

SCHEDULE

REGULATIONS AMENDMENTS

CHAPTER 21

FORMS

Amendment of Chapter 21 of the regulations

Chapter 21 of the regulations is hereby amended by: -

1. The substitution of form 21.9 (2) (a) with the following forms:

i. Airborne Pollutants -Particulate Personal Quarterly Report Form 21.9(2)(a)(i) in terms of regulation 9.2.(7) - Single Pollutant HEG Category A and C

MAIN COMMODITY CODE:								DMR MINE CODE:						
SAMPLE AREA:								SUB MINE CODE:						
ACTIVITY AREA CODE:								REPORTING PERIOD:						
HEG RECLASSIFICATION BAND: (based on previous annual 90th percentile results)								Name and SANAS accreditation number of analytical laboratory used:						
				Q1	Q2	Q3	Q4	ANNUAL RESULTS: ANNUAL 90TH PERCENTILE BASED ON THE 4 QUARTERS MEASUREMENTS RESULTS						
NUMBER OF SAMPLES PLANNED FOR THE CURRENT SAMPLING CYCLE:														
Number of samples taken														
Quarterly HEG classification based on 90th percentile measurement results														
HEG			Pollutant code	Sample Concentration per Occupation (TWA - 8hr) mg/m3 [Sample Concentration = Sample mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration TWA 8h= Sampling Concentration * actual exposure duration 480 (min)			Pollutant analytical mass (mg)	Pollutant Concentration per Occupation (TWA - 8hr) mg/m3 [Pollutant Concentration = Pollutant mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration Pollutant TWA 8h= Pollutant Concentration * actual exposure duration 480 (min)		Mean pollutants concentration dose allocated to medical records		90th percentile HEG classification	OEL	
Occupations codes in HEG	Occupations in HEG	Number of persons per occupation		2. If Sampling time > exposure duration TWA 8h= Sampling Concentration* actual sampling time 480(min)				2. If Sampling time > exposure duration Pollutant TWA 8h= Pollutant Concentration* actual sampling time 480 (min)		(Tick appropriate block) mg/m ³ f/ml	ppm		(Tick appropriate block) mg/m ³ f/ml	ppm
				(A)			(B)	(C)		(D)		(E)	(F)	
TOTAL														
COMMENTS ON:														
Reasons for over-exposures														
Corrective measures that will be implemented to prevent / mitigate over-exposures														

ii. Airborne Pollutants -Particulate Personal Quarterly Report Form 21.9(2)(a)(ii) in terms of regulation 9.2.(7) - Single Pollutant HEG Category B

MAIN COMMODITY CODE:									DMR MINE CODE:		
SAMPLE AREA:									SUB MINE CODE:		
ACTIVITY AREA CODE:									REPORTING PERIOD:		
HEG RECLASSIFICATION BAND: (based on previous annual 90 th percentile results)									Name and SANAS accreditation number of analytical laboratory used:		
			Q1	Q2	BI - ANNUAL RESULTS (Q2-PERCENTILE RESULTS OF Q1 AND Q2)	Q3	Q4	ANNUAL RESULTS (ANNUAL 90TH PERCENTILE BASED ON THE 4 QUARTERS MEASUREMENTS RESULTS)			
NUMBER OF SAMPLES PLANNED FOR THE CURRENT SAMPLING CYCLE:											
Number of samples taken											
Quarterly HEG classification based on 90 th percentile measurement results											
HEG			Pollutant code	Sample Concentration per Occupation (TWA - 8hr) mg/m3 [Sample Concentration = Sample mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration TWA 8h= Sampling Concentration * actual exposure duration 480 (min) 2. If Sampling time > exposure duration TWA 8h= Sampling Concentration* actual sampling time 480(min)	Pollutant analytical mass (mg)	Pollutant Concentration per Occupation (TWA - 8hr) mg/m3 [Pollutant Concentration = Pollutant mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration Pollutant TWA 8h= Pollutant Concentration * actual exposure duration 480 (min) 2. If Sampling time > exposure duration Pollutant TWA 8h= Pollutant Concentration* actual sampling time 480 (min)	Mean pollutants concentration dose allocated to medical records		90 th Percentile HEG classification	OEL	
Occupations codes in HEG	Occupations in HEG	Number of persons per occupation					(Tick appropriate block)			(Tick appropriate block)	
							mg/m ³			mg/m ³	
							f/ml			f/ml	
							ppm			ppm	
			(A)		(B)	(C)	(D)		(E)	(F)	
TOTAL											
COMMENTS ON:											
Reasons for over-exposures											
Corrective measures that will be implemented to prevent / mitigate over-exposures											

iii. Airborne Pollutants -Particulate Personal Quarterly Report Form 21.9(2)(a)(iii) in terms of regulation 9.2.(7) - Additive effects HEG Category A and C

MAIN COMMODITY CODE:					DMR MINE CODE:										
SAMPLE AREA:					SUB MINE CODE:										
ACTIVITY AREA CODE:					REPORTING PERIOD:										
HEG RECLASSIFICATION BAND: (based on previous annual 90 th percentile results)					Name and SANAS accreditation number of analytical laboratory used:										
Number of samples planned for the current sampling cycle:		Q1	Q2	Q3	Q4	ANNUAL RESULTS (ANNUAL 90TH PERCENTILE BASED ON THE 4 QUARTERS MEASUREMENTS RESULTS)									
Number of samples taken															
Quarterly HEG classification based on 90th percentile measurement results or AQI (HEG classification must be based on 90th percentile of each pollutant or AQI, whichever is the greatest)															
HEG		Sample Concentration per Occupation (TWA - 8hr) mg/m3 [Sample Concentration = Sample mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration TWA 8h= Sampling Concentration * actual exposure duration 480 (min) 2. If Sampling time > exposure duration TWA 8h= Sampling Concentration* actual sampling time 480(min)		Pollutant analytical mass (mg)		Pollutant Concentration per Occupation (TWA - 8hr) mg/m3 [Pollutant Concentration = Pollutant mass (mg)/Sample Volume (m3) 1. If Sampling time = exposure duration or < exposure duration Pollutant TWA 8h= Pollutant Concentration * actual exposure duration 480 (min) 2. If Sampling time > exposure duration Pollutant TWA 8h= Pollutant Concentration* actual sampling time 480 (min)		Mean pollutants concentration dose allocated to medical records (Tick appropriate block) mg/m ³ f/ml ppm		OEL (Tick appropriate block) mg/m ³ f/ml ppm		Pollutant index		AQI	
Occupations codes in HEG	Occupations in HEG	Number of persons per occupation	Pollutant code	(A)	(B)	(C)	(D)	(E)	(F)						
TOTAL															
COMMENTS ON:															
Reasons for over-exposures															
Corrective measures that will be implemented to prevent / mitigate over-exposures															

iv. Airborne Pollutants -Particulate Personal Quarterly Report Form 21.9(2)(a)(iv) in terms of regulation 9.2.(7) - Additive effects HEG Category B

MAIN COMMODITY CODE:								DMR MINE CODE:				
SAMPLE AREA:								SUB MINE CODE:				
ACTIVITY AREA CODE:								REPORTING PERIOD:				
HEG RECLASSIFICATION BAND: (based on previous annual 90 th percentile results)								Name and SANAS accreditation number of analytical laboratory used:				
NUMBER OF SAMPLES PLANNED FOR THE CURRENT SAMPLING CYCLE:		Q1	Q2		Q3	Q4	ANNUAL RESULTS (ANNUAL 90TH PERCENTILE BASED ON THE 4 QUARTERS MEASUREMENTS RESULTS)					
Number of samples taken				BI - ANNUAL RESULTS (Q2-PERCENTILE RESULTS OF Q1 AND Q2)								
Quarterly HEG classification based on 90th percentile measurement results or AQI (HEG classification must be based on 90th percentile of each pollutant or AQI, whichever is the greatest)												
HEG	Occupations codes in HEG	Occupations in HEG	Number of persons per occupation	Pollutant code	Sample Concentration per Occupation (TWA - 8hr) mg/m ³ [Sample Concentration = Sample mass (mg)/Sample Volume (m ³) 1. If Sampling time = exposure duration or < exposure duration TWA 8h= Sampling Concentration * actual exposure duration 480 (min)	Pollutant analytical mass (mg)	Pollutant Concentration per Occupation (TWA - 8hr) mg/m ³ [Pollutant Concentration = Pollutant mass (mg)/Sample Volume (m ³) 1. If Sampling time = exposure duration or < exposure duration Pollutant TWA 8h= Pollutant Concentration * actual exposure duration 480 (min)	Mean pollutants concentration dose allocated to medical records (Tick appropriate block)	90th percentile HEG classification	OEL		Pollutant index
					2. If Sampling time > exposure duration TWA 8h= Sampling Concentration* actual sampling time 480(min)		2. If Sampling time > exposure duration Pollutant TWA 8h= Pollutant Concentration* actual sampling time 480 (min)			ppm	(Tick appropriate block)	
								mg/m ³				
								f/ml				
								ppm			ppm	
					(A)		(B)	(C)	(D)	(E)	(F)	
TOTAL												
COMMENTS ON:												
Reasons for over-exposures												
Corrective measures that will be implemented to prevent / mitigate over-exposures												

2. The substitution of form 21.9 (2) (b) with the following forms:

i. Airborne Particulates Gases and Vapours Personal Quarterly Report Form 21.9(2)(b)(i) in terms of regulation 9.2.(7) - Single Pollutant HEG Category A and C.

Main Commodity Code:						DMRE Mine Code:								
Sample Area:						Sub Mine Code:								
Activity Area Code:						Reporting Period:								
HEG reclassification Band (Based on previous annual 90 th Percentile results)						Annual Results: Annual 90th percentile based on the 4 quarters measurements results								
		Q1	Q2	Q3	Q4									
Number of samples planned for the current sampling cycle														
Number of samples taken														
Quarterly HEG classification (Based on 90 th percentile measurement results)														
HEG			Pollutant Code	Pollutant Concentration per Occupation in (Tick appropriate box)		Pollutant analytical %	Mean Pollutant Concentration Dose Allocated to Medical Record Mean Pollutant Concentration Dose = Average TWA Pollutant Concentration (average of all results calculated in A)	Range of Pollutant Concentration		90 th Percentile HEG Classification =PERCENTILE [(A),0.9]	OEL			
Occupations Codes in HEG	Occupation Name in a HEG	Number of Persons per Occupation		ppm							(Tick appropriate box)		Min	Max
				mg/m ³				ppm						
		TWA - 8hr												
		STEL												
		CL												
				(A)	(B)	(C)			(D)					
TOTAL														
COMMENTS ON: REASON/S FOR OVEREXPOSURES														
CORRECTIVE MEASURES THAT WILL BE IMPLEMENTED TO PREVENT/MITIGATE OVEREXPOSURES.														

ii. Airborne Particulates Gasses and Vapours Personal Quarterly Report Form 21.9(2)(b)(ii) in terms of regulation 9.2.(7) - Single Pollutant HEG Category B.

Main Commodity Code:								DMRE Mine Code:					
Sample Area:								Sub Mine Code:					
Activity Area Code:								Reporting Period:					
HEG reclassification Band (Based on previous annual 90 th Percentile results)													
	Q1	Q2	Bi - Annual Results (Q2- percentile results of Q1 and Q2)	Q3	Q4	Annual Results: Annual 90th percentile based on the 4 quarters measurements results							
Number of samples planned for the current sampling cycle													
Number of samples taken													
Quarterly HEG classification (Based on 90 th percentile measurement results)													
HEG		Pollutant Code	Pollutant Concentration per Occupation in (Tick appropriate box)	Pollutant analytical %	Mean Pollutant Concentration Dose Allocated to Medical Record Mean Pollutant Concentration Dose = Average TWA Pollutant Concentration (average of all results calculated in A)	Range of Pollutant Concentration	90 th Percentile HEG Classification =PERCENTILE [(A),0.9]	OEL					
Occupations Codes in HEG	Occupation Name in a HEG							Number of Persons per Occupation	ppm		(Tick appropriate box)	mg/m ³	ppm
									mg/m ³				
									TWA - 8hr				
									STEL				
									CL				
										(A)	(B)	(C)	Min
TOTAL													
COMMENTS ON: REASON/S FOR OVEREXPOSURES													
CORRECTIVE MEASURES THAT WILL BE IMPLEMENTED TO PREVENT/MITIGATE OVEREXPOSURES.													

iii. Airborne Particulates Gasses and Vapours Personal Quarterly Report Form 21.9(2)(b)(iii) in terms of regulation 9.2.(7) - Additive effects HEG Category A and C

Main Commodity Code:								DMRE Mine Code:						
Sample Area:								Sub Mine Code:						
Activity Area Code:								Reporting Period:						
HEG reclassification Band (Based on previous annual 90 th Percentile results)														
		Q1	Q2	Q3	Q4	Annual Results: Annual 90th percentile based on the 4 quarters measurements results								
Number of samples planned for the current sampling cycle														
Number of samples taken														
Quarterly HEG classification (Based on 90 th percentile measurement results)														
HEG			Pollutant Code	Pollutant Concentration per (Tick appropriate box)		Pollutant analytical %	Mean Pollutant Concentration Dose Allocated to Medical Record Mean Pollutant Concentration Dose = Average TWA Pollutant Concentration (average of all results calculated in A)	Range of Pollutant Concentration		90th Percentile HEG Classification =PERCENTILE [(A),0.9]	OEL		Pollutant Index =90th Percentile HEG for the quarter Classification /OEL	AQI = Sum of Pollutant Index
Occupations Codes in HEG	Occupation Name in a HEG	Number of Persons per Occupation		ppm							(Tick)			
				mg/m ³										
				TWA - 8hr							ppm			
				STEL										
			CL			Min	Max							
			(A)	(B)	(C)			(D)	(E)	(F)				
TOTAL														
COMMENTS ON: REASON/S FOR OVEREXPOSURES														
CORRECTIVE MEASURES THAT WILL BE IMPLEMENTED TO PREVENT/MITIGATE OVEREXPOSURES.														

iv. Airborne Particulates Gasses and Vapours Personal Quarterly Report Form 21.9(2)(b)(iv) in terms of regulation 9.2.(7) - Additive effects HEG Category B

Main Commodity Code:								DMRE Mine Code:							
Sample Area:								Sub Mine Code:							
Activity Area Code:								Reporting Period:							
HEG reclassification Band (Based on															
		Q1	Q2	Bi - Annual Results (Q2- percentile results of Q1 and Q2)	Q3	Q4	Annual Results: Annual 90th percentile based on the 4 quarters measurements results								
Number of samples planned for the															
Number of samples taken															
Quarterly HEG classification (Based on															
HEG				Pollutant (Tick appropriate box)		Pollutant analytical %	Mean Pollutant Concentration Dose Allocated to Medical Record Mean Pollutant Concentration Dose = Average TWA Pollutant Concentration (average of all results calculated in A)	Range of Pollutant Concentration		90 th Percentile HEG Classification =PERCENTILE [(A),0.9]		OEL		Pollutant Index =90th Percentile HEG for the quarter Classification /OEL	AQI = Sum of Pollutant Index
Occupations Codes in HEG	Occupation Name in a HEG	Number of Persons per Occupation	Pollutant Code	ppm						Min	Max	(D)	(Tick)		
				mg/m ³		mg/m ³									
				TWA - 8hr		ppm									
				STEL											
			CL												
			(A)	(B)	(C)										
TOTAL															
COMMENTS ON: REASONS FOR OVEREXPOSURES															
CORRECTIVE MEASURES THAT WILL BE IMPLEMENTED TO PREVENT/MITIGATE OVEREXPOSURES.															

3. The substitution of the form 21.9 (2) (c) with the following form:

Heat stress exposure: Quarterly Report Form 21.9(2)(c) in terms of regulation 9.2.(7)

Main Commodity Code:					DMR Mine Code	Sub Mine Code	
Sampling/Measurement Area:	Surface <input type="checkbox"/>		Underground <input type="checkbox"/>				Reporting Period
	Activity Area:		Activity area name				
		Q1	Q2	Q3	Q4	Start:	End:
Heat Environmental classification (based on 90 th percentile of the most significant parameter)							

Thermal: Heat Environment			Parameter	Number of measurements taken per parameter	Mean dose allocated to medical records (for each parameter)	90 th percentile of each parameter (for heat environment classification)	OEL/Standard (for each parameter)	Significant Parameter used for classification (tick relevant parameter)
Occupations Codes	Occupations Description	Number of Persons per Occupation						
			Wet bulb (WB) °C					
			Dry bulb (DB) °C					
			Globe (GT) °C					
			WBGT Index					
COMMENTS ON:								
Reasons for over-exposures								
Corrective measures that will be implemented to prevent / mitigate overexposure								

4. The substitution of the form 21.9 (2) (d) with the following form:

Cold Stress Exposure Quarterly Report Form 21.9(2)(d) in terms of regulation 9.2.(7)

Main Commodity Code:						DMR Mine Code	
Sampling/Measurement Area:	Surface	Underground				Sub Mine Code	
	<input type="checkbox"/>	<input type="checkbox"/>				Reporting Period	
Activity Area Code:	Activity area name	Activity area code				Start	End
	Q1	Q2	Q3	Q4			
Cold Environmental classification (based on 10th percentile of the most significant parameter)							

Thermal: Cold Environment			Cold stress Parameter	Number of measurements taken	Mean dose allocated to medical records	10th percentile cold environment classification	OEL
Occupations Codes	Occupations Description	Number of Persons per Occupation					
			Wind chill equivalent chill temperature °C				
COMMENTS ON:							
Reasons for over-exposures							
Corrective measures that will be implemented to prevent / mitigate overexposure.							

5. The substitution of the form 21.9 (2) (e) with the following form:

Personal Noise Exposure- Quarterly Report Form 21.9(2)(e) in term of regulation 9.2.(7)

MINE NAME:					
QUARTERLY NOISE EXPOSURE REPORT FORM 21.9(2)(e) in terms of regulation 9.2.(7)					
MAIN COMMODITY CODE:					DMRE MINE CODE:
SAMPLE AREA:					SUB MINE CODE:
ACTIVITY AREA CODE:					REPORTING PERIOD:
HEG DESCRIPTION:					(e.g. January to March)
HEG CLASSIFICATION BAND: (based on 90th percentile statistical analysis of the previous annual results)					
ANNUAL 90th PERCENTILE RESULT FOR THE HEG: (based on all individual measurements obtained from all quarters during the previous measurement cycle)					
NUMBER OF EXPOSED EMPLOYEES: (where there are new employees, number of exposed employees reported should be progressive)	Q1	Q2	Q3	Q4	ANNUAL RESULTS
NUMBER OF SAMPLES PLANNED FOR THE CURRENT SAMPLING CYCLE:					
NUMBER OF SAMPLES TAKEN:					
QUARTERLY HEG CLASSIFICATION: (based in the Log average)					
OCCUPATION CODE IN HEG	OCCUPATION DESCRIPTION IN A HEG	NUMBER OF PERSONS PER OCCUPATION	Each recorded sound pressure level measured ($L_{Aeq, 8h}$) within the HEG linked to the occupation code		
Reasons for individual result/s exceeding the annual HEG Classification					
Corrective actions that will be implemented to mitigate the individual result/s exceeding the annual HEG Classification					

