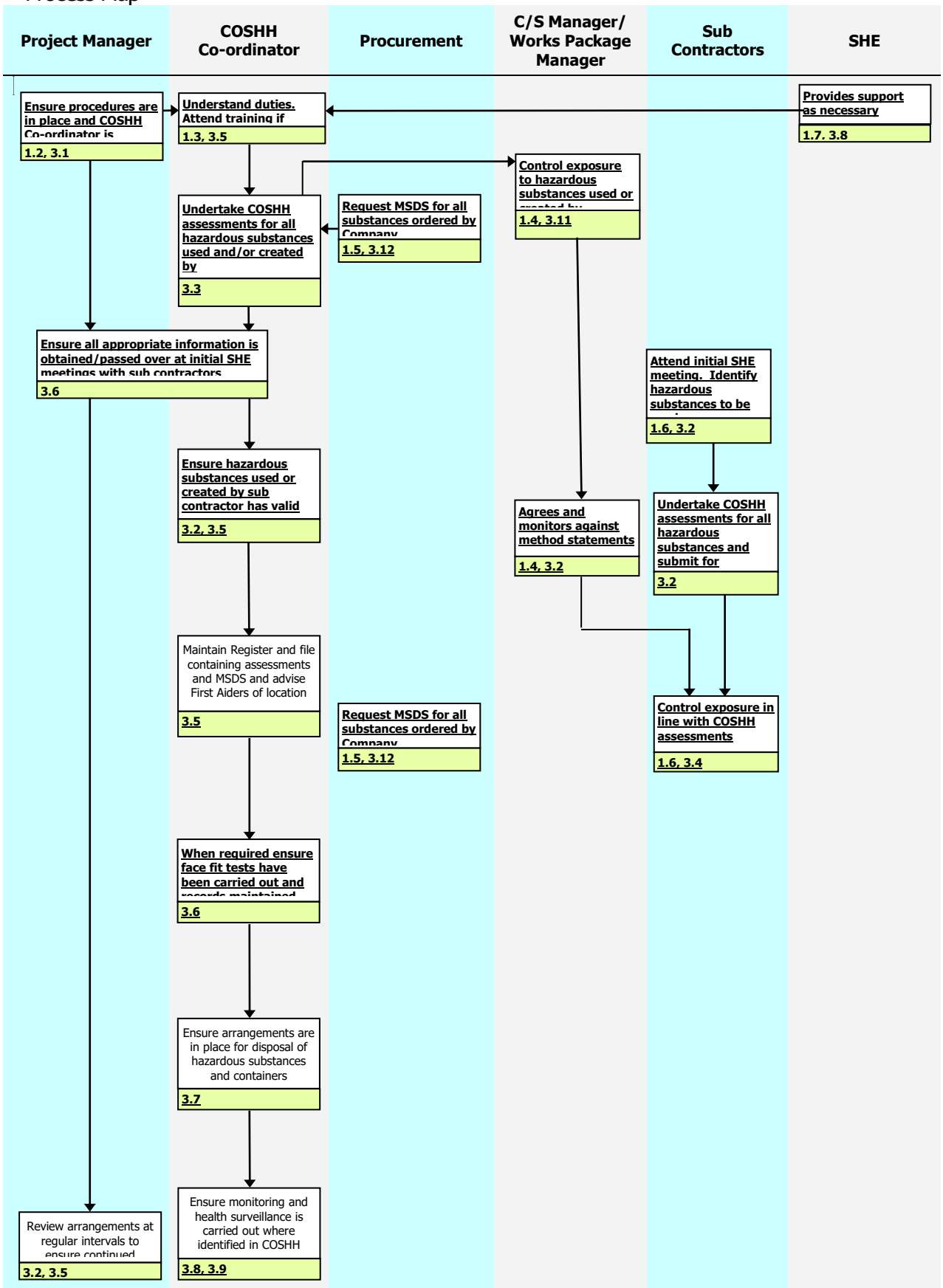
Process Map




Key:

Activity
Guidance

## PURPOSE

1 The purpose of this procedure is to assign responsibilities and establish a system for the control of substances hazardous to health.

## SCOPE

1 This procedure covers all **COMPANY** Projects and locations under the control of **COMPANY**. A **COMPANY** is defined as the organization with responsibility for management of safety at a construction site.

## COMPETENT AUTHORITIES

1 Governmental responsibilities regarding COSHH rest with Civil Defense & Environment Ministry.

### 2.3.2.1 Responsibilities

**SHE DIRECTOR**

1 Authorises this procedure.

**PROJECT/MANAGER**

2 Ensures the procedure is established and reviewed for effectiveness. Appoints a COSHH Co-ordinator for the project.

**COSHH CO-ORDINATOR**

3 Carries out duties as defined in the procedure.

**CONSTRUCTION/SITE MANAGER OR WORKS PACKAGE MANAGER**

4 Is aware of COSHH assessment controls along with other risk assessments and method statement. Monitors work to ensure it is done in line with method statement.

**PROCUREMENT**

5 Requests Material Safety Data Sheet (MSDS) for all substances ordered by **COMPANY**

**SUB-CONTRACTORS**

6 Provide COSHH assessments and MSDS for all substances. Control exposure in line with COSHH assessment and method statement.

**FIRST AIDERS**

7 Make themselves aware of location of COSHH assessments and MSDS in case needed in an emergency.

**SHE MANAGER/ADVISER**

8 Provides advice and support in the application of this procedure and monitors effectiveness of control measures.

## 2.3.2.2 Definitions of terms

**HAZARDOUS SUBSTANCE**

1 'Substance' means a natural or artificial substance whether in solid or liquid form or in the form of a gas or vapour (including micro-organisms).

2 A 'substance hazardous to health' is one which, because of the way it is made, stored, transported, used or disposed of, presents a risk to health in the workplace. The definition of a hazardous substance is comprehensive. All supplied substances which are classified as hazardous must by be labelled correctly. Substances will be labelled as Very Toxic, Toxic, Harmful, Corrosive or Irritant. However, some hazardous substances can be created during processes, and these are also covered by the Qatar Regulatory Document (Construction), for example dusts of any kind in specified concentrations.

**QATAR WORKPLACE EXPOSURE LIMITS (WEL) (BASED ON UK HSE STANDARDS)**

3 This is the exposure limit approved by the UK Health and Safety Commission for a substance in relation to the specified reference period of either 15 minutes or 8 hours. A list of WEL's is available in the HSE Publication "EH/40 Workplace Exposure Limits", which is updated annually. The majority of WELs listed in EH40 are for single compounds or for substances containing a common element or radical, for example, 'isocyanates'. A few of the WELs relate to substances commonly encountered as complex mixtures or compounds, for example 'rubber fume'. If the Safety Data Sheet lists a substance with a WEL, the employer should ensure that the WEL is not exceeded.

**HAZARDOUS DUST**

4 Is a dust of any kind present in the air at concentrations equal to or greater than 10 $mg/m^3$ over an 8 hour period if inhalable (i.e. can be breathed in) or 4 $mg/m^3$ over an 8 hour period if respirable (i.e. small enough to reach to the very base of the lungs).

## 2.3.2.3 Appointment of COSHH Co-ordinator

1 The Project Manager is responsible for appointing a COSHH Co-ordinator

**ASSESSMENT OF RISK**

2 Under COSHH the risk presented by any hazardous substance used, stored, transported, created or disposed of in the workplace must be assessed.

3 If a substance is supplied or created by COMPANY, the COSHH Co-ordinator is responsible for ensuring a COSHH assessment has been undertaken. The COSHH Co-ordinator should ensure that a register of all hazardous substances is maintained, and that each has a valid COSHH assessment, and where applicable a MSDS.

4 If the substance is supplied or created by a sub-contractor, it is their responsibility to provide the COSHH assessment along with all other risk assessments submitted for acceptance. These assessments are likely to accompany a method statement, and should be read as part of the method statement acceptance process as covered by procedure SHE-PRO-001. Construction/Site Managers and Works Package

5 Managers must ensure that assessments and method statements have been agreed and must monitor work to ensure it is undertaken in line with the method statement. The COSHH Co-

ordinator should ensure that all hazardous substances present on a project have a valid COSHH assessment. For a supplied substance the COSHH assessment should be accompanied by the manufacturers/suppliers MSDS.

6 NB - a MSDS alone does not constitute a COSHH assessment.

7 In all cases risks to persons other than those using a substance must also be considered (e.g. those working in adjacent areas). The COSHH Co-ordinator should ensure this is done, and that suitable measures are taken. These measures may include provision of information and training to personnel other than those who will use the substance.

**COSHH ASSESSMENT PROCEDURE**

8 To enable **COMPANY** to comply with the requirements of COSHH, an assessment is required. This is in two parts:

9 Firstly, **COMPANY** must not carry out any work that is liable to expose employees to any substance hazardous to health, unless a suitable and sufficient assessment of the risks created by the work has been made.

10 Secondly, if the first step indicates that substances hazardous to health will be used or created, **COMPANY** must identify the actions to be taken to comply with COSHH.

11 The procedure itself is fairly simple but does take time and effort. It involves:

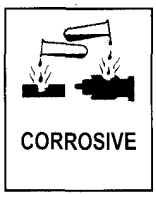
identifying jobs, working processes and procedures that involve the use or generation of substances that are hazardous to health

identifying all the hazardous substances in use in the workplace, very toxic, toxic, harmful, corrosive or irritant

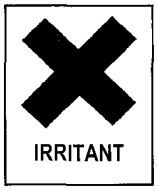
identifying how the hazardous substances are stored and used. This means how they are used, not how they should be used


12 Very toxic or toxic: Substances that, in low quantities, cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin.


13 Harmful: Substances that may cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin.




14 Corrosive: Substances that may, on contact with living tissues, destroy them.




15 Irritant: Non-corrosive substances that through immediate, prolonged or repeated contact with the skin or mucous membrane may cause inflammation.

16 Identifying how these hazardous substances might enter the body. Normally these methods are classed as:

(a) inhalation into the lungs, when the substance is in the form of a gas, vapour, fume, mist, aerosol or dust

absorption through the skin or eyes by contact with a substance that can penetrate unbroken skin, or is absorbed through unprotected cuts or grazes

injection by contact with contaminated sharp objects or high-pressure equipment, e.g. water jetting

ingestion by swallowing particles of a hazardous substance resulting from hand-to-mouth transfer identifying the amount of exposure. This involves knowing how much of the substance will be used, how people will be exposed to it and if there are is a workplace exposure limit investigating the possible health effects of such exposure

(i) identifying who is at risk, for example the persons using it or anyone who enters the area within the following 24 hours

(ii) considering the effectiveness of the control measures already in place, for example whether the concentration of vapour is likely to be above the WEL

(iii) identifying the risk to workers if control measures deteriorate or fail or if an emergency occurs, for example if a volatile solvent is accidentally spilt resulting in a high concentration of hazardous vapour in the workplace

(iv) finally, from the above considerations, making a decision upon whether a substance represents a health risk or not. If the answer is 'no', the findings should be recorded. If 'yes', action will be necessary to either prevent or control exposure.

17 Completed assessments must be made available to the person who is going to carry out the work so that they are aware of the health hazards present and the control measures that they must use, record COSHH Assessments on SHE-FRM-2-01.

**CONTROL OF EXPOSURE TO HAZARDOUS SUBSTANCES**

18 The measures which need to be taken to comply with COSHH should be detailed on the COSHH assessment. The overriding duty is to prevent exposure to hazardous substances. This may

be achieved by using a different process, design or technique which does not require or create the hazardous substance, or substituting the hazardous substance for a non-hazardous one. Where it is not possible or practicable to prevent exposure completely, exposure should be reduced by using an alternative less hazardous substance or version (e.g. more dilute concentration), using a different form (e.g. pellets instead of powders) or changing the process (e.g. to use less).

19 If it is not reasonably practicable to prevent exposure, then exposure must be controlled. This must be achieved as far as possible by controlling the substance at source by engineering controls. Other measures may also be needed such as provision of information and instruction, and hygiene facilities. Personal Protective Equipment (PPE) can only be used as a last resort where adequate control cannot be achieved by other means.

20 Where a substance has been assigned a WEL, this must not be exceeded.

21 Additional requirements may be necessary if substances have been identified as carcinogens, mutagens, asthmagens or are biological agents. These substances may be identified by the risk phrases R42, R42/43, R45, R46 or R49. Consult the SHE Advisor for further information if required.

22 Control measures should be monitored to ensure that they are effective. Where they prove ineffective the assessment should be reviewed, and measures modified so far as is reasonably practicable.

**DUTIES OF THE COSHH CO-ORDINATOR**

23 The COSHH Co-ordinator should ensure that first aiders know where to access information on hazardous substances used on the project. This could be achieved by maintaining a file of all MSDS and assessments which is easily accessible by first aiders.

24 COSHH Co-ordinators should liaise with Safety Co-ordinator / SHE Adviser / Managers / Environmental Adviser / First Aiders / Emergency Co-ordinators for further advice if necessary.

**RESPIRATORY PROTECTIVE EQUIPMENT (RPE) – FIT TESTING**

25 COSHH requires fit testing of RPE. Where sub-contractors provide RPE for their workers they should also provide evidence that a suitable fit test has been carried out for each worker required to wear RPE. The COSHH Co-ordinator should ensure that fit tests have been carried and records are available.

26 Where **COMPANY** employees are required to wear RPE, **COMPANY** will be responsible for ensuring fit tests have been carried out. The SHE Department can undertake fit tests, or it is possible to have a member of the project staff trained to undertake the tests. Training can be provided by the SHE Department and takes half a day. Records of training should be kept on site as well as centrally.

27 Fit testing of individuals must be carried out using the appropriate RPE for the task identified in the risk assessment, and the results recorded on the Qualitative Fit Test Proforma – SHE-FRM-2-02.

28 Records of fit testing must be kept on the users personnel file for 5 years. If there are any changes in the wearer, such as significant weight change or dentistry that may affect the size or shape of the face, then a new fit test should be carried out.

29 Further information on RPE can be found in SHE-PRO-010 – Personal Protective Equipment (PPE).

**USE AND DISPOSAL OF HAZARDOUS SUBSTANCES**

30 Hazardous must only be used by persons who have received instruction and training, and must only be issued in quantities sufficient to complete the task. Hazardous substances are often harmful to the environment, and half empty containers can pose a risk to persons in the future. Therefore, all containers must be disposed of as hazardous waste, including empty containers.

**EXPOSURE MONITORING**

31 The COSHH assessment will identify when exposure monitoring is required. Typically this will be required if any of the following apply:

(a) If it is possible that the failure of any control measures could result in a serious health effect;

If a substance has a WEL

(b) If there is doubt whether exposure monitoring should be carried out, consult the SHE Dept who will advise on appropriate protocols and details of record keeping.

**HEALTH SURVEILLANCE**

32 Responsibility for health surveillance lies with **COMPANY**. Many of the tasks carried out in the construction environment will not require health surveillance to be carried out. However, if all three of the following conditions apply, then health surveillance is required:

(a) An identifiable disease or adverse health effect may be related to exposure.

(b) There is a reasonable likelihood that the disease or effect may occur under particular conditions of work.

(c) There are valid techniques for detecting indications of the disease or the effect.

**ARRANGEMENTS TO DEAL WITH ACCIDENTS, INCIDENTS AND EMERGENCIES**

33 Arrangements to deal with emergency situations (e.g. spillages, accidental release or over exposure) should be detailed in the appropriate method statement. Emergency arrangements which cover the project as a whole should also be detailed in the construction phase plan.

**INITIAL SHE MEETING**

34 At the initial SHE meeting (see procedure SHE-PRO-007) COMPANY will advise sub-contractors of any substances used by others which could affect their employees. In addition sub-contractors will be required to advise COMPANY of all hazardous substances they will use.

**PROCUREMENT**

35 All orders and requisitions shall clearly identify the product being ordered and shall contain a requirement to comply with COSHH and to provide the MSDS. The COSHH Co-ordinator shall ensure MSDS from the supplier are delivered with the product.

### 2.3.2.4 Appendices

**APPENDIX 1 – EXAMPLE OF COSHH RISK ASSESSMENT**

| | |
|---|---|
| Name of hazardous substance: | Auto diesel |
| Substance hazard classification: | Flammable, harmful/irritant |
| Trade name(s): | Any auto fuel production company |
| Substance used for: | Motive power for plant and other diesel powered vehicles |

| **Potential hazards** | **Safety precautions** | **Emergency procedures** |
|---|---|---|
| Inhalation: can lead to nausea and headaches. | Avoid inhaling vapour or mist; ensure good ventilation. Remove the victim from exposure. | Remove to fresh air. Seek medical attention if conditions severe. |
| Skin contact: can be irritating and have a defatting effect. | Avoid prolonged/repeated contact. Wear PVC gloves. Do not use as a cleaning agent. | Remove contaminated clothing. Wash skin thoroughly with soap and warm water. |
| Eye contact: will cause irritation. | Wear eye protection if splashing can occur. | Rinse immediately with plenty of water until irritation subsides. Seek medical advice. |
| Ingestion: will irritate mouth, throat etc. | Do not eat, drink or smoke during use. | Do not induce vomiting. Wash mouth with water. Seek immediate medical attention. |
| Fire: products of combustion are toxic. Vapour/air mixture is explosive. | Do not smoke during use. Avoid heat sources and open flames. | Clear the area. Do not inhale vapours, smoke etc. |
| Spillage: fumes/vapour likely to collect in low areas. | Do not allow to enter drains. Eliminate ignition sources. Ensure good ventilation. | Contain with sand or granules. Remove into a container. Dispose of as hazardous waste. |
| **Additional information:** Environmentally damaging. | | |

| | | | |
|---|---|---|---|
| **Assessment date** | | **Next review date** | |
| **Approved for use by (print name and position)** | | | |
| **Signature** | | | |

## APPENDIX 2 - COSHH RELATED RECORD KEEPING REQUIREMENTS

| **COSHH Related Record Keeping Requirements Summary** | | |
|---|---|---|
| Issue | Document | Archive Period |
| Personal Protective Equipment | **COMPANY** Register entries | None specified, recommended minimum 3 years |
| PPE (various items) | Maintenance Records | Minimum 5 years |
| Respiratory Protective Equipment (RPE) e.g. cartridge type | Examination and where appropriate test records. Maintenance records. | Minimum 5 years |
| Local Exhaust Ventilation (LEV) | Examination and test records (including repairs)[1] | Minimum 5 years |
| Exposure Monitoring (Personal) | Monitoring results or a suitable summary[2] | Minimum 40 years |
| Exposure Monitoring (Not Personal) | Monitoring results or a suitable summary | Minimum 5 years |
| Health Surveillance | Health record containing particulars approved by the HSE. | 40 years from date of last entry |
| Disposable RPE | Project specific records | Minimum 5 years |
| Breathing Apparatus | Maintenance, examination and test records. Maintenance log. | Minimum 5 years |
| Fit Test Report | RPE Qualitative Fit Test Records | Minimum 5 years |
| [1] All LEV systems must be examined/tested every 12 months. [2] All personal monitoring results must be treated as confidential information and consultation must be carried out through the SHE Department. | | |

### 2.3.2.5 Reference Documents

**FORMS**

1 COSHH Assessment Form – (SHE-FRM-2-01)

2 COSHH RPE Qualitative Fit Test Report (SHE-FRM-2-02)

3 COSHH Training Record (SHE-FRM-2-03)

**REFERENCE DOCUMENTS**

4 Qatar Regulatory Document (Construction) RD1.2.3

5 UK Workplace Exposure Limits (EH40)



### 2.3.2.6 Author

| SECTION | NAME | POSITION IN COMPANY | CONTACT DETAILS |
|---|---|---|---|
| | | SHE Manager | |

### 2.3.2.7 Approvals

| | NAME | POSITION IN COMPANY | SIGNATURE & DATE |
|---|---|---|---|
| **Approved by:** | | SHEQ Director | |

**COSHH ASSESSMENT**

| | |
|---|---|
| Name of hazardous substance: | |
| Substance hazard classification: | |
| Trade name(s): | |
| Substance used for: | |

| **Potential hazards** | **Safety precautions** | **Emergency procedures** |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| **Additional information:** | | |

| | | | |
|---|---|---|---|
| **Assessment date** | | **NEXT REVIEW DATE** | |
| **Approved for use by (print name and position)** | | | |
| **Signature** | | | |

| | | | |
|---|---|---|---|
| Name: | | Worker No: | Report Number: |
| Employer: | | | |
| Date of Test: | | Name of tester: | |
| RPE Model Number: | | | |
| Size of RPE Tested: | | | |
| Sensitivity Test Complete? Y/N | Solution Dose? 10 - 20 - 30 (circle) | Please circle test solution used. | |
| | | Sweet | Bitter |
| User Seal Test carried out successfully? Y/N | | | |

| Exercise | Exercise (Duration is 1 minute for each). | Pass | Fail |
|---|---|---|---|
| 1 | Normal Breathing. | | |
| 2 | Deep breathing through mouth | | |
| 3 | Turn Head side to side – breathe in as head looks at shoulder. | | |
| 4 | Look up and down – breathe in looking at ceiling. | | |
| 5 | Talking for 1 minute. | | |
| 6 | Jog on the spot OR bend down and then up. | | |
| 7 | Breathe normally. | | |
| Note - 1 | The performance of RPE with a tight fitting facepiece (filtering facepieces, half and full face masks) depends on good contact between the wearer's skin and the face seal of the mask. A good face seal can only be achieved if the wearer is clean- in the region of the seal and the facepiece is of the correct size and shape to fit the wearers' face. Spectacles with side arms and other items of PPE must not interfere with the correct fitting of the facepiece or the face seal | | |
| Note - 2 | Dosage for Fit test – Initially, same dosage as determined in Sensitivity Test when hood is in place. Then introduce a ½ dose every 30 seconds during exercises | | |
| Note –3 | If at any time during the test, the subject tastes the particulate then the test is failed. Wait 15 minutes before re-testing. If the retest is failed then test using a different sized mask. | | |

| |
|---|
| Notes: (*To be used by the employee, Manager, Occupational Hygienist and/or SHE Advisor.*) |
| I certify that I have carried out the Fit Testing of Respiratory Protective Equipment as required under the COSHH Regulations<br><br>Signature of tester..... Date ..... |
| I certify that I have received Fit Testing for Respiratory Protective Equipment as required under the COSHH Regulations<br><br>Signature of employee..... Date ..... |
| **THIS DOCUMENT TO BE RETAINED ON FILE FOR 5 YEARS.** |

| Contract: | Assessment Sheet No: |
|---|---|
| Substance: | Activity No: |

I declare that I am in receipt of training in the precautions required for the safe use of substances list above.

| **Name** | **Date** | **Position Held** | **Signature** |
|---|---|---|---|
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| Instructor's Signature: | Date: |
|---|---|

Copy to: Site Register