

Proficiency Module Syllabus

P404 - Air Sampling of Asbestos and MMMF and Requirements for a Certificate of Reoccupation Following Clearance of Asbestos

Aim

To provide candidates with theoretical and practical knowledge in the techniques of air sampling and clearance testing and the provisions for certification for reoccupation.

Prior Knowledge

Candidates for this course are expected to be aware of the contents of HSG248 Asbestos: the analysts' guide for sampling, analysis and clearance procedures, and in particular Section 6: Site assessment for reoccupation. Candidates will also be expected to have prior experience of undertaking clearance testing including air sampling, fibre counting and issuing certificates of reoccupation.

Content

The syllabus is structured into five sections:

	Time Allocation
1 Health Effects and Regulations	10%
2 Method Statement/Plan of Work	15%
3 Air Sampling for Asbestos	15%
4 Enclosures, Clearance Air Monitoring and Reporting	20%
5 Practical Work	40%

Note: Reference is made in this syllabus to HSE guidance and other documentation. This list may not contain the most up-to-date relevant publications from HSE and other sources and is intended as guidance for candidates only.

1 Health Effects and Regulations (10%)

Educational Objectives Candidates should have a clear understanding of the health effects relating to asbestos and of the current UK legislative requirements for work with asbestos.

1.1 Health Effects

- 1.1.1 Outline the full range of health effects of asbestos ranging from the benign (pleural plaques) to the terminal (mesothelioma) in the light of results from epidemiological studies carried out on asbestos workers.
- 1.1.2 Review influential publications.
- 1.1.3 Cover dose-response relationships, the effects of smoking whilst working with asbestos and the risks to health from low level exposure.

1.2 Regulations

- 1.2.1 Outline the relevant HSE regulations for asbestos removal and for the licensing of asbestos work, with reference to the Control of Asbestos Regulations 2012. Highlight the duties of the asbestos removal contractor, employer, building owner and laboratory analytical service.
- 1.2.2 Refer to good practice for asbestos removal as laid out in the Approved Codes of Practice supporting these regulations.
- 1.2.3 Refer to other relevant HSE guidance.
- 1.2.4 Describe control limits and the clearance indicator together with the underlying philosophy of setting such limits. (1) (2) (3)

2 Method Statement/Plan of Work (15%)

Educational Objectives Candidates should be thoroughly familiar with current good practice in enclosures for asbestos remediation and must be able to identify examples of poor working procedures in a practical situation.

- 2.0.1 Discuss the importance of the role of the method statement/plan of work and the use of control measures to reduce airborne asbestos emissions and to limit the spread of debris.
- 2.0.2 Look in detail at the design, construction, testing and maintenance of enclosures and negative pressure air management systems.
- 2.0.3 Discuss the role and use of personal protective equipment, transit and hygiene facilities. Cover the importance of cleaning the area and the safe removal and disposal of debris. (1) (2) (4)
- 2.0.4 Describe the 1st stage of reoccupation and its certification and the requirements of the method statement. This includes work areas, enclosures, hygiene facilities, transit routes and waste disposal.

3 Air Sampling for Asbestos (15%)

Educational Objectives Candidates should have a detailed knowledge of the approved methods for sampling of airborne asbestos and MMMF.

3.1 Types of Air Sampling

- 3.1.1 Detail the types of air sampling that can be carried out.
- 3.1.2 Review sampling strategies and their relevance for identification of sources of contamination, assessment of personal exposure and the checking of efficiency and effectiveness of control measures. (2)

3.2 Air Sampling Equipment and Procedures

- 3.2.1 Discuss the requirements of the counting method in HSG248 (in relation to sampling of airborne asbestos) and in MDHS59 (in relation to sampling of MMMF).
- 3.2.2 Discuss the requirements for recording calibration and site sampling information to ISO 17025 standards. (2) (5)
(Note: The detailed set up and use of air sampling equipment is covered in Proficiency Module P403)

3.3 Clearance Sampling

- 3.3.1 Describe when and how visual inspection and clearance sampling is carried out, what must be looked for and the types and frequency of dust disturbance which must take place prior to clearance sampling. (2)
- 3.3.2 Discuss the inspection process and clearance sampling required for a decontamination unit.

4 Enclosures, Clearance Air Monitoring and Reporting (20%)

Educational Objectives Candidates should be able to describe the methods used to inspect and test an enclosure used for asbestos removal, and to describe the four stages to the site certification for reoccupation purposes.

The course must contain all the elements of the four-stage clearance procedure with the exception of sample mounting and counting which are covered in Proficiency Module P403.

4.1 *Safety Aspects*

- 4.1.1 Discuss face fit testing, the selection and use of PPE and RPE, its place in the control hierarchy and the likely protection it affords.
- 4.1.2 Describe transit and decontamination procedures that may need to be followed.
- 4.1.3 Discuss the medical records that may need to be kept, together with other risk assessments that may be necessary (4).

4.2 *Enclosure Evaluation*

- 4.2.1 Describe inspection procedures to detect any deficiencies in enclosures including smoke testing, leak testing, and identification of faults in enclosure design.
- 4.2.2 Emphasise the need to include the decontamination unit and any other equipment in the evaluation of the enclosure.

4.3 *Thorough Visual Inspections (Stage 2)*

- 4.3.1 Describe clearance inspections of enclosures and decontamination units and give advice as to where asbestos may be found after contractors have completed stripping operations.
- 4.3.2 Examine HSE Guidance Documents HSG248 and HSG247 in relation to clearance sampling and the meaning of thoroughly visually clean and how this is assessed (2).

4.4 *The Clearance Indicator Threshold and the Role of the Clearance Sampling (Stage 3)*

- 4.4.1 Discuss the significance of the clearance indicator threshold and its application to clearance sampling (2).
- 4.4.2 Discuss the requirements imposed by ISO 17025 (7) accreditation and the role of HSE and UKAS in ensuring that certification is carried out with integrity.
- 4.4.3 Discuss the areas of potential conflict of interest and what to do if undue pressure or threats are made.

4.5 *Final assessment post-enclosure/work area dismantling (Stage 4)*

- 4.5.1 Describe areas for inspection outside the enclosure and the overall removal of ACMs in compliance with the method statement.

4.6 *Certificates of Reoccupation*

- 4.6.1 Identify who must issue and who must receive the certificate of reoccupation and what it must contain.
- 4.6.2 Clarify the status of any conditions specified in the certificate.

4.7 *Communications and Reporting*

- 4.7.1 Explain the need for clear communications with colleagues and clients.
- 4.7.2 Describe the requirements for formal reporting of analytical results and the four stage clearance.

5 **Practical Work (40%)**

Practical work must be carried out to provide the student with all practical knowledge in carrying out the following:

5.1 *Method Statement (30%)*

- 5.1.1 Reviewing the method statement and comparison with site details.

5.2 *Air Sampling (10%)*

- 5.2.1 Confirmation of the candidate's ability to do all relevant calculations relating to the number of samples to be taken for clearance and the air volume for each sample etc.
(*General sampling strategies covered in P403*)

5.3 Clearance Testing (45%)

- 5.3.1 Confirmation of the candidate's full knowledge of all of the elements of the four-stage clearance procedure.
- 5.3.2 Enclosure inspection - prior to work and to detect deficiencies, smoke testing, leak testing and enclosure design.
- 5.3.3 Visual clearance of enclosure post remediation.
- 5.3.4 Use of PPE/RPE and personal decontamination procedures.
- 5.3.5 Issuing a certificate of reoccupation.

5.4 Role Plays (15%)

- 5.4.1 Dealing with awkward and pressured situations.

Relevant Documents

- (1) L143 (2013) Managing and working with asbestos. Control of Asbestos Regulations 2012, Approved Code of Practice and guidance
- (2) HSG248 (2005) Asbestos: The analyst's guide for sampling, analysis and clearance procedures
- (3) HSG247 (2006) Asbestos: The licensed contractor's guide
- (4) HSG 189/2 (1999) Working with asbestos cement
- (5) HSG53 (2013) Respiratory protective equipment at work: A practical guide
- (6) MDHS59/2 (2014) Machine-made fibres: Airborne number concentration and classification by phase contrast light microscopy
- (7) ISO 17025 (2005) General requirements for the competence of testing and calibration laboratories

Course Length

This course will require approximately 11 hours of study time, of which at least 9 hours will be taught (teaching and formative practical assessment) and 2 hours will be independent (in the candidates' own time).

Course Examinations and Assessment

Candidates are required to pass all of the following parts (A, B and C below) to be awarded the module.

A Formative Practical Assessment

The formative practical assessment is carried out by the training provider during the course. It enables candidates to demonstrate their ability to locate and take air samples and use PPE and RPE correctly.

The formative practical assessment includes:

- full procedure for taking air samples,
- use of PPE and RPE plus personal decontamination,
- all four stages of the clearance and issuing of a certificate of reoccupation.

Further information about the formative practical assessment is published in the following document on the BOHS website: <http://www.bohs.org/education/examinations/proficiency-modules/>

- Formative Practical Assessment: Guidance for Tutors and Candidates

B Written Theory Examination

This is a closed-book examination comprising 40 short-answer questions to be answered in two hours. The examination covers sections 1 to 4 of the syllabus in proportion to the time allocation given on the front page of the syllabus. The examination is overseen by a BOHS invigilator.

C Written Practical Examination

This is an open-book practical examination with up to 35 questions, illustrated with photographs and including diagrams and extracts from contract documents, to be answered in two hours. The examination covers section 5 of the syllabus in proportion to the time allocation shown in section 5. Candidates are permitted to access relevant reference material but not electronic databases, computers, tablets or mobile phones. Communication between candidates is not permitted. The examination is overseen by a BOHS invigilator.

Certification

Candidates who pass all the parts (A, B and C) within 12 months will be awarded a ***Proficiency Certificate in Air Sampling of Asbestos and MMMF and Requirements for a Certificate of Reoccupation Following Clearance of Asbestos.***