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# Specialist Estates Services Notification 21/23

## 23 December 2021

### For action by:

NHS Health Boards and Trusts, Chief Executives, Clinical & Medical Directors, Anaesthetists, Estates/Facilities Directors and Managers.

### For information only:

Approved Persons (MGPS), Head of Pharmacy, Quality control pharmacist (MGPS)

Copy to: Department of Health and Social Care, Welsh Government

### Attached documents:

Annex 1 Interim Protocol for decommissioning of Nitrous Oxide manifolds.

Dear Colleague,

## INTERIM PROTOCOL FOR DECOMMISSIONING OF NITROUS OXIDE MANIFOLDS

Many NHS teams within Wales have recognised that their nitrous oxide manifold is redundant or excessive compared to actual need and are ready to decommission or reduce provision of this supply. This is an excellent development for the environment and our ambitions for NHS Wales to become a net-zero health service as nitrous oxide is a potent greenhouse gas and ozone depleting substance.

However, the decommissioning of nitrous oxide manifold creates a risk that the gas contained within surplus cylinders will be released to the atmosphere on return to the manufacturer.

Under the Medicines and Healthcare products Regulatory Authority's Rules (MHRA) and Guidance for Pharmaceutical Manufacturers and Distributors 2017 (The Orange Guide) and the Rules Governing Medicinal Products in the European Union,

“Cylinders that have been returned for refilling should be prepared with care in order to minimise the risks of contamination, in line with the procedures defined in the Marketing Authorisation. These procedures, which should include evacuation and/or purging operations, should be validated.”

As a result, all cylinders currently returned to medical gas suppliers are directly vented into the environment. Thus, as we decommission nitrous oxide manifolds, each site would inadvertently liberate a significant amount of nitrous oxide. It is imperative that we avoid this and as such, catalytic cracking solutions are being explored, along with other practical options to deal with these cylinders and avoid this harmful event.

To mitigate the risk of this potential emissions event, after consulting with NHS engineers, Specialist Estates Services is recommending Health Boards follow the interim decommissioning protocol set out in the Annex to this letter, until a longer-term solution is found. The process will be kept under review nationally and we will inform you of any developments.

If you require further information please contact Chris East, Senior Performance Engineer (Medical

Gases), on 07787 002550 or e-mail [Chris.East@wales.nhs.uk](mailto:Chris.East@wales.nhs.uk).

A handwritten signature in black ink that reads "NH Davies". The letters are cursive and somewhat stylized.

**NH Davies BSc (Hons), Dip Proj Man (RICS), MBA, MCIQB, FIHEEM**  
**Director Specialist Estates Services**

**NWSSP Specialist Estates Services, 3rd Floor, Companies House, Crown Way, Cardiff CF14 3U**

## **ANNEX 1**

### **INTERIM PROTOCOL FOR DECOMMISSIONING OF NITROUS OXIDE MANIFOLDS**

Where a Health Board intends to decommission a nitrous oxide manifold, following discussion with: MGPS group, clinical & medical directors, anaesthetists and pharmacy colleagues it should take the following steps:

1. Isolate the manifold supply at final distribution system valve.
2. Turn off the cylinder valves.
3. Insert proprietary blanking plugs at all N<sub>2</sub>O outlets, so as to indicate unavailability and to stop depressurisation of the system and local area alarm activation.
4. In longer term, arrange for the local area alarm setting to be deactivated.
5. Advise Pharmacy that the manifold is no longer in use.
6. Pharmacy informs Medical Gas Supplier.
7. Keep cylinders on site and in situ (in bank set up) until the nitrous oxide can be safely disposed of through catalytic cracking.