Welcome to Regulation Roundup. The OTR series of roadshows is coming to a close for the year. While we are generally pleased with the number of people who attended this year’s roadshow series we always encourage more to attend. The OTR’s philosophy has always been that we would rather prevent a compliance issue than have to deal with the aftermath of something going wrong. We see the roadshows as an effective means to assist the industry with achieving safety compliance. To this end we encourage any feedback you may have as to how the roadshows could be improved to assist you with any issues you have with your day to day work. We also see Regulation Roundup as another means of getting across recent issues.

This edition is again packed full of useful and interesting information and I encourage you to take the time to have a read.

New expiation arrangements and forms

The OTR has adopted a new method of issuing expiations for serious breaches of the Gas, Electricity and the Water Industry Acts. Provided work is compliant, 99% of you will probably never see an expiation form. The main difference is that any follow up, eg reminders for late or non-payments, will be done by SA Police.

Robert Faunt, Technical Regulator

Recall - DC Isolators

The Australian Competition & Consumer Commission (ACCC) has issued several recalls recently on DC isolators that are commonly used in the solar industry. All these products feature an internal fault, where a high resistant connection may form; there is a risk that the DC Isolator may overheat and, in some cases, cause fire.

The affected brands and models numbers are as follows:

- **DKSH Australia Pty Ltd—"PVPower" Branded DC Isolator**
  Model no: XPDCISO1000V32A - Dates available for sale: 1st August 2012 - 30th August 2013

- **Advancetech Pty Ltd—Avanco Brand DC Isolators**

- **Uniquip Industries—PV Array Rotary DC Isolator**

Electrical contractors are advised not to install these devices.

For more information and updates see www.recalls.gov.au

The Technical Regulator has issued a Prohibition of Sale Notice on the above mentioned products; sale of these products is illegal within South Australia.

NOTE: Recall notices from the ACCC also exist for the following DC isolators:

- **NHP Electrical Engineering Product Pty Ltd—DC Solar Isolator Switches**
- **Eitech Industries—ISO-MAX Solar Connect DC Isolator**

FOR TECHNICAL ENQUIRIES:

**Electrical**
P: (08) 8226 5518 | (8.30am - 4.30pm)
F: (08) 8226 5529

**Gas**
P: (08) 8226 5722 | (8.00am - 5.00pm)
F: (08) 8226 5866

**Plumbing**
P: 1300 760 311 | (8:00am – 4:30pm)

See www.recalls.gov.au for Australian recall information
Electronic COC

For Plumbing, Gas fitting and Electrical work

The last edition of Regulation Roundup indicated that the OTR was considering the introduction of electronic certificates of compliance. Comment on this notion was encouraged by providing a link to a website questionnaire.

Over the last few months the OTR has further discussed this idea at trade roadshows and by holding after hours focus group meetings with representatives of the various trades. A committee was formed and included executive members from industry associations - PIA and NECA.

The outcome of the consultation process was that the industry is overwhelmingly in favour of electronic COC’s and saw it as a time and cost saving idea. There were some that preferred the existing paper system and it was made clear that customers will still be able to get hard copies. It is likely that there will be a phase-out and phase-in period.

The actual design of the electronic form is yet to be decided but it will, of course, need to capture all relevant information about the job and will include time saving features to save typing (eg drop-down boxes with options). We will keep you informed as things move along and it may be that training sessions are needed for those not used to filling in computer based forms.

IMPORTANT INFORMATION - Have You Changed Your Address?

Remember to contact Consumer and Business Services (CBS) for any change of address or licence details. Their address is L3, 91-97 Grenfell Street, Adelaide 5000, phone 131 882 or you can email them on 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.

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!

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 eg G200251.
Soft wiring systems

OTR often receives phone calls regarding the wiring of demountable office partitions and work stations. The calls are usually regarding whether this is electrical work required to be done by a suitably licensed person.

The wiring of demountable office partitions and work stations that are assembled on site is considered to be electrical installation work. Regardless of how the systems are connected to other parts of the electrical installation, this work must be carried out by suitably licensed electricians.

Example of a soft wired office partition

Portable screens and partitions are regarded as portable equipment. The insertion of a plug into a socket outlet to provide supply to the pre-wired equipment is not electrical installation work, however it would be expected that these partitions would have ongoing tag and testing to ensure their electrical integrity.

New requirements for the interconnection of smoke alarms

The Building Code of Australia (BCA) has mandated smoke alarms, a smoke alarm system or a smoke detection system be installed throughout new residential buildings (houses, apartments, flats etc) since 1997.

Smoke alarms are required to be located in strategic positions, such as hallways serving bedrooms, in order to facilitate an early response by occupants to a fire within a dwelling. In some circumstances, the size or layout of the dwelling necessitates the installation of more than one smoke alarm within that dwelling. For example, a two-storey dwelling requires at least one smoke alarm to be installed on each storey (even if there are no bedrooms located on one of those storeys).

New dwellings

Since 1 May 2014, smoke alarms are required to be interconnected in all new Class 1 dwellings, within sole-occupancy unit of a Class 2 or 3 building and in a Class 4 part of a building. This means that when one alarm is activated, it will activate all other alarms in the occupancy.

Existing dwellings

For the purposes of these provisions, an existing dwelling is one where the application for building rules consent was lodged prior to 1 May 2014.

New additions/extensions to existing dwellings

From 1 May 2014 an addition/extension that requires more than one smoke alarm will have to interconnect those smoke alarms. They are not, however, required to be interconnected with any other smoke alarms in the existing dwelling.

Any subsequent addition/extension which requires a smoke alarm must interconnect with any other smoke alarm previously installed as part of any other extension/ addition that was lodged for building rules consent after 1 May 2014.

Monitored smoke detection/security systems for houses

Interconnected smoke alarms must comply with the Australian Standard AS 3786 Smoke Alarms. Monitored smoke detection/ security systems utilising smoke detectors and sounders installed in new or existing dwellings may not comply with AS 3786 and therefore may not comply with the requirements of regulation 76B of the Development Regulations 2008 or the BCA.

Where monitored smoke detection/ security systems are installed in new or existing dwellings, owners and installers need to ensure that one or more AS 3786 complying smoke alarms are also installed within each dwelling to meet the requirements of regulation 76B.

For more information contact:

Grid-connected photovoltaic (PV) arrays

The OTR has a webpage on grid- connected photovoltaic (PV) arrays - new, alterations, additions and repairs.

Information on the following topics is provided to assist electrical contractors:

• Safety requirements for new PV system installations
• Complying with revised standards
• Recent history of standard changes for AS/NZS 3000, 4777 & 5033, including amendments
• SA Power Networks requirements
• Licensing requirements
• A guide on the Safety requirements for alterations, additions and repairs to existing PV systems
• Installing additional capacity or replacing panels, inverters and other components on a solar PV system where a feed-in tariffs exists

Go to www.sa.gov.au/otr and follow the links: Electricity trades > Electrical installations > Grid-connected photovoltaic (PV) arrays - new, alterations, additions and repairs

Dangerous electrical work sparks disqualification

CBS media release 24 December 2013

An electrician from the north-eastern suburbs has been banned from working in the industry for his dangerous electrical work.

On 10 December 2013, in proceedings brought against him by South Australia’s consumer watchdog, the District Court found that James Trimboli (of Commercial & Domestic Electrical Services Pty Ltd) had overseen and/or performed negligent electrical work under the Plumbers, Gas Fitters and Electricians Act 1995.

Consumer Affairs Commissioner, Paul White, said that Trimboli’s substandard electrical work constituted a very real danger to the community.
“From March 2010 to May 2012 Trimboli’s business, Commercial & Domestic Electrical Services Pty Ltd, was responsible for the performance of negligent electrical work at several properties,” the Commissioner said.

“Trimboli was negligent in his oversight and supervision of electrical work and in most cases he improperly completed paper work that indicated he had both performed the work and supervised it when this was not the case.

“In one instance, where he had completed the work himself, the work was also negligent. This conduct is of great concern as anyone who holds an electrical contractor’s licence and electrical worker’s registration under the Plumbers, Gas Fitters and Electricians Act 1995 has a clear responsibility to perform work that complies with all statutory requirements.”

In November 2010 legal intervention was undertaken by the Office of the Technical Regulator, and amongst other things, Trimboli agreed to complete a wiring rules course. Trimboli failed to successfully complete the course and subsequently his worker’s registration was suspended in May 2012 and he voluntarily surrendered his contractor’s licence.

The Commissioner then commenced disciplinary action against Trimboli to protect consumers against his substandard electrical work.

“The District Court has imposed significant disqualification and prohibition orders which will apply until further order of the Court,” Mr White said.

“This includes disqualification from being licensed as an electrical contractor, registered as an electrical worker, employed by an electrical contractor or being a director of a body corporate that is an electrical contractor.

“Trimboli now cannot work in the electrical industry.

“His negligent electrical work was found to be unsafe and dangerous as it gave rise to an increased risk of electrical shock to persons, an increased risk of damage to property and equipment, an increased risk of fire at the premises and an increased risk of fire spreading.

“Negligent and improper electrical work is a severe safety hazard for the community with potentially lethal consequences.

“This serves as a reminder to all electrical workers that quality performance is required in order to keep your licence.”

Master Electricians Australia
Electrical Industry Forums 2014

With more than 75 years experience leading the industry as the Electrical Contractors Association Queensland (ECAG), MEA connects electrical contractors with local services to build business success, providing industry development and representation across Australia.

During September and October a series of technical forums for the electrical industry will be held throughout South Australia. The forums are structured to ensure relevance to local issues and to keep abreast of the latest standards and trends in what is an ever-changing business environment.

The forums are open to electrical contractors and licensed electricians and present an excellent opportunity to receive the latest technical and safety information relevant to the electrical industry. Topics covered at each seminar include:

- electrical contractor business risk assessment and WHS obligations outlined in AS4801
- updates in the next edition of AS/NZ3000
- update to the Service and Installation Rules
- product recalls and product compliance obligations
- ‘sham’ contracting; is a sub-contractor actually an employee?
- LED lighting standards and what to consider when selecting products/suppliers

At each location a Q&A forum will be held where a panel of government and industry representatives, including the Office of the Technical Regulator, SA Power Networks and Fair Work Ombudsman, will provide advice and clarification on topics such as standards, product compliance, technical issues and safety.

In addition, the latest innovative products in the industry will be on display from suppliers and wholesalers to keep you up to date.

To secure your place at one of the MEA forums, simply complete the enclosed registration form and fax to (08) 8443 5319 or scan and email to sa@masterelectricians.com.au

Are you relying on someone else’s design?

The Electricity Act 1996 requires all electrical installations to be DESIGNED, installed, operated and maintained to comply with all applicable requirements of AS/NZS 3000 Wiring Rules and any standard called up by the Wiring Rules. The Act also requires that the work is examined and tested to ensure it complies with all relevant standards and is electrically safe to energise. The electrical worker who undertakes the examinations and tests, must when satisfied that the installation is compliant, complete a Certificate of Compliance.

The Wiring Rules refers to design, designed or designer in excess of 120 times throughout the book and therefore places a high priority in the design process for compliance.

If you are the electrician installing an installation or the electrician certifying an installation for which you have not designed, it would be prudent to seek all relevant documentation including the design criteria, equipment selection and calculations. This information should be concise enough to provide evidence to your satisfaction that the design meets all the relevant requirements.

For any of the design criteria you are unsure of, you should seek further clarification from the designer before proceeding.

The Certificate of Compliance places the responsibility for all aspects of the electrical installation you are certifying squarely on your shoulders. Do you really want to be held responsible for someone else’s mistakes?

OTR Electrical expiations issued since the last edition of RR

<table>
<thead>
<tr>
<th>Worker / Contractor</th>
<th>Breach</th>
<th>Expiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Contractor</td>
<td>Electrical work not carried out as required under regulations</td>
<td>Section 61 (1)(a) Electricity Act 1996 $375.00</td>
</tr>
<tr>
<td>Electrical Contractor</td>
<td>Electrical Certificate of Compliance not completed as required under regulations</td>
<td>Section 61 (1)(c) Electricity Act 1996 $375.00</td>
</tr>
<tr>
<td>Electrical Contractor</td>
<td>Electrical Certificate of Compliance not completed as required under regulations</td>
<td>Section 61 (1)(c) Electricity Act 1996 $375.00</td>
</tr>
<tr>
<td>Shock Source</td>
<td>Cause</td>
<td>Contributing Factors</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Gate at front of property and shower taps.</td>
<td>Damaged neutral conductor.</td>
<td>Tree branch swaying in strong winds damaged overhead service at pole top.</td>
</tr>
<tr>
<td>Fence of abandoned vehicle compound for local council.</td>
<td>Electric security fence.</td>
<td>Worker was weed spraying when he reached through gate opening to spray weeds on other side of gate.</td>
</tr>
<tr>
<td>Swimming pool in neighbours’ property.</td>
<td>Service Neutral conductor high resistance.</td>
<td>When home owner turned on air-conditioner the next door neighbour received shocks when contacting water of their swimming pool.</td>
</tr>
<tr>
<td>Gate at front of rural property.</td>
<td>Electric fence.</td>
<td>Neighbour had installed electric fence unit to control stock but failed to advise neighbouring property owners.</td>
</tr>
<tr>
<td>Revenue metering enclosure.</td>
<td>Live meter cabling.</td>
<td>Property revenue meter had been removed however the metering isolator was not locked off.</td>
</tr>
<tr>
<td>Damaged power tool cord.</td>
<td>Exposed conductors.</td>
<td>Carpenter came into contact with damaged cord after accidentally cutting into it with power saw.</td>
</tr>
<tr>
<td>Guttering of house roof.</td>
<td>Damaged lighting circuit cable.</td>
<td>Occupier received shock when standing on fence and touching guttering.</td>
</tr>
<tr>
<td>Lighting pole.</td>
<td>Damaged underground cable.</td>
<td>Lighting pole had become live due to damaged underground cable.</td>
</tr>
<tr>
<td>Bathroom taps and conductive floor tiles.</td>
<td>Damaged underground cable.</td>
<td>Cable fault between transformer and supply pit.</td>
</tr>
<tr>
<td>Waste pipes in structural cavity.</td>
<td>Damaged cable in wall.</td>
<td>Plumber was repairing sewage leak and contacted corroded mineral insulated metal sheathed cable in the wall cavity.</td>
</tr>
<tr>
<td>Kitchen mixer style appliance.</td>
<td>Conductive frame of mixer.</td>
<td>Kitchen staff went to operate mixer for the first time since it had been repaired. The appliance had not been tag and tested as per Safe Work SA requirements since the repairs.</td>
</tr>
<tr>
<td>Water meter and taps.</td>
<td>High resistance supply neutral.</td>
<td>Home owner went to use water taps in garden and received shock.</td>
</tr>
<tr>
<td>Gutter mesh.</td>
<td>Deteriorated overhead service.</td>
<td>Gutter guard installer rolled out mesh which contacted single insulated overhead service conductors attached to fascia.</td>
</tr>
<tr>
<td>Appliance used to trim dental moulds.</td>
<td>On/Off toggle switch.</td>
<td>Staff member using appliance in vicinity of water whilst trimming moulds.</td>
</tr>
</tbody>
</table>
Gas industry stalwart calls it a day

After a distinguished career of 54 years in the gas industry Bill Patience has decided to call it a day and retire to spend more time with family and friends. He will be sadly missed by many in Government and in Industry.

Bill served on the AG 006 Gas Installation Committee for 17 years including 10 years as the chairman. In that time the AG 601 Gas Installation Code was transformed into the AS/NZS 5601 Standard which is now recognised throughout Australia and New Zealand.

With the deregulation of the gas industry in SA, the Government commenced regulatory control in 1997. SA Gas Co became a private entity and Bill was recruited to the Office of Energy as the Principal Gas Advisor in July 1997.

Bill was pivotal in establishing gas certificates of compliance, regulatory monitoring, inspections, auditing and investigation capabilities within the office to regulate the gas industry as per the newly enacted Gas Act 1997.

Under Bill's guardianship the gas sector has gradually expanded our resources and capabilities to serve the gas industry. We owe a lot to Bill for his dedication and mentoring of employees who hope to continue his legacy.

We thank Bill for his pioneering work and we wish him a happy and safe retirement.

Copper press-fit systems in commercial kitchens

Care should be taken if press-fit copper fittings are used in a commercial kitchen installation. Radiant and conducted heat can affect the non-metallic components in the fittings and therefore the soundness of the joint. The preferred method is brazed copper when fabricating pipework in close proximity to burners, flues or other heat sources. It is common in commercial kitchens for cleaners to use steam cleaning, which would further exacerbate the problem.

Hose assemblies used to connect domestic cookers and commercial gas catering appliances

A restraining chain / cable must be fitted to prevent strain on the hose assembly. Always attach restraining chains to the wall and the frame of the cooker, not to the pipework. The restraint shall only permit the hose to extend to 80% of its length.

Some cooker manufacturers specify that chains be used as stability (anti tilt) devices. Do not confuse gas hose assembly protection with this function as both may apply.

Sub (check) gas meters installed inside commercial premises

AS/NZS 5601 – 2013 at 5.11.6.7 requires that sub meters (privately owned and read meters) be supported so that the meter is not supported by the installation pipework. Where the meter is located on a wall supporting brackets should be used. The location of a direct billing meter is at the discretion of the gas utility but should also be supported.

Where a gas meter located inside is to be mounted at low level it must be protected against impact damage and corrosion (eg supported off the floor where the floor is to be steam cleaned.

Error in AS/NZS 5601 part 1 - 2013 appendix F - Pipe size tables list on page 108

The list on page 108 of the 2013 edition indicates that tables F20 / 21 / 22 are for natural gas through polyamide pipe; this is incorrect. The actual tables, on pages 183, 184 and 185 are correctly labelled - natural gas through SDR 11 polyethylene pipe. Please correct the list on page 108 of your 2013 Standard. The 5601 committee will amend this error in the next edition.

Portable LPG hot water system installed inside a yacht

A marine insurance company recently contacted the OTR for an opinion about the safety and suitability of a continuous flow hot water unit and its location inside the port pontoon hull of a catamaran. The hot water heater was an approved type certified by SAIG for portable outdoor use only. As you will see in the photo the appliance has a flue spigot (but was not flued). The sleeping and bathroom areas were not separated from the appliance.

There are obvious and immediate threats to life, from both the accumulation of products of combustion within the confined space, and a fire hazard when the appliance is in operation.

Insurance cover was refused and the appliance tagged off as dangerous. Due to the difficulty in fluing the appliance through the deck (entry of seawater) the appliance was relocated above the deck.
**Uncertified Type A appliances – new test procedure**

The APA Group have withdrawn from the testing of uncertified type A (domestic and light commercial) gas appliances. There is a new procedure for the testing and approval of these appliances.

Mostly they are of the commercial catering types, eg pizza and tandoori ovens, but also some domestic appliances. See the OTR explanatory note inserted in this edition of Regulation Roundup issued to plumbers and gasfitters.

As in the past with APA fees are charged for this service; contact Gassupport Pty Ltd for a quote. Portable appliances and catering trailers can be tested at the provider’s premises in Adelaide (Hendon).

Many uncertified appliances will require modifications to meet the standards required. These modifications can be arranged through the certification provider at an extra cost. Gas fitters can carry out the necessary modifications prior to testing but do not do so unless you are familiar with the relevant appliance Standards.

**New number for reporting gas leaks on mains and inlets**

APA have introduced a new 24 hour number for reporting gas leaks on mains, inlets and at billing meters: 1800 GAS LEAK (1800 427 532).

The old number 1800 808 526 will continue to work for some time and will then be phased out.

Calls will continue to be taken by the National Response Centre, based in Victoria, acting for gas utilities nationally. It is essential that you specify clearly the address and the suburb and South Australia as many suburb names are also used in other states. The operator will notify the appropriate gas utility to attend.

**Repairs to, or extensions from, imperial (yellow) polyethylene to metric (black with yellow stripes) polyethylene gas pipe**

In several past editions of Regulation Roundup we have discussed the difficulties experienced when gas fitters are called to repair, or extend from, damaged yellow PE gas outlet pipes. The superseded yellow PE pipe was made to imperial dimensions (measured ID) and is dimensionally incompatible with the current black with yellow stripes (tiger pipe) made to metric dimension (measured OD). Obtaining an imperial to metric PE adaptor was the problem. In some cases the APA Group was able to help with an adaptor fitting but an alternate supplier was required.

Despite a search of likely suppliers we were only able to find one SA based company able to provide these fittings. The OTR is aware that Advanced Piping Systems (located at 5-9 Benjamin St, St Mary’s, phone 8206 7000) can provide adaptors from imperial to metric PE pipe.

The fittings are shown in the attached photo. It is essentially a metric PE tail (so that an electro-fusion fitting can be used) to a mechanical adaptor to attach to the imperial pipe. The mechanical end will adapt to a number of external pipe diameters and to several materials. We suggest a call to Advanced Piping System for a catalogue and price list may be worthwhile.

**Testing for soundness - Which one do you use?**

The OTR prefers to use a simple water type manometer “U” gauge for soundness testing. Digital manometers are very good but the OTR’s experience is that they may give false readings by being too sensitive eg fluctuating with wind. Digital manometers are ideal for checking and setting gas pressures when commissioning gas appliances.

**Confirming an appliance gas rate or checking a rate of escape using a meter test dial**

The test dial on a gas meter can be used for checking the hourly gas consumption rate of an appliance or the rate of a gas escape to help determine the size of a gas leak. All that is needed is a watch to time the consumption or rate of escape over a set time, then multiplying that to get an hourly rate.

**Liquefied Natural Gas Plant at Port Wakefield (first in South Australia)**

The Primo abattoir at Port Wakefield has recently converted its gas plant from LPG to operate on natural gas. The nearest piped natural gas supply is approximately 40 km away at the Moomba to Adelaide pipeline.
Primo Abattoir engaged Clean Energy Australia to provide a natural gas supply on site using liquefied natural gas (LNG) stored in insulated storage vessels. The gas is stored at minus 160 degrees and the vapour must be warmed up before entering the outlet pipe and the gas appliances. This is done using heat exchangers.

**Did you attend the OTR Roadshows?**

The OTR in conjunction with the PIA and commercial sponsors recently completed 15 Roadshows throughout regional and metropolitan South Australia. All plumbers and gas fitters were invited via the previous edition of this newsletter.

The gas part of the Roadshows covered a significant number of changes in the revised Gas Installations Standard AS/NZS 5601 part 1 and 2 - 2013. If you did not attend the show you may be in for a shock when we next audit your work either proactively or because of a complaint or incident.

This edition contains a number of significant changes concerning gas appliance ventilation as a result of new (5 and 6 star) high energy efficiency building constructions. **A new normative (mandatory) appendix R – Spillage Test for Flued appliance - is included for the first time.** The appendix requires that gasfitters installing internal model flued gas appliances test for flue spillage if exhaust fans or range hoods are present to verify that they do not cause a negative pressures and flue inversion inside buildings. The concern is that if the appliance is faulty or poorly maintained the flue may contain products of incomplete combustion, including carbon monoxide. Under certain conditions (lack of make-up air / adventitious ventilation) the exhaust fans may cause flue products to be pulled down the flue and into the space.

Think of Gas Roadshows as continual professional development. You never stop learning so why not invest a little time in your development so you are aware of the current trends and requirements. This will save you having to ring us up later to clarify changes when you find out second hand that your work is not compliant.

**Ventilation on Caravans & RV’s**

If you service LP Gas installations in caravans & RV’s please check that the ventilation openings are clear and unobstructed. If insect screens are fitted to the vents they must be kept clean at all times. The small holes in the insect screens can significantly reduce the free area of the vent and caravan manufacturers are aware they must compensate for this by doubling vent sizes to achieve the ventilation areas specified in part 2 of AS/NZS 5601 – 2013. Ventilation, correct appliance installation and regular maintenance are all vital to the safe operation of gas appliances and especially vital in confined spaces.

**Fatality in caravan.**

The photo below shows a ventilation grill blocked by newspaper in an older style caravan. The owner / occupier blocked the door vents to minimise heat loss while he was living in the van during the cold winter evenings.

He operated the cooker burners to heat the caravan; the air was slowly consumed and the occupant died as a result of a toxic build-up of carbon monoxide, carbon dioxide and a lack of oxygen. **Note:** cookers must not be used for comfort heating. Caravan dealers have stickers available to warn against this. See clause 6.9.4 in part 2 of AS/NZS 5601 – 2013.

**Q & A**

Q: Are we able to flue horizontally through a wall, with the other side of the wall being a walk way in the neighbour’s property? The houses are boundary to boundary.

It is well vented; the neighbour has given permission, and all seems good, just not sure if there are any regulations regarding this issue.

Could you clarify so I can quote accordingly?

A: This is not an issue covered in the 5601 Standard or the Gas Act. Presumably the flue will cross the property boundary and this becomes a legal encroachment issue. What if the house next door changes hands and the new owner objects? What if burn injury occurs to the neighbour or family? What if objects are placed in or obstruct the flue terminal (eg kids posting toys)? Getting access to the flue for maintenance.

Avoid if possible and certainly get something in writing from the neighbour (do not use the gas coc for this purpose). We have no official view except to say you should consider this as a last option only.

**We have a winner!**

Those of you who attended the 2014 Gas Roadshow will remember that by filling in the participant details form you were entered into the draw to win a set of Gas Installation Standards. The draw took place at the OTR offices on 14 July 2014 and the winner is Steve Lomman of Peninsula Plumbing at Port Hughes.

Congratulations Steve and we hope the set of AZ/NZS 5601 Parts 1 & 2 are useful to you.
For more information on plumbing regulation in South Australia please visit The Office of the Technical Regulator (OTR) plumbing website www.sa.gov.au/otrplumbing and follow the links. We welcome your feedback. If you have any comments about Plumbing Advisory Notes, or wish to suggest some topics to be covered in future editions please send us an email to otr.plumbenquiries@sa.gov.au

Non-drinking water (recycled water)

From 1 August 2014, the Office of the Technical Regulator (OTR) will regulate the supply of non-drinking (recycled) water.

The National Construction Code, Volume 3 Part B3 sets out the requirements for design, construction, installation, replacement, repair, alteration and maintenance of any part of a non-drinking water service (recycled water).

Plumbing contractors carrying out work on non-drinking water services (recycled water) for residential, commercial and industrial properties in South Australia need to:

- ensure all work complies with AS/NZS 3500 Part 1
- book an inspection for all in-wall and in-ground non-drinking water (recycled) installations with the OTR, which can be done by calling 1300 884 055 or emailing plumbooking@sa.gov.au no later than 3pm the day before an inspection is required

Conducting cross connection/separation tests

SA Water is currently supplying non-drinking water (recycled) to the following areas:

- Bowden
- Mawson Lakes
- Seaford Meadows
- Lochiel Park (Campbelltown)

Plumbing contractors undertaking work in these areas are required to book a cross connection/separation test with SA Water by calling (08) 7424 1360 by 3pm the day before an inspection is required.

For all other non-drinking water (recycled) sites, plumbing contractors are responsible for conducting the cross connection/separation test and completing the Certificate of Compliance Non Drinking Water section (in-wall, in-ground and cross connection/separation test boxes) and forwarding a copy to the owner/developer of the property and the OTR within seven days of completing the work.

Complex building sites

When lodging a building plan with the OTR, applicants will be informed if a development is considered a complex building site (such as the NRAH development). Applicants will also be told about relevant approval conditions, including the requirement for a plumbing contractor to conduct and document all cross connection/separation tests after each stage of work.

Plumbing contractors should retain all documentation of the cross connection/separation tests for auditing by the OTR, and on completion of the work forward a copy of the documentation to the property owner/developer.

Maintenance

Property owners with non-drinking water (recycled) services are required under the Water Industry Act 2012 (S69) to ensure that those services maintain operational compliance.

Fees for re-inspecting or re-attending onsite plumbing

The Office of the Technical Regulator (OTR) authorised officers have been performing an increasing number of re-inspections for plumbing that is either not up to standard or not ready at the agreed inspection time.

Commensurate with the reasonable costs associated with onsite re-inspections or re-attendances, a $98.00 service fee is being introduced pursuant to regulation 35(1)(a) of the Water Industry Regulations 2012:

If...a person’s acts or omissions require the Technical Regulator (or a person acting on behalf of the Technical Regulator) to undertake a reinspection of any work, or to re-attend at any place for any other need.

<table>
<thead>
<tr>
<th>What type of dwelling is the water heater for?</th>
<th>Does the property have a reticulated gas connection?</th>
<th>Type of water heater that can be installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Detached or semi-detached house</td>
<td>Yes</td>
<td>• A low emission type water heater.</td>
</tr>
<tr>
<td>• Maisonette</td>
<td></td>
<td>• An electric storage water heater cannot be installed.</td>
</tr>
<tr>
<td>• Row house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Townhouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Flat or unit (not located above or below another dwelling)</td>
<td>No</td>
<td>Either:</td>
</tr>
<tr>
<td>• Small hostel (Class 1A or 1B dwelling)</td>
<td></td>
<td>• A low emission type water heater</td>
</tr>
<tr>
<td>An apartment or flat in a multi-storey buildings (Class 2 dwelling)</td>
<td>Not applicable</td>
<td>• An electric storage water heater no greater than 250 litres rated hot water delivery</td>
</tr>
<tr>
<td>New home, alteration or addition, subject to development approval (National Construction Code Class 1A and 1B dwelling)</td>
<td>N/A</td>
<td>• An electric instantaneous water heater up to 15kW (electrical input) and maximum storage capacity of 1 litre.</td>
</tr>
<tr>
<td>Commercial property</td>
<td>N/A</td>
<td>• Any water heater type</td>
</tr>
</tbody>
</table>

| N/A                                           | • Any water heater can be installed – the requirements do not cover non-domestic purposes. |
reason, in connection with the operation or requirements of a standard under Part 7 of the Act... the person is liable to pay a fee of an amount equal to the reasonable costs of the reinspe ction or re-attendance (as the case may be).

Fees must be paid - either by cheque, money order, credit card or BPay - before plumbing work will be re-inspected by an OTR authorised officer. Plumbing work must not be covered over until the re-inspection has occurred and the work is approved.

Having your work compliant and ready at the agreed time of the first inspection is the best way to avoid this fee. If you foresee that your work won’t be ready at the agreed inspection time, call the OTR as soon as possible to organise a new inspection time.

If you have any questions, please call the OTR on (08) 8204 1768.

South Australian water heater installation requirements

In South Australia, there are requirements for the types of water heaters that can be installed in homes. These requirements were reviewed and updated in January 2014.

The requirements only apply when installing new water heaters or replacing old water heaters. Working water heaters do not need to be replaced.

A plumbing advisory note was sent to licensed installers in January, which summarised the new requirements and described installations excluded from the requirements.

How do the requirements relate to your work?

For commercial installations, any type of water heater can be installed. The water heater requirements only apply to residential installations.

For residential installations, the type of water heater that can be installed depends on:

- the type of dwelling (based on the National Construction Code classifications)
- whether the property has a reticulated gas connection.

A property is connected to a reticulated gas supply if it has a piped connection to a gas distribution system and this connection is capable of supplying gas to gas equipment or appliances.

What type of water heater can you install?

Use the following table, together with the information provided in the plumbing advisory note, to determine what type of water heater you can install in residential situations.

Further information

For more information about the South Australian water heater installation requirements and related building classes, visit www.sa.gov.au/energy/waterheaters or contact the Plumbers’ Water Heater Information Line on 1300 883 019 during business hours.

Advisory Note - Installing water filters

This advisory notice details the requirements for installing water filters connected to a drinking water supply.

All water filters must be installed by a licensed plumber and the water filter must be certified and authorised.

Legislative Requirements

Regulation 4 of The Plumbers, Gasfitters and Electricians Regulations 2010 provides that all water plumbing work in or on a building must be installed by a licensed plumber.

In addition, the National Construction Code Volume 3 Part A2 stipulates that materials or products listed in Table A2.1 (including water filters) which are used in plumbing or drainage installations must be certified and authorised (watermarked).

New fire hydrant couplings

The OTR Plumbing group have had recent meetings with the South Australian Metropolitan Fire Service (SAMFS), outlining the impending change from ‘London Round’ hydrant fittings to ‘Storz’ fittings on all new fire hydrant installations. The SA Country Fire Service (CFS) have already switched to the Storz fittings.

Technical review has indicated that Storz fittings would best meet the needs of the SAMFS due to their sexless design (no male and female fittings), lack of complexity and existing use by the CFS and other National Fire Authorities. It is fully understood that this change will take decades to be complete and that adaptors will be carried and used in the field by all Fire Authorities.

The South Australian Metropolitan Fire Service (MFS) have issued an Advisory Notice (001) on the adoption of Storz fittings. For further details contact the MFS Community Safety and Resilience Department: ph 08 8204 3611 email: Communitiesafety@samfs.sa.gov.au

Appointment of Regional Inspector and Recycled Water contact

The Office of Technical Regulator has recently appointed Brent Slee to the position of Regional Plumbing Installation Inspector. Brent will be located at Port Pirie and will be responsible for ensuring residential, commercial and industrial plumbing and drainage installations (including water services, heated water, backflow prevention, fire service installations, recycled, non-drinking water and rainwater installations), comply with the National Construction Code Volume 3 (Plumbing Code of Australia) and relevant Australian Standards.

Brent will be responsible for Port Pirie, Port Augusta, Whyalla, Port Lincoln and Mt Gambier and surrounding regional areas.

Brent’s contact details are:
Email: brent.slee@sa.gov.au
Phone: 0477 725 535

Recycled Water Contact

Robert Breslauer is the contact person for all recycled water systems. Robert takes over this role from Robert Knowles who will be responsible for Backflow Prevention and Fire Service Installations.

Robert’s contact details:
Robert.breslauer@sa.gov.au
ph: 08 8226 5788
Mob: 0488 931 346

Above pic shows “London Round” to “Storz” fittings in adaptors to both male and female “London Round”.
Alternative water supplies
AS/NZS 3500.1 Section 4 Clause 4.2.5 permits water supplied from one source to be connected to another water source with the use of an appropriate backflow prevention device which shall be fitted. The installation shall be authorised by the Office of the Technical Regulator.

Another option is to provide a manifold as shown in the diagram below.
The diagram below is an example of a typical arrangement to install a manifold interconnection which provides separation from the drinking water to an alternative water supply used for irrigation systems. This system enables the continued supply of water in the event the drinking water supply is temporarily or permanently unavailable eg depletion of aquifer.

South Australian water heater rebate forms
The South Australian solar hot water rebate scheme ended on 30 June 2013 and all applications needed to be submitted by 31 July 2013. If you still have South Australian water heater rebate forms, please can you destroy them.

The main incentive currently available for water heaters are small-scale technology certificates. For more information about water heater regulations and incentives visit www.sa.gov.au/energy/waterheaters or call the Plumber’s water heater information line 1300 883 019.

![Diagram of interconnection system]

- Modified fire hydrant booster cabinet
- Reduced pressure zone (RPZ) valves
- Recycled water supply and water meter
- Feed from site water meter
- Raised concrete with air space to permit discharge from RPZ vent
- Spade blank for complete separation of services
- Removeable flanged section to avoid cross connection
- Main feed to site’s domestic water supply
- Main feed to site’s irrigation system
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
Master Electricians Australia
4A Northcote St, Torrensville 5031
Phone: 1300 889 198
Lawrence & Hansson
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 Tce
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 the following agencies:
Gas Works
All stores
Gas Appliances Plus
Unley
Norm’s Plumbing Supplies
John Street, Mt Gambier
Scott’s Plumbing
66 O.G. Road, Klemzig
Northern’s Plumbing Supplies
All Stores
TradeLink
All stores
Reece Plumbing
All stores

General Information
Licence and Address Change
Consumer & Business Services
Phone: 131 882
Email: gge.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
AGA
Phone: (03) 9580 4500
www.gas.asn.au

Training
Gas
Plumbing Industry Association
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 Rd
Hendon 5014
(PO Box 83, Royal Park 5014)
Phone: 8447 7783
Phone: 1300 955 583
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

Power Lines/Cables
Clearance Zones
Between vegetation and power lines or building/
structures and power lines contact
Office of the Technical Regulator
Phone: (08) 8226 5521
SA Power Networks Service Rules Advice
Phone: (08) 8404 4898

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

Gas Leaks and Emergencies
Natural Gas Network: 1800 808 526
Origin Energy, LPG: 1800 898 526
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
Phone: (08) 8159 1661

New Gas Connections
APA Group
Phone: 1300 001 001

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.alpga.asn.au
Australian Competition and Consumer
Commission (ACCC)
www.accc.gov.au
Envestra web site promoting natural gas
www.natural-gas.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/

Plumbing Technical Advice
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: 1300 760 311 (8:00am–4:30pm)
Email: otr.plumbenquiries@sa.gov.au
www.sa.gov.au/otrplumbing

Plumbing Certificate of Compliance
Available in person from:
Service SA Outlets

Government of South Australia
Department of State Development