



**DUBBO
REGIONAL
COUNCIL**

TECHNICAL SCHEDULE

DRC-W309

SEWER SMOKE TESTING

TECHNICAL SCHEDULE DRC-W309 – SEWER SMOKE TESTING

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DRC-W309: SEWER SMOKE TESTING

DRC-W309.1 SCOPE

This Specification applies to the use of smoke testing of house drainage lines which are connected to the Principal's sewer mains. Smoke testing is used for the detection of defects and illegal connections which are sources of inflow and infiltration to the sewer mains.

The work required to be performed under this Contract shall comply with the referenced documents in Clause DRC-W309.2, unless specified otherwise herein.

A plan of the area covered by the Contract will be provided by the Principal.

DRC-W309.2 REFERENCED DOCUMENTS

The following documents are referred to in this Specification. The latest version of the document including any published amendments shall apply unless noted otherwise. Where the Drawings or a project specific specification are in conflict, or inconsistent with these referenced documents, or this Specification, then the details on the drawings or project specific specification shall apply.

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DRC-W301 Sewer Maintenance - General

Australian Standards

Works shall also comply with the current versions of all relevant Australian Standards.

Water Services Association of Australia Standards

WSA02 Sewerage Code of Australia

DRC-W309.3 GENERAL REQUIREMENTS

The Contractor shall comply with the general requirements for sewer maintenance activities and accessing sewer maintenance holes as detailed in Technical Schedule SW-301.

DRC-W309.4 SAFETY

Refer to Technical Schedule DRC-W301 for details of safety requirements.

DRC-W309.5 CUSTOMER NOTIFICATION AND COMPLAINTS

The Contractor is responsible for notifying customers where entry to private property is required and also for handling and addressing any customer complaints. Refer to Technical Schedule DRC-W301 for details of customer notification and complaints requirements.

The Principal shall be responsible for placing media advertisements advising affected customers according to the work program supplied by the Contractor.

The Superintendent will forward to the Contractor a complete and up to date list of the properties to be smoke tested with the names and addresses of the property owners four weeks prior to the anticipated start of smoke testing in the field. The Superintendent will also forward to the Contractor supplies of Council letterhead and an electronic signature of a Council officer who is to be signatory.

The Contractor shall prepare and mail out, approximately two weeks before the smoke testing is due to start, notification letters to the following:

- Property owners.
- Occupant and Residents.
- Managing Real Estate Agents.

The notification pro forma letter for each class of letter recipients is included in Appendix B, C and D. Note that these letters are designed so that the property itself, the name and address of the recipient, where applicable appears only on the address label on the envelope.

The Superintendent will also arrange for notices to be published in a local newspaper (and electronic media?) indicating the water mains to be cleaned, the anticipated start date and the likely duration of the cleaning.

On the day that the work is programmed and prior to commencement of work, the Contractor shall contact the residents and advise them that smoke testing is about to commence. The Contractor shall draw the residents' attention to the clause in the Principal's letter relating to asthma sufferers.

If no resident is at the property, the Contractor shall proceed with the work and leave the notification card shown on Appendix F in the letterbox of the property.

On completion of work the Contractor shall leave a card in the letterbox of the property. The Principal shall provide to the Contractor the necessary cards.

If a defect is found, the Contractor shall prepare and mail out to the property owner the Defect Notice letter as shown in Appendix E. The Principal shall provide to the Contractor one copy of the pro forma Defect Notice.

The Contractor shall contact the property owner in writing and give notification of at least one week of the Contractor's intention to re-inspect the property.

DRC-W309.6 NOTIFICATION OF EMERGENCY SERVICES

At least two days prior to the commencement of work the Contractor shall advise the local Fire Brigade and Police of the proposed work program involving the use of smoke.

DRC-W309.7 SAFETY

Refer to Clause DRC-W301.4 in Technical Schedule DRC-W301.

DRC-W309.8 SMOKE EQUIPMENT

The Contractor's equipment shall generate non-toxic smoke, easily visible to the naked eye, during daylight and direct the smoke into house drainage lines via the inspection shaft.

In addition to being non-toxic, the smoke is to be non-harmful to curtains, furniture, carpets, etc. This is to account for the potential for a defect allowing smoke to emanate from internal fittings.

Details of proposed equipment and methods shall be submitted with the tender documents.

All equipment used by the Contractor shall comply with all relevant statutory requirements.

DRC-W309.9 SMOKE TESTING

Access to the house drainage lines is to be via the property's inspection shaft and external fittings.

Prior to the injection of smoke into drainage lines at any property the Contractor shall ensure the external gully water seal is cleared and make all reasonable effort to ensure that all internal water seals are in place.

If there is no boundary trap the Contractor shall seal the shaft below the inlet for the property's drains to prevent smoke entering the sewer main.

The Contractor shall seal the induct vent at boundary trapped properties.

The Contractor shall inject smoke into the subject house drainage lines via the inspection shaft. Sufficient smoke shall be injected so as to completely fill the subject property's drainage lines. The Contractor shall then visually detect the appearance of smoke from the ground, roof drainage pipes and elsewhere.

The Contractor shall make deductions based on the locations where smoke is emitted and complete the Smoke Testing Report accordingly.

The Superintendent may direct the Contractor to retest any property where testing results are inconclusive. No additional payment shall be made to the Contractor in such cases.

DRC-W309.10 SURCHARGE

The Contractor is to take all care to prevent surcharging during all stages of the work, however if surcharging occurs immediately notify the Superintendent and thoroughly clean up the affected area to the Superintendent's satisfaction.

DRC-W309.11 ADVERSE WEATHER CONDITIONS

Smoke testing is not to be carried out if weather conditions are unsuitable. Examples of unsuitable weather are rain, fog or high wind.

Smoke testing is not to be carried out in saturated ground conditions.

DRC-W309.12 REPORTING

For each property smoke tested the Contractor shall fully complete the Smoke Testing Report (refer Appendix A) and submit the completed sheet to the Superintendent within one week of the smoke testing being carried out.

The Contractor shall forward to the Superintendent paper copies of the Defect Notices and Defect Notice letters sent out as well as the electronic mail merge document.

DRC-W309.13 PRACTICAL COMPLETION

A Certificate of Practical Completion will not be issued by the Superintendent until the following have been satisfactorily completed:

1. The Superintendent is satisfied that the work complies with the requirements of this Specification and the Contract in all respects (subject to such minor omissions as may be accepted by the Superintendent) and that the Contractor has carried out all of his obligations under the Contract.
2. Reporting in accordance with Clause DRC-W309.12 has been satisfactorily completed.

APPENDIX A SMOKE TESTING REPORT

CONTRACTOR _____

DATE __

TIME __

ADDRESS _____

RESIDENTS HOME YES [] NO [] NOTIFIED []

SHAFT LOCATED []

BOUNDARY TRAP YES [] INDUCT VENT SEALED []

NO [] SHAFT SEALED []

SMOKE OBSERVED EMANATING FROM THE FOLLOWING LOCATIONS:

EDUCT VENT []

COMMENTS/DEDUCTIONS _____

ROOF DRAINAGE []

COMMENTS/DEDUCTIONS _____

STORMWATER []

COMMENTS/DEDUCTIONS _____

GROUND []

COMMENTS/DEDUCTIONS _____

INTERNAL []

COMMENTS/DEDUCTIONS _____

OTHER []

COMMENTS/DEDUCTIONS _____

APPENDIX B PROPERTY OWNER NOTIFICATION LETTER**LEAK TESTING OF SEWERS**

To Property Owner

As part of a programme to minimise surcharge and odour problems and to lower pumping and sewage treatment costs. Council will be conducting Leak Tests in its sewerage system in your area commencing on _____. A special non-toxic smoke, which is manufactured for this purpose only, will be blown into the internal sewer pipes. This smoke will reveal places where sewer odours may escape as well as places where storm and other surface waters may be entering the sewerage system.

Inspection outside your house or building only is required - it is not necessary for you to be present at the time of inspection. Council's contractor will be required to enter upon your land during the course of the tests to observe for smoke.

As the plumbing appliances in your house or building are connected to the Council's sewerage system, some of the smoke may enter your house if the:

- Vents connected to your building's sewer pipes are inadequate, defective or improperly installed;
- Traps under sinks, tubs, basins, showers and other drains are dry, defective, improperly installed or missing;
- Pipes, connections and seals of the wastewater drain system in and under your building are damaged, defective, have plugs missing or are improperly installed.

The smoke used in the tests has a distinctive, but not unpleasant odour, and dissipates within a few minutes if there is adequate ventilation. Although the smoke is non-toxic it may cause some discomfort to asthma sufferers.

If traces of this smoke or smoke odours enter your house or building, it is an indication that gases and odours from the sewers may also enter. These can be unpleasant and, if the defects are not rectified, they could pose a health hazard to the occupants.

While Council will render all possible co-operation and advice, the correction of any defects in the house service sewerage system on private property is the responsibility of the owner. The services of a licensed plumber or drainer would be required to rectify any problems detected.

If you have any questions or desire more information, please telephone 6801 4000, during normal business hours, Monday to Friday.

Kathryn McAlister
Client Services Coordinator

APPENDIX C MANAGING AGENT NOTIFICATION LETTER**LEAK TESTING OF SEWERS**

To the Managing Agent:

Dubbo Regional Council intends to carry out smoke testing of the sewerage network in parts of the City. Council has written to occupants and residents within this area informing them of the proposed testing. Council's records indicate that you may be managing a property that will be smoke tested. I am now taking the opportunity to advise property managers about the smoke testing procedure.

As part of a programme to minimise surcharging and odour problems and to lower pumping and sewage treatment costs, Council will be conducting leak tests on internal sewerage pipes within the property. A special non-toxic smoke, which is manufactured for this purpose only, will be blown into the sewer pipes. This smoke will reveal places where sewer odours may escape, as well as places where storm and other surface waters may be entering the sewerage system. Inspection outside your house or building only is required. It is not necessary for you or your representative to be present at the time of inspection. Council's contractor will be required to enter the property during the course of the tests to observe for smoke.

As the plumbing appliances are connected to Council's sewerage system, some of the smoke may enter the building if the:

- Vents connected to the building's sewer pipes are inadequate, defective or improperly installed;
- Traps under sinks, tubs, basins, showers and other drains are dry, defective, improperly installed or missing;
- Pipes, connections and seals of the wastewater drainage system in and under the building are damaged, defective, have plugs missing or are improperly installed.

The smoke used in the tests has a distinctive, but not unpleasant odour, and dissipates within a few minutes if there is adequate ventilation. Although the smoke is non-toxic it may cause some discomfort to asthma sufferers. If traces of this smoke or smoke odours enter the house or building it is an indication that gases and odours from the sewers may also enter. These can be unpleasant, and if the defects are not rectified, they could pose a health hazard to the occupants.

While the Council will render all possible co-operation and advice, the correction of any defects in the house's sewerage system on private property is the responsibility of the owner. The services of a licensed plumber or drainer would be required to rectify any problems detected.

If you have any questions or desire more information, please telephone 6801 4000, during normal business hours, Monday to Friday.

Kathryn McAlister
Client Services Coordinator

APPENDIX D OCCUPANT AND RESIDENT NOTIFICATION LETTER**LEAK TESTING OF SEWERS**

To Occupants and Residents:

As part of a programme to minimise surcharging and odour problems and to lower pumping and sewage treatment costs, Council will be conducting leak tests in its sewerage system in your area commencing on _____. A special non-toxic smoke, which is manufactured for this purpose only, will be blown into the internal sewer pipes. This smoke will reveal places where sewer odours may escape, as well as places where storm and other surface waters may be entering the sewerage system.

Inspection outside your house or building only is required. It is not necessary for you to be present at the time of inspection. Council's contractor will be required to enter upon your land during the course of the tests to observe for smoke.

As the plumbing appliances in the house or building are connected to Council's sewerage system, some of the smoke may enter the building if the:

- Vents connected to the building's sewer pipes are inadequate, defective or improperly installed;
- Traps under sinks, tubs, basins, showers and other drains are dry, defective, improperly installed or missing;
- Pipes, connections and seals of the wastewater drainage system, in and under the building are damaged, defective, have plugs missing or are improperly installed.

The smoke used in the tests has a distinctive, but not unpleasant odour, and dissipates within a few minutes if there is adequate ventilation. Although the smoke is non-toxic it may cause some discomfort to asthma sufferers.

If traces of this smoke or smoke odours enter the house or building, it is an indication that gases and odours from the sewers may also enter. These can be unpleasant and if the defects are not rectified, they could pose a health hazard to the occupants.

While Council will render all possible co-operation and advice, the correction of any defects in the house service sewerage system on private property is the responsibility of the owner. The services of a licensed plumber or drainer would be required to rectify any problems detected.

If you have any questions or desire more information, please telephone 6801 4000, during normal business hours, Monday to Friday.

Kathryn McAlister
Client Services Coordinator

APPENDIX E DEFECT NOTICE

«Owner_Name»
«Address1»
«Address2»
«City»

Dear Sir/Madam

DEFECT NOTICE - «Lot__DP», «House_No» «Street» «Type», DUBBO

Dubbo Regional Council aims to provide all its customers with the best possible sewerage services to ensure it plays its part in protecting the health of the community, as well as the natural environment. Part of the work entails smoke testing and inspection of property drainage services. A recent inspection of your property and results of the smoke tests have revealed that your internal plumbing is defective and stormwater from your property could enter the sewerage system.

The sewerage system is designed to transport sewage only, and does not have the capacity to accept stormwater. When stormwater enters the sewerage system, overflow of sewage into homes and nearby areas can occur.

The attached **Defect Notice** identifies the problems you will need to rectify. Your early compliance would be appreciated. The work must be carried out by a licensed plumber and it's suggested that you obtain several quotes for this work.

Your property will be re-inspected on following dates, "**Date of defect notice**", 60 days after the date of the Defect Notice to ensure that the repairs have been completed to the satisfaction of Council. The initial smoke testing and inspections were originally undertaken by the contractor engaged by Dubbo Regional Council.

Thank you for your co-operation. By fixing these defects quickly, you will be helping to protect public health and the environment.

If you, or your plumber, would like additional information regarding the attached Defect Notice, enquiries should be directed to Council on telephone 6801 4000, during normal business hours, Monday to Friday.

Yours faithfully

Steve Carter
Manager Water Supply and Sewerage

APPENDIX F PROPERTY ENTRY CARD

ENTRY TO PROPERTY

Earlier today while no one was home, Council found it necessary to enter your property to carry out urgent maintenance work on Council's water/sewer assets.

Council aimed to ensure that you were not inconvenienced by this work.

If you have any questions, please refer to Council's website or contact Council's Customer Service Centre.



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