Health Surveillance Procedure

SEQ-PR-021

Document History			
Revision	Description of Amendments	Reviewed By	Date
1	Document Review	SEQ Manager	18/12/2010
2	Document Review	Jeremy Wallis	16/07/2012
3	Document Review	Jeremy Wallis	20/02/2014
4	Document Review	Jeremy Wallis	22/01/2015
6	Update to Haslin's new branding	Jeremy Wallis	01/09/2016
7	Combined with OHHMP developed by Hypex Group for Metro Project and complete review. OHHMP superseded	Jake Iskenderian	16/01/2024
8	NSW – New Exposure Standard Adopted	Tim Kelly	24/05/2024
9	Updated to include ECP Template and Appendix E	Tim Kelly	16/02/2025

Document Approval			
Revision	Approved By	Signature	Date
7	Tim Kelly	Tim Kelly	16/01/2024
8	Tim Kelly	Tim Kelly	24/05/2024
9	Tim Kelly	Tim Kelly	16/02/2025

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Name	Position
Tim Kelly	Business Development and Improvement Manager
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Table of Contents:

1. Scope

The requirements specified in this document apply to all sites or facilities which are operated by Haslin Constructions. Unless otherwise stated, Project Managers are responsible for the implementation of the requirements specified in this procedure. Implementation of the controls specified in this procedure is the responsibility of the Site Supervisor. Monitoring of controls is performed by the Safety Coordinator.

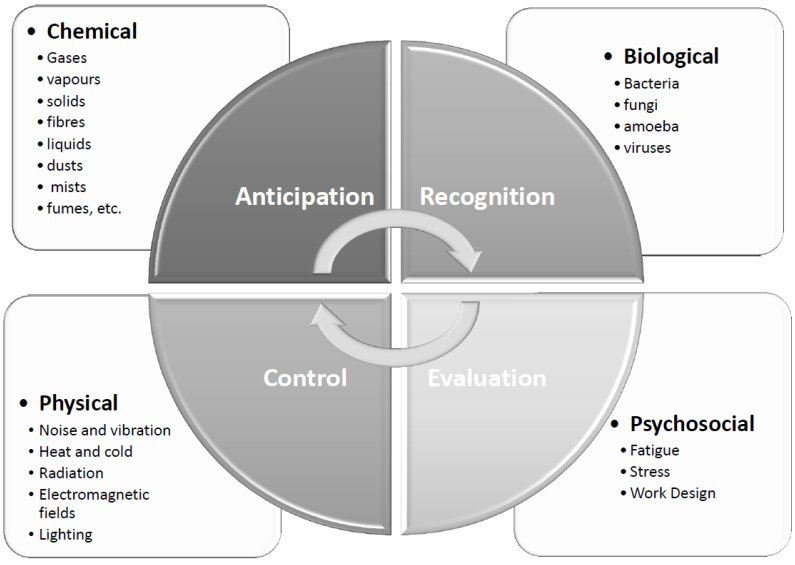
Where Haslin Constructions has an equity stake but does not have operational responsibility, this document must be made available to the operator, so comparable requirements are applied.

This document has a direct interface with Haslin Constructions Integrated Safety, Environment and Quality Management System. Other documents that would have interfaced with this procedure are as follows:

- Health and hygiene risk specific Exposure Control Plans
- Risk Management Procedure (SEQ-PR-001)
- Project Safety Management Plan (SEQ-TP-049)
- Project Safety Risk Register (SEQ-TP-002)
- Safe Work Method Statements
- Site Safety Rules (SEQ-TP-047)
- Site Safety and Environmental Induction (SEQ-TP-048)
- Emergency Plan (SEQ-TP-037)

2. Application

This document defines the performance requirements for an occupational health and hygiene risk management program and prescribes company Workplace Exposure Standards (WES) and methods to measure exposure. This document supports Haslin Constructions' goal of health and safety excellence by preventing occupational illness and disease.



3. References

- WHS ACT 2011
- NSW WHS REGULATION 2017

- QLD Work Health and Safety Regulation 2011
- Workplace Exposure Standards for Airborne Contaminants 2013 – Safework Australia

4. Definitions

Definitions and abbreviations to be applied to this procedure are listed in Table 1 below.

Table 1: Definitions and Abbreviations

TERM/ ABBREVIATION	DEFINITION
AIOH	Australian Institute of Occupational Hygienists Inc.
ASCO	Australian Standard Classification of Occupations
ASIC	Australian Standard Industrial Classification
COH	Certified Occupational Hygienist
ECP	Exposure Control Plan
HCIS	Hazardous Chemical Information System
HRA	Health Risk Assessment
NATA	National Association of Testing Authorities
OHH	Occupational Health and Hygiene
PCBU	Person conducting a business or undertaking
PPE	Personal Protective Equipment
RPE	Respiratory Protective Equipment
SEG	Similar Exposure Group - A grouping of workers who perform similar tasks and who are likely to have a somewhat comparable exposure to occupational health hazards.
SFAIRP	So Far as is Reasonably Practicable
STEL	Short Term Exposure Limit - A 15-minute TWA exposure which should not be exceeded at any time during a workday even if the eight-hour TWA average is within the TWA exposure standard. Exposure at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	Time-Weighted Average - The average airborne concentration of a particular substance when calculated over a normal eight-hour workday, for a five-day working week.
UCL	Upper Confidence Limit - The value, below which we are 95% confident, lies the true value of the SEGS mean exposure.
WES	Workplace Exposure Standard (Same as Occupational Exposure Limit (OEL)) - Airborne concentrations of a particular chemical or substance in the workers' breathing zone that should not cause adverse health effects or cause undue discomfort to nearly all workers.

5. Legal Requirements

The Work Health and Safety legislation of each Australian jurisdiction require the Person Conducting a Business or Undertaking (PCBU) to identify hazards associated with the work environment and associated stressors, assess the health and safety risks to exposed persons and eliminate, or if not possible to eliminate, control those risks to minimise them to an acceptable level. In order to meet applicable legislative requirements, PCBUs are required to engage a competent person (usually referred to in the industry as qualified and skilled occupational hygienist) to undertake the process described above.

Once the process is completed for the hazard or a range of hazards in the workplace by collecting and evaluating the required exposure measurement data, the PCBU will have the evidence demonstrating compliance with the legislation with the aim of protecting their people at the workplace. The evidence can be in the form of an occupational hygiene scientific report or a program designed to define and assist in the implementation of ongoing activities for the protection of workers and others.

6. Procedure

6.1. OHH Objectives and Targets

Haslin Constructions aim to comply with the obligations pertaining to OHH that are stipulated in WHS and Rail Safety legislation. Haslin Constructions will manage risks to occupational health and hygiene through a structured process of health risk assessment, control, and ongoing review using competent persons. Table 2 below lists the OHH Objectives and Targets to be reported on a monthly basis, which demonstrate conformance with this procedure.

Table 2: OHH Objectives and Targets

NO.	OBJECTIVE	KPI TARGET/ FREQUENCY	RESPONSIBILITY
1	The proportion of Health Risk Assessment's completed in comparison to those required by this procedure.	100%	WHS Manager
2	The proportion of SEGs at Significant Risk with Exposure Control Plans assessed by the COH.	100%	WHS Manager
3	The proportion of SEGs at Significant Risk with Exposure Control Plans effectively implemented	75%	WHS Manager

The OHH Objectives and Targets will be reviewed regularly, and new objectives and targets added if new risks are identified throughout the construction of a project.

6.2. Risk Assessment

Haslin Constructions will conduct project-specific risk assessments and record the assessment of workplace exposures established by the quantitative exposure assessment in the respective Project Risk Register in accordance with SEQ-PR-001 Risk Management Procedure. Entries into the Project Risk Register will describe details of the work activity, the workplace exposure, risk ratings and risk control measures.

6.3. Workplace Exposure Standards and Action Limits

Workplace Exposure Standards (WES) used to determine exposure acceptability will be equal to or lower than the WES as published:

- in WHS legislation, or on the
- Safe Work Australia (SWA) Hazardous Chemical Information System (HCIS).

Action Limits for each occupational health hazard will include, but not be limited to:

- any full-shift personal exposure > 50% of the TWA-WES
- any 15-minute personal exposure > STEL
- any personal exposure > ceiling limit
- any full-shift additive concentration WES > 1.

Exposures above the Action Limit demonstrate that a process is not under reasonable control and an Exposure Control Plan must be implemented to further reduce exposure. Workplace exposure standards and subsequent information are provided in Table 3 for reference and will be used as required for each Project.

Table 3: Workplace Exposure Standards

HAZARD	UNIT	15MIN STEL	ACTION LIMIT	8HR TWA WES
Respirable Dust	mg/m^3	-	0.5	1
Inhalable Dust	mg/m^3	-	2.5	5
Respirable Crystalline Silica (RCS)	mg/m^3	-	0.03	0.05
Diesel Particulate Matter (DPM)	mg/m^3	-	0.05	0.1
Welding fumes	mg/m^3	-	0.5	1
Respirable Asbestos Fibres	f/mL	-	0.01	0.1
Lead	mg/m^3	-	0.03	0.05
Carbon Monoxide (CO)	ppm	200	15	30
Carbon Dioxide (CO_2)	ppm	30000	2500	5000
Hydrogen Sulphide (H_2S)	ppm	15	5	10
Nitric Oxide (NO)	ppm	N/A	13	25
Nitrogen Dioxide (NO_2)	ppm	5	1.5	3
Sulphur Dioxide (SO_2)	ppm	5	1	2
Ozone (O_3) Peak	ppm	-	0.05 (peak)	0.1 (peak)
Occupational Noise $L_{Aeq,8hr}$		-	80	85
Occupational Noise $L_{C,peak}$		-	135	140
Hand Arm Vibration	-	-	2.5 m/s^2 averaged over an 8-hour work day	5 m/s^2 averaged over an 8-hour work day
Whole Body Vibration	-	-	0.5 m/s^2 A(8) or 9.1 $m/s^{1.75}$ vibration dose value	1.15 m/s^2 A(8) or 21 $m/s^{1.75}$ vibration dose value

6.4. Determination of Exposure Acceptability

In all circumstances, exposure sampling results will be assessed against WES for the purposes of evaluating occupational health risks and determining exposure acceptability.

In all cases exposure acceptability will be determined without regard for any protection afforded using personal protective equipment.

The requirements for exposure acceptability are determined by the Occupational Hygienist and will be based on:

- Individual exposures are below the Action Limit, and/or
- Where the 95% upper confidence limit of the minimum variance unbiased estimate (MVUE) of a SEG's exposure is below the TWA-WES, for chronic acting health agents.

6.5. Methods for Shift Adjustment

WES adjustment models will be selected and applied under the guidance of the Occupational Hygienist to ensure persons daily or weekly peak body burden does not exceed acceptable levels.

It should be noted that shift adjustments are predominantly for airborne contaminants. Noise exposure adjustments for extended shifts will be made in accordance with AS1269.1.

Atmospheric contaminant and noise monitoring results must be statistically analysed to assess compliance take account of potential synergistic effects between hazards.

6.6. Identification of Similar Exposure Groups

Similar Exposure Groups (SEGs) for health surveillance, need to be determined to analyse a workforce by grouping employees who perform similar tasks, use similar materials or are exposed to comparable levels of hazards. This involves conducting a thorough workplace assessment to identify exposure factors like job titles, work areas, work activity, chemicals used, and task frequencies. Defining SEG's allows monitoring a representative sample from each group instead of every individual.

6.7. Qualitative Health Risk Assessment

Haslin Constructions will undertake and document a Qualitative Health Risk Assessment using SEQ-TP-135 Qualitative HRA Tool to identify and estimate the potential exposures to health and hygiene hazards for each SEG at each project as per the requirements stipulated in AS 4360:2004 Risk Management. This is a risk assessment based on the integration of available information and judgement to estimate whether a given exposure scenario is acceptable, or if it is likely to produce a negative health effect. This assessment must:

- be undertaken by competent persons with knowledge and experience of the workplace and processes
- include all occupations, tasks and work environments, consistent with exposure risks;
- establish SEGs;
- consider exposure to chemical, physical, biological and physical agents
- identify SEGs estimated to have a Significant Risk to Health
- plan for appropriate controls, in accordance with the control hierarchy so far as is reasonably practicable
- prioritise controls where exposures are estimated to present a Significant Risk to Health
- establish quantitative exposure assessment and health surveillance activities
- include a physical inspection of work areas; review of processes and observation of work performance
- include engaging the workforce to facilitate information sharing and enable Project teams to ask questions and raise issues requiring follow up
- document recommendations for exposure control.

6.8. Quantitative Health Risk Assessment

Haslin Constructions will undertake Quantitative Health Risk Assessments when required to measure exposure to occupational health hazard(s) for the purpose of evaluating compliance with Workplace Exposure Standards (WES) and evaluating the effectiveness of exposure controls where a SEG's risk of exposure presents a Significant Risk to Health or exposures could exceed, or have exceeded, the acceptable WES. This is an assessment using the actual measurement of a chemical, physical, or biological agent using an approved sampling method such as the use of sound level meters or gas detectors to provide immediate results. This assessment must:

- Be conducted by a COH, or by competent persons acting under their direction.
- Use equipment which is appropriate for the method, and calibrated and maintained in accordance with the manufacturer's recommendations.

- Employ sampling and chemical analysis methods identified in, or validated to, the Standards specified in the table below. Laboratories must be certified to perform the chemical analysis.
- Be random, with respect to time and worker, in the selection of airborne contaminant or noise exposure events monitored. The number of samples will be determined by the COH.

A Quantitative HRA will also be triggered in any of the following circumstances where:

- Exposures have aroused complaints or adverse symptoms directly or indirectly related to health hazards in or from the workplace.
- Changes in activities or processes could potentially increase exposures likely to impact health.
- Concerns are raised with regards to the level of exposure.

When exposure exceeds the WES or is qualitatively assessed to exceed 50% of the WES, Haslin Constructions will:

- Prioritise exposure controls on the basis of potential health consequences, number of people exposed and magnitude of exposure reduction.
- Implement exposure controls in project design and equipment selection.
- Implement elimination, substitution, isolation or engineering exposure controls, supplemented by administrative controls where required
- Follow a recognised standard when implementing personal protective equipment (PPE) programs;
- Maintain, monitor and verify the effectiveness of exposure controls.

Where a previous Quantitative Health Risk Assessment has been conducted for comparable SEG's, this historical data may be used as the basis to implement controls to reduce the risk of exposure to workers.

6.9. Equipment and Instrumentation

All occupational health and hygiene testing equipment must conform to relevant standards and display visual evidence of calibration, including date of calibration, and date the next calibration is to be performed. Calibration and servicing frequencies will be established based upon the function and operational characteristics of equipment, including but not limited to:

- Manufacturer specifications
- Duration and frequency of equipment use
- Equipment operating environment
- Consequence of fault or failure of equipment.

Copies of calibration certificates must be made available by the Occupational Hygienist on request. A calibration schedule must be implemented for equipment purchased for in-house use.

6.10. Standard Methods of Assessment

Exposure assessment will be performed by a competent Occupational Hygienist in accordance with validated test methods utilising NATA accredited laboratories, which will include those listed in Table 4 below.

Table 4: Approved Methods for Exposure Assessment

PARAMETER TO BE ASSESSED	APPROVED COLLECTION METHOD	APPROVED ANALYSIS METHOD

Respirable Dust	AS2985 25mm PVC filter SIMPEDs cyclone	AS2985
Inhalable Dust (incl. heavy metals)	AS3640 25mm PVC filter	AS3640
Welding Fume and Gases	AS 3853-Part 1 and 2, 25mm PVC filter	AS3640 and X-Ray Fluorescence Spectrophotometry for welding fume elements. Direct reading instrument for gases
Respirable Crystalline Silica (RCS)	AS2985 25mm PVC filter SIMPEDs cyclone	NHMRC (1984) via X-ray Diffraction
Diesel Particulate Matter (DPM)	DPM 37mm Cassette with impactor	NIOSH Method 5040
Diesel Exhaust Gases	Direct reading instrument	Direct reading instrument
Respirable Asbestos Fibres	MFM 2nd Ed (NOHSC, 2005) 25 mm mixed cellulose ester membrane filter mounted in cowl	MFM 2nd Ed (NOHSC, 2005) Phase Contrast Microscopy
Oxygen (O2)	Direct reading instrument	Direct reading instrument
Ozone (O3)	Direct reading instrument	Direct reading instrument
Occupational Noise	AS1269 NOHSC:1007	AS1269 NOHSC:1007
Hand-Arm Vibration	AS ISO 5349	AS ISO 5349
Whole-Body Vibration	AS 2670 / EN 14253	AS 2670 / EN 14253

6.11. Exposure Control Plans

Exposure Control Plans (ECPs) will be developed in consultation with workers, supervisors and Project management to treat all occupational health risks with emphasis and priority placed on those SEG's where risk of exposure presents a Significant Risk to Health and/or where the results of personal exposure assessment are above the Action Limit.

ECPs will be established based on the control hierarchy principles and will consider both short and long-term control strategies to immediately control personal exposures while longer term control strategies can be designed and implemented. ECP's include the following minimum information:

- Roles and responsibilities including documenting who has accountability for each measure
- Implementation of interim controls
- Up-to-date training and competency requirements
- Up-to-date hazard information
- A process for regular review and consultation, and an
- Investigation mechanism for reported incidents.

ECPs are approved by the Project Manager confirming that the assessed health hazards can be managed to an acceptable level of risk.

Haslin Constructions will integrate exposure control into:

- design processes;
- the procurement of new plant and equipment and
- the development of new or changed processes.

Where PPE is used to control exposure, Haslin Constructions will implement a program which is consistent with:

- Australian Standard AS 1716 Selection, use and maintenance of respiratory protective devices
- Australian Standard AS/NZS 1269 Occupational noise management Part 3: Hearing protector program.

PPE used must be:

- selected on the basis of occupational exposure monitoring results;
- issued under a documented management program which includes assessment of the effectiveness of, and compliance with the program,
- issued to workers if requested by them to use on a voluntary basis.

Haslin Constructions will include in any:

- respiratory protection program processes for respirator selection, training and fit testing, rules for facial hair, and information on, and facilities for, the cleaning, maintenance and storage of respirators.
- hearing conservation program training on the selection, correct use, cleaning, maintenance and storage of hearing protectors and the importance of wear time.

Compressed air breathing (Respiratory Protection Equipment (RPE)) use must comply with the following:

- Self-Contained Breathing Apparatus or Supplied Air Respirators must meet the requirements of AS1716:2012 Selection, use and maintenance of Respiratory Protection Devices.
- Selection, use, storage and maintenance of RPE must be in accordance with AS1715:2009.
- The verification, filling, inspection, testing and maintenance of air tanks must be in accordance with AS2030.1
- Compressed air quality for breathing must meet the requirements of AS1715:2009 Appendix A for concentrations of carbon monoxide, carbon dioxide, oxygen, oil and mist.

6.12. Medical Surveillance and Health Monitoring

Haslin will ensure that health monitoring is provided to a worker if the worker is carrying out ongoing work using, handling, generating or storing hazardous chemicals and there is a significant risk to the worker's health because of exposure to a hazardous chemical referred to in Schedule 14, Table 14.1, Column 2 of the WHS Regulation (Appendix D of this procedure), any other hazardous chemical or lead.

Health monitoring activities will be performed in a standardised and coordinated manner and will be prioritised based on a worker's risk of developing an occupational illness caused by exposure to health effecting agent(s) or poor adaptation to the work environment. This is identified through the HRA process.

Before the implementation of any additional Medical Surveillance or Health Monitoring, an Occupational Physician will be engaged to review and provide comment on the proposed plan. This plan will subsequently be revised based on those comments such that the Occupational Physician can endorse it.

The registered medical practitioner selected will establish and maintain familiarity with the occupational activities performed by workers and therefore understand the health hazards that are likely to impact upon a worker's health to ensure that the design of the health monitoring program is suitable to the nature and scope of the work and therefore affords the evaluation of exposure controls. The medical assessments required for each work group is summarised in the Project-Specific HRA.

6.12.1. Baseline Monitoring

Baseline health monitoring is required for workers who are anticipated to have a significant risk of exposure to scheduled hazardous substances before they start work which may expose them to that hazard. The baseline monitoring requirement varies for each hazard and may include:

- Collection of personal data:
  - demographic data
  - previous work history
  - medical history.
- Physical examination:
  - spirometry (respiratory function)
  - skin checks
  - chest x-ray.
- Biological testing of:
  - blood
  - urine
  - saliva
  - mucous
  - hair.

6.12.2. Audiometric Assessment

Audiometric testing will be provided to workers who are frequently required to use personal hearing protection. Where audiometric testing is required, it will be carried out within 3-months of the worker commencing work by competent persons in accordance with the procedures in AS/NZS 1269.4:2005 Occupational noise management - Auditory assessment. A repeat assessment is required at least every 2-years; however, more frequent assessment may be needed if exposures are equal or greater than LAeq,8hour 100dB(A).

6.12.3. Crystalline Silica Baseline Monitoring

The baseline monitoring requirements for Crystalline silica are presented in Table 9 below. Persons working with crystalline silica re required to have medicals on an annual basis. The medicals involve all the items presented in the table below, except for the Chest X-ray. Chest X-rays should be completed at periods as directed by the medical practitioner, but no more than once every five years.

Table 5: Baseline Monitoring for Crystalline Silica

ITEM	DETAIL
Demographic, medical and occupational history	Name and unique company identification number; Date of birth; Sex; Address; Date of starting company service; Descriptive job title. To include the Australian Bureau of Statistics' Australian Standard Classification of Occupations (ASCO) and Australian Standard Industrial Classification (ASIC); Places of previous employment. Presence of symptoms; Smoking history.
Records of personal exposure	Past work history, including previous exposure to crystalline silica; Potential current exposure; Whether suitable personal protective equipment is used for crystalline silica exposure.
Completion of a standardised respiratory questionnaire	Two examples are the international Union Against Tuberculosis' Bronchial Symptoms Questionnaire 1986 or the Medical Research Council's Questionnaire on Respiratory Symptoms 1986
Physical examination	Emphasis on the respiratory system.

ITEM	DETAIL
Standardised respiratory function test	For example: FEV1, FVC and FEV1/FVC; The norms for predictive values must be stated.
Chest X-ray full size PA	Report to be recorded according to the current ILO classification.
Health Advice	The medical practitioner must inform the worker of the potential health effects associated with exposure to crystalline silica.

6.12.4. Asbestos Health Monitoring

If a worker is carrying out licensed asbestos removal work, the WHS Regulations require health monitoring is conducted before the worker commences the work. The frequency of health monitoring will be determined by a risk assessment and the significance and frequency of past or future exposure.

Health monitoring will be conducted at regular intervals, for example once every two years.

The baseline monitoring requirements for Asbestos are presented in Table 10 below.

Table 6: Baseline Monitoring for Asbestos

ITEM	DETAIL
Demographic, medical and occupational history	Name and unique company identification number; Date of birth; Sex; Address; Date of starting company service; Descriptive job title. To include the Australian Bureau of Statistics' Australian Standard Classification of Occupations (ASCO) and Australian Standard Industrial Classification (ASIC); Places of previous employment. Presence of symptoms; Smoking history.
Records of personal exposure	Past work history, including previous exposure to asbestos; Potential current exposure; Whether suitable personal protective equipment is used for asbestos exposure.
Completion of a standardised respiratory questionnaire	Two examples are the international Union Against Tuberculosis' Bronchial Symptoms Questionnaire 1986 or the Medical Research Council's Questionnaire on Respiratory Symptoms 1986
Physical examination	Emphasis on the respiratory system. Only required if clinical indications are present or they are recommended by the medical practitioner.
Standardised respiratory function test	For example: FEV1, FVC and FEV1/FVC; The norms for predictive values must be stated. Only required if clinical indications are present or they are recommended by the medical practitioner.
Chest X-ray full size PA	Report to be recorded according to the current ILO classification. Only required if clinical indications are present or they are recommended by the medical practitioner.
Health Advice	The medical practitioner must inform the worker of the potential health effects associated with exposure to asbestos.

6.12.5. Biological Monitoring

Biological exposure monitoring must form part of the health monitoring program in circumstances where exposure to high-risk hazardous substances has been identified and a validated method exists for the collection, analysis and measurement of the hazardous substance, or its metabolites in the bodily fluid or tissue of exposed workers.

Biological exposure monitoring results must be analysed and interpreted in order to evaluate the effectiveness of exposure controls, particularly in circumstances where the hazardous substance may enter the body via more than one exposure route.

6.12.6. Skin Check

Workers who predominantly work outdoors (e.g. traffic controllers, scaffolders and riggers, surveyors, etc.) will receive pre-employment and annual skin cancer checks. Furthermore, workers who are at risk of skin contact with wet concrete and other cement-based products should undergo an annual skin check for adverse health effects (e.g. irritant and allergic contact dermatitis).

6.12.7. Final Examination

Full medical examinations may be conducted as required and will include:

- medical history
- physical examination, and
- investigation.

6.12.8. Worker Confidentiality

Health monitoring reports and results will be kept as confidential records and will not be disclosed to another person without the workers written consent, except where the records are required to be given under the WHS Regulations to any of the following:

- the regulator
- another PCBU who has a duty to provide health monitoring for the worker
- a person who keeps the record confidential under a duty of professional confidentiality.

Haslin Constructions will implement a health surveillance program for each worker in a SEG where exposure of the SEG exceeds 50% of the WES or for noise exceeds 80 dB(A). The health surveillance program must:

- be consistent with the level of exposure and other relevant factors such as the age, gender and health of the worker;
- be documented and describe the medical tests conducted, the frequency of testing and interpretation of results;
- be conducted by trained and competent people and accredited laboratories;
- use equipment that is calibrated and maintained in accordance with the manufacturer's recommendations;
- include appropriate baseline testing;
- keep medical records confidential.

Haslin Constructions will ensure that health surveillance programs consistent with this procedure are established to protect sub-contractors from risks to their health associated with work at our project.

6.13. Reporting

Haslin Constructions will provide individual feedback of the result(s) of exposure monitoring, including the potential health effects of the exposure, to the worker whose exposure was monitored. An assessment of SEG exposure monitoring results must be reported to:

- site medical professionals;
- relevant SEGs and line management.

Occupational illness and the results of health surveillance must be:

- reported to affected employees so that the health significance is understood,
- analysed in relation to exposure and de-identified results reported to relevant stakeholders.

Haslin Constructions will include SEG exposures exceeding WESs and abnormal results of health surveillance in incident reporting and investigation processes.

Haslin Constructions will conduct a biennial self-assessment of the health and hygiene programs.

6.14. Psychosocial Hazards

A psychosocial hazard is anything that could cause psychological harm (e.g. harm someone's mental health). Common psychosocial hazards at work include:

- job demands
- low job control
- poor support
- lack of role clarity
- poor organisational change management
- inadequate reward and recognition
- poor organisational justice
- traumatic events or material
- remote or isolated work
- poor physical environment
- violence and aggression
- bullying
- harassment, including sexual and gender-based harassment, and
- conflict or poor workplace relationships and interactions

Psychosocial hazards can create stress which can cause psychological or physical harm. Stress itself is not an injury but if workers are stressed often, over a long time, or the level of stress is high, it can cause harm. Psychological harm may include anxiety, depression, post-traumatic stress disorder, sleep disorders. Physical harm may include musculoskeletal injuries, chronic disease or fatigue related injuries.

Psychosocial hazards may interact or combine to create new, changed or higher risks. It is important to consider all the psychosocial hazards workers may be exposed to when managing psychosocial risks. Some hazards may not create psychosocial risks on their own but may do so if combined with other hazards. For example, when workloads are high the risk may increase if workers cannot take breaks or there is no one around to help. Some hazards may only create risks on their own when severe.

Psychosocial risks must be eliminated or minimised so far as is reasonably practicable by following the risk management process:

- identifying the hazards
- assessing the associated risks
- implementing control measures to eliminate or minimise risks, and
- regularly reviewing control measures to ensure they remain effective.

6.15. Management review

Each year Haslin Constructions will review and approve the status of the occupational hygiene and health surveillance. The review must include:

- exposures exceeding the WES;
- incidence of abnormal health surveillance results;
- cases of occupational illness;
- the appropriateness and on-going effectiveness of exposure controls;
- incidence of positive drug and alcohol testing results;
- recommendations for improvement.

7. Training

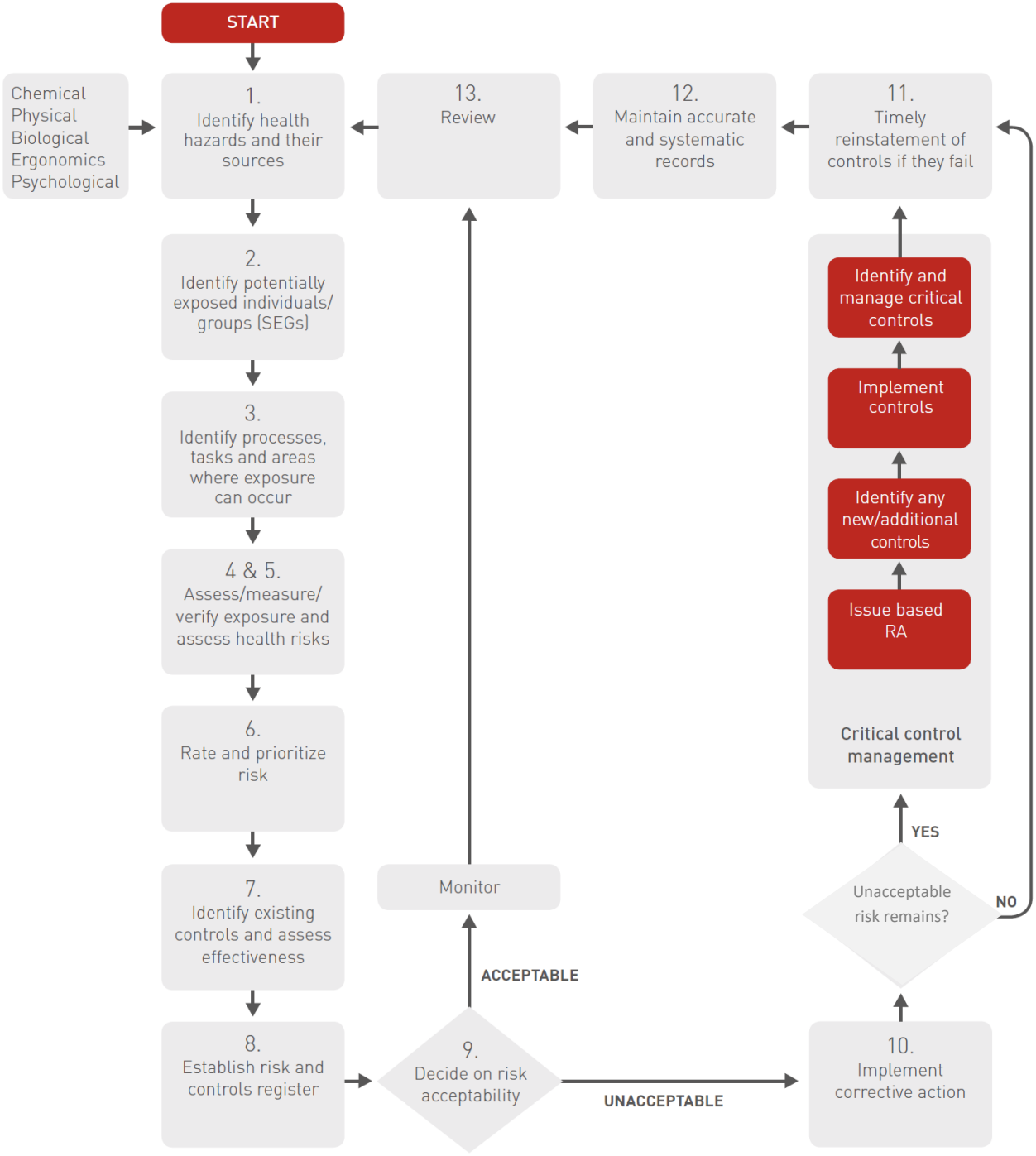
Internal Training is provided for Occupational Health and Hygiene Management awareness and the use and care of respiratory and hearing Personal Protection Equipment. Use of Supplied Air Respirators requires formal vocational training to the appropriate Unit of competency.

8. Relevant Templates, Forms and Checklists

- Health and hygiene risk- specific Exposure Control Plans
- Risk Management Procedure (SEQ-PR-001)
- Project Safety Management Plan (SEQ-TP-049)
- Project Safety Risk Register (SEQ-TP-002)
- Safe Work Method Statements
- Site Safety Rules (SEQ-TP-047)
- Site Safety and Environmental Induction (SEQ-TP-048)
- Emergency Plan (SEQ-TP-037)

- Qualitative HRA Tool (SEQ-TP-135)
- SEQ-TP-140 Exposure Control Plans

9. Appendix A – Health Risk Assessment Process



10. Appendix B– Risk Matrix and Risk Acceptability

Exposure that is **Low** risk is permitted subject to controls being fully implemented.

Exposure that is **Medium** risk is permitted subject to existing controls being fully implemented and other reasonably practicable controls being implemented.

Exposure that is **High** risk is generally not permitted unless further controls are implemented, that workers are made specifically aware of the risks and that senior management has agreed to expose workers to that risk.

Exposure that is **Extreme** is unconditionally not permitted. Significant improvements in controls to reduce the risk are require before proceeding.

					Consequence				
					Probably not carcinogenic to humans (IARC-Cat 4) or causes minor irritation	Not classification as carcinogenic to humans (IARC-Cat3) or causes irritation, headache, nausea, shortness of breath, erytherma. Temporary hearing loss (threshold shift)	Possibly carcinogenic to humans (Cat2b) or causes temporary incapacitation or dermatitis, dizziness, poor coordination. Permant hearing loss / impairment	Probably carcinogenic to humans (Cat2a) Permanent incapacitation / sensation, liver or kidney damage. Significant permanent hearing loss / impairment	Carcinogenic to humans (Cat1), reproductive effects, death. Deafness
					Insignificant	Minor	Moderate	Major	Catastrophic
					1	2	3	4	5
Likelihood / Exposure	Always <10% of Exp Std (ES)	Periodic contact with the potential hazard at low levels	Very unlikely to occur	E	Low	Low	Low	Medium	High
	Consistently < 50% of ES and 0% of all samples above ES	Periodic contact with the potential hazard at moderate levels or regular contact with the potential hazard at low levels	Unlikely to occur	D	Low	Medium	Medium	Medium	High
	Consistently < 50% of ES and 5% of all samples above ES	Periodic contact with the potential hazard at high levels or regular contact with the potential hazard at moderate levels	Possibly could occur	C	Low	Medium	High	High	High
	Consistently 50% - 100% of ES or > 5% of all samples above ES	Periodic contact with the potential hazard at very high levels or regular contact with the potential hazard at high levels	Likely to occur	B	Medium	Medium	High	High	Extreme
	Consistently 100% of ES	Regular contact with the potential hazard at very high levels	Almost certain to occur	A	Medium	Medium	High	Extreme	Extreme

11. Appendix C - Sample Health Risk Assessment

Health Risk Assessment HASLIN

	HAZARD				INITIAL RISK ASSESSMENT				REDUCING THE RISK		RESIDUAL RISK ASSESSMENT			
SEG	HAZARD	ACTIVITY	SOURCE	EXPOSURE PATHWAY	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	RATING	CONTROLS	MONITORING REPORT / SAMPLE ID	LIKELIHOOD	CONSEQUENCE	RISK LEVEL WITH CONTROLS	RATING
SEG01 Site Worker	Biological	General site work	Contact or disturbance of with animal waste.	Inhalation Ingestion	Rare	Moderate	Low	E3	• High risk areas isolated with physical barriers, warning signage and restricted to essential workers. • Worker training, SWMS, SOPs. • Task specific PPE.	N/A	Unlikely	Minor	Low	D2
SEG01 Site Worker	Diesel Exhaust	Working adjacent to diesel powered plant and equipment.	Plant exhaust	Inhalation	Unlikely	Major	Medium	D4	• Exclusion zones established around mobile plant. • Emission control technologies fitted where feasible. • Supplementary ventilation used when operating diesel equipment in enclosed or semi-enclosed areas.	N/A	Unlikely	Minor	Low	D2
SEG01 Site Worker	Vibration	Operating hand held power tools.	Operating hand held power tools.	Physical	Possible	Moderate	Medium	C3	• Use of tools with vibration dampening technology. • Regular inspection and maintenance of tools. • Task rotation and regular breaks. • Worker training, SWMS, SOPs.	N/A	Unlikely	Moderate	Medium	D3
SEG01 Site Worker	Heat Stress	General site work	• Exposure to adverse weather conditions. • Working adjacent to a heat source. • Use of PPE that restricts evaporative cooling. • High metabolic workload.	Physical	Possible	Severe	High	C5	• Provision of shade, cool rest areas and drinking water. • Regular breaks during hot weather. • Works are planned to avoid high manual tasks during the hottest parts of the day. • Task rotation at prescribed intervals. • Thermal risk assessment and cessation of high thermal stress activities as required, • Worker training and awareness of thermal strain.	N/A	Possible	Minor	Medium	C2
SEG01 Site Worker	Heavy Metals	Demolition work	Lead containing paints and lead contaminated dust in structures being demolished.	Inhalation Ingestion	Possible	Severe	High	C5	• Isolate restricted areas with physical barriers and warning signage and limit access to essential workers. • Remove dust with Class H HEPA vacuum and wet wiping. • Worker training, SWMS, SOPs. • Fit testing and clean shave policy for tight fitting RPE. • Task specific PPE including Type 5/6 disposable coverals and combination P2/ABEK RPE.	N/A	Unlikely	Moderate	Medium	D3

12. Appendix D – Work Health and Safety Regulation – Schedule 14

Hazardous chemicals requiring health monitoring. For Lead see below.

Column 1	Column 2	Column 3
Item	Hazardous chemical	Type of health monitoring
1	Acrylonitrile	Demographic, medical and occupational history
		Records of personal exposure
		Physical examination
2	Arsenic (inorganic)	Demographic, medical and occupational history
		Records of personal exposure
		Physical examination with emphasis on the peripheral nervous system and skin
		Urinary inorganic arsenic
3	Benzene	Demographic, medical and occupational history
		Records of personal exposure
		Physical examination
		Baseline blood sample for haematological profile
4	Cadmium	Demographic, medical and occupational history
		Records of personal exposure
		Physical examination with emphasis on the respiratory system
		Standard respiratory questionnaire to be completed
		Standardised respiratory function tests including for example, FEV 1, FVC and FEV 1 /FVC
		Urinary cadmium and β2-microglobulin
		Health advice, including counselling on the effect of smoking on cadmium exposure
5	Chromium(inorganic)	Demographic, medical and occupational history
		Physical examination with emphasis on the respiratory system and skin
		Weekly skin inspection of hands and forearms by a competent person
6	Creosote	Demographic, medical and occupational history
		Health advice, including recognition of photosensitivity and skin changes
		Physical examination with emphasis on the neurological system and skin, noting any abnormal lesions and evidence of skin sensitisation
		Records of personal exposure, including photosensitivity
7	Crystalline silica	Demographic, medical and occupational history
		Records of personal exposure
		Standardised respiratory questionnaire to be completed
		Standardised respiratory function test, for example, FEV 1, FVC and FEV 1 /FVC
		Chest X-ray full size PA view
8	Isocyanates	Demographic, medical and occupational history
		Completion of a standardised respiratory questionnaire

		Physical examination of the respiratory system and skin
		Standardised respiratory function tests, for example, FEV 1, FVC and FEV 1 /FVC
9	Mercury (inorganic)	Demographic, medical and occupational history
		Physical examination with emphasis on dermatological, gastrointestinal, neurological and renal systems
		Urinary inorganic mercury
10	4,4' methylene bis (2-chloroaniline) (MOCA)	Demographic, medical and occupational history
		Physical examination
		Urinary total MOCA
		Dipstick analysis of urine for haematuria
		Urine cytology
11	Organophosphate pesticides	Demographic, medical and occupational history including pattern of use
		Physical examination
		Baseline estimation of red cell and plasma cholinesterase activity levels by the Ellman or equivalent method
		Estimation of red cell and plasma cholinesterase activity towards the end of the working day on which organophosphate pesticides have been used
12	Pentachlorophenol (PCP)	Demographic, medical and occupational history
		Records of personal exposure
		Physical examination with emphasis on the skin, noting any abnormal lesions or effects of irritancy
		Urinary total pentachlorophenol
		Dipstick urinalysis for haematuria and proteinuria
13	Polycyclic aromatic hydrocarbons (PAH)	Demographic, medical and occupational history
		Physical examination
		Records of personal exposure, including photosensitivity
		Health advice, including recognition of photosensitivity and skin changes
14	Thallium	Demographic, medical and occupational history
		Physical examination
		Urinary thallium
15	Vinyl chloride	Demographic, medical and occupational history
		Physical examination
		Records of personal exposure

Lead – Details of Health monitoring requirements for a “lead process” as defined by *Section 392* of the WHS Regulations are provided in *Division 4 – Health Monitoring* of *Part 7.2 – Lead* of the WHS Regulations.

13. Appendix E – Compressed Air Quality

Breathing air quality testing to AS 1715:2009 Appendix A for workers using compressed air line or cylinder respirators provides reassurance that the air they are breathing is adequately safe in their harsh working environments and they are not place at risk.

The compressor line or cylinder should be filled initially to at least 12 MPa and subsequently tested to ensure the air quality of the breathing air. The capacity of the breathing air should be 170 litres per minute (L/min) for each person. Compressor lines with a ring circuit are recommended to reduce the potential of flow reduction due to multiple lines feeding off the same compressor.

Compressed air quality must meet the following requirements:

Parameter	**Range**
Carbon Monoxide	< 11mg/m3 (10ppm)
Carbon Dioxide	< 1400 mg/m3 (800 ppm)
Capacity	170 L/min for each person
Water Vapour	< 100 mg/m3
Oil Mist	< 1mg/m3
Odour	Not Objectionable
Oxygen	19.5% to 22%