

Coal – Similar Exposure Group (SEG) List

This information sheet provides guidance on SEGs used in Queensland Coal mines. Specifically, what are they, their benefits, how they are established, their broad classification and how they are used when reporting monitoring data periodically to the Mine Inspectorate, Resources Safety and Health Queensland (RSHQ).

What are SEGs?

SEGs are used to identify a group of workers who have the same general exposure to risks. This can include:

- Similarity and frequency of the tasks performed.
- The types of materials and processes used to complete tasks.
- Similarity of the way tasks are performed.

Benefits of SEGs

The nature and extent of the risks to which every worker is exposed should be identified and the level of risk assessed. Grouping coal mine workers (CMWs) into a SEG avoids having to assess every position individually. If the members of a large work group do a similar job and are exposed to similar risks, data from a representative sample of those workers can be used to estimate the exposure of the whole group.

Site Specific SEGs

Mines are encouraged to establish and use their own SEGs list. This should be based on observations and sampling of their specific work groups. However, to facilitate the periodic (quarterly) reporting of SEG data to the Mines Inspectorate, all data must be allocated under one of the appropriate SEGS listed on the following pages.

The site specific SEG listing and the composition and population of individual SEGs should be reviewed periodically to ensure it remains relevant to the site operations. Particularly if the nature of the work changes, new processes or equipment are introduced or the descriptive statistical analysis for the SEG indicates a high variance (e.g. geometric standard deviation >3.0).

How to Establish SEGs

The most acceptable method for a mine to establish their own SEGs is by observation and sampling.

- Observation involves grouping work activity according to the task, job description, the process, and exposure to any agent in the work environment and control measures applied. Identifying SEGs by observation alone is not sufficient because exposure can alter with differences in work techniques from one worker to another or from shift to shift.
- Sampling data is required (either historic data or data collected for the purpose of defining a SEG) to support the observational data. With sufficient data collected, statistical analysis can confirm that the group is representative of a single SEG.

Itinerant SEGs

There may be some SEG based activities undertaken on coal mines or coal mine leases that are considered non-routine or intermittent. Examples of SEGs in this category may include:

- drift construction
- topsoil removal

The SSE must consider itinerant SEGs when establishing the respirable dust monitoring program, as it is still a requirement under Section 89 of the CMSHR 2017 that dust exposures for these activities are controlled and monitored.

Reporting Quarterly Data

The site senior executive (SSE) shall provide a quarterly dust monitoring report to the Mines Inspectorate by the dates specified in Table 1 below, including all personal exposure sampling results collected during the quarter.

Table 1 – Reporting Range and Dates

QUARTER	DATE RANGE	<u>DUE BY</u>
Quarter 1	1 January to 31 March	1 May
Quarter 2	1 April to 30 June	1 August
Quarter 3	1 July to 30 September	1 November
Quarter 4	1 October to 31 December	1 February

Where monitoring was not performed in a respective quarter, an email with an explanation must be provided by the due date to the <u>airborne.contaminants@rshq.qld.gov.au</u> mailbox.

It is important to note that although the minimum number and frequency of samples required to be collected for individual SEGs is prescribed by Recognised Standard 14; sites must ensure that the scheduling of samples does not bias exposure results. Samples should be scheduled to ensure they are randomly distributed across the full monitoring period to minimise the impacts from any potential sources of bias such as seasonal, operational, shift and roster variations. For example where there is a yearly monitoring requirement, the total number of samples should be collected at more frequent intervals across the year.

When reporting quarterly data, mine operators must use the current version of the supplied 'dust data import template', ensuring that all relevant columns are completed. This includes selecting from the SEG categories provided in this information sheet. The SEGs provided are sufficiently generic and broad to enable comparison across the industry (e.g. data collected for 'Longwall Production' workers can be collated and analysed to identify trends in this group across the relevant Queensland mine sites).

Shift Rotations

Where a CMW may conduct various tasks across different SEGs during one monitoring period. It is requested that the CMWs dominant SEG (where the majority of shift was spent and/ or where the greatest contribution to dust exposure was likely to have occurred) be listed as their primary SEG, with details of shift activities provided in the 'Primary Operator Task' column. Any other task that may fall into another SEG category can be added into the 'Secondary Operator Task' column.

SEG Population Numbers

When reporting dust monitoring data for the first quarter of each calendar year, the total number of workers belonging to each SEG population shall be provided in the respective tab of the 'dust data import template'.

Further Information:

Visit www.qld.gov.au Email <u>minesafetyandhealth@rshq.qld.gov.au</u> Call 13 QGOV (13 74 68)

UNDERGROUND COAL MINES			
SEG	CODE	PRIMARY TASK DESCRIPTIONS	
	QCU001	Coal mine workers who operate or rotate th (tailgate or maingate); operating maingate dr	rough the following tasks: operating shearer ive; operating chocks / shields.
Longwall Production		Longwall Production SUB GROUPS*	
		Bi-Di Cutting	Uni-Di
Development	QCU002		miner; operating a shuttle car or ram car; hoses, handling cables, hanging vent tubes,
Production		Development Production SUB GROUPS*	
		Bord & Pillar	Main Gate Drivage
Underground Maintenance	QCU003	Coal mine workers performing mechanical maintenance services underground; performing electrical maintenance underground; undertaking mechanical repairs and vehicle servicing underground.	
Outbye Supplies	QCU004	Coal mine workers delivering supplies to underground locations on LHDs, jugganauts and personnel transporters. This includes waste management activities.	
Longwall Moves	QCU005	Coal mine workers operating dozers, LHDs, driftrunners performing face retraction and installation, or involved in the face retraction/ installation including fitters, electricians and mine technicians.	

UNDERGROUND COAL MINES		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
Outbye Construction / Infrastructure	QCU006	Coal mine workers performing roadwork construction and maintenance underground; installing / removing infrastructure underground including hoses, cables, lights and pipe work; shotcreting and concreting underground.
VCD Installer	QCU007	Coal mine workers spraying stoppings and using jackhammer and conducting VCD removal tasks.
ERZ Controller	QCU008	Coal mine workers performing inspections and statutory duties in production panels, returns and outbye locations.
Surface Maintenance	QCU009	Coal mine workers servicing / maintaining plant and equipment including work in surface workshop.
Control Room Operator	QCU010	Coal mine workers involved in control room operations. This includes those workers remotely operating automated equipment from within an enclosed control room environment.
Belt Splicers	QCU011	Coal mine workers performing belt maintenance, splicing and commissioning.
Boilermaker (Surface)	QCU012	Coal mine workers involved in steel fabricating, welding, oxy cutting, air gouging—surface workshop and CHPP workshop.
Administration	QCU013	Coal mine workers undertaking administration and security activities on the surface, whom are not directly involved in mining related activities.
Resin Worker	QCU014	Coal mine workers undertaking resin injection and void filling activities throughout the underground workings. This includes the use of polyurethane resins (PUR) and phenolic resins.
Stone Drivage	QCU015	Coal mine workers involved in mining through stone, faults and intrusions (e.g. for mine expansion or drift construction). Doesn't include development or longwall workers who encounter small areas of faulted ground or stone banding.
Secondary Support	QCU016	Coal mine workers undertaking secondary support tasks including bolting; building cogs; standing cans; building bulkheads; injecting cementitious products (grout).
Gas Drainage UG	QCU017	Coal mine workers undertaking gas drainage tasks underground.
Shift Co-Ordinator / Management	QCU018	Shift or section coordinators and under managers who undertake inspections and supervisory tasks. This includes a mixture of underground and surface activities.
Production Support / Bullgang	QCU019	Coal mine workers undertaking longwall support and development support activities. This may include some minimal coal winning activities within their work period (e.g. straightening shear, bolting unsupported ground etc).
Returns	QCU020	Coal mine workers routinely undertaking maintenance, construction, service recovery, secondary support, stone dusting and services extension / retractions activities in return airways.
Surface Other	QCU021	Coal mine workers performing any other tasks on the surface of an underground mine that are not adequately represented by any other SEG.
Underground Other	QCU022	Coal mine workers routinely performing any underground non-production tasks underground that are not adequately represented by any other SEG.
Gas Drainage Surface	QCU023	Coal mine workers undertaking gas drainage tasks on the surface.

UNDERGROUND COAL MINES		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
Drilling Other	QCU024	Coal mine workers undertaking surface to seam drilling operations at an underground coal mine for the purpose of boreholes, shafts and services.
Warehousing	QCU025	Coal mine workers undertaking warehousing activities including forklift operation.
Tech Services	QCU026	Coal mine workers performing mine planning and design (includes surveyors, geotechnical engineers, ventilation officers, hygienists, observers conducting tasks underground.)
Domestic Cleaners	QCU027	Coal mine workers involved in the general domestic cleaning of internal and external buildings and structures (e.g. crib rooms, bathhouses, restrooms, office spaces and meeting rooms).
Industrial Cleaners	QCU028	Coal mine workers involved with heavy and light industrial cleaning of plant and equipment.
Remote Mining Operations	QCU029	Coal mine workers involved in the continuous remote method of mining of consecutive unsupported plunge cuts extending from pre-developed gate roads under controlled conditions. This includes remote guidance, horizon control, gas monitoring and incorporating a high level of automation functionality.

* Sub groups for Longwall and Development SEGs must be selected on the dust data import template where applicable.

SURFACE COAL MINES		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
Pre-strip and Overburden Removal	QCS001	Coal mine workers working in pre-strip areas of the mine and operating equipment (e.g. haul trucks, loaders, dozers, graders and excavators).
Coal Removal	QCS002	Coal mine workers involved in the removal of product coal (e.g. digger/shovel, dump trucks, dozer).
Open Cut Inspection Services	QCS003	Coal mine workers performing inspection and monitoring tasks in the mining and excavation areas (e.g. OCE and shift supervisors).
Road Maintenance	QCS004	Coal mine workers operating graders and water trucks for the purposes of road maintenance.
Boilermaker	QCS005	Coal mine workers involved in steel fabricating, welding, oxy cutting, air gouging. Includes workshop, field and CHPP activities.
Field Maintenance	QCS006	Coal mine workers undertaking electrical and mechanical maintenance activities predominantly in mining areas other than a fixed workshop.
Blast Crew	QCS007	Coal mine workers undertaking blasting and shot firing duties.
Tech Services	QCS008	Coal mine workers performing mine planning and design (includes surveyors, geotechnical engineers).
Exploration Drillers	QCS009	Coal mine workers undertaking exploration drilling operations including exploration geologists.
Blast Hole Drillers	QCS010	Coal mine workers undertaking blast hole drilling operations.

SURFACE COAL MINES		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
Belt Splicers	QCS011	Coal mine workers performing belt maintenance, splicing and commissioning.
Warehousing	QCS012	Coal mine workers undertaking warehousing activities including forklift operation.
Administration	QCS013	Coal mine workers undertaking administration and security activities, whom are not directly involved in mining related activities.
Workshop	QCS014	Coal mine workers undertaking electrical and mechanical maintenance and services predominantly in the workshop.
Service Crew	QCS015	Coal mine workers supplying fuel, grease and oil to mobile plant throughout the mine.
Tyre Fitters	QCS016	Coal mine workers performing tyre handling, tyre fitting and tyre repair duties.
Dragline	QCS017	Coal mine workers operating or supporting dragline operations.
Dozer Push	QCS018	Coal mine workers operating a dozer to push overburden and spoils.
Emergency Response Personnel	QCS019	Employees and/or contractors whose principle responsible is supplying emergency response capability.
Open Cut Other	QCS020	Coal mine workers performing any other tasks at an open cut mine that are not adequately represented by any other SEG.
Control Room Operator	QCS021	Coal mine workers involved in control room operations. This includes those workers remotely operating automated equipment from within an enclosed control room environment.
Pump Crew	QCS022	Coal mine workers performing pump crew activities such as polywelding, pump checks, operating backhoe and other mobile equipment.
Highwall / Auger	QCS023	Coal mine workers conducting highwall / auger mining operations such as operator, deckhand and loader operations.
Quarrying / Stone Crushing	QCS024	Coal mine workers conducting crusher activities associated with an onsite quarry or as a by- product of coal mining activities such as non-coal mobile crusher activities.
Mobile / Bypass Crushing (Coal)	QCS025	Coal mine workers conducting coal crushing activities using fixed and mobile crushers. This includes operation of loaders, dozers and excavator within this area.
Civil Construction	QCS026	Coal mine workers conducting civil construction projects such as concreting, road construction, earthworks and surface infrastructure.
Coal Haulage	QCS027	Coal mine workers hauling coal from processing plants to load out facilities.
Rehabilitation	QCS028	Coal mine workers operating heavy mobile equipment for mine environmental rehabilitation and remediation.
Surface Coating / Preparation	QCS029	Coal mine workers involved in surface preparation, abrasive blasting, surface coating / painting.

SURFACE COAL MINES		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
Domestic Cleaners	QCS030	Coal mine workers involved in the general domestic cleaning of internal and external buildings and structures (e.g. crib rooms, bathhouses, restrooms, office spaces and meeting rooms).
Industrial Cleaners	QCS031	Coal mine workers involved with heavy and light industrial cleaning of plant and equipment.
Groundskeeping	QCS032	Coal mine workers maintaining grounds (e.g. gardens, lawns).
Shutdown Maintenance	QCS033	Coal mine workers involved in maintenance activities during major shutdowns of plant.

COAL HANDLING PREPARATION PLANT (CHPP) & ROM		
SEG	CODE	PRIMARY TASK DESCRIPTIONS
CHPP Production	QCP001	Coal mine workers involved in control room operations, hosing, clearing blockages, shovelling, bobcat, general maintenance and train loading out activities.
CHPP Maintenance	QCP002	Coal mine workers undertaking electrical and mechanical maintenance throughout the plant and in the workshop.
CHPP Laboratory	QCP003	Coal mine workers taking samples and processing samples in CHPP laboratory.
СНРР НМЕ	QCP004	Coal mine workers operating heavy mobile equipment (HME) such as stockpile dozer, loader, dump truck
Belt Splicers	QCP005	Coal mine workers performing belt maintenance, splicing and commissioning
CHPP Other	QCP006	Coal mine workers performing any other tasks at the CHPP that are not adequately represented by any other SEG.
ROM HME	QCP007	Coal mine workers operating heavy mobile equipment (HME) such as loaders / dozers around ROM not otherwise covered under CHPP activities. This may include loading and carting rejects.
CHPP Shutdown Maintenance	QCP008	Coal mine workers involved in maintenance activities during major shutdowns of the CHPP.