where a "high hazard" reduced pressure zone (RPZ) backflow prevention device is required, it must be installed upstream of the toilet douche seat or flexible hose connection.

**The RPZ must be fitted before connecting the property's water service to the water meter.**

**Toilet seat douches**

A toilet seat douche or bidet must comply with AS/NZS 3500 Part 1 Water Services Clause 12.2.3.

A douche outlet installed at least 25 mm above the overflow level of the pan, at any position, does not require a backflow prevention device.

If the douche outlet is less than 25 mm above the overflow level of the pan, at any position, a "high hazard" RPZ backflow prevention device must be installed upstream of the hose connection (see figures 1 and 2). The device must comply with AS/NZS 2845.1 or AS 2845.2.

**Flexible hoses adjacent to toilets**

Where a water connection point is installed adjacent to a toilet for the purpose of supplying water to a flexible hose, a "high hazard" RPZ backflow prevention device must be installed upstream of the hose connection. (see figures 1 and 2). The device must comply with AS/NZS 2845.1 or AS 2845.2.

**How NOT to do it!**

**Non-compliant plumbing installations**
Contact list

**Electrical Technical Advice**
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: (08) 8226 5518 (8:30am–4:30pm)
Fax: (08) 8226 5529
Email: dsd.otrmail@sa.gov.au

**Electrical Certificates of Compliance**
Available in person from the following agencies:
- Office of the Technical Regulator
  Level 8, 11 Waymouth Street, Adelaide
- NECA
  213 Greenhill Road, Eastwood
  Phone: (08) 8272 2966
- Lawrence & Hanson
  All stores
- MM Electrical
  All stores
- Middendorp
  All Stores
- Rexel Australia Ltd
  All stores
- P & R Electrical Wholesalers
  All stores
- CNW Wholesalers
  All stores
- Service SA Outlets
  EDS Centre, 108 North Terrace, Adelaide and Regional Areas

**Gas Technical Advice**
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide.
Phone: (08) 8226 5722 (8:00am–5:00pm)
Fax: (08) 8226 5866
Email: dsd.otr@sa.gov.au

**Gas Certificates of Compliance**
Available in person from:
- Gas Works
  All stores
- Norm’s Plumbing Supplies
  John Street, Mt Gambier
- Samios Plumbing Supplies
  All stores
- Scott's Plumbing
  66 O.G. Road, Klemzig
- Northern’s Plumbing Supplies
  All Stores
- Tradelink
  All stores
- Reece Plumbing
  All stores
  Personal collection orders available from:
  - Service SA Outlets
    EDS Centre, 108 North Tce Adelaide and Regional Areas

**General Information**
Licence and Address Change
Consumer & Business Services
Phone: 131 882
Email: pge.bos@agd.sa.gov.au

**Appointments and Information**
SA Power Networks Builders & Contractors Line
Phone: 1300 6500 14
Fax: 1300 6500 16

**Australian Standards**
Standards Australia
www.standards.com.au

**Training**
**Gas**
Master Plumbers Association (formerly PIA)
1 South Road, Thebarton
Phone: (08) 8292 4000
Fax: (08) 8292 4040
Technical Advisory Centre P/L
4/543 Churchill Road, Kilburn
Phone: (08) 8162 5640
Fax: (08) 8162 5638
www.techad.com.au

**Gastrain**
U1 61-65 Tapleys Hill Road
Hendon 5014
(PO Box 83, Royal Park 5014)
Phone: (08) 8447 7753
Fax: (08) 8447 7753
www.gastrain.com.au

**Electrical and Gas**
TAFE info (for all training enquiries)
Phone: 1800 882 661

**Peer Veet**
Rescue and Resuscitation, First Aid & other Industry related courses:
1042 Port Road, Albert Park
Phone: (08) 8348 1200
www.peer.com.au

**Electrical**
ATEC (Adelaide Training & Employment Centre)
Electrical Rescue & Resuscitation Certificate
Phone: (08) 8240 1235
www.atec.asn.au

**Power Lines/Cables**
Clearance Zones
Between vegetation and power lines or building/structures and power lines contact the
Office of the Technical Regulator
Phone: (08) 8226 5521
SA Power Networks (SAPN)
Phone: 13 12 61

**For Locations of Gas, Electricity or Telecommunications**
“Dial Before You Dig”
This service is still available when doing emergency excavations at short notice.
Phone: 1100
www.dialbeforeyoudig.com.au

**For after hours locations or gas emergency (including LPG)**
Natural Gas Network: 1800 808 526
Origin Energy LPG: 1800 808 526
Kleenheat: 1800 093 336
Elgas: 1800 819 783
APA Group Gas leaks: 1800 427 532
(1800 GAS LEAK)

**For gas or electrical major incident reporting 24 hours (SA only)**
Office of the Technical Regulator
Phone: 1800 558 811
This number also appears in the 24 hour emergency numbers section at the front of the South Australian White Pages

**Gas Trade contact**
APA Group system operator
Phone: 1300 001 001

**Additional websites for further information**
South Australian Parliament for Acts and Regulations
www.legislation.sa.gov.au
SafeWork SA
www.safework.sa.gov.au
Australian Liquefied Petroleum Gas Association (ALPGA)
www.alpg.asn.au
Australian Competition and Consumer Commission (ACCC)
www.accc.gov.au
Australian Gas Networks Ltd (formerly Envestra)
www.australiangasnetworks.com.au
Elgas
www.elgas.com.au
Origin Energy
www.origenergy.com.au
Kleenheat
www.kleenheat.com.au
Australian Standards
www.infostore.saiglobal.com/store/

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**Government of South Australia**
Department of State Development