

REGULATIONS WITH RELEVANCE TO AIR HYGIENE MONITORING

THE MONITORING OF AIR HYGIENE IS A STATUTORY REQUIREMENT OF THE HEALTH & SAFETY EXECUTIVE

Introduction

Air Hygiene Monitoring comprises two elements, namely System Cleanliness and Environmental Conditions. The Green Air Monitoring Ductwork Inspection (Ventilation Hygiene Assessment) program deals with the first element and the Basic5 program (which can be tailored) deals with the second element.

An assumption is made that a maintenance contractors responsibilities commence from a point where system cleanliness and environmental conditions have been proven, typically at the completion of new or fit out works, or on taking over from a predecessor. Adequate air hygiene monitoring routines need to be sustained as part of the maintenance regime.

The following are extracts from HEALTH & SAFETY COMMISSION; APPROVED CODE OF PRACTICE (ACOP)
Workplace (Health, Safety and Welfare) Regulations 1992

Where word(s) or terminology has relevance, these are highlighted in green as are also our additional comments in ().

Regulation 5. Maintenance of workplace, and of equipment, devices and systems

Regulation (1) The workplace and the equipment, devices and systems to which this regulation applies shall be maintained (including cleaned as appropriate) in an efficient state, in efficient working order and in good repair. (2) Where appropriate, the equipment, devices and systems to which this regulation applies shall be subject to a suitable system of maintenance.

ACOP 22: Regulation 5(2) requires a system of maintenance where appropriate, for certain equipment and devices and for ventilation systems. A suitable system of maintenance involves ensuring that:

- a) regular maintenance (including, as necessary, inspection, testing, adjustment, lubrication and cleaning) is carried out at suitable intervals.*

(Ductwork Ventilation Hygiene Assessment (VHA) for microbial activity will fulfil the requirement for regular maintenance by inspection and testing and will highlight or even obviate the need for expensive cleaning)

- d) a suitable record is kept to ensure that the system is properly implemented and to assist in validating maintenance programmes.*

(Apart from satisfying the need as a "suitable record", a Green Air Monitoring audit and report will independently assist with benchmarking and comparison with any existing internal monitoring system as well as provide input for establishing routines for maintenance programmes).

Regulation 6. Ventilation

Regulation (1) Effective and suitable provision shall be made to ensure that every enclosed workplace is ventilated by a sufficient quantity of fresh or purified air.

(This means that the quality of the indoor air should be as good, if not better, than that which is available outside. The only way to ensure this is to measure it).

ACOP 28: Enclosed workplaces should be sufficiently well ventilated so that stale air, and air which is hot and humid because of processes or equipment in the workplace, is replaced at a reasonable rate.

ACOP 29: The air which is introduced should, as far as possible, be free of any impurity which is likely to be offensive or cause ill health. Air which is taken from the outside can normally be considered to be "fresh", but air inlets for ventilation systems should not be sited where they may draw in excessively contaminated air (for example close to a flue, an exhaust ventilation system outlet, or an area in which vehicles maneuver). Where necessary the inlet air should be filtered to remove particulates.

ACOP 32: In the case of mechanical ventilation systems which recirculate air, including air conditioning systems, recirculated air should be adequately filtered to remove impurities. To avoid air becoming unhealthy, purified air should have some fresh air added to it before being recirculated. Systems should therefore be designed with fresh air inlets which should be kept open.

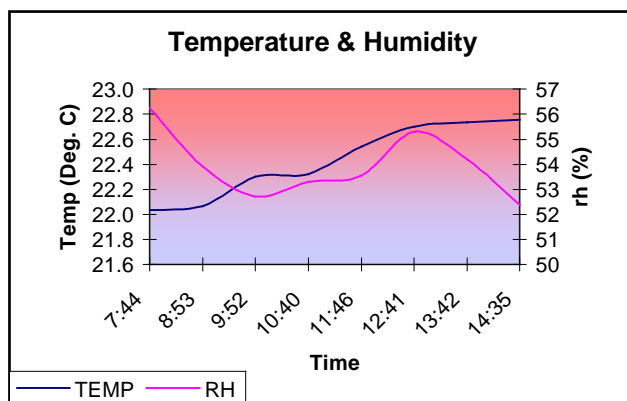
ACOP 33: Mechanical ventilation systems (including air conditioning systems) should be regularly and properly cleaned, tested and maintained to ensure that they are kept clean and free from anything which may contaminate the air.

Regulation 7. Temperature in indoor workplaces

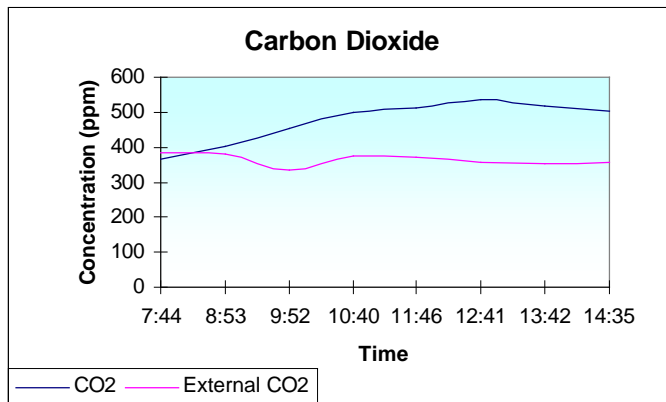
Regulation (1) During working hours, the temperature in all workplaces inside the buildings shall be reasonable.

*(Concentration will decrease by between 30% and 50% as the temperature rises above 24 degrees. As the temperature rises above 35 degrees, staff * become much more vulnerable to accidents and their mental performance declines accordingly, resulting in a reduction in quality and output. (HVAC Indoor Air Quality Initiative 96)).*

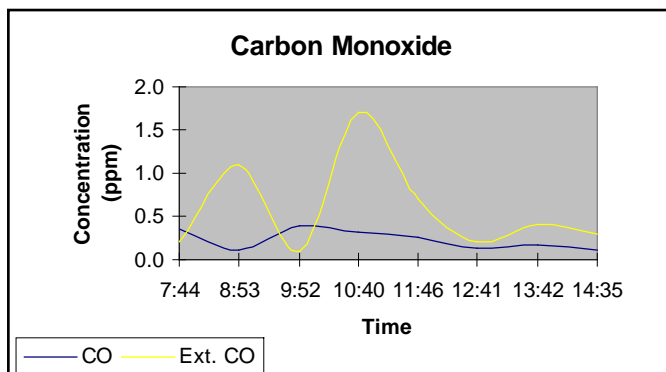
** or indeed any occupant.*



Example of **Basic5** survey per location for Temperature and Humidity



Example of **Basic5** survey per location for both Carbon Dioxide and Carbon Monoxide (note external readings for comparison)



Other reference material

The statutory controlling measures for air (and water) hygiene are set down in the following documents;

- The Health & Safety at Work Act, 1974
- The Management of Health & Safety at Work Regulations, 1992
- The Workplace (health, Safety & Welfare) Regulations, 1992
- Health & Safety Commission Approved Code of Practice L24, 1992
- Health & safety Commission document, Control of Substances Hazardous to Health Regulations, 1999 (COSHH)
- Health & safety document Legionnaires Disease. The control of Legionella Bacteria in Water Systems. Approved Code of Practice & Guidance (L8)
Guidance for implementing appropriate regimes can be found in the following publications:
- British Standard BS 6700
- Building Services Research & information Association (BSRIA) Technical Notes 3/88, Sick building Syndrome, and 4/88, Micro-organisms in Building Services
- BSRIA Technical Note TN18/92, Ventilations System Hygiene
- BSRIA Technical Note FMS/97 Guidance to and Specification for Ventilation Hygiene
- CIBSE Technical Memoranda TM 26; 1999, Hygiene Maintenance of Office Ventilation Ductwork
- HVCA publication, Cleanliness of Ventilating Systems, TR/17

KTM/GAM- 02/09- v1.0

Notes.....