

## STAR RATING OF AN UNDERGROUND COAL MINES - DRAFT EVALUATION TEMPLATE

Sr No.	Evaluation Parameter	Required/target/statutorily specified Value	Actual value	Rating points	Maximum points	Points Scored	Multiplying factor	Point scored	Rationale for points
<b>MODULE 1 - MINE GEOMETRY</b>									
1	Pillar Size	Size as per permission		%number of pillars within permissible limit (1 for >50% and 5 for >90%)	2	2	0.4	0.8	
2	Height of galleries	As per permission		% length within permissible limit (1 for >50% and 5 for >90%)	2		0.4	0	
3	Width of galleries	As per permission		% length within permissible limit (1 for >50% and 5 for >90%)	2		0.4	0	
4	Panelization of UG workings	Yes	Yes/No	3 Points - If Yes Other cases - 0 Point	2		1	0	
5	In case of depillaring with Caving - Area of uncaved roof	Maximum permissible uncaved area		% uncaved area within permissible limit (1 for >50% and 5 for >90%)	2		0.4	0	
6	In case of depillaring with stowing - Status of stowing	Maximum permissible un-stowed residual void		% stowed area within permissible limit (1 for >50% and 5 for >90%)	2		0.4	0	
<b>MODULE 2 - Mine ENVIRONMENT RELATED PARAMETERS</b>									
7	Dust supression measures as per PR/EMP	Water sprinkling arrangament in UG workings as per statute	Number of faces covered	%achieved (1 for 60% and 5 for100%)	1		0.2	0	
		Quaanatity of Stone dusting used as per annual production	Actual	%achieved (1 for 60% and 5 for100%)	1		0.2	0	
8	Mine water utilization	Total discharge	Total Utilized	% utilised (1 for 80% and 5 for100%)	2		0.4	0	
9	Whether Energy audit was undertaken within 5 years	There should be atleast 1 such audit in 5 years	Yes/No	Yes (1 point) No (0 point)	1		1	0	
10	Implementation of recommendations of Energy Audit	Nos. of recommendations made	Nos. of recommendations implemented	% achievement (1 for 80% and 5 for100%)	1		0.2	0	
<b>MODULE 3 - ADOPTION OF Technology: Best mining practices</b>									
11	Use of State of art technology in communication e.g. telephone	Telemonitoring system, multi gas detector, under ground telephone, LED cap lamp		1 point for each technology	4		1	0	
12	Use of mining technologies	Use of continuous miner, use of UDM, use of rasin capsule for support, man riding		1 for each technology	4		1	0	
<b>MODULE 4 - ECONOMIC PERFORMANCE RELATED PARAMETERS</b>									
13	Achievement of coal production target in reporting year	Target (MT)	Actual Production - % Achievement -	% achieved (1 for 80% and 5 for100%)	3		0.6	0	
14	Achievement of coal despatch target in reporting year	Target (MT)	Actual despatch - % Achievement -	% achieved (1 for 80% and 5 for100%)	3		0.6	0	
15	Capacity utilization	Mine capacity as assessed by CMPDI (M Cu.m)	Actual Capacity achieved - Capacity Utilization % -	% achieved (1 for 80% and 5 for100%)	3		0.6	0	
16	Impact of grade slippage (Realization Percentage)	Expected realization as per the declared grade (Rs./T)	Actual Realization - Realization % -	% achieved (1 for 80% and 5 for100%)	3		0.6	0	
17	Growth in OMS	OMS of preveuios year -	OMS of present year - Growth % -	% achieved (1 for 80% and 5 for100%)	3		0.6	0	

18	Utilization of budget for capital expenditure	Capital Budget -	Capital Utilization - % Capital Utilization	% achieved (1 for 80% and 5 for 100%)	3	0.6	0		
<b>MODULE 5 - REHABILITATION &amp; RESETTLEMENT RELATED PARAMETERS</b>									
19	Survey for identification of Project affected families, families to be displaced, compensation to be paid for houses and other properties, persons losing livelihood etc.	Whether a formal survey has been done in line with existing R&R Policy?	Yes/No	Yes (1 point) No (0 point)	1	1	0		
20	Status of Rehabilitation Site	Whether all stipulated facilities have been provided?targetted expenditure	expenditure done	% expenditure as per PR (1 for 90% and 5 for 100%)	1	1	0		
		Whether periodic maintenance of RR site is being done ?	Yes/No	Yes (1 point) No (0 point) N.A.	1	1	0		
21	Whether alternate arrangements for sustainable livelihood have been made for persons who lost their livelihood due to Project	Number of identified families/persons who have lost their livelihood	No. of such families/persons provided direct employment -	% achieved (1 for 60% and 5 for 100%)	1	0.2	0		
			No. of such families/persons provided indirect employment -		1	0.2	0		
			No. of such families/persons provided skill development and vocational training -		1	0.2	0		
<b>MODULE 6 - EMPLOYEE/WORKER RELATED COMPLIANCE PARAMETERS</b>									
22	Expenditure on Welfare Activities	Committed Expenditure	Actual	% expenditure (1 for 60% and 5 for 100%)	3	0.6	0		
23	PME conducted as per the requirement of once in 5 years (once in 3 years for 50+ age)	Target	Actual	% achievement (1 for 60% and 5 for 100%)	3	0.6	0		
24	Sanitation provisions as per Mines Rules 1955	List the provisions required to be made in the mine	Actual provided	% achievement (1 for 60% and 5 for 100%)	3	0.6	0		
25	Whether 20% of workers were given vocational training in reporting year as per requirement of Mines Vocational Training Rules 1966	Target	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
<b>MODULE 7 - SAFETY and SECURITY RELATED PARAMETERS</b>									
26	Imposition of Sec-22 in the mine	Nil	Actual nos. of orders/notices issued under Section-22	(-5) for each such order/notice	0	1	0		
27	Safety audit of mine	Whether Safety audit was undertaken in reporting year	Yes/No	Yes (2 point) No (0 point)	2	1	0		
28	Standard of Illumination	No. of surveys required to be conducted	Actual	% achievement (1 for 60% and 5 for 100%)	1	0.2	0		
		No. of readings recorded during the year	No. of readings not conforming to prescribed standard	(-) 0.5 point for each unconformity	0	1	0		
29	Standard of Ventilation	Required quantity of air in the last VC	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
		Required VEQ	Actual	% achievement (1 for 60% and 5 for 100%)	1	0.2	0		
		Required frequency of gas survey	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
30	Support	Existence of SSR	Yes/No	Yes (2 points) Else - 0	2	0.4	0		
		Adherence to SSR at all places	number of faces adhered to SSR.	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		

30	Support	Whether the stability of roof and pillars is being monitored regularly by a geo-technical cell constituted for the purpose	Yes/No	Yes (2 points) Else - 0	2	0.4	0		
31	Provision of man-riding system	Nos. required as per the existing manpower and distance of travel involved	Actual	% achievement (1 for 60% and 5 for 100%)	3	0.6	0		
32	Light weight LED lamps	Nos. required to be provided	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
33	Pit safety committee meetings	No. of Required meetings	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
34	No of disasters in recording year (Note: figures of the previous financial year to be considered and not the calendar year)	Nil		-10 for every disaster incident	0	1	0		
35	No of fatal accidents in recording year (Note: figures of the previous financial year to be considered and not the calendar year)	Nil		(-5) for every casualty	0	1	0		
36	No of serious bodily injuries in recording year (Note: figures of the previous financial year to be considered and not the calendar year)	Nil		(-2) for every serious bodily injury	0	1	0		
37	No of dangerous occurrences in recording year (Note: figures of the previous financial year to be considered and not the calendar year)	Nil		(-1) for every such reportable incident	0	1	0		
38	IT initiatives to check pilferage			Yes (1 point) No (0 point)	1	1	0		
39	Utilization of safety budget	Actual Budget	Actual Utilization %	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
40	Strength of statutory personnel	Nos. required	Actual	% achievement (1 for 60% and 5 for 100%)	3	0.6	0		
41	Risk assessment based safety management system	There should be one such system in place	Yes/No	Yes (2 point) No (0 point)	2	1	0		
42	Maintenance of all important statutory plans including emergency action plan	No. of plans to be maintained (Give the List the Plans at Annexure)	Actual	% achievement (1 for 60% and 5 for 100%)	4	0.8	0		
43	Existence of various SOPs/Code of practice for	No. of required SOPs/Code of practices (Give the list at annexure)	Actual	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		
44	Installed telemonitoring system for monitoring of gases		Yes/No	Yes (2 point) No (0 point)	2	0.4	0		
45	Assessment in the annual safety week	Maximum marks at which mine was assessed	Actual % obtained	% achievement (1 for 60% and 5 for 100%)	2	0.4	0		

MODULE	SUM OF MAXIMUM POINTS IN APPLICABLE PARAMETERS		SUM OF POINTS SCORED IN APPLICABLE PARAMETERS	PERCENTAGE	CRITERION FOR STAR RATING	
					PERCENTAGE SCORE	STAR RATING
MODULE 1 - MINING OPERATIONS RELATED PARAMETERS	12		0.8		91 TO 100%	5 STAR
MODULE 2 - ENVIRONMENT RELATED PARAMETERS	6		0		81 TO 90%	4 STAR
MODULE 3 - ADOPTION OF INTERNATIONAL STANDARDS	8		0		71 TO 80%	3 STAR
MODULE 4 - ECONOMIC PERFORMANCE RELATED PARAMETERS	18		0		61 TO 70%	2 STAR
MODULE 5 - REHABILITATION & RESETTLEMENT RELATED PARAMETERS	6		0		41 TO 60%	1 STAR
MODULE 6 - EMPLOYEE/WORKER RELATED COMPLIANCE PARAMETERS	11		0		0 TO 40%	NO STAR
MODULE 7 - SAFETY RELATED PARAMETERS	39		0			

