 <p><b>BAY OF PLENTY</b> DISTRICT HEALTH BOARD HAUORA A TOI</p>	<p><b>MEDICAL GAS PIPELINE SYSTEMS - TESTING PROCEDURE</b></p>	<p><b>Policy 5.1.3 Protocol 1</b></p>
<p><b>MEDICAL GAS PIPELINE SYSTEMS PROTOCOL</b></p>		

**OBJECTIVE**

To specify the requirements for testing of medical gas delivery systems as a result of new installations or the modification to existing Bay of Plenty District Health Board (BOPDHB) medical gas systems in order to ensure the safe and efficient delivery of medical gas services.

The practices detailed in the relevant HTM are to be followed in all circumstances relating to medical gas services at BOPDHB. A copy of the HTM is available on request from the BOPDHB Property Services Department.

**SCOPE**

Intended for use by BOPDHB staff, contractors and all hospital facilities.

**STANDARDS TO BE MET**

If an existing system is to be modified or extended, the following should be established:


- The existing system should be tested and the performance noted.
- A design specification should be produced detailing total system performance.
- During construction, inspections and tests of the system are to be undertaken as detailed in the relevant HTM. Verification of acceptable performance is to be documented to form part of the overall handover documentation.
- Upon completion of works, performance tests of the total system are to be undertaken as detailed in the relevant HTM with verification of acceptable performance witnessed by the appropriate persons and documented before the system is used.

Before a system is used the appropriate persons must certify in writing that the tests and procedures required in paragraphs 15.12 & 15.13 of HTM have been completed and that all systems comply with the requirements. This must include certification that all drawings and manuals required by the contract have been supplied and “as-fitted” drawings are correct.

**1. Testing to HTM**

- 1.1. The tests to be carried out at each stage of the installation programme are set out in the relevant HTM together with requirements for personnel, instrumentation and documentation required.
- 1.2. The HTM provides 30 specimen forms which should be used for the sequential verification of the system development – refer Associated Documents.
- 1.3. Bespoke forms combining the requirements of the HTM may be used providing the sequence and content of test information is retained. The use of such a form will require the approval of the BOPDHB Authorised Person prior to use.
- 1.4. The BOPDHB has developed a checklist charting test responsibilities as a reference tool.
- 1.5. BOPDHB - Property Services - MGPS Testing & Responsibility Schedule.
- 1.6. Regular reference to this checklist during project execution will promote best practise.
- 1.7. When the project milestones arise, as each test document is completed and verified, copies of the completed form must be handed immediately to the BOPDHB Authorised Person and the Responsible Officer. This will ensure in the closing

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stages of the project that a well constructed set of documentation has been retained to allow confident completion of the HTM “Summary of Tests form” BO.

**2. Project Completion**

At handover, the contract supervising officer is to deliver a comprehensive set of documentation to the BOPDHB Authorised Person. Notwithstanding the specific deliverables, this documentation must contain compliant verified test results and verified drawings (relevant to the scope of works).

**3. Handover To BOPDHB Department (User)**

Post project completion once all relevant documentation is verified, the Facilities Management team will authorise the use of medical gas systems by presenting to the user copies of test documentation capturing all BOPDHB authorities in accordance with BOPDHB Medical Gas Pipeline Systems Testing & Responsibility Schedule.

**4. Roles and Responsibilities**

Contact Details	Role	Responsibility
<b>BOPDHB Site Engineer, Building Services</b>	BOPDHB Authorised Person	<ul style="list-style-type: none"> <li>Signs the Approved Medical Gas outlet Sticker on behalf of BOPDHB</li> <li>Responsible for the control of the Approved Outlet register</li> </ul>
<b>BOPDHB Site Engineer, Building Services</b>	Quality Control	<ul style="list-style-type: none"> <li>Witnesses the tests associated with forms B14 &amp; B15 in accordance with BOPDHB Medical Gas Pipeline Systems Testing &amp; Responsibility Schedule</li> </ul>


**5. Records**

All electronic records will be stored on the Property Services DocMan site and hard copies kept in the vital records file in the Property Services department. Records will be kept for a period of seven (7) years from the date of last action then destroyed in accordance with General Disposal Authority 20.10.

**REFERENCES**

- Health Technical Memorandum (HTM) 20/22, and 02/01 Piped medical gases, medical compressed air and medical vacuum installations
- District Health Boards General Disposal Authority 20.10

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**ASSOCIATED DOCUMENTS**

- Bay of Plenty District Health Board policy 5.1.3 Medical Gas Pipeline Systems Testing
- Bay of Plenty District Health Board policy 5.1.3 protocol 2 Medical Gas Outlet Control
- Bay of Plenty District Health Board policy 2.4.5 Records Management
- Medical Gas Pipeline Systems – Testing & Responsibility Schedule
- Medical Gas Pipeline Summary of Tests Form B0
- Medical Gas Pipeline Carcass – Labelling / Marking, Sleeving / Supports and Leakage Test Form B1
- Medical Gas Pipeline Carcass – Cross Connection Test Form B2
- Medical Gas Pipeline System – Leakage Test Form B3
- Medical Gas Pipeline System – Vacuum Leakage Test Form B4
- Medical Gas Pipeline System – AVSUs – Closure & Zoning Tests Form B5B
- Medical Gas Pipeline System – Cross Connection Test Form B6
- Medical Gas Pipeline System – Functional Test of Terminal Units Form B7A
- Medical Gas Pipeline System – Functional Tests of NIST Connectors Form B7B
- Medical Gas Pipeline System – Design Flow Performance Test Form B8
- Medical Gas Pipeline System – Functional Test of Supply System Form B9
- Medical Gas Pipeline System – Pressure Safety Valves Form B10
- Medical Gas Pipeline System – Warning Systems Form B11
- Medical Gas Pipeline System – Verification of Drawings Form B12
- Medical Gas Pipeline System – Purging and Filling Form B13
- Medical Gas Pipeline System – Quality Form B14
- Medical Gas Pipeline System – Gas Identification Form B15
- Medical Gas Pipeline System – Certificate of Completion Form B16

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