



Office of Safety, Health & Environment

STANDARD FOR STATUTORY MEDICAL EXAMINATIONS

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1. OBJECTIVE

Under the WSH (Medical Examinations) Regulations 2011, workers who are exposed to the Schedule of Hazards listed in the Regulations (see Para 2) are required to undergo mandatory specific pre-placement and periodic medical examinations called statutory medical examinations.

2. SCOPE

All NUS staff and students who are exposed to the listed hazards should undergo medical examinations to be conducted by NUS Occupational Health (OH) Physician should they have significant exposure to those hazards. This applies to research activities. For teaching activities, this is not required.

The hazards are:

- a. The use or handling of or exposure to the fumes, dust, mist, gas or vapour of arsenic, cadmium, lead, manganese or mercury or any of their compounds;
- b. The use or handling of or exposure to the liquid, fumes or vapour of benzene,
- c. Liquid, fumes or vapour of perchloroethylene, trichloroethylene, organophosphates or vinyl chloride monomer;
- d. The use or handling of or exposure to tar, pitch, bitumen or creosote;
- e. The use or handling of or exposure to the dust of asbestos, raw cotton or silica;
- f. Exposure to excessive noise; or
- g. Any work in a compressed air environment

3. DEFINITIONS

MOM	Ministry of Manpower
WSH (Medical Examinations) Regulations	Workplace Safety and Health (Medical Examinations) Regulations 2011
OH Clinic	Occupational Health Clinic located at the basement of University Health Centre. It is an occupational health services provider for NUS. It will also assist with the retention of the medical records. Please email: oshgsw@nus.edu.sg (66011781 tel) for queries on the NUS OH programme nursekim@nus.edu.sg or workhealthclinic@gmail.com (65167333 tel) for appointment
OH Physician	Occupational Medicine specialist registered with the Singapore Medical Council
FSHO	Faculty Safety and Health Officer with OSHE
PI	Principal Investigator
DWD	Designated Workplace Doctor registered with Ministry of Manpower and authorized to conduct statutory medical examinations.

4. RESPONSIBILITIES

OH Clinic	Conducts the statutory medical examinations and evaluates cause for abnormal results
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	Issues Certificate of Fitness and Certificate of Suspension Completes the Summary Report for Staff only Submits Summary Report and Register of Workers to MOM Sends auto-reminders to staff and students (if available)
Faculty Safety and Health Officers	Obtain Register of Workers from Departmental Safety Representatives Submits Register of Workers (Staff and Students) to OH Clinic for the conduct of statutory medical examinations Prepares Exemption of Medical Examinations with OH Clinic to submit to MOM for waiver Investigates cases for of excessive exposure
OSHE	Reviews statutory medical exemptions and works with OH Physician. Submits Application for Exemption of Statutory Medical Examinations to MOM for Staff. Gives approval to Application for Exemption of Statutory Medical Examinations for Students only.
Principal Investigator / Department Supervisors	Conduct of risk assessment Ensure that the staff/student undergone the necessary vaccinations and medical screening pertaining to their research Retain the Certificates of Fitness and waiver forms for the staff/student under their care
Departmental Safety Representative	Maintains Register of Workers for Department Keeps Summary Report and Register of Workers Can also submit the Summary Report and Register of Workers when DWD is not able to submit
Staff	Required to undergo the statutory medical examinations under the WSH (Medical Examinations) Regulations as an employee. Comply to laboratory protective measures
Student	Undergo the statutory medical examinations as part of NUS policy to protect the health of the students. Comply to laboratory protective measures

5. DESCRIPTION OF THE STATUTORY MEDICAL EXAMINATIONS PROGRAMME

Prior to the start of potential exposure at work, the Principal Investigator/Supervisor shall conduct a risk assessment of the research project activities. One available tool is that of the Semi-Quantitative Risk Assessment. Based on the nature of hazards, he will determine if the staff/student should undergo the statutory medical evaluation.

5.1 Types of Statutory Medical Examinations

Statutory medical examinations are compulsory for NUS staff and students.

The types of statutory medical examinations are:

- Pre-placement medical examination (preferably prior to the start of work; but latest within 3 months of starting work)
- Periodic medical examinations – every year (unless otherwise specified)

The details of the more common statutory medical examinations are shown in **Annex A**. Typically, the medical examination will comprise of physical examination and investigations specified in the Regulations. They include:

- a. A clinical examination of the person for symptoms and signs of any diseases that may result from exposure to the hazards of the occupation in which the person is employed; and
- b. An assessment as to whether the person who is to be employed in a hazardous occupation is fit to work in that occupation by the DWD or OH Physician.

The following investigations may be required:

- a. Blood analysis: Full blood count and peripheral blood film, liver function, kidney function, blood toxicology testing
- b. Urine analysis, urine toxicology testing
- c. Chest X-ray
- d. Spirometry
- e. Audiometry

5.2 Certificate of Fitness, Summary of Examinations, Register of Workers

- a. **Certificate of Fitness.** A **Certificate of Fitness (Annex B)** will be issued by the attending physician with a usual validity of 1 year (6 months for work with lead and organophosphates; 3 years for work with silica and asbestos). The certificate will be given to the respective staff/student upon completion of the medical review. Cases of occupational diseases will be notified to MOM by the DWD via **I-reporting** at the MOM website.
- b. **Certificate of Suspension.** One of the requirements for fitness to work is that the Biological Exposure Indices¹ are within permissible levels. In the event that the Biological Exposure Indices exceed the permissible levels or if there is a significant increase over the previous result, the staff/student will be deemed unfit to work with that particular exposure.

The OH Physician will issue a **Certificate of Suspension (Annex C)** to the individual and copy to the Supervisor and FSHO. The Supervisor and FSHO will not let the staff/student be exposed to the hazard until he/she has been cleared by the OH Clinic. They will also investigate the cause of the excess exposure.

- c. **Register of Workers and Summary of Examinations.** For periodic medical examinations, the **Register of Workers (Annex D)** and **Summary of Examinations (Annex E)**, both of which are MOM forms will be submitted to the MOM. The forms can be submitted via the DWD or the Departmental (Safety) Representative. Further details can be found at: <http://www.mom.gov.sg/workplace-safety-health/worker-workplace-surveillance/workers-health-surveillance/Pages/default.aspx>

According to the Regulations, the **Register of Workers** is required to be updated to show the particulars of all persons who are currently employed in any hazardous occupation in the workplace and all the persons who had or have been employed in the hazardous occupation in the workplace in the last 5 years. It is also to be produced for inspection upon request by an MOM inspector.

Only the staff (permanent or casual), being employees of NUS, will be included in this list for submission. Students who are not currently remunerated by NUS are to be excluded from the submissions to MOM.

5.3 Submission of Documents

¹ Biological Exposure Indices are biomarkers of exposure set by Ministry of Manpower to determine the acceptable levels before adverse health effects occur

Following the conduct of the medical examinations, the persons responsible for the submission of the following documents to MOM, employers and workers are summarised in the table below:

Type of Document	Description	Submission to Employer	Submission to MOM	Submission to Worker
Summary Report form	Summary of Examination findings including details of abnormal results	DWD's Responsibility	Employers' Responsibility*	Not applicable
Register of Workers form	Register of all workers exposed to the specified hazard	DWD provides toxicological test results to employer	Employers' Responsibility*	Not applicable
Certificate of Suspension	Certificate to be issued by the DWD to inform worker, employer and MOM of worker's unfitness to continued exposure	DWD's Responsibility	DWD's Responsibility	DWD's Responsibility
Certificate of Fitness	For certification of fitness or certification of unfitness	DWD's Responsibility	DWD's Responsibility	DWD's Responsibility
iReport notification form	Notification of occupational disease under WSH (Incident Report Regulations)	DWD's Responsibility to inform employer of diagnosis of occupational disease	DWD's and Employers' Responsibility** (OSHE)	DWD to inform worker of implications of diagnosis

*Departments may arrange with the DWD to submit the Summary Report and the Register of Workers on their behalf

**All i-reports from NUS is to be submitted via OSHE

6. EXEMPTION FROM STATUTORY MEDICAL EXAMINATIONS

OSHE adopts a risk-based approach to medical surveillance. Pertaining to **staff**, where applicable and available, if the biological exposure levels are consistently very low and/or the environmental surveillance also shows very low exposure levels of the hazards (a guideline is below less than 10% of the Permissible Exposure Limits), then the PI and FSHO, working with the OH Physician, can request for a waiver from statutory medical examinations from MOM, using the **Application for Exemption from Statutory Medical Examinations (Annex F)**.

For workplaces or research projects involving only **students**, there is no legal requirement to do statutory medical examinations. However, as NUS has the ethical duty and corporate social responsibility to safeguard the safety and well-being of students, an internal waiver would still be required without applying to MOM. Supervisors are to apply the same risk assessment methodology and use the same Application for Exemption form for this internal application.

6.1 Application of Exemption for students

The chemical user does the Semi-Quantitative Risk Assessment (SQRA) for all the chemicals handled as per normal. For any chemicals that fall under the list of hazards (19 of them) requiring

Statutory Medical Examination, PI can submit request for exemptions from SME for students to OSHE (**Annex K**) If request is not submitted, the students should undergo SME at OH Clinic.

****Please note that exemption from benzene would not be granted regardless of the working conditions. All users handling benzene are required to undergo the necessary statutory medical examinations.***

****In instances where the SQRA indicates a risk level of medium and above, the students are required to have baseline medical investigations done at the Occupational Health Clinic (OHC) and submit the results together with the exemption requests.***

OSHE will review all exemption requests pertaining to students. If approval is granted, OSHE will issue a formal reply to the PI. The PI will then:

- Update the Safety Management System (SMS) Dossier with regards to the exemption;
- Submit details of the exemption to the Department Safety Coordinator; and
- Upload the details into OSHE Lab Safety Data System (LSDS)

Thereafter, they can proceed with work involving the chemicals. If approval is not granted, the students shall undergo the required SME with reference to the hazards handled.

The underlying principle is that PIs would undertake the responsibilities of all chemicals used in the lab and ensure the execution of control measures stated in SQRA. At any point in time, if there are any health concerns, the PI or department should consult its Safety Officer who can also liaise with OSHE if further expertise is required.

Details of the application exemption for students can be found in the NUS intranet Staff Portal → Occupational Health Programme (<https://inetapps.nus.edu.sg/osh/portal/oh/intro.html>) → Application for Exemption from Statutory Medical Examinations for Students.

7. MAINTENANCE OF STATUTORY MEDICAL EXAMINATION RECORDS

The departments will keep a copy of the submissions to MOM for at least 5 years. They comprise of:

- a. Certificate of Fitness
- b. Certificate of Suspension
- c. Register of Workers
- d. Summary Report

The medical notes will be kept by the OH Clinic for 20 years.

8. ADMINISTRATIVE PROCESSES

All referrals will be made through the FSHO using the **Authorization form for Occupational Health Services Form** (via the link: https://share.nus.edu.sg/corporate/forms/safety_and_health/Occupational-Health/Form-for-OH-medical-services.pdf).

The Departmental Safety Representative will collate a list of staff/students that require statutory medical examinations periodically. The list will be submitted to OH Clinic through the FSHO using the **Register of Workers** template. The following information will be required:

- a. Name
- b. NRIC/FIN
- c. Sex/Race
- d. Date of birth
- e. Section of the Department/Lab

- f. Nature of work that results in the exposure or Job Title
- g. Start and end date of hazard exposure
- h. Type of Statutory Medical Examination required
- i. UEN Number of NUS
- j. Workplace Number of the Department
- k. Workplace Address of the Department (Departmental Office Address)
- l. Telephone and Fax number of the contact person within the Department

OH Clinic will make the arrangements with the FSHO (or Departmental Safety Representative) on the schedule of the patients. Where possible, the Faculty could dedicate a specific time period for the conduct of the statutory medical examinations for ease of administration.

When the list for the Faculty has been medically cleared, OH Clinic will complete the rest of the **Register of Workers** to include the test results. The OH Clinic will also provide a summary sheet of the results using the spreadsheet given by the Faculty to also show:

- a. Date of examination
- b. Results of examination

OH Clinic will also make the necessary submissions to MOM as part of the WSH (Medical Examinations) Regulations on behalf of NUS.

Staff and students should bring along documentary proof of previous blood test results or pre-existing medical conditions for the medical consultation (whenever possible).

For further details on the various MOM forms, please refer to **Annex J**.

9. REFERENCES

- a. Workplace Safety and Health (Medical Examinations) Regulations 2011
- b. WSH Guidelines on Statutory Medical Examinations 2012
- c. Workplace Safety and Health (Incident Reporting) Regulations 2006

10. ANNEXES

- A. Details of Common Statutory Medical Examinations
- B. Certificate of Fitness
- C. Certificate of Suspension (MOM)
- D. Register of Workers (MOM)
- E. Summary Report (MOM)
- F. Application of Exemption from Statutory Medical Examinations (MOM)
- G. Workflow for Applications of Exemptions from SME for students
- H. Permissible Exposure Limits for Chemicals
- I. Permissible Exposure Limits for Noise
- J. Details of Various MOM Forms
- K. Exemption Application Form for Students

Annex A: Details of Common Statutory Medical Examinations

Chemical	Pre-Employment Examination	Periodic Examination	Sampling details	Min Vol (ml)	Analytical Method	BTLV	Instruction to Worker
Arsenic (As)	• Urine As	• Urine As	- Early morning urine - clean sterile bottle (Results corrected to SG=1.016)	35	Graphitefurnace AAS	300µg/l	Abstain from Seafood and seaweed for 3 days before test
	• Liver function test: AST, ALT, SAP, Bil, GGT • Full-sized CXR		- plain tube	5			Abstain from alcohol for at least 2 weeks
Asbestos (any exposure to airborne asbestos fibres)	• Full-sized CXR	• Full-sized CXR					
Benzene	• Urine tt-ma OR Urine s-pma	• Urine tt-ma OR Urine s-pma	- End Shift urine mid-week - clean sterile bottle	20	HPLC	1.6 µg/g Cr 45 µg/g Cr	Inhalation of tobacco and use of sorbitol increases background levels
	• FBC & peripheral blood film	• FBC & peripheral blood film	- EDTA tube				

Chemical	Pre-Employment Examination	Periodic Examination	Sampling details	Min Vol (ml)	Analytical Method	BTLV	Instruction to Worker
Cadmium (Cd)	• Blood Cd	• Blood Cd	- venous bld - heparinised tube	3	Graphite-furnace AAS	5 µg/l	Collect specimen 2 hrs after drinking 15 ml Mist. Pot. Cit.
	• Urine B2 Macroglobulin	• Urine B2 Macroglobulin	- plain bottle - send sample to laboratory only if pH>5.6 - Specimens to reach laboratory within 2 hrs.	50		<290 µg/l)	
Cotton (any exposure to raw cotton dust)	• Lung function test: FEV1 and FVC	• Lung function test: FEV1 and FVC	For periodic examinations: - Pre shift on 1st day of working week - Post shift after at least 6 hrs of exposure on same day as pre shift test				
Inorganic Lead (any exposure to inorganic lead or its compounds)	• Blood Pb	• Blood Pb	- venous blood - heparinised tube	3	Graphitefurnace AAS	Male: 50µg/dl	
	• Hb	• Hb	- EDTA bottle	2		Female: 30µg/dl	

Chemical	Pre-Employment Examination	Periodic Examination	Sampling details	Min Vol (ml)	Analytical Method	BTLV	Instruction to Worker
Organic Lead (Pb)	• Urine Pb	• Urine Pb	- EMU, end of workweek - clean sterile bottle - If intermittent exposure: collect before and after job (Results corrected to SG-1.016)	30	Graphite-furnace AAS	<150 µg/l	
Manganese (Mn)	• Urine Mn	• Urine Mn	- EMU - clean sterile bottle (Results corrected to SG=1.016)	35	Graphite-furnace AAS	50 µg/l	
Inorganic Mercury (Hg)	• Urine Hg	• Urine Hg	- EMU - clean sterile bottle (Results corrected to SG=1.016)	35	Graphite - furnace AAS	35 µg/g Cr	Avoid seafood and seaweed at least 3 days prior to collection.
Organo-Phosphates	• RBC cholinesterase	• RBC cholinesterase	- venous blood - heparinised tube - send immediately to lab (keep chilled)	5		70% of baseline or lower limit (LL) of lab normal	Baseline: not worked with OP for at least one month
	• Plasma Cholinesterase		Plain tube	5			

Chemical	Pre-Employment Examination	Periodic Examination	Sampling details	Min Vol (ml)	Analytical Method	BTLV	Instruction to Worker
Perchloro - ethylene (PCE)	• UTCA	• UTCA	- ESU mid-week - clean sterile Bottle (Results corrected to SG=1.016 or urinary creatinine)	35	Colorimetric	7 mg/l or 7 mg/g Creat	Abstain from alcohol for at least one week For irregular/intermittent exposure, test at the end of the exposure period
	• Liver function test: AST, ALT, SAP, Bil, GGT		- plain tube	5			Abstain from alcohol for at least 2 weeks
Silica (any work where workers are exposed to airborne free silica)	• Full-sized CXR	• Full-sized CXR					
Tar, Pitch, Bitumen and Creosote	Clinical examination only	Clinical examination only					
Toluene (nonstatutory)	• Blood Toluene	• Blood Toluene	- venous blood - prior to last shift of workweek - heparinised tube	5	GC	0.05 mg/l	To go directly to Dr's clinic from Home

Chemical	Pre-Employment Examination	Periodic Examination	Sampling details	Min Vol (ml)	Analytical Method	BTLV	Instruction to Worker
Trichloro – ethylene (TCE)Z	• Urine Trichloroacetic acid (UTCA)	• Urine Trichloroacetic acid (UTCA)	- ESU mid-week - clean sterile bottle (Results corrected to SG=1.016 or urinary Creatinine)	35	Colorimetric	100 mg/l or mg/g creat 50 mg/l or mg/g creat if mixture of TCE and PCE (if PCE < half PEL)	Abstain from alcohol for at least one week For intermittent/irregular exposures, test at the end of the exposure period
	• Liver function test: AST, ALT, SAP, Bil, GGT		- plain tube	5			Abstain from alcohol for at least 2 week
Trinitrotoluene (TNT) (nonstatutory)	• Urine DNAT	• Urine DNAT	- ESU mid-week - clean sterile bottle	35	GC	10 mg/L	
	• Liver function test: ALT, AST, SAP, Bil, GGT)	• Liver function test: ALT, AST, SAP, Bil, GGT)	- plain tube	5			Abstain from alcohol for at least 2 weeks
Vinyl Chloride Monomer (VCM)	• Liver function test: ALT, AST, SAP, Bil, GGT) • Hepatitis B & C Serology	• Liver function test: ALT, AST, SAP, Bil, GGT)	- plain tube	5			Abstain from alcohol for at least 2 weeks

Note: EMU - Early morning urine

ESU- End-of-shift urine

Annex B

**WORKPLACE SAFETY AND HEALTH ACT
WORKPLACE SAFETY AND HEALTH (MEDICAL EXAMINATIONS)
REGULATIONS
Regulation 4(1)
CERTIFICATE OF FITNESS**

NRIC / FIN	:	_____	Employee Name	:	_____
Date of Birth	:	_____	Sex	:	_____ Race : _____
Hazard	:	_____			

Certification of Fitness:

I hereby certify that I have examined the above-named person on _____ and that he/she is

*fit / not fit for work which may expose him to _____ (please specify hazard).

Results of medical examination(s) / test(s) done:

Remarks if any:

*Delete appropriately

Designated Workplace Doctor:

Name	:	_____	MCR No.	:	_____
Practice Address	:	_____			
Email	:	_____	Tel	:	_____ Fax : _____

Date

Signature

Note:

Please attach copies of actual results including laboratory test results, Chest X-ray reports and audiograms etc.

You may wish to update Singapore Medical Council if there are any changes to your practice and contact information.

Annex C

WORKPLACE SAFETY AND HEALTH ACT WORKPLACE SAFETY AND HEALTH (MEDICAL EXAMINATIONS) REGULATIONS Regulation 10(2) CERTIFICATE OF SUSPENSION FROM WORK INVOLVING EXPOSURE TO A HAZARD			
UEN	:	Workplace Number	:
Workplace Name	:		
Workplace address	:		
NRIC / FIN	:	Employee Name	:
Date of Birth	:	Sex	:
		Race	:
Hazard	:	Date Started Employment	:
<p>I certify that the above named person examined by me on _____ should not continue to work as a _____ in _____ department / section for _____ months, subject to a review on _____.</p> <p>In the meantime, he/she should be given alternative work in another department / section which does not expose him to _____ (please specify hazard).</p> <p>The reasons for my recommendations are:</p> <p>_____</p>			
Designated Workplace Doctor:			
Name	:	MCR No.	:
Practice Address	:		
Email	:	Tel	:
		Fax	:
Date	Signature		
<small> Note: This certificate should be saved for your records and copies given to the employer, employee and the Commissioner for Workplace Safety and Health. The copy sent to the Commissioner for Workplace Safety and Health (c/o Ministry of Manpower, 18 Havelock Road, Singapore 059764) or submitted online at www.mom.gov.sg should be accompanied with a copy of the test results report. For <i>quantitative</i> results, (e.g. blood lead) the exact figures and units of measurement must be stated. For <i>qualitative</i> results, (e.g. chest X-ray) attach a copy of the report. For audiometric examinations, attach audiogram. You may wish to update Singapore Medical Council if there are any changes to your practice and contact information. </small>			

Annex D

**WORKPLACE SAFETY AND HEALTH ACT
WORKPLACE SAFETY AND HEALTH (MEDICAL EXAMINATIONS) REGULATIONS
Regulation 8(2)**

REGISTER OF PERSONS EMPLOYED IN HAZARDOUS OCCUPATIONS

UEN	:		Workplace Number	:	
Workplace Name	:				
Workplace address	:				
Tel	:		Fax	:	

Hazard	:		Date of Register	:	
Test 1	:	Unit of measurement	:		
Test 2	:	Unit of measurement	:	Laboratory conducting the test	:

Note: For hazards where toxicological analysis is required, use of an analytical lab with accreditation or an effective quality assurance programme will ensure the credibility of the data.

Name	NRIC/FIN	Sex	Race	Date of Birth	Dept/Section	Work involving exposure (Occupation)	Exposure			Test Result	
							Date of Test	Date started exposure	Date stopped exposure	Test 1	Test 2

Annex E

**WORKPLACE SAFETY AND HEALTH ACT
WORKPLACE SAFETY AND HEALTH (MEDICAL EXAMINATIONS) REGULATIONS
Regulation 9(3)
SUMMARY REPORT OF EXAMINATIONS**

Workplace Name	: _____
Workplace Address	: _____
Email (optional)	: _____
Tel	: _____
Fax	: _____

Date of Summary Report	: _____
Hazard	: _____ Total no. of exposed workers : _____

No. of workers examined	: _____	No. with abnormal results	: _____
No. with normal results	: _____	a. Occupational	: _____
		b. Not occupational	: _____
No. of workers recommended for suspension	: _____		

For NOISE hazard only:		
No. of workers examined who use hearing protectors during noise exposure : _____		
Name(s) and identification numbers of person(s) performing the audiometric tests:		
Name	NRIC/FIN number	Practice Name

For hazards where toxicological analysis is required, use of an analytical laboratory with accreditation or an effective quality assurance programme will ensure the credibility of the data.

For ARSENIC, CADMIUM, MANGANESE, MERCURY, LEAD, PERCHLOROETHYLENE AND TRICHLOROETHYLENE hazards only:	
The laboratory conducting the analysis <i>*does / does not</i> participate in the following proficiency testing scheme for the relevant chemical : <i>*NEQAS / Robens Institute / Danish EQAS / NIOSH /</i>	
<i>Others, please specify:</i> _____	
<i>* Circle appropriately</i>	

I certify that the information given above is correct. I confirm that the medical examinations were conducted in accordance with the Guidelines for Designated Workplace Doctors. In the case of audiometric examinations, these were done in a proper booth or test environment and conducted by persons who have undergone a course of training in audiometric screening acceptable to the Commissioner for Workplace Safety and Health. All workers were counselled on the importance of wearing personal protective equipment when exposed to workplace hazards. Details of workers with abnormal results are attached.

Designated Workplace Doctor:	
Name	: _____ MCR No. : _____
Practice Address	: _____
Email	: _____ Tel : _____ Fax : _____
Date	Signature
<p>You may wish to update Singapore Medical Council if there are any changes in your practice and contact information. Please ensure all items in the form are completed. Incomplete forms will be returned.</p>	

WORKERS WITH ABNORMAL RESULTS

No.	Name	NRIC/FIN	Sex	Date of Exam	Clinical Findings Including auroscopy*	Diagnosis	Action taken**

For quantitative results (eg blood lead) give the exact figures & units of measurement. Also state the laboratory normal range. For audiometric examination, attach audiograms. Auroscopy should be done for all newly detected cases of abnormal audiograms which were not notified previously.

Annex F

WORKPLACE SAFETY AND HEALTH ACT SECTION 62(3)

APPLICATION FOR EXEMPTION FROM MEDICAL EXAMINATIONS REQUIRED UNDER THE WORKPLACE SAFETY AND HEALTH (MEDICAL EXAMINATIONS)

UEN	:	Workplace Number :		
Workplace Name	:			
Workplace address	:			
Email	:		Tel :	Fax :

Part A: To be completed by Company Representative

I would like to apply for exemption from medical examinations of workers exposed to the following hazards:

(Please tick where applicable)

<input type="checkbox"/>	Arsenic	<input type="checkbox"/>	Asbestos	<input type="checkbox"/>	Benzene
<input type="checkbox"/>	Cadmium	<input type="checkbox"/>	Compressed air environment	<input type="checkbox"/>	Lead
<input type="checkbox"/>	Manganese	<input type="checkbox"/>	Mercury	<input type="checkbox"/>	Excessive Noise
<input type="checkbox"/>	Organophosphates	<input type="checkbox"/>	Perchloroethylene	<input type="checkbox"/>	Raw cotton
<input type="checkbox"/>	Silica	<input type="checkbox"/>	Trichloroethylene	<input type="checkbox"/>	Vinyl chloride monomer
<input type="checkbox"/>	Tar, Pitch, Bitumen, Creosote				

To support my application, information in Part B is attached.

Name	:		Designation	:	
Date of application	:				

Part B:

To be completed by a competent person, e.g. Workplace Safety and Health Officer, Industrial Hygienist or Designated Workplace Doctor

Use a separate form for each hazard.

Hazard : _____

Process or Operation (including description of existing control measures)	No. of Workers involved in each process	Max. hours of exposure per day	Exposure level* (State unit of measurement e.g. dB(A), ppm etc)

Submit a copy of the following:

- a. Biological monitoring results for past 5 years (if available)
- b. * Environmental assessment reports (if available)

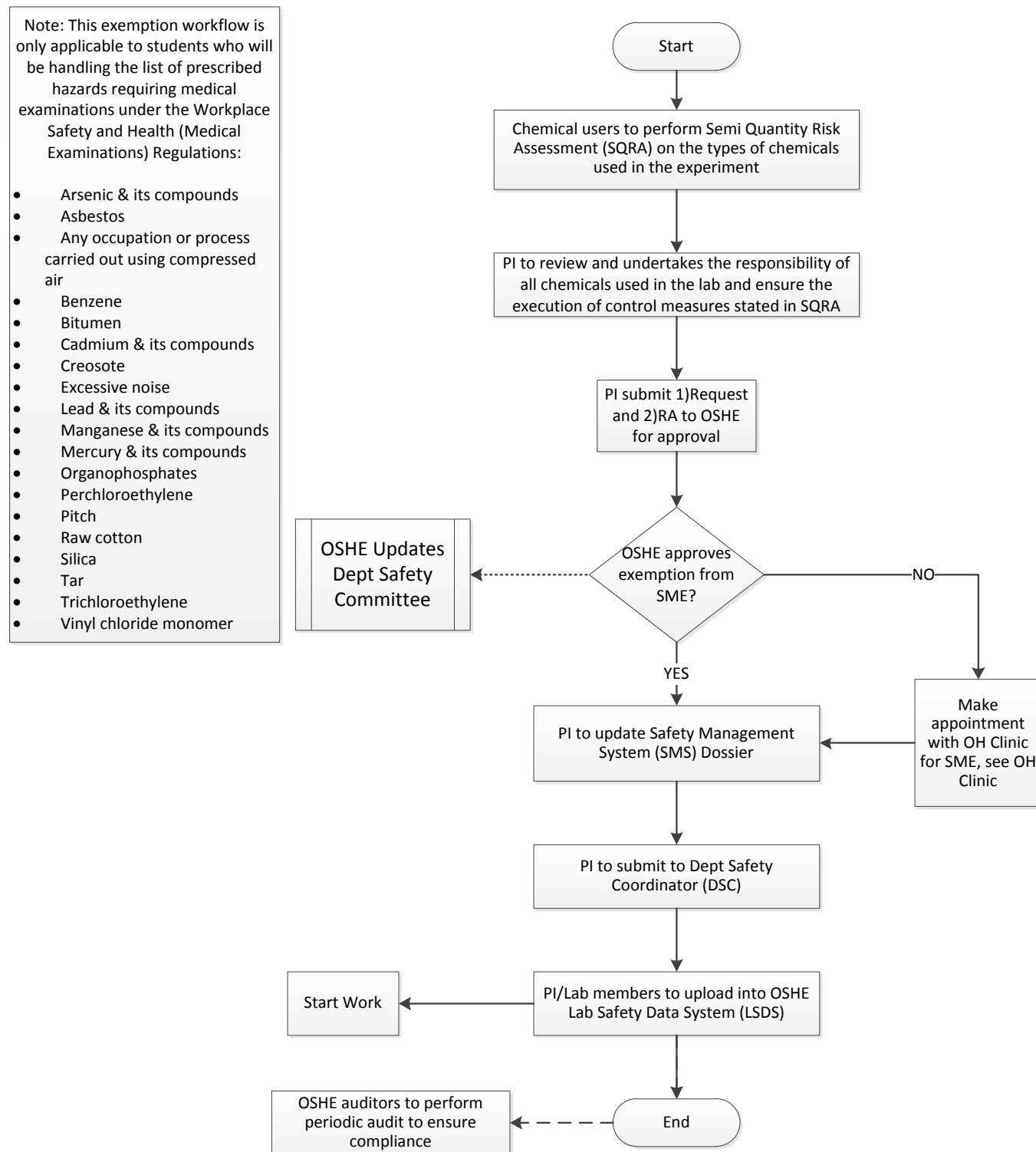
Other information to support application

(e.g. Safety Data Sheet, photographs of work process, etc):

Completed by:

Name	:			
Address	:			
Email	:		Tel :	Fax :
Date		Signature		

Annex G. Workflow for Applications of Exemptions from SME for students (Please refer to the *SOP for Application of Exemption from SME for NUS Students* for details)



Annex H: Permissible Exposure Levels

Workplace Safety and Health (General Provisions) Regulations 200				
A. Permissible Exposure Levels (PEL) for Toxic Substances				
<u>Substance</u>	PEL (Long Term)		PEL (Short Term)	
	(ppm) ^a	(mg/m ³) ^b	(ppm)	(mg/m ³)
• Arsenic, elemental and organic compounds, as As	-	0.01	-	-
• Asbestos (all forms) (fiber/cc)	-	0.1	-	-
• Benzene	1	3.18	-	-
• Cadmium, as Cd				
- Elemental	-	0.01	-	-
- Compounds	-	0.002	-	-
• Coal tar pitch volatiles (Polycyclic aromatic hydrocarbons), as benzene solubles	-	0.2	-	-
• Cotton dust, raw	-	0.2	-	-
• Lead, inorganic dusts and fumes, as Pb	-	0.15	-	-
• Manganese, as Mn				
- Dust and compounds	-	1	-	-
- Fume	-	1	-	3
- Manganese cyclopentadienyl tricarbonyl, as Mn	-	0.1	-	-
• Mercury				
- Alkyl compounds	-	0.01	-	0.03
- Aryl compounds	-	0.1	-	-
- Inorganic forms including metallic mercury	-	0.025	-	-
• Perchloroethylene (Tetrachloroethylene)	25	170	100	685
• Silica-crystalline				
- Cristobalite, respirable dust	-	0.05	-	-
	-	0.1	-	-
- Quartz, respirable dust	-	0.05	-	-
- Tridymite, respirable dust	-	0.1	-	-
- Tripoli, respirable dust				
• Trichloroethylene	50	269	100	537

• Vinyl Chloride (Chloroethylene)	5	13	-	-
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Notes:

- ppm means parts of the substance per million parts of contaminated air by volume; and
- mg/ m3 means milligrammes of the substance per cubic metre of contaminated air.

Annex I: Permissible Exposure Limits for Noise

Sound Pressure Level dB(A)	Maximum duration per day
85	8 hrs
86	8 hrs
87	5 hrs 2mins
88	4 hrs
89	3 hrs 11mins
90	2 hrs 31 mins
91	2 hrs
92	1 hr 35 mins
93	1 hr 16 mins
94	1 hr
95	48 mins
96	38 mins
97	30 mins
98	24 mins
99	19 mins
100	15 mins
101	12 mins
102	9 mins
103	7.5 mins
104	6 mins
105	5 mins
106	4 mins
107	3 mins
108	2.5 mins
109	2 mins
110	1.5 mins
111	1 mins
112	56 secs
113	45 secs
114	35 secs
115	30 secs

Notes:

- No exposure to noise in excess of 140 dB(A) is allowed.
- The duration of exposure is to be obtained by adding up the total duration of exposure per work day, whether there is one continuous exposure or a number of separate exposures.
- All continuous, impulsive or impact noise of sound pressure levels from 80 dB(A) to 140 dB(A) must be included in the computation of noise exposure of the person.
- The permissible exposure limit is exceeded if a person is exposed to noise at a sound pressure level listed in the Table above in excess of the corresponding duration.

Annex J: DETAILS OF VARIOUS MOM FORMS (Extracted from WSH Guidelines)

1. Summary Report Form (Regulation 9)

- This should be completed and submitted to the Commissioner for Work Safety and Health (OSHD, MOM) as soon as possible after completion of the examinations. One form should be used per hazard per workplace. DO NOT combine results from different workplaces even if they are the same company.
- For workplaces which have a large number of workers, medical examinations could be conducted in batches. The Summary Report form could be submitted to MOM upon completion of each batch of workers.
- Summary Report need not be completed for repeat test results. For individual workers' repeat test results and updating on all follow-up actions taken, update MOM separately using the workers' Report of Examinations form.
- Details of all abnormal cases (whether occupational or not) should be given in the Form.
- Workers diagnosed with occupational diseases should separately be notified through iReport (www.mom.gov.sg/iReport) as required under the WSH (Incident Reporting) Regulations.

2. Report of Examinations (Regulation 9)

- Every worker examined should have their individual Report of Examinations as this serves as their personal case notes. The workers' individual forms should be completed after each round of examinations and whenever repeat tests and other actions e.g. workplace inspection, assessing and reducing risks, referrals, etc are carried out. It gives a chronological record of the medical examination results and interventions, enabling you to detect adverse trends.
- Clinical examination findings and test results should be included.
- One form should be used per worker per hazard. If a worker is exposed to more than one hazard, the worker's personal particulars need only be completed once.
- This form may be substituted with any other medical examination form provided it contains all the required information found in the Report of Examinations form e.g. audiometric test report may be used instead of the Report of Examinations form.

3. Register of Workers (Regulation 8)

- The company is responsible for maintaining the register of workers exposed to the hazard. Separate registers should be maintained for different hazards.
- Obtain a copy of the register from the company before starting the medical examinations. Confirm with the company that all exposed workers are included, particularly the maintenance and cleaning workers (if exposed).

4. Certificate of Suspension (Regulation 10)

- When a worker is recommended for suspension from work involving exposure to a certain hazard on a temporary or permanent basis, a copy of the Certificate of Suspension is to be issued to the employer, worker and MOM.
- When a suspended worker is subsequently fit for exposure to the hazard, the employer, worker and MOM should be informed by receiving the Certificate of Fitness.

5. Certificate of Fitness (Regulation 4)

- This form is used for certification of fitness for workers returning to work after a period of suspension.
- This form is also used for certification of unfitness e.g. during pre-placement examinations or for workers permanently suspended from exposure.
- When issued, a copy must be completed and submitted to the Commissioner for Workplace Safety and Health, MOM.

Annex K: Exemption Application Form for Students

Ref: OSHE/OHSOP09/

Name of PI / Instructor: _____

Department: _____ Faculty: _____

Location of Lab: _____

Period of work – From: _____ To: _____

Statutory Hazard/s involved: _____

Process or Operation (include description of existing control measures)	No. and Names of students involved in each process	Max. hours of exposure per day	Exposure level (State unit of measurement e.g. dB(A), ppm etc.)

Findings from SQRA: _____

Other information to support application (e.g. Safety Data Sheet, risk assessment, photographs of work process, medical reports from OHC etc.):

Completed by: _____ Date: _____

Email: _____ Tel: _____