Workplace Health Surveillance (WHS+) Audit Report Management of Hazardous Chemical Programme

for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Workplace name and Workplace Number)

**Details of workplace**

|  |  |
| --- | --- |
| Workplace Name: |  |
| Workplace No: |  |
| Workplace address: |  |
| Person-in-charge: |  |
| Designation: |  |
| Email: |  |
| Telephone: |  |

To be submitted to MOM at [OSHD\_OH@mom.gov.sg](mailto:OSHD_OH@mom.gov.sg).

**COMPETENT PERSON DECLARATION FORM**

**COMPLETION OF WHS+ GAP ANALYSIS REPORT AND IMPLEMENTATION PLAN**

The Gap analysis checklist (Annex A) and Implementation plan (Annex B1, B2) was completed by

|  |  |
| --- | --- |
| Name: |  |
| Designation: |  |
| Company: |  |
| Email: |  |
| Telephone: |  |

Declaration by competent person

Please declare by signing on this form that the following

1. the Gap analysis checklist (Annex A) and Implementation plan (Annex B1, B2) for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was conducted to the best of my knowledge.

(Company name)

1. I am qualified to conduct the Gap analysis checklist (Annex A) and Implementation plan (Annex B1, B2). (example RIH, SAC accredited WSH auditor, WSHO etc)

Signature of competent person Date

**AUDITOR DECLARATION FORM**

**COMPLETION OF WHS+ AUDIT REPORT**

The Audit finding (Annex C) was completed by

|  |  |
| --- | --- |
| Name: |  |
| Designation: |  |
| Company: |  |
| Email: |  |
| Telephone: |  |

Declaration by competent person

Please declare by signing on this form that the following

1. the Audit finding (Annex C) for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was conducted to the best of my knowledge. (Company name)
2. I am satisfied with the evidence provided in the Gap analysis Checklist (Annex A)
3. I am satisfied with the evidence provided in Implementation plan (Annex B1,B2)
4. I am qualified to conduct the Audit finding (Annex C). (example SAC accredited WSH auditor etc)

Signature of Auditor Date

Submission of completed audit report shall include the following documents:

1. Annex A Gap analysis Checklist
2. Annex B1 Hazardous Substance Control plan
3. Annex B2 Action plan list
4. Annex C Audit findings
5. New toxic substance monitoring report

**Annex A**

**Gap analysis checklist**

Questions are based on elements in the Management of Hazardous Chemicals Programme (MHCP)

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| **Policy and Strategy** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there a policy established for management of hazardous chemicals? | *(example , The company policy state explicitly the responsibility and commitment of management to ensure the safe use of chemicals, and the protection of employees against chemical hazards.)* | *(example , Attach Company's MHCP policy document)* | *(example , The policy did not include the duties and responsibilities of employees)* |
| 2 | Is there a broad strategy on managing hazardous chemicals? | *(example , for instance maintaining as small an inventory of chemical as possible; buying the lowest concentration of chemical required; considerations of possible substitutes for more hazardous chemical etc.)* | *(example , Attach Company's MHCP policy document)* |  |
| 3 | Are the duties and responsibilities of employees clearly stipulated? | *(example , using chemical and equipment according to their training; reporting any incidents; using protective equipment provided by the company etc.)* | *(example , Attach Company's MHCP policy document)* |  |
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| **Selection and Procurement** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there a proper approval procedure and detailed selection criteria established for chemical selection and procurement? | *(example ,approval procedures should include whether there are safer substitutes available, what is the volume required, what concentration of the chemical is required, where can the chemical be safely used, where can the chemical be disposed etc.)* | *(example , Attach approval/ selection criteria document)* |  |
| 2 | Is information on the protection against safety and health hazards of each chemical obtained from suppliers? | *(example ,SDS for chemicals are requested, and information from the SDS is used to decide whether company can use/ ban or restricted use for the chemical etc)* | *(example , Attach approval/ selection criteria document)* |  |
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| **Register of Chemicals and Safety Data Sheets (SDS)** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there a register of all hazardous chemicals produced, stored, used or handled in the workplace? | *(example , chemical inventory showing how much of each chemical the company possess)* | *(example , attach the chemical inventory etc)* |  |
| 2 | Does the register contain information on the inventory, supplier, application, location and movement of these chemicals, as well as the persons at risk? | *(example , chemical inventory including the information listed)* | *(example , attach the chemical inventory etc)* |  |
| 3 | Is the register updated periodically? | *(example , the register should not include any expired chemicals; the register should be updated with the latest SDS information obtained from the supplier)* | *(example , attach the chemical inventory etc)* |  |
| 4 | Are copies of SDS of all hazardous chemicals listed in the register obtained from the respective suppliers and compiled? | *(example , The SDS copies should be up to date; SDS are only valid for 5 years)* | *(example , attach the listing of the SDS etc)* |  |
| 5 | Is the information in the SDS studied and necessary measures taken to ensure the safe use of the chemicals? | *(example , The risk assessment and SOP should include the necessary measures listed in the SDS regarding the safe use of chemicals)* | *(example , provide SDS, RA and SOP for the use of the chemical)* |  |
| 6 | Is the SDS available to persons who are exposed or liable to exposure of hazardous chemical? | *(example , Physical folder containing the SDS or shared directory online containing SDS))* | *(example , Provide photo of the SDS file or photo of the online directory)* |  |
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| **Labelling and Warning Signs** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Are all chemical containers labelled in accordance with GHS? | *(example , Correct GHS labels are used, Transport labels are not mistaken as GHS label)* | *(example , Provide photo of chemical container with proper GHS labels)* |  |
| 2 | Are there warning signs or notices specifying the nature of the hazardous chemicals and the risks involved? | *(example , Areas working with flammable liquids are clearly demarcated; Corrosives warning signs near acid / bases etc)* | *(example , Provide photo of warning signs and the corresponding chemical)* |  |
| 3 | Are the labels and warning signs legible, prominently displayed and in languages understood by workers? | *(example , labels and warning should be in languages which the worker are able to read)* | *(example , if non English speaking workers are identified, please provide photos of labels in other language; if all workers are able to understand English, provide photo of English labels)* |  |
| 4 | Appropriate steps are taken to include or exclude workers in the MHCP whose exposures have changed significantly. |  |  |  |
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| **Storage and Transportation** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is a proper system of storage of hazardous chemicals established? | *(example ,is chemical incompatibility considered during the storage; chemical are stored according to advice in SDS; Gas cylinders are properly secured etc)* | *(example, provide photos of chemical storage area and SOP regarding chemical storage)* |  |
| 2 | Are hazardous chemicals locked up, and only the authorised person has the key? | *(example ,list of chemicals listed in the poisons Act are kept under lock and key; explosive precursors are kept under lock and key)* | *(example, photo of separate storage for these chemicals)* |  |
| 3 | Are adequate measures taken to ensure that potential risks are communicated properly to all who may come into contact with the chemicals during transportation? | *(example ,marking and labelling of packages or containers to indicate*  *the hazards of the consignment; provision of transport documents etc)* | *(example, photo of transport labels and information in transport documents)* |  |
| 4 | Are precautionary measures taken to ensure that emergency situations during transportation, loading and unloading of chemicals are adequately dealt with? | *(example ,Vehicles equipped with fire fighting appliances; drivers trained in safe transport of dangerous goods and dealing with emergency situations; SWPs for loading, unloading and transfer operations etc)* | *(example, photos of emergency equipment; training materials for drivers; SOP for loading, unloading and transfer operations etc)* |  |

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| **Risk Assessment and Control** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is a risk assessment conducted for work on any process, plant, vessel or machinery that is liable to produce or give off any hazardous chemical? | *(example , RA should include identification of the safety and health hazard events; determination of the degree of exposure to the hazardous chemicals or the frequency or*  *likelihood of occurrence of the events; analysis of the possible effects of exposure to the hazardous chemicals or the consequences of the events.)* | *(example, provide completed Risk assessment)* |  |
| 2 | Are the risk assessment worksheets reviewed every 3 years or immediately if there has been a significant change to the process? | *(example ,Check for last revision of RA and whether it coincides with the date of last incident, process change etc)* | *(example, photo of transport labels and information in transport documents)* |  |
| 3 | Are control measures implemented to reduce any unacceptable risk? | *(example ,Verify that control measures listed in the RA is implemented)* | *(example, Photos of the control measures implemented)* |  |
| 4 | Do the control measures follow the hierarchy of control (hazard elimination, process or chemical substitution, engineering control, administrative measures and personal protection)? | *(example ,provide evidence that upstream risk controls are considered; PPE and administrative controls should be last resort)* | *(example, provide evidence of considering upstream risk control))* |  |
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| **Safe Work Procedures and Personal Protective Equipment** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Are safe work procedures on any work involving hazardous chemicals established and documented? | *(example , Safe work procedures established for manufacturing processes etc)* | *(example , provide SWP on the processes)* |  |
| 2 | Is there a suitable personal protective equipment programme implemented to ensure that the employees are effectively protected? | *(example Elements of PPE Programme to include PPE Selection, PPE Fitting, PPE Maintenance and Storage & PPE User Education and Training)* | *(example ,Provide documents regarding PPE programme)* |  |
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| **Workplace Monitoring and Medical Surveillance** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is monitoring of areas where hazardous chemicals are used or given off is carried out by a competent person regularly? | *(example Toxic substance monitoring report; online monitoring systems etc)* | *(example provide Toxic substance monitoring report; photos of online monitoring systems etc)* |  |
| 2 | Are results of the monitoring correctly interpreted and records properly kept? | *(example actions taken when monitoring results were found to be above PEL)* | *(example, Change in work processes; change in chemical usage etc)* |  |
| 3 | Is a medical surveillance programme established where appropriate? | *(example Medical surveillance is conducted for workers who are exposed to certain occupational hazards)* | *(example medical surveillance is done for all workers who are currently using chemicals in the list. )* |  |
| 4 | Are results of the medical examinations evaluated and medical records properly kept? | *(example, Workers medical examination are kept and tracked to determine if there were any increase in levels based on previous monitoring etc )* | *(example evidence that workers medical surveillance results are tracked; for workers who exceed the biological exposure limits proper procedures are in place )* |  |
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| **Information and Training** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there a training programme to ensure that the safe handling procedures and SDS of chemicals are known and understood by all concerned? | *(example, Chemical management training; spill test kit training etc )* | *(example training slides for the training provided; training records for the workers )* |  |
| 2 | Are employees trained prior to their first assignment working with hazardous chemicals? | *(example, Chemical management training)* | *(example provide training records of workers and when they started working with hazardous chemicals )* |  |
| 3 | Are hazardous chemicals put under the control of a competent person who understands how to handle and manage the chemicals? | *(example, Management of hazardous chemicals license holder; appointed competent person to handle hazardous chemicals)* | *(example Provide appointment letter or training record of MHS course )* |  |
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| **Emergency Planning and First Aid Procedures** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Are emergency procedures established to cope with chemical accidents such as fires, explosions, spills, leaks or release of hazardous chemicals? | *(example, SWP for emergency procedures; SWP for Chemical spills etc)* | *(example Provide SWP)* |  |
| 2 | Are emergency drills conducted at suitable intervals? | *(example, Chemical Spill drill, chemical fire drill, chemical splash drill etc)* | *(example, Evidence that previous drills were conducted not including normal fire drills)* |  |
| 3 | Is there a first aid programme to ensure that provisions for emergency treatment of victims of chemical poisoning or excessive exposure to toxic chemicals are available? | *(example, Emergency eye wash; emergency showers; First aid kit; appointed and trained first aid personnel etc)* | *(example, Photos of first aid facilities and documents of trained first aid personnel etc)* |  |
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| **Waste Disposal** | | | | |
| **S/no** | **Area of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there a hazardous waste management system which includes proper labelling of waste, waste storage and treatment facilities, waste transport and disposal facilities emergency action plan? | *(example, Waste labelling done according to national/international code; proper waste storage and treatment facility; compatibility of waste is considered)* | *(example, Photos of waste storage facility and SWP for waste management)* |  |
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| **Contract Work** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is there an established criteria for the selection of contractors based on their safety and health awareness, management and performance? | *(example, duties, responsibilities, authority and reporting relationships with contractors are defined; track record, safety records of contractors are considered during selection etc)* | *(example, provide evidence of past selection criteria used)* |  |
| 2 | Are the safe work procedures and training of contractors developed together with the contractors? | *(example SWP or training materials jointly developed for a specific job)* | *(example, provide evidence of SWP or training material)* |  |
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| **Programme Review and Audit** | | | | |
| **S/no** | **Areas of concern** | **What have been done** | **Evidence** | **Gaps** |
| 1 | Is the Management of Hazardous Chemicals Programme reviewed annually? | *(example MHCP is reviewed annually or when process changes)* | *(example past records of MHCP revisions)* |  |
| 2 | Is the programme audited regularly? Are recommendations arising from the review implemented to improve the programme? | *(example Annual audits on MHCP conducted; recommendations from the audit is reviewed)* | *(example past records of MHCP audits and recommendation review)* |  |

**Annex B1**

**Hazardous substances control plan**

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| **S/no** | **Work location** | **Machine, Equipment or Process with air monitoring levels above PEL** | **Chemical name and monitoring level** | **Possible Control Measures in the market (upstream risk controls only)\*** | **Control measures to be implemented (upstream risk controls only)\*** | **Reasons for not choosing other control measures** |
| *eg* | *Factory level 1* | *Acid bath* | *Nitric acid- 6.24mg/m3( 8 hr TWA) – 120% PEL* | *1. Replacement of acid bath with a new set up with in-built LEV 2. Installation of LEV into existing acid bath* | *Installation of LEV into existing acid bath* | *To replace all the acid baths is too costly ($100,000) and is not reasonably practicable.* |
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**\* (Elimination, Substitution & Engineering controls measures only)**

**Annex B2**

**Action plan list**

Include all item(s) from gap analysis that require follow up(Annex A) and the upstream risk control(s) (Annex B) to be implemented

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| **S/N** | **Issues identified** | **Planned action** | **Related goals/ outcomes** | **Planned Resources/ support** | **Deliverables** | **Proposed Deadline** | **Priority level** | **Person in-charge** | **Signature of person in charge** |
| *example* | *Workers working near the acid bath were exposed to high levels of nitric acid fumes (120% PEL)* | *Installation of local exhaust ventilators for acid baths* | *Lower workers exposure to nitric acid fumes to below PEL* | *1. $5000 to be set aside for installation of local exhaust ventilation (LEV) and maintenance of LEV 2. Scheduling of work to allow the installation of LEV.* | *Air monitoring results of workers working near the acid bath to be reduced to below PEL.* | *31-May-21* | *1* | *Mr Tan Lee Lee* | *Tan Lee Lee* |
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**Annex C**

**Audit Findings**

All actions items in Annex B2 must be completed

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| **S/N** | **Issues identified** | **Corrective action performed** | **Verification by the auditor** | **Auditor** | **Signature of Auditor** |
| *example* | *Workers working near the acid bath were exposed to high levels of nitric acid fumes (120% PEL)* | *Installation of local exhaust ventilators for acid baths* | *Air monitoring was conducted after the corrective action. Current nitric acid levels at 20% PEL* | *Mr Tan Lee Lee* | *Tan Lee Lee* |
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