

MINUTES OF 46th MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 26 to 27 JUNE, 2023 THROUGH VIDEO CONFERENCE.

Confirmation of the Minutes of 45th Meeting of the EAC (Coal): The minutes of the 45th Meeting of the EAC (Coal) held on 31st May 2023 has been confirmed by the Chairman.

Opening Remarks of the Chairman: At the outset, the Chairman welcomed the Expert members & other participants and requested to start the proceeding as per the agenda adopted for this meeting.

Consideration of Proposals: The 46th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 26 to 27 June 2023 through Video Conferencing. The EAC considered proposals as per agenda adopted for the meeting with additional 2 items incorporated at later stage. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 46.1

Chakla Opencast Coal Block Mine (North Karanpura Coalfield) with production capacity of 4.5 MTPA in ML area 863 ha of M/s Hindalco Industries Limited located at villages Chakla, Hariyatoli, Nawatoli, Amwatanr and Ambuatanr, Tehsil Chandwa, District Latehar (Jharkhand) – Reconsideration for Environmental Clearance

[Online proposal number IA/JH/CMIN/424605/2023; File No. IA-J-11015/1072/2007-IA-II (M)]

46.1.1 The proposal is for Environmental Clearance for Chakla Opencast Coal Block Mine (North Karanpura Coalfield) with production capacity of 4.5 MTPA in ML area 863 ha of M/s Hindalco Industries Limited located at villages Chakla, Hariyatoli, Nawatoli, Amwatanr and Ambuatanr, Tehsil Chandwa, District Latehar (Jharkhand).

46.1.2 The proposal was earlier considered in the 43rd EAC meeting held on 24 April 2023 wherein EAC after detail deliberation deferred the proposal for the submission of observation. Reply was submitted on 23.05.2023 such as:-

S.N o.	Observation of EAC	Replied by PP
1	Project Proponent to rework on proper estimation of impact due to diversion and revisit the specific condition	The specific condition no. (iii), (iv) and (xiii) have been revisited in light of impact due to diversion, seepage due to existing channel, impact on Ecosystem/ Environment, and protection of tributary no 6 of Mahanalianala. ➤ The tributary no 6 (based on CWPRS report this tributary named as S5). ➤ The Mahalanianala originating near the northern portion of the Chakla coal block flows towards south and meets NagarnadiaNadi, a

	<p>no. (iii), (iv) and (xiii) for submission of study which will cover the concerns of seepage from diverted channel to existing as well as impact of diversion on the Ecosystem/Environment and the protection of tributary no. 6 of MahalaniaNalla. The study shall be redone accordingly.</p>	<p>tributary of Damodar River outside of the coal block boundary.</p> <ul style="list-style-type: none"> ➤ The general slope of the study area is from North to South direction. ➤ One tributary namely tributary S2 join MahalaniaNala at right bank, Tributary S4 & S5 meet & exit at G point and meet NagarnadiyaNadi outside the block area. ➤ All the tributaries & nallas of the block are seasonal except NagarnadiaNadi, which is perennial at places with meagre discharge during dry months. ➤ In its further course, the NagarnadiaNadi meets perennial Damodar River and finally discharges into it. <p>Surface Water Availability: The proposed nala diversion has been designed in such a way that there will not be any impact of reduction of rate of peak flood over the relevant diversion area.</p> <p><i>MahalaniaNala Pre diversion discharge- 186.59 m³/sec and post diversion discharge 186.59m³/sec.</i></p>
2	<p>PP needs to submit certificate from the District Magistrate for verifying the existence of forestland covered under the Forest Right Act, 2006 and consequential forestland shall be required for diversion.</p>	<p>Certificate from the District Magistrate for verifying the existence of forestland covered under the Forest Right Act, 2006 has been enclosed.</p>
3	<p>PP needs to clarify from the documents of State Government that the area does not fall under No-Go Area</p>	<p>The Area is already categorized as “Go Area” mentioned vide letter No. J-11015/1072/2007-IA.II(M) issued by MoEF & CC dated 22/09/2010.</p> <p>The forest diversion proposal for the project had already been forwarded by State and had been reviewed at FAC, the same has been vested to HIL, vide letter no: File No.8-06/2014-FC, dated 17th Aug 2021 action has been taken by MoEF&CC to carry forward the process of FC of Chakla Coal Mine.</p>

	category/zone.	We further submit that, vide letter F.No.11-269/2012-PC dated 30/08/2012 issued by forest division of MoEF&CC, the concept of Go-No GO zone has been done away.
4	PP shall submit Letter of Intent in the name of PP from State Government regarding proposed mine lease area	<ol style="list-style-type: none"> 1. The block has been vested to HIL vide Vesting Order No. NA-104/9/2020-NA dated 03.03.2021. 2. Mining lease application (Form - D) has been submitted to State Government dated 13.07.2021. 3. Application forwarded to Directorate Mines, Ranchi from DC Latehar dated 26.03.2022 for further process.
5	PP needs to submit the coal reserves available below the forestland lying inside the Mine lease area.	<p>Total geological resources are 83.101 Million Tonnes.</p> <p>Out of the total geological reserves total mineable reserves are 75.51 Million Tonnes and extractable reserves are 71.14 Million Tonnes.</p> <p>Coal reserve available below the forest land are 45.87 Million Tonnes.</p>
6	PP needs to submit the protection plan for villagers lying inside the mine lease area from the mining activities during overlapping period of mining and rehabilitation.	<ul style="list-style-type: none"> ➤ Habitation of 2 villages i.e. Hariyatoli & Amwatanr and also a part of the Chakla village fall within the project area. ➤ All the population within the project area will be relocated outside of the project area. ➤ There will be no habitation within the project area. The process of R&R has already started. Hence, there is no overlapping involved. ➤ The proposed project area is 786.5 ha.
7	PP needs to submit the coal evacuation plan considering the route should not pass through village area for the initial 3 years i.e. till implementation of railway siding.	<ul style="list-style-type: none"> • The mine opening permission is envisaged as Aug 2025, in line with schedule of efficiency parameters of CMDPA. Accordingly, coal production is likely to start by Mar 2026. • The railway siding within the block is planned to be commissioned by Mar 2026. Hence, no road transport through the village areas is envisaged. However, alongside the railway track a separate dedicated road corridor is planned and is in the process of approval and same will be used for coal transportation during initial 3 years. • ESP (Engineering Scale Plan) & DPR (Detailed Project Report) for the proposed railway siding is approved by Railways.
8	PP needs to	<ul style="list-style-type: none"> • As per ToR specific condition no (vi) “PP shall prepare the Mining

	<p>revisit and conform that current mine plan is in compliance to discussion held during Terms of References i.e a per ToR(vi) covering all items prescribed in TOR. Therefore, PP shall submit the Mine Plan and Mine Closure Plan as per observation of EAC and latest guidelines of Ministry of Coal.</p>	<p>Plan in such a manner that condition prescribed by EAC shall be intact from environment point of view. EIA- EMP shall accordingly be prepared on the suggested stipulation with point-wise compliance & in accordance with recommendations of Mining Plan”.</p> <ul style="list-style-type: none"> • Conditions mentioned in ToR has been already incorporated within the approved mining plan. Hence there is no requirement of revised mine plan. The evidences are as followed: <ul style="list-style-type: none"> A. In compliance to <u>ToR Additional condition XVI</u>, details of mining technology/methodology have been described in the (chapter no 5, Page No. 5.1 – 5.32) of the approved mine plan with associated environmental benefits like, due to use of surface miner dust free coal face will be provided. B. In compliance to <u>TOR Additional condition XXII</u>, integrated mine plan with mine reclamation also provided in the mine plan (Page No. 9-10 of addendum to mining plan). <p>As per waste management and selection of dump site ultimate height of the external dump will be +592m AMSL and the external dump will accommodate about 50.54 mcum of waste. The permanent internal dump (backfilling) will start from 5th year onwards and will continue till the life of the mine.</p> <p>It is proposed to backfill overburden on the entire property in the de-coaled area. Individual tiers of OB dumps would have maximum height of 30m at an angle of 37 degree. Overall slope angle of the OB dump would be about 27 degree. Maximum top level of internal dump will be +535m RL. The area which will be worked during the final year of mine operation will be backfilled upto +470m level from the floor of bottom most seam. This area will be utilized for water reservoir and the total area for water storage is 25 ha.</p> 																										
9	<p>The PP shall submit the progressive reclamation plan of mine in time bound manner and approved Standard Operating Procedure for handing over the land to land allottees and</p>	<p>Progressive Reclamation plan of mine in time bound manner is mentioned in the EIA/EMP report -Chapter no. 4, table no 4.28 (page no. 183) The same is reproduced below:</p> <table border="1" data-bbox="537 1499 1456 1919"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Greenbelt</th> <th colspan="2">Backfilling</th> <th colspan="2">Non-mineralized (Temp. Dump Area)</th> <th colspan="2">Total</th> </tr> <tr> <th>Area (In Ha)</th> <th>No of Plants</th> <th>Area (In Ha)</th> <th>No of Plants</th> <th>Area (In Ha)</th> <th>No of Plants</th> <th>Area (In Ha)</th> <th>No of Plants</th> </tr> </thead> <tbody> <tr> <td>1st - 5th</td> <td>40.20</td> <td>100500</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>40.20</td> <td>100500</td> </tr> </tbody> </table>	Year	Greenbelt		Backfilling		Non-mineralized (Temp. Dump Area)		Total		Area (In Ha)	No of Plants	Area (In Ha)	No of Plants	Area (In Ha)	No of Plants	Area (In Ha)	No of Plants	1 st - 5 th	40.20	100500	-	-	-	-	40.20	100500
Year	Greenbelt			Backfilling		Non-mineralized (Temp. Dump Area)		Total																				
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1 st - 5 th	40.20	100500	-	-	-	-	40.20	100500																				

Forest Department.	6 th – 10 th h	21.65	54125	101	161600	-	-	122.65	215725
	11 th h – 15 th h	-	-	160.6	256960	20.00	32000	180.6	288960
	16 th h – 20 th h	-	-	240	384000	94.75	151600	334.75	535600
	Tot al	61.85	154625	501.6	802560	114.75	183600	678.2	1140785
	Greenbelt/plantation plan- coal mine lease periphery in the first year								
	Location	Mtr.	Safety zone	Total Area in Mtr.	Ha.	Per Ha. no. of Plants	Total no. of Plants	Per Plant @ 100	
	Coal Mine lease Periphery	12853	7.5	96397.5	9.63975	2500	24099	2891880	
	<ul style="list-style-type: none"> ➤ According to this Plan, greenbelt will be completed within initial 10 years. Plantation on safety zone will be completed within initial 5 years. Plantation on remaining area will be done as given in above plan. ➤ At conceptual stage, there will be approximately 11,40,785 trees on 678.20 ha area @ 1600 to 2500 plants per ha. ➤ Survival rate should be maintained 90%. 								
10	PP shall submit a detailed report on total carbon sink/absorption currently happening due to forest cover area and its loss after	<ul style="list-style-type: none"> ➤ As per tree enumeration details at present, total 1,45,409 nos of trees belonging to different species are existing in the proposed Chakla Coal Mine. Due to mining activity in the core zone <i>Ficus benghalensis</i>, <i>Aegle marmelos</i>, <i>Acacia catechu</i>, <i>Tamarindus indica</i>, <i>Albizia lebbek</i>, <i>Butea monosperma</i>, <i>Mangifera Indica</i> etc. species are likely to be cleared. ➤ Total Carbon Sequestration Potential is approximately 2,39,56,485 kg. The carbon sequestration per tree can be calculated as 							

	<p>cutting of tress/forest and further, rate of carbon sequestration with progressive backfilling and plantation.</p>	<p>approximately 21 kg/year.</p> <ul style="list-style-type: none"> ➤ At conceptual stage, total excavated area will be 526.6 ha; out of which 501.6 ha area will be reclaimed by backfilling and same will be rehabilitated by plantation with 1140785 nos of samplings belonging to different species. ➤ Greenbelt/ plantation will be carried out on 678.20 ha (Greenbelt along block boundary: 61.85 ha, Plantation on non-mineralized area: 114.75 ha, Plantation over backfilled area: 501.6 ha). ➤ The reduction in carbon sequestration due to proposed tree cutting of total 130000 nos of trees is estimated to be 27,30,000 kg/year by the end of (16th -20th year time period). ➤ The native plant species will be selected for greenbelt/plantation in consultation with the local Forest Officer. ➤ The species with rapid growth, ever green, large crown volume and small pendulous leaves with smooth surface/high rate of CO2 absorption tree species will be selected. <p>Comparison between Carbon Sequestration reduction (Kg/year) and Carbon Sequestration Potential (Kg/year)</p> <table border="1" data-bbox="537 909 1458 1732"> <thead> <tr> <th>S. No.</th> <th>Year</th> <th>Proposed tree cutting plan</th> <th>Carbon sequestration reduction (Kg/year)</th> <th>Proposed Plantation Plan</th> <th>Carbon sequestration Potential (Kg/year)</th> <th>Net Carbon Gain (Kg/year)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1st-5th</td> <td>20,000</td> <td>4,20,000</td> <td>1,00,500</td> <td>2110500</td> <td>16,90,500</td> </tr> <tr> <td>2</td> <td>6th - 10th</td> <td>30,000</td> <td>6,30,000</td> <td>2,15,725</td> <td>4530225</td> <td>39,00,225</td> </tr> <tr> <td>3</td> <td>11th - 15th</td> <td>32,000</td> <td>6,72,000</td> <td>2,88,960</td> <td>6068160</td> <td>53,96,160</td> </tr> <tr> <td>4</td> <td>16th - 20th</td> <td>48,000</td> <td>10,08,000</td> <td>5,35,600</td> <td>11247600</td> <td>1,02,39,600</td> </tr> <tr> <td colspan="2">Total proposed tree cutting</td> <td>1,30,000</td> <td>27,30,000</td> <td>11,40,785</td> <td>2,39,56,485</td> <td>2,12,26,485</td> </tr> </tbody> </table>	S. No.	Year	Proposed tree cutting plan	Carbon sequestration reduction (Kg/year)	Proposed Plantation Plan	Carbon sequestration Potential (Kg/year)	Net Carbon Gain (Kg/year)	1	1 st -5 th	20,000	4,20,000	1,00,500	2110500	16,90,500	2	6 th - 10 th	30,000	6,30,000	2,15,725	4530225	39,00,225	3	11 th - 15 th	32,000	6,72,000	2,88,960	6068160	53,96,160	4	16 th - 20 th	48,000	10,08,000	5,35,600	11247600	1,02,39,600	Total proposed tree cutting		1,30,000	27,30,000	11,40,785	2,39,56,485	2,12,26,485
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11	PP shall submit the detailed plan for implementation in form of	PP has submitted the detailed plan for implementation in form of CPM/PERT chart.																																										

	CPM/PERT chart considering all eventuality involved for implementation of mechanized system.	
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46.1.3 The committee during the EAC meeting noted the followings:

- (i) ToR granted to project vide letter no J-11015/1072/2007-IA.II (M) dated 11.10.2021.
- (ii) Mine plan was approved by Ministry of Coal vide letter no. 13016/32/2007-CA-I dated 10.06.2008 in favour of M/s. Essar Power Ltd. Further it was transferred to M/s. Hindalco Industries Ltd.
- (iii) Life of Mine is 20 years with proposed production capacity of 4.5 Million TPA.
- (iv) No National Park, Reserved Forest, wildlife sanctuaries and Eco-sensitive zones located within 10 km boundary of the project.
- (v) NOC of Central Ground Water Authority vide NOC No. CGWA/NOC/MIN/ORIG/2022/ 15986 dated 14.07.2022 was obtained, which is valid up to 13.07.2024.
- (vi) Previously, Public Hearing was conducted on 29.06.2009 for production capacity of 4.5 MTPA. However, PP could not obtain EC after appraisal and recommendation of EIA-EMP by the than EAC due to non-submission FC and subsequent deallocation.
- (vii) The proposed budget for public hearing was submitted as Rs. 581.822 lakh and EMP budget is Rs. 1185.1 Lakh.
- (viii) Baseline Monitoring has been carried for Summer Season (March to May 2021).
- (ix) **Table 1: Proposed Physical targets for addressing issues of during Public Hearing**

S. No.	Physical Targets	Activity	Details of Activities	EMP budget for PH concerns (Rs. In Lakh)									
				2023-24 (1 st Year)		2024-25 (2 nd Year)		2025-26 (3 rd Year)		Total			
				Target Population (Nos)	Proposed Budget	Target Population (Nos)	Proposed Budget	Target Population (Nos)	Proposed Budget	Target Total Population (Nos)	Proposed Total Budget		

1	Education (School Infrastructure)	Buildings and Civil structures (Renovati on & Maintena nce)	<p>FY 2023-24</p> <p>Buildings and Civil structures (Renovation & Maintenance) Chakla Middle School to convert as Model School with Kitchen Extension - 2.5 Lakhs Toilet Construction - 3.5 Lakhs Fencing - 2 Lakhs Lunch Varandah - 7 Lakhs</p> <p>FY 2024-25 Repair of Ambatand and Nagar Primary School @Rs.2,60,000/- each. Construction New Primary School for Hariya Paduwa Village @Rs.21,00,000/-</p> <p>FY 2025-26 Repair of Nagar High School, the only High School of the Gram Panchayat @Rs.4,00,000/- each. Construction New Primary School for Arandiyatand Village @Rs.21,00,000/-</p>	430	15.0	430	23.6	500	25.0	1360	63.6
2	Health Infrastructure	Special Project	Site specific intervention-Swachta Sandesh with Sanitary Napkin Production Unit engaging SHG women	1000	70.0	1000	2.0	1000	2.0	3000	74.0
		Buildings and Civil structures (renovati on and maintena nce)	<p>FY 2023-24 Developing Community Dispensary & Telemedicine Facility with free medicines throughout the year at Chakla Khas village</p> <p>FY 2024-25 Maintaining the Community Dispensary & Telemedicine Facility with free medicines throughout the year at Chakla Khas village</p> <p>FY 2025-26 Running & Maintenance of Community Dispensary & Telemedicine Facility with free medicines throughout the year at Chakla Khas village</p>	4000	9.5	4000	2.4	8000	6.3	16000	18.1

		<p>Drinking water new sources (Handpump/RO/Water Tank/well)</p> <p>FY 2023-24 New installation of Deep Borewell at least 2nos @Rs.2,20,000/- each Chakla, Ambatand Villages</p> <p>FY 2024-25 New installation of Deep Borewell at least 2nos @Rs.2,20,000/- each Hariya Paduwa & Nawatoli Villages</p> <p>FY 2025-26 New installation of Deep Borewell at least 3nos @Rs.2,20,000/- each Chakla & Arandiyatand Villages</p>	600	4.400	600	4.400	600	6.600	1800	15.400	
		<p>Drinking water existing sources (Operation/Maintenance)</p> <p>FY 2023-24 Repair of Hand Pump at least 10 Nos @Rs.20000/- each) and 05 nos of Bore-well Repair @Rs.30,000/- each at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages</p> <p>FY 2024-25 Repair of Hand Pump at least 10 Nos @Rs.20000/- each) and 05 nos of Bore-well Repair @Rs.30,000/- each at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages</p> <p>FY 2025-26 Repair of Hand Pump at least 20 Nos @Rs.20000/- each) and 05 nos of Bore-well Repair @Rs.50,000/- each Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages</p>	850	3.5	850	3.5	1700	6.5	3400	13.5	
3	Sustainable Livelihood Infrastructure	Natural Resource conservation programs & Non-conventional Energy									
		Water conservation and harvesting (small structures / bigger structure)	Maintenance and beautification of new water bodies/grass patching and plantation on bunds	300	20.0	150	10.0	150	10.0	600	40.0
		Livelihood Infrastructure									
		Check Dams/Water sheds/Tree Plantation									
		Pond deepening work in Villages Chakla, Hariyatoli, Amwatan, Nawatoli & Ambuatandr	1000	50.0	200	10.0	200	10.0	1400	70.0	

		Watershed/Area treatment/Check Dam/Gabion structure	400	20.0	400	20.0	400	20.0	1200	60.0
		Tree Transplant/Tree Plantation	500	25.0	500	25.0	500	25.0	1500	75.0
4	Rural Infrastructure Development other than for the purpose of Health/Education/Livelihood	New Roads/Culverts/Bridges/Bus Stands FY 2023-24 02 nos of CC Road covering total 1KM at Chakla and Hariya Paduwa with approx @Rs.8,50,000/- each FY 2024-25 02 nos of WBM (Water Bound macadam) covering total 2KM at Arandiyatand & Ambatand with approx @Rs.6,58,000/- each FY 2025-26 02 nos of WBM Road at Ambatand & Nawatoli with approx @Rs.8,50,000/- each	2000	17.0	1500	13.2	2000	17.0	5500	47.2
		Repair Roads/Culverts/Bridges/Bus Stands FY 2023-24 02 nos of CC Road covering total 1KM at Chakla and Hariya Paduwa with approx @Rs.8,50,000/- each FY 2024-25 Road repair at Chakla village with approx @Rs.3,00,000/- FY 2025-26 1 no of Murrum Road with approx @Rs.3,00,000/- at Chakla	4000	3.0	4000	3.0	4000	3.0	12000	9.0
		Community Halls FY 2023-24 1 Community Hall at Chakla @Rs.15,00,000/- FY 2024-25 1 no of Women SHG Training Hall @Rs.16,00,000/- at Chakla Repair of Chakla Youth Club @Rs.4,00,000/- FY 2025-26 1 Community Hall at Ambatand @Rs.15,00,000/- 1 Women SHG Training Hall at Ambatand @Rs.16,00,000/-	2500	15.0	1000	20.0	2500	31.0	6000	66.00
		Other Community Assets FY 2023-24 New Dug Well @Rs.200000/- *5=10,00,000/- with Washing Platform and Soakpit at Chakla & Ambatand Villages FY 2024-25 New Dug Well @Rs.200000/- *5=10,00,000/- with Washing Platform and Soakpit at Nawatoli	1500	10.0	1500	10.0	1500	10.0	4500	30.00

			and Bhukutola Villages FY 2025-26 Dug Well @Rs.200000/- *10=20,00,000/- with Washing Platform and Soakpit at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages								
SUB TOTAL (A)				19080	26 2.4	161 30	14 7.1	230 50	17 2.4	582 60	581.8
Other Proposed Activities											
S. N o.	Physical Targets	Activity	Details of Activities	2023-24 (1 st Year)		2024-25 (2 nd Year)		2025-26 (3 rd Year)		Total	
				Target Population (Nos)	Pr og ra m Sp en di ng (R s. In L a k h)	Target Population (Nos)	Pr og ra m Sp en di ng (R s. In L a k h)	Target Population (Nos)	Pr og ra m Sp en di ng (R s. In L a k h)	Target Population (Nos)	Pr og ra m Sp en di ng (R s. In L a k h)
1	Pre-school education	Strengthening Anganwadi Centre- Govt. supported	FY 2023-24 04 nos of Anganwadi at Chakla Khas, Ambatand, Nawatoli and Arandiyatand - Infrastructure renovation and Educational Paintings @Rs.60,000/- each FY 2025-26 04 nos of Anganwadi at Chakla Khas, Ambatand, Nawatoli and Arandiyatand - Education and sports stationaries @Rs.60,000/- each	110	2.4	0	0.0	110	2.4	220	4.8
2	School Education Program	Enrollme nt awareness program mes / events	Awareness campaign through Nukkad Natak and door to door campaign at Chakla Khas, Ambatand, Nawatoli, Arandiyatand @Rs.50,000/- each	0	0.0	0	0.0	100	2.0	100	2.0

		Scholarship (Merit and Need based assistance)	FY 2023-24 & 2024-25 To help at least 30 Girls students from Chakla Middle School and Chakla High School for Higher studies @Rs.10,000/- each FY 2025-26 To help at least 30 Girls students from Chakla Middle School and Chakla High School for Higher studies @Rs.20,000/- each	30	3.0	30	3.0	30	6.0	90	12.0
		School competitions /Best teacher award	FY 2023-24 & 2024-25 01 Mega Inter-school sports Competition programs Including all the primary, Middle and High Schools of Chakla GP @Rs.1,00,000/- FY 2025-26 01 Mega Inter-school sports Competition programs Including all the primary, Middle and High Schools of Chakla GP @Rs.1,50,000/-	750	1.0	750	1.0	750	1.5	2250	3.5
		Quality of Education (support teachers, Improve education methods,)	FY 2023-24 Establishing Mini Science Lab at Chakla Middle school @Rs.2,50,000/- and High School @Rs.4,50,000/- FY 2024-25 & 2025-26 Maintenance of Mini Science Lab at Chakla Middle school and High School @Rs.75,000/- PA	400	7.0	400	0.8	400	0.8	1200	8.5
3	Education support programs	Adult and non-formal education	FY 2023-24 & 24-25 Total 8 nos of Free Coaching Centres for Primary students at Chakla Khas 4, Ambatand 1, Nawatoli 1, Arandiyatand 1 & Hariya Paduwa 1 with Monthly Parents Teachers Meeting @Rs.40,000/- each FY 2025-26 Total 8 nos of Free Coaching Centres for Primary students at Chakla Khas 4, Ambatand 1, Nawatoli 1, Arandiyatand 1 & Hariya Paduwa 1 with Monthly Parents Teachers Meeting @Rs.25,000/- each	250	4.8	250	4.8	250	3.0	750	12.6
		Celebration of National days /	At all the 5 Primary, 1 Middle and 1 High School of Chakla GP @Rs.30,000/- each	950	1.5	950	1.5	950	1.5	2850	4.5

		International days										
		Computer education	FY 2023-24 & 24-25 Computer Coaching Centre at Chakla Khas & Nawatoli @Rs.2,00,000/- each FY 2025-26 Computer Coaching Centre at Chakla Khas & Ambatand @Rs.2,50,000/- each	100	4.0	100	4.0	100	5.0	300	13.0	
4	Health (Preventive Health Care)	Immunization	04 Camps per year @Rs.20,000/- per camp at Chakla Khas, Ambatand, Arandiyatand, Hariya Paduwa	240	0.8	240	0.8	240	0.8	720	2.4	
		Pulse polio immunization	Logistic support to CHC Chandwa for Polio Iradication Drive Once in a year	2500	0.2	2500	0.2	2500	0.3	7500	0.7	
		Health & Hygiene awareness programmes	FY 2023-24 & 24-25 At least 5 session @ 15,000/- each at Chakla Khas, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli FY 2025-26 At least 5 session @ 18,000/- each at Chakla Khas, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli	500	0.8	500	0.8	500	0.9	1500	2.4	
5	Curative Health Care program	General Health camps	MHU running 5 Days a week covering every tolas of Chakla Khas, Hariya Paduwa, Arandiyatand, Ambatand, Nawatoli, Nagar & Sadabah and conducting Village Health Camps with medicines @Rs.1,50,000/- PM * 12 months	5000	18.0	5000	18.0	5000	18.0	15000	54.0	
		Specialized Health Camps	04 Specialized Health Camps covering Ortho, Peiatrics, Gynee, Skin, ENT, etc.@ Rs.45,000/- each at Chakla Khas being the center point for all the villages.	1200	1.8	1200	1.8	1200	1.8	3600	5.4	
		Eye camps	Catract Identification Camp @Rs.80,000/- once in a year at Chakla Khas being the center point for all the villages. This is followed by operation and spectacles distribution. each with Specs	150	0.8	150	0.8	150	1.0	450	2.6	

		Tuberculosis	FY 2023-24 & 24-25 02 Camps @Rs.15,000/- each at Chakla and Ambatand FY 2025-26 02 Camps @Rs.30,000/- each at Chakla and Ambatand	100	0.3	100	0.3	100	0.6	300	1.2
6	Reproductive and Child Health	Adolescent Health care (for Girls)	FY 2023-24 & 24-25 On Project mode drive digitally, supply of nutritious food and medicine to approx 200 Adolescent Girls @Rs.125/- *400 Girls *12 months = 3,00,000/- Volunteers Fees @Rs.2000*12 Months=24000/- FY 2025-26 On Project mode drive digitally, supply of nutritious food and medicine to approx 400 Adolescent Girls @Rs.125/- *400 Girls *12 months = 6,00,000/-	200	3.2	200	3.2	400	6.0	800	12.5
		Infant and child health (Healthy baby completion)	FY 2023-24 & 24-25 Tonics, Medicines and Food supplements to the Babies of Hariya Paduwa, Chakla, Ambatand @Rs.166.66/- per baby*12 Months *150 Babies up to 2 years of age=300000/- FY 2025-26 02 nos of Healthy Baby Show at Chakla @Rs.60,000/- each Tonics, Medicines and Food supplements to the Babies of Hariya Paduwa, Chakla, Ambatand @Rs.130/- per baby*12 Months *300 Babies up to 2 years of age	150	3.0	150	3.0	600	6.0	900	12.0
		Nutritional programmes for mother/child	FY 2023-24 & 24-25 In Chakla, Hariya Paduwa, Ambatand villages - On Project mode Mother and Child Health care combined with Nutritional Program drive digitally record keeping in the GP, supply of nutritious food and medicine to approx 200 mothers (either expecting/with baby upto 1 year) * 125/- pm each* 12 months = 3,00,000/- FY 2025-26 In Chakla, Hariya Paduwa, Ambatand villages - On Project mode Mother and	200	3.0	200	3.0	500	6.0	900	12.0

			Child Health care combined with Nutritional Program drive digitally record keeping in the GP, supply of nutritious food and medicine to approx 250 mothers (either expecting/with baby upto 1 year) * 150/- pm each* 12 months = 4,50,000/- + volunteer appreciation in kind @ 2000/- * 05 volunteer *12 months = 1,20,000/- + Program Overhead cost Rs.30,000/-								
7	Quality / Support Program	Referral services	This is to cater for emergency referral cases as and when require in Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	30	5.0	30	5.0	30	5.0	90	15.0
		Treatment of BPL, old age or needy patient	This is to cater for special treatment of BPL, Oldage and Needy patients as and when require in Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	0	0.0	0	0.0	15	3.0	15	3.0
		Support for differently abled	This is to cater for apparatus, calipers, wheelchairs etc. etc for Differently Abled people to support as and when require in Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	10	2.0	0	0.0	10	1.5	20	3.5
		Blood donation camps	01 camp @Rs.30,000/- centrally at Chakla Village	100	0.3	100	0.3	100	0.3	300	0.9
		Others	To provide 2 ANM @Rs.15000/- each*12 months*2 = 3,60,000/- for Govt. Health Sub Centers at Chakla and Nagar	8000	3.6	8000	3.6	8000	3.6	24000	10.8
8	Sustainable Livelihood	Agriculture & Horticulture training programme/ Farmers group	FY 2023-24 25 on field Training programs on Agriculture/ Horticulture with demo plot @Rs.34,000/- each at Chakla, Ambatand & Nawatoli FY 2024-25 25 on field Training programs on Agriculture/ Horticulture with demo plot @Rs.34,000/- each at Chakla, Ambatand & Nawatoli FY 2025-26 25 on field Training programs on	150	8.5	150	8.5	150	8.5	450	25.5

		Agriculture/ Horticulture with demo plot @Rs.34,000/- each at Chakla, Arandiyatand, Ambatand & Nawatoli									
		Transfer of Technology-Demonstration plots	One Lab on 2 acres with Nursery creation on our own acquired Land at Chakla	300	8.0	300	8.0	300	8.0	900	24.0
		Support for horticulture plots	5 nos of programs with demo @ Rs.50,000/- each at Chakla, Arandiyatand, Ambatand & Nawatoli	0	0.0	0	0.0	100	2.5	100	2.5
		Seeds Improvement Program	05 nos of programs with seed distribution and demo agriculture @ Rs.50,000/- each at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	100	2.5	100	2.5	100	2.5	300	7.5
		Support for improved agriculture equipment and inputs	To support 50 Farmers with Agricultural Inputs @Rs.10,000/-each of Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	1600	5.0	1600	5.0	1600	5.0	4800	15.0
		Soil health and organic farming	Nutritional home garden in covering 200 household @Rs.3,000/- each	800	6.0	800	6.0	800	6.0	2400	18.0
		Farm Based IGP	Promotion of Farm based Livelihood Azolla farming/ Vermi compost unit/Mushroom	100	2.0	100	2.0	100	2.0	300	6.0
		Farm Based IGP	Promotion of Off Farm based - Duck rearing/ Poultry Unit/Bee Keeping	100	3.0	100	3.0	100	3.0	300	9.0
9	Animal Husbandry Based	Treatment and vaccination	To cover at least 500 cattle of Chakla GP @ Rs.70,000/-	500	0.7	500	0.7	500	0.7	1500	2.1
Non-farm & Skills Based Income Generation Program											

		Capacity Building Program-Tailoring, Beauty Parlour, Mechanical	Capacity Building programme-Tailoring Training (Trainer fee 5500+Room Rent 1800+ Materials 1000 + Misc 500 *5 Centre * 12 Months) = Rs.5,28,000/- Pico and Other Machines Rs.250000/- at Chakla, Ambatand, Navatoli villages	110	7.8	110	7.8	110	7.8	330	23.3
		Rural Enterprise development & Income Generation Programmes	Sewing Machines for 50 women @Rs.7000/- each	50	3.5	50	3.5	50	3.5	150	10.5
		Support to SHGs for entrepreneurial activities	To support 10 SHGs with Rs.30,000/- each of Hariya Paduwa village	0	0.0	0	0.0	110	3.0	110	3.0
		Non-farm Based IGP	Promotion of Non-Farm based Livelihood-Cocoon Reeling/Advance stitching/others	200	15.0	200	15.0	200	15.0	600	45.0
10	Natural Resource conservation programs & Non-conventional Energy	Solar energy support and	FY 2023-24 & 24-25 To provide Solar Street Light @Rs.35000/- each*25=8,75,000/- at Chakla & Hariya Paduwa Village FY 2025-26 To provide Solar Street Light @Rs.35000/- each*50=17,50,000/- at Arandiyatand Village	1200	8.8	1200	8.8	2400	17.5	4800	35.0
		Plantation / Green Belt Development / Roadside Plantation	To distribute 1200 fruit bearing saplings * Rs.50/- each= 60,000/- + program cost 10,000	0	0.0	0	0.0	300	0.7	300	0.7
		Green Belt for Environment Protection	Nursery Development work to maintain Biodiversity and Plantation in Villages Chakla, Hariyatoli, Amwatan, Nawatoli	500	50.0	200	20.0	200	20.0	900	90.0

			and Ambuatn (5000 Sapling in each Village)									
1 2	Institutional building & strengthening	Strengthening / formation of community based organization (SHGs)	Strengthening 40 nos of SHGs by imparting various Book Keeping Training and Conducting Competitions activities @ Rs.2,000/- each SHG * 40 = Rs.80,000/-	400	0.8	400	0.8	400	0.8	1200	2.4	
		Others	Women's Day Celebration at Chakla	500	1.5	500	1.5	500	2.0	1500	5.0	
		Social Security										
		Support to old age/ Widow/ physically challenged person / poor	Support to Oldage and widows' people of Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	0	0.0	0	0.0	30	3.0	30	3.0	3.0
		Awareness programmes										
		Community awareness program	03 Awareness program on Disaster Preparedness/ WitchCraft/ Blind Belief/ Road Safety etc. etc. @Rs.30,000/- each with the people of Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	300	0.9	300	0.9	300	0.9	900	2.7	2.7
		Social Events to minimize causes of poverty										
		National/International day celebrations with community	26 th January and 15 th August National Days Celebration 02 program @Rs.50,000/- each with the people of Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	500	1.0	500	1.0	500	1.0	1500	3.0	3.0
		Support with basic necessities (Blankets)	Blanket distribution to 2000 Senior Citizens of Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages @Rs.250/- each	2000	5.0	2000	5.0	2000	5.0	6000	15.0	15.0
		Promotion of heritage/culture/Sports										

	Support to rural cultural programme, Festivals & Fairs	Support to Rural Culture including Sarhul, Adivasi Diwas & Karma at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages	4000	8.1	4000	8.1	4000	8.1	12000	24.3
	Support to Rural Sports program	To support to 04 nos of Mega Sports Tournaments of Football/Cricket and Tribal Sports at Chakla, Hariya Paduwa, Arandiyatand, Ambatand & Nawatoli Villages @Rs.1.75,000/-	2000	7.0	2000	6.0	2000	7.0	6000	20.0
13	Salary and Overheads	Salary & Overhead Voulunteer @Rs.8000/-PM * 12 Months * 4 persons = Rs.3,84,000/-	4	3.8	4	3.8	4	3.8	12	11.5
SUB TOTAL (B)			36384	215.4	35964	173.7	38889	214.2	111237	603.3
GRAND TOTAL (A+B)				477.7		320.8		386.6		1185.1

46.1.4 The EAC after deliberation observed that the instant proposal is Greenfield coal mine project. The project was earlier considered and deferred by EAC with certain observations. The PP has submitted the detailed replies on PARIVESH portal. The committee during discussion observed proposed budget of Rs. 581.822 lakhs against Public Hearing and Rs. 1185.1 lakhs as EMP cost. The Committee advised PP to have regular annual audit on the proposed budget and submit the report to IRO, MoEF&CC.

The committee raised concerns on protection of Chakla village after diversion of Mahalania Nallah. On enquiry about safety measures to be adopted on diversion of **Mahalania Nallah**, PP informed that adequate embankment height shall be maintained on both side of stream with sufficient free board upto 3 mts. PP informed that all care shall be taken for smooth discharge of water before its disposal to other channel at downstream along with tree plantation. Further in order to avoid chances of submergence during construction in monsoon, PP agreed to divert stream in one go i.e. majority of works during post Monsson season and extra protection measures shall be made like lining, sedimentation pond and closure bunds. EAC emphasized that project proponent shall not divert the tributary no. 6 of Mahalania nallah located towards south, adequate protection measures needs to be taken to protect this stream. If required, mine plan shall be amended at later stage based on above stipulation prescribed by EAC. Finally, EAC advised for adequate protection measures to be adopted by PP on diversion of stream and same shall be reported to IRO, MoEF&CC with complete report including the drone video.

Further, PP informed that it has already obtained approval of Chief Engineer (Water Resource

Department) for diversion of Mahalania nallah based on hydrogeological study conducted by WAPCOS. The recommendation of the same shall be strictly complied within certain timeline as the mine operations progresses.

Based on the above, EAC **recommended** the proposal for grant of Environmental Clearance for Chakla Opencast Coal Block Mine (North Karanpura Coalfield) with production capacity of 4.5 MTPA in ML area 863 ha of M/s Hindalco Industries Limited located at villages Chakla, Hariyatoli, Nawatoli, Amwatanr and Ambuatanr, Tehsil Chandwa, District Latehar (Jharkhand), under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

- i. PP shall submit Stage-I Forest Clearance for the forest land/area (503.578 ha) involved in the mine lease area prior to grant of Environment Clearance.
- ii. PP shall obtain CTE/CTO from State Pollution Control Board for 4.5 MTPA production capacity for open cast operation.
- iii. PP shall divert the Mahalania Nallah in a manner that its construction for diversion shall be covered in one go without extended period and works plan shall be designed to complete the diversion avoiding Monsoon season (i.e effective working months of non-monsoon season). Embankment height shall be maintained on both side of stream with sufficient free board upto 3 mts from its HFL.
- iv. PP shall maintain 50 mts width of embankment all along the diverted stream/nallah (Mahalania) and conduct dense plantation with fruit bearing native species by itself.
- v. The diversion of Mahalania Nallah shall be monitored by IRO and complete report with the drone video and satellite imagery shall be submitted to IRO, MoEF&CC.
- vi. PP shall install dedicated inpit conveyor belt with silo loading system till railway siding for transportation of 90% of extracted coal through rail and only 10% by road within three years (i.e. March, 2026). Accordingly, SPCB should grant the consent to operate.
- vii. PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only till March, 2026.
- viii. As proposed dedicated concrete Road of ~2km length and 12 mt width, away from the villages and sensitive location like school and hospitals shall be constructed to transport the coal prior to the start of the mining operation. Further 10 mts width of tree plantation shall be conducted to mitigate the vehicular and dust emission on both side of road.
- ix. The PP shall not divert the Nagarnadiya Nadi S1, Tributary S2, Tributary S4, tributary no. 6 of Mahalanianallah located towards south.
- x. The mining plan shall be revised/amended at later stage after incorporating the diversion of Nallah in one go with year-wise coal production.
- xi. PP shall implement activities-wise proposed budget of Rs. 581.822 lakhs (as Public Hearing Budget), Rs. 1185.1 lakhs (as EMP cost) in time bound manner as in Table 1 in above para of MoM 46.1.3. The details of annual expenditure shall be part of report submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated online monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, which will be part of CSR budget.

- xii. *PP needs to carry out the regular desilting operation in order to maintain continuous flow of water in diverted channel including the point “G” of the proposed channel segment before discharging into tributary of Damodar River.*
- xiii. *PP shall monitor regularly water levels in open dug wells located in village and by establishing Piezometer to ascertain the impact of mining over ground water table and to plan mitigative measures to recharge the area.*
- xiv. *Main haul road in the mine shall be provided with permanent water sprinklers, and other roads shall be regularly wetted with water tankers fitted with sprinklers. Also PP shall install Mist Cannon Dust Suppression Systems (80-100 mtrs.) at Coal Stock Yard to suppress the dust particles.*
- xv. *Garland drains (2mX3m) of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year.*
- xvi. *Check dams shall be constructed at required locations within drains to arrest eroded materials and settling ponds shall be constructed to treat mine discharge water inside the mine block.*
- xvii. *As proposed 5 water harvesting pond shall be created separately to recharging the ground water and usage of project affected families.*
- xviii. *Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps.*
- xix. *Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development. Wastewater from the HEMM washing/ workshop will be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development.*
- xx. *Dumping of OB shall move away from Chakla village and distance of about 200 mts shall be kept and additional Greenbelt development/plantation (atleast 8 to 10 ft trees) shall be carried out at the periphery of the mine lease area as well as in the adjacent area Chakla village.*
- xxi. *PP shall limit the activities of mining in its mine lease area only. No OB Dumping and infrastructure activity should be proposed and dumped on forest land. Accordingly revised Mine Plan should be submitted (if required) and submitted to Ministry.*
- xxii. *PP shall make use of advanced computer simulation techniques for design and execution of blasting operation in the mine. PP shall make use of Electronic Delay Detonators for optimal blasting in coal and OB rock to minimize the environmental impacts of blasting such as ground vibration, fly rocks and excessive dust generation*
- xxiii. *PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc.*
- xxiv. *All the recommendation of hydrogeology study conducted by WAPCOS shall be complied during the mining operation and status shall be submitted to Ministry’s IRO.*
- xxv. *As proposed during the meeting, PP shall reduce the carbon footprint after sequestration of CO₂ and 16,90,500 Kg/year, 39,00,225 Kg/year, 53,96,160 Kg/year and 1,02,39,600 Kg/year of CO₂ to be sequestered in the 5th, 10th, 15th & 20th year of mining respectively. IRO will review the progress of CO₂ sequestration. The process of sequestration of CO₂ will include the planting trees, by “Developing carbon capture and storage (CCS) technologies” and implementation of*

renewable energy. Further, PP shall carry out enough plantation to ensure carbon sequestration lost due to deforestation and other fossil fuel based activities.

- xxvi. PP shall create a **“Public Grievance Redressal and Monitoring System”** for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on **“Public Grievance Redressal and Monitoring System.**
- xxvii. PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.
- xxviii. PP shall install fixed fog cannon (mist spayer) and fixed sprinkler all along the haul road/ CHP, and OB dump till Railway siding is completed. The sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.
- xxix. PP shall deposit the approved amount as proposed for wildlife conservation plan to the Govt. of Jharkhand, Forest & Environment Dept. and further consult with State Biodiversity Authority for its CSR activity.
- xxx. PP shall construct new multispecialty (50 beds) hospital in the 10 km of the project area within 5 years for local people out of approved budget. The project affected families shall be given free medical facility. This shall be done in consultation of DM of the district.
- xxxi. PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.
- xxxii. The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.
- xxxiii. PP to maintain the topped haul road properly to minimized the dust emission. PP to also develop pucca roads by seeking consent from the panchayat with widening of roads especially roads inter linking the villages within the study area of 10 km radius buffer zone.
- xxxiv. PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.
- xxxv. PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.
- xxxvi. Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.
- xxxvii. PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.
- xxxviii. PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on

routine basis. Any non-compliance or infringement should be reported to the concerned authority.

- xxxix. Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.
- xl. PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021

Agenda Item 46.2

Sahapur East Underground Coal Mine Project 0.70 MTPA Coal production by Underground Semi Mechanized Method in Mine Lease Area of 659 Ha by M/s Chowgule and Company Private Limited located at Villages Chunia, Senduri, Kathotia, Khamaria Kala, Kholhar Tehsil Sohagpur, District Shahdol and Village KhamariyaKhurd, Tehsil Pali, District Umariya (Madhya Pradesh) – Reconsideration for Environmental Clearance- reg.

[Online Proposal No. IA/MP/CMIN/402376/2022; File No. J-11015/280/2010-IA-II (M)]

46.2.1 The proposal is for reconsideration of Environmental Clearance for Sahapur East Underground Coal Mine Project 0.70 MTPA Coal production by Underground Semi Mechanized Method in Mine Lease Area of 659 Ha by M/s Chowgule and Company Private Limited located at Villages Chunia, Senduri, Kathotia, Khamaria Kala, Kholhar Tehsil Sohagpur, District Shahdol and Village KhamariyaKhurd, Tehsil Pali, District Umariya (Madhya Pradesh).

46.2.2 The proposal was last considered in the 37th EAC meeting wherein committee deferred the proposal for submission of desired information. The PP has submitted the reply vide letter dated 31.05.2023 are as follows:

S. No.	Observation of EAC	Reply by PP
1.	PP shall submit the approved Mine Plan and Mine Closure Plan as per approved ToR for which EIA/EMP has been prepared.	➤ The mine plan was approved for NMDC vide letter no. 13016/31/2020-CA-I dated 27.12.2012. The same methodology and mechanism will be utilized for underground mining by M/s Chowgule & Company Private Limited.

		<ul style="list-style-type: none"> ➤ The Ministry of Coal vide their letter no. NA104/12/2020 dated 24.03.2023 has advised with regards to our above letter dated 16.12.2022 for initiating the process for modification of the Mining Plan for the area 659 ha. ➤ Accordingly, we have initiated the process for modification of Mining plan and Mine Closure Plan and issued work order to a competent RQP for modification of the Mining Plan and Mine Closure Plan due to change in the area from 693 Ha to 659 Ha. and the work is in advanced stage. ➤ We will submit the approved Mining plan and Mine Closure Plan (1st Revision) immediately after approval of the same by Ministry of Coal.
2.	PP shall submit proper plan with undertaking to setup the solar power plant in the Barren land area within the premise of MLA as well as outside the premise of MLA and Villages.	<ul style="list-style-type: none"> ➤ As per clause 4(vii) of ToR vide no 11015/280/2010-IA-II (M) dated 07.07.2021 issued for Sahapur East Underground Coal Mining project“No extra area should be covered beyond 14 Ha and entire agricultural activities shall be continued without any hindrance and mining shall be planned and executed with agricultural safeguard.” ➤ Accordingly, Chowgule & Company Private Limited is in the process of acquiring land for the specific purpose of mining infrastructures. ➤ Chowgule and Company Private Limited, in its action plan for Sahapur East Coal Mine has provided for solar lamps for the surrounding villages in consultation with village panchayats. ➤ However, as per the direction of MoEF&CC as to the submission of a plan for setting up of Solar Power plant in the Barren land area within the premise of Mining Lease as well as outside the premise of Mining Lease and Villages, we commissioned a study by an independent expert agency. 7 Sahapur East UG Coal Mine of CCPL –EC PPT, S.NO.46.2 Observation No. 2 As per the above study, a brief conclusion as arrived is given below <p>(a) There is no barren land within the ML area.</p>

		<p>(b) The adjacent area to the extent of about 15Km radius outside the Mining Lease of Sahapur East is considered as coal bearing area by MoC and the coal block have been started allocating thereby to the successful bidders.</p> <p>(c) As per the report prepared by the expert on solar plant, there will be an additional cost of Rs 64.17 Crores, which has to be incurred at the initial stage, which actually was not considered in the feasibility report and approved mining plan. Thus, the total cost of setting of solar plant will be around 16% of the total project cost Rs 390 Cr.</p> <p>(d) Therefore, the condition for setting up Solar Power plant may be relaxed/deleted. Rooftop solar for Office, canteen and other infrastructure facilities will be considered during implementation of the project</p>
3.	PP shall submit undertaking that there shall not be diversion of Ghinachunia Stream or Nalah	<p>➤ Here we may kindly be permitted to straighten the RainfedGhinachuniaNallah. The ground on which we may be given liberty for the above permission are as under –</p> <p>As per ToR (amendment) dated 16.12.2021 vide clause 4"a detailed hydrological survey of the Ghinachunia no/la regarding its catchment area, flow volume and length of the stretch to be diverted to be provided with proper diversion plan in EIA and EMP report".</p> <p>➤ Accordingly, the above study was conducted by hydrological expert consultant M/s GCRS, Hyderabad and incorporated in chapter 7 and 9 of final EIA/EMP report. However, we got the feasibility study of the straightening/diversion of GhinachuniaNalla done through an independent expert agency, SRK Mining Services {India) Private Limited, the study report is shown in the next slide. → As per the study report at the present perspective, it has been recommended in favour of straightening or diversion of the nallah for the sake of valued</p>

minerals, safety, productivity, generation of revenue for Government and CCPL etc. 9 Sahapur East UG Coal Mine of CCPL –EC PPT, S.NO.46.2 Observation No. 3 The ground for the recommendation favouring the straightening of nallah is given as under:

- i. The loss of Government in terms of the Revenue Sharing, Royalty, DMF, NMET, MPGATSVVA, Forest Transit Fees, GST etc against the valuation of the released coal will be Rs 67 Cr and 102 Cr for the option 1 and option 2 respectively. Thus, there will be an effect on the income of the government in terms of the taxes, royalties, revenue sharing and other duties which indeed will be a loss to the government. At the same time, the blocked coal underneath the nallah will remain unextracted for an unknown period which ultimately will be a loss to the nation. Thus, as a perusal of the above calculation it is sensible to straighten/divert the nallah.
- ii. The report signifies that the total revenue generation from the value of released coal for option 1 and option 2 will be Rs 83 Crores and Rs 133 Crores, which are merely 5.07% and 3.04% respectively. Therefore, with respect to the revenue generation and cost of the straightening of nallah makes more sense favoring the straightening.
- iii. There will be additional generation of employability to the locals during the course of the straightening/diversion of nallah.
- iv. The existing position of the nallah is in a form serpentine, thus the final line of extraction of coal near the position underneath nallah cannot be made straight, which eventually may cause unforeseen

		<p>subsidence and possibility of inundation thereby.</p> <p>v. In the approved Mining plan, there was a provision for diverting the Ghinachunianalla and the land use pattern was also prepared accordingly. 10 Sahapur East UG Coal Mine of CCPL –EC PPT, S.NO.46.2 Observation No. 3</p> <p>vi. It may also be noted that as Ghinachunianallah is not perennial but seasonal or rainfed in nature, the work of straightening the nallah can be done during dry season without interfering with the normal course of the nallah in the subsequent monsoon. This would ensure that the flow of water to the downstream remains almost continuous or similar before the diversion.</p> <p>vii. Rejuvenation of Existing Rainfed Ghinachunia nallah: We are proposing the reconstruction of Ghinachunia nallah with straightening and diverting the route of rainwater without impacting the rainwater flow.</p> <ul style="list-style-type: none"> • The natural flow of rainwater will be maintained. • In addition to this, plantation along both sides of Ghinachunia nallah will be done in consultation with DFO, fruiting and non-fruiting local trees will be planted. • It will also create aesthetic look of the area and habitat for avifauna. Further, to the above it is to mention that the Geo Technical Investigation from the cores of boreholes to evaluate the rock characteristics of Sahapur East Coal Block has been done by prior allottee through Central Institute of Mining & Fuel Research(CIMFR), Dhanbad, 11 Sahapur East UG Coal Mine of CCPL –EC PPT, S.NO.46.2 Observation No. 3 <p>Concluding Remarks</p>
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		<ul style="list-style-type: none"> ➤ The straightening of the Ghinachunia nallah makes the operation safer and also the cost benefit to both the Government and to CCPL. ➤ The rejuvenation and straightening of the nallah practically do not affect the hydrogeological and hydrological balance of the block area and its surroundings. ➤ The action of straightening at small stretch within the coal block boundary will be done with due consideration to the protecting the natural flow of the nallah. ➤ It will be done during dry season only to avoid any water logging and flood situations in the area. ➤ It can be inferred that there would be a yearly impact of 27,120 Tons on coal production from the Sahapur East Coal Mine as 569530 Tons of extractable reserve would be blocked due to non-straightening of the Ghinachunia Nallah. ➤ We have also taken initiatives to conduct the Geo Technical Investigation by our own and the techno-commercial offers has been received from the competent vendors to evaluate the Rock Mass Rating, Rock Quality Designation, Compressive Strength, Tensile Strength, Shearing Strength, Protodyakonov Index, Young Modulus and Poisson Ratio etc of the various strata present Sahapur East underground Coal Mine
4.	PP shall submit Letter of Intent granted by State Government for conducting mine activity before grant of Mine Lease	<ul style="list-style-type: none"> ➤ Chowgule& Company Private Limited has applied for Mining Lease on 13.10.2021. All the due diligence is undergoing to obtain Letter of Intent (LOI) from the Govt of Madhya Pradesh and will be submitted to EAC immediately after receiving it. ➤ We have submitted an application for mining lease request to Principal Secretary (Mineral Resource Department). The

		Acknowledgment copy of request letter is shown in the next slide.
5.	PP shall clarify the level (i.e. District Magistrate/ADM/SDM etc) of the officer (in this case CEO, District Panchayat, Smt. Ela Tiwari) from the District authority under whom the PH was conducted in Umaria District as per provisions of EIA Notifications, 2006 and its amendments therein	➤ We have enquired about the status on cadre of Smt. Ela Tiwari from District administration and the letter issued by District authority about her level to ADM is shown below
6.	PP shall submit signed and legible copy of Environment Policy of its company	➤ The environment policy is approved by the board of director and signed & legible copy of Environmental Policy is shown in the next slide
7.	PP shall submit the traffic impact assessment considering the size of trucks/dumpers as 40-50 tonnes comparing with lower capacity of fleet and action plan for implementing chute system for loading into trucks shall be submitted.	➤ The traffic impact assessment considering the size of trucks/dumpers as 40- 50 tonnes is shown in next slide The action plan for implementing chute system for loading into trucks is shown in next slide

46.2.3 *The EAC, after deliberations noted that instant project is a Greenfield underground coalmine project. The proposal was last deferred in the 37th EAC meeting with major observations. Now PP has submitted the replies as given above. On examination of replies as well as discussions held in the meeting, the committee observed that PP has still not completed technical as well as procedural requirements. Importantly PP was required to get approved the mine plan and mine closure plan as per the area defined in the granted ToR, the same is underway.*

As per last observations, PP was to submit proper plan for setting up of solar power plant within and outside the mine area. However, PP based on report expressed that a cost of Rs. 64.17 cr has been estimated to fulfill this condition. It has been stated that this cost was not considered in the feasibility report which is now rendering additional cost burden on the overall project. By considering this, the committee advised PP to have alternate option such as green plantation/fruit plantation in and around ML area wherever land is available within ML area; such as government land, Cremation ground, Khal khaddar road, around surface water body as indicated in their submission, and also in outside the ML area and make it overall upto 30% of project area as per the guidelines or at least 20% being UG operation. The Committee emphasized to explore availability of land outside the ML area as well.

While discussing the diversion of Ghinachunia Stream, which is one of deferred points, the PP claimed that there would be loss of Rs. 102 cr which would be occurring by not extracting the coal from vicinity/underneath of stream. The committee surprised to note that PP rather calculating

Environmental loss only focusing loss of exchequer. It was also noted that this loss is merely 5% of revenue generation by coal during the life of mine. The Committee finally concluded that there is no technical reason given by PP on the need for diverting the stream, which should be based mine plan and mere calculation are made on total coal reserves'; once it is noted to be underground operation. PP was advised not to divert the stream and modify the mine plan and mine closure plan, if needed. It was also advised to conduct the study on ecology and bio-diversity loss upon diversion of stream in commensurate vis a vis with the loss of coal.

The Committee also desired that PP must employ atleast 20% of the truck using the clean fuel and their size shall not be less than 40 tonnes (pay-loads) while considering the road transportation.

Finally, the committee concluded that in background of tree plantation, protection of nallah, and employing clean fuel transportation system with higher fleet size, PP should evaluate the entire project through cost benefit analysis without compromising the environmental implication as deliberated above. Taking into account of aforesaid losses of Rs. 64.17 cr. &Rs. 102 cr against the important environmental features, the Committee emphasized to recalculate the rated capacity of coal production by adopting environmental protection measures as per the suggestion of EAC for taking view of the Committee.

In view of above, EAC observed that PP has to submit the compliance of below mentioned observation for further consideration of the project:-

- i. PP shall submit the plan for tree plantation at least 20% of the project area considering the land available within ML area such as government land, Cremation ground, Khal khaddar road, around surface water body, as well as outside the ML area.*
- ii. PP needs to evaluate the entire project through cost benefit analysis without compromising the environmental implication and recalculate the rated capacity of coal production by adopting environmental protection measures as per the suggestion of EAC.*
- iii. PP shall conduct the study on ecology and bio-diversity loss upon diversion of stream in commensurate with the loss of coal and submit protection measures for stream without diversion.*
- iv. PP shall submit the transportation plan by considering atleast 20% of the truck using the clean fuel and their size shall not be less than 40 tonnes (pay-loads) in-light of traffic study as per the route decided for transportation.*
- v. PP shall prepare the mining plan/mine closure plan with above measures.*

*The proposal is **deferred** on above lines*

Agenda Item 46.3

Tubed coal mine project of 6 MTPA of M/s Damodar Valley Corporation located at villages Tubed, mangra, dihi, ambajharan, Dhobiajharan, nawari, Tehsil Latehar, District Latehar (Jharkhand) – Regarding Amendment of Environment Clearance dated 28.04.2020

[Online proposal number IA/JH/CMIN/428908/ 2023; File No. J-11015/54/2017-IA.II.(M)]

46.3.1 The proposal is for Amendment of Environment Clearance dated 28.04.2020 for Tubed coal mine project of 6 MTPA of M/s Damodar Valley Corporation located at villages tubed, mangra, dihi, ambajharan, Dhobiajharan, nawari, Tehsil Latehar, District Latehar (Jharkhand).

46.3.2 The project proponent vide letter no. Tubed/EC/2023 requested Ministry for amendment of specific condition no. (xv) & (xxiii) of EC letter dated 28.04.2020.

Specific condition no. (xv) reads as; “No transportation of coal shall be carried by road after commission of proposed railway siding near the coal mine i.e. after 36 months from the date of issue of EC” and ;

Specific condition no. (xxiii) is: “*Install in-pit conveyor from the pit bottom upto the silo loading point/rapid loading system within 3 yrs and further no transportation shall be carried over by trucks to railway siding.*”

Reason for the amendment sought: PP stated that “In view of the foregoing and necessity of shipment of coal from Tubed Coal Mine Project to DVC Thermal Power Station, amendment in the EC condition (xv & xxiii of Sl. No. 5) may kindly be considered for allowing transportation of coal by road from Tubed Coal Mine Project to Kusmahi Railway Station Goods Siding for a period of 60 months from commencement of coal evacuation by road or till construction and operationalization of permanent coal evacuation arrangement”.

Further, PP vide letter dated 01.07.2023 also submitted that

- RITES has been appointed as consultant, a detailed project report has been prepared and submitted to the railway authority on 27.09.2018 and approval received on 26.06.2019.
- As per the DPR, the route length is 17.04 Km from Demu Block halt station of East central railway Barkakhana-Daltongnj section. The estimated project cost is Rs. 490.47 crores (excluding land cost).
- An amount of Rs. 7.66 Crores has been deposited with railway and;
- DVC, MDO and M/s RITES has been scheduled on 05.07.2023 to speed up process.

46.3.3 *The EAC, after deliberations noted that instant project is for amendment of existing EC condition wherein extension of timeline for construction of belt conveyor and railway siding for coal transportation is being sought and further proposed to transport by road for next three years until said mechanism is installed. While discussing the reasons for non-compliance of EC condition, the Committee noted that earlier PP has made efforts to implement the condition and DPRs were prepared; however, the same was not carried forward with the concerted efforts. It was observed that mine has been started in the current year i.e from January 2023; while the EC was granted on 28.04.2020, which mean it took almost 3 years to commence the production. The mine is in initial stage of production against the permitted EC capacity of 5 MTPA and achieving peak production will take for another 2 years. Now by considering the traffic study and detailed schedule of work plan by PP, EAC agreed to extend the timeline for next 3 years including the relaxation of one year, available for Corona period by Ministry. EAC also took a note that PP could be given the relaxation period of one year only as provided for all projects in context of Corona pandemic but as per preparedness of PP for*

implementation of in pit belt conveyor, giving one-year relief may not suffice. Therefore, based on submission of PP before the committee, the revised the specific condition no. (xv) & (xiii) is recommended for 3 year, which reads as:

Specific condition no. (xv) “No transportation of coal shall be carried by road after commission of proposed railway siding near the coal mine i.e. after 36 months w.e.f. 27.04.2023.”

Specific condition no. (xiii) “Install in-pit conveyor from the pit bottom upto the silo loading point/rapid loading system within 3 yrs for further no transportation shall be carried over by trucks to railway siding and accordingly the SPCB will not issue the CTO.”

Based on the above, EAC recommended the proposal for grant of amendment of Environmental Clearance for Tubed coal mine project of 6 MTPA of M/s Damodar Valley Corporation located at villages Tubed, mangra, dihi, ambajharan, Dhobajharan, nawari, Tehsil Latehar, District Latehar (Jharkhand) under EIA Notification, 2006 and its amendments therein with following additional specific conditions: -

- i. Install in-pit conveyor from the pit bottom upto the silo loading point/rapid loading system within 3 yrs w.e.f 27.04.2023. During the period the coal transportation shall be made through road through tarpaulin covered trucks.*
- ii. No village road/sensitive locations (school, hospital, etc.) shall be used for transportation of coal*
- iii. PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only.*
- iv. No transportation of coal shall be carried by road after commission of proposed belt conveyor and railway siding i.e. after 36 months w.e.f. 27.04.2023. SPCB shall grant the CTO accordingly.*
- v. PP shall increase the plantation along both sides of approach road along with the installation of water sprinkler for dust suppression at interval of 500 meters.*
- vi. PP shall maintain the road conditions for smooth transportation ensuring no dust emission are released due to truck movements. Proof of road condition shall be part of six monthly report to be submitted to IRO, MoEF&CC.*
- vii. PP shall create a “Public Grievance Redressal and Monitoring System” for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on “Public Grievance Redressal and Monitoring System.*
- viii. PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.*
- ix. PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*

- x. *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.*
- xi. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xii. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xiii. *PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc.*
- xiv. *PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021*

Agenda Item 46.4

Proposed Kedla Opencast project (1.35 MTPA peak) of M/s Central Coalfields limited in an area of 1084.49 ha located at West Bokaro Coalfield in Mandu Development block of Ramgarh District (Jharkhand) – Amendment of Terms of Reference dated 22.10.2019

[Online Proposal No. IA/JH/CMIN/253863/2022; F No. 23-244/2018-IA.III (V)]

46.4.1 The proposal for amendment of Terms of Reference dated 22.10.2019, which was granted under violation category for project “*Kedla Opencast project (1.35 MTPA peak) of M/s Central Coalfields limited in an area of 1084.49 ha located at West Bokaro Coalfield in Mandu Development block of Ramgarh District (Jharkhand)*”.

46.4.2 PP has requested Ministry for amendment in ToR of Kedla OCP (2 MTPA) by reducing mine lease area from 1084.49 ha to 189.05 ha.

Reason for the Amendment in ToRs: Pre-feasibility report of Kedla OCP was prepared within the project area of 1084.49 Ha for making an application in Form I for EC as per MoEF&CC notification no: SO 804 (E) Dt.14.03.2017. The Terms of Reference of the project was issued by MoEF&CC vide F.No. 23-244/2018-IA (III) (V) Dated 22.10.2019. However, the said proposal involves 773.08 Ha vacant land, wherein majority of land is un-diverted forest. Therefore, to expedite environment clearance, a revised mining plan has been prepared by excluding vacant land, within a revised project area of 189.05 Ha and rated capacity of 2.0 MTPA. Accordingly, the amendment in ToR application is being submitted for kind perusal.

46.4.3 Committee observed the following during the EAC meeting:

- i. Terms of Reference was granted on 22.10.2019 vide F. No. 23-244/2018-IA (III) (V) under violation category.
- ii. Stage-I FC for diversion of 168.50 ha of forestland for non-forestry purposes granted vide MoEF&CC letter No. 8-55/2003-FC dated: 23.08.2004.
- iii. NOC from CGWA has been issued vide Ref No: CGWA/NOC/MIN/ORIG/2021/ 13999 for ground water abstraction of 2460.80 KLD, which is valid upto 08.12.2023.
- iv. Total project area is 189.05 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the CCL Board on 30.07.2022 for project area of 189.05 ha.
- v. Life of Mine is 08 years.
- vi. The KedlaNala will be diverted in consultation with the Water Resource Department of the State Government.

46.4.4 *EAC after detailed deliberation noted that the instant proposal is for amendment of existing ToR dated 22.10.2019, which was issued under violation category by MoEF&CC for ML of 1084.49 ha. The PP has requested for the reduction in the Mine lease area from 1084.49 ha to 189.05 ha. Committee reviewed the project and found that the KedlaNallah flowing through the mine lease area, and PP has intended for diversion. The Committee opined that Diversion shall be part of mining plan. It was also noted that EDS was raised by MoEF&CC in context of reasons of land reduction being a violation category project. In this background, the Committee agreed to consider the amendment of TOR being reduced area with the remarks that EAI-EMP report shall be submitted to SEIAA/SEAC of State for appraisal.*

In view of above, the committee recommended amended in the Terms of Reference dated 22.10.2019 and will be read as: “Kedla Opencast project (1.35 MTPA peak) of M/s Central Coalfields limited in an area of 189.05 ha located at West Bokaro Coalfield in Mandu Development block of Ramgarh District (Jharkhand)”.

*Based on the above, EAC **recommended** the proposal for grant of amendment of Terms of reference for Kedla Opencast project (1.35 MTPA peak) of M/s Central Coalfields limited located at West Bokaro Coalfield in Mandu Development block of Ramgarh District (Jharkhand) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:*

- i. *PP shall obtain the Stage II forest clearance for the forestland lying inside the mine lease area.*
- ii. *Nallah flowing through the mining lease area shall be integral part of the mining plan.*
- iii. *All other conditions stipulated in the ToR granted vide letter no. 23-244/2018-IA (III) (V) dated 22.10.2019 shall remain unchanged.*

Agenda Item 46.5

Expansion of Singhori opencast coal mining project for increase in production capacity from 1.12 MTPA to 1.20 MTPA (increase of 10% to original EC i.e 0.8 MTPA) of in land area of 423.91 Ha (within the already sanctioned EC ML area of 425.04 Ha) by M/s Western Coalfields Ltd, located in the village Singhori, Tehsil Parseoni, District Nagpur (Maharashtra) – Reconsideration for Environmental Clearance dated 23.05.2022 issued under OM no. F. No. IA3-

22/10/2022-IA.III 07.05.2022 (availing 50% relaxation in original EC capacity under clause 7(ii) of EIA, Notification with exemption of public hearing) reg.

[Online Proposal No. IA/MH/CMIN/410896/2022; File No. J-11015/67/2006-IA-II(M)]

46.5.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022 to avail 50% relaxation Ministry’s OM dated 7th May, 2022 for project “*Singhori opencast coal mining project for increase in production capacity from 1.12 MTPA to 1.20 MTPA (increase of 10% to original EC i.e 0.8 MTPA) of in land area of 423.91 Ha (within the already sanctioned EC ML area of 425.04 Ha) by M/s Western Coalfields Ltd, located in the village Singhori, Tehsil Parseoni, District Nagpur (Maharashtra)*”.

46.5.2 The proposal was earlier considered in the 39th EAC meeting held on 12-13 January 2023 wherein committee has deferred the proposal for submission of information. The PP has submitted the reply compliance of observation made in the 39th EAC meeting are detailed below:

Sl. No	Particulars (ADS Query)	Status of Compliance
1	PP shall submit the prior consent to operate for enhanced capacity that is for 1.20 MTPA from the State Pollution Control Board under Air and Water Act.	<p>Complied</p> <p>Consent to Establish for expansion from 1.12 MTPA to 1.20 MTPA has been obtained vide Format1.0/CC/UAN No.0000144219/CE/2303000014 dated 01.03.2023.</p> <p>Consent to Operate for 1.20 MTPA from Maharashtra Pollution Control Board, Mumbai have been obtained vide Format1.0/CC/UAN No.MPCB CONSENT - 0000144263/CO/ 2303001243 dated 17.03.2023.</p>
2	PP shall submit the undertaking to complete the implementation of pipe conveyor system and agreement with MAHAGENCO to stop the road transportation.	<p>Complied</p> <p>As directed, Undertaking has been attached.</p> <p>It is to be mentioned here that Closed Pipe Conveyor Belt System has been commissioned in the nearest coal mine named Bhanegaon OCM in January 2023 and it is expected that the same will also be commissioned in the Singhori OCM latest by the end of December 2023.</p>

Sl. No	Particulars (ADS Query)	Status of Compliance
		Geotagged photos of the pipe conveyor system are attached.
3	PP shall submit the vetted action report from IRO an certified compliance report of the EC letter dated J-11015/67/2006-IA. II (M) dated 22.08.2019 granted for total 40% expansion after complying all major specific condition mentioned in the EC letter.	<p>Complied</p> <p>The certified copy of EC compliance report (w.r.t. EC vide no. J-11015/67/2006-IA. II (M) dated 22.08.2019 – 1.12 MTPA) was secured from IRO, MOEF & CC Nagpur vide letter no. EC-1067/RON/2019-NGP/10433 dated 13.10.2022.</p> <p>In the aforesaid Certified Copy of Compliance Report, there was two nos. partially complied condition for which the action taken report was submitted to IRO, MOEF & CC, Nagpur vide email dated 31.10.2022.</p> <p>Now, as directed by 39th EAC, for the needful compliance of directives, a formal request letter for obtaining vetted action taken report has been submitted to Integrated Regional Office, MoEF&CC, Nagpur vide letter no WCL/NA/BSSA/SAM/2023-24/228 dated 27/28.05.2023.</p> <p>The nature of partially complied condition pertains to third party audit of EC compliance.</p> <p>It may be mentioned here that, third party assessment of EC compliance was completed (field visit) by CSIR-NEERI on 17.01.2023. Copy of the same has also been attached.</p> <p>The matter regarding issuance of vetted ATR was discussed with RO, MoEF&CC, Nagpur wherein it was informed that the partially complied condition pertaining to third party assessment of EC</p>

Sl. No	Particulars (ADS Query)	Status of Compliance
		compliance as such does not require formal issuance of closure report/ vetted ATR.
4	PP shall submit the status of construction of ETP along with the plan for addition of recycling setup.	<p>Agree to comply with the condition and compliance is in progress.</p> <p>For construction of the Effluent Treatment Plant (ETP) at Singhori OCM, work has been awarded and is in progress and expected to be completed latest by 30.06.2023. A copy of the work order is attached.</p>
5	PP shall submit mine photographs including the dump, 3-tier plantation, ETP and other major mine component certified by the technical department head.	<p>Complied</p> <p>Photographs including the OB dump, 3-tier plantation, other major mine components such as sedimentation tank, rain guns installed in coal stock yard and mist canon system deployed at coal crusher plant certified by the Project Proponent is attached.</p>
6	PP shall submit NOC from CGWA for the withdrawal of Ground water.	<p>Complied</p> <p>PP has secured NOC from CGWA for the said project vide NOC no. dated 24.10.2019 having validity up to 23.10. 2022. Copy attached.</p> <p>Renewal application of NOC has been submitted to CGWA. Application has been approved by CGWB and is in processing stage for issue of the formal letter by CGWA, New Delhi.</p> <p>A copy of the latest online status through CGWA Portal is attached.</p> <p>A copy of the request letter addressed to CGWA, New Delhi for early release of NOC is attached.</p> <p>All the efforts are being made for the early issuance of the formal NOC renewal. Once secured, copy of</p>

Sl. No	Particulars (ADS Query)	Status of Compliance
		the same will be submitted to MoEF& CC along with six monthly compliance report.
7	PP shall submit the status of expenditure plan for the already allocated in Public Hearing Budget including the amount that has been spent already or going spend in future.	Complied. Point wise compliance status in respect of the public hearing along with expenditure details (already spent) and expected to spend in FY 2023-24 (Budget) is attached.

46.5.3 *The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted due to shortage of coal in the country and PP was required to submit the proposal within six months with collection EIA/EMP based on standard ToR. It has further been observed that EC under this OM was granted on 23rd May, 2022.*

Earlier, the committee has reviewed the proposal in the 39th EAC meeting and deferred with certain observations. Now it is being considered after submitting the documents/information by PP. The PP has now submitted CTO for production capacity of 1.2 MTPA. On enquiry about mechanized system, PP assured, through an undertaking dated 12.05.2023 that conveyor belt system will be operational by December 2023; thereafter no transportation shall be undertaken by road. Accordingly, the committee emphasized that SPCB shall issue the CTO for compliance of this condition. PP also submitted the certified compliance report and action taken report to the IRO 27/28.05.2023. It was assured for Construction of ETP by June, 2023, and its operational status will be submitted to IRO, MoEF&CC.

*Based on the above, EAC **recommended** the proposal for grant of Environmental Clearance for Singhori opencast coal mining project for increase in production capacity from 1.12 MTPA to 1.20 MTPA (increase of 10% to original EC i.e 0.8 MTPA) of in land area of 423.91 Ha (within the already sanctioned EC ML area of 425.04 Ha) by M/s Western Coalfields Ltd, located in the village Singhori, Tehsil Parseoni, District Nagpur (Maharashtra) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:-*

- i. *As proposed, PP to implement surface miner and conveyor belt system from pit head to CHP by December 2023 and thereafter no transportation shall be permitted by road. SPCB shall issue the CTO accordingly, ensuring that no road transportation shall take place beyond this time.*
- ii. *PP shall deploy 40 tonnes (payload) covered trucks/dumper to reduce fleet size till Rapid loading system is completed.*

- iii. *Wastewater from the HEMM washing/ workshop shall be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development as applicable. PP shall submit operational status of ETP to IRO, MoEF&CC the six monthly.*
- iv. *Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development.*
- v. *PP shall construct pond with proper drain for irrigation purposes to villagers with the consultation of village panchayat.*
- vi. *PP shall provide village Bore-well/Open well to nearby villages as community development programme.*
- vii. *Garland drains (2mX3m) of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year.*
- viii. *Check dams shall be constructed at required locations within drains to arrest eroded materials.*
- ix. *Settling ponds shall be constructed to treat mine discharge water inside the mine block.*
- x. *Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps.*
- xi. *Additional Greenbelt development/plantation shall be carried out at the periphery of the mine lease area as well as in the adjacent area.*
- xii. *PP shall construct water harvesting structure with the facility of ground water recharge facility.*
- xiii. *PP shall ensure the employment for the Project Affected Families (PAF) on timely basis.*
- xiv. *PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.*
- xv. *PP shall construct a pucca road to maintain the safety of people residing nearby along the transportation route with plantation on either side of the road.*
- xvi. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xvii. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xviii. *Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- xix. *PP to fulfill all the commitment made in the minutes of public hearing to address the issues raised therein in a time bound manner and a progressive report to be furnished to IRO in every six monthly as compliance report.*
- xx. *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora,*

fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent”. The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.

- xxi. *All other conditions stipulated in the previous ECs granted vide letter no. J-11015/67/2006-IA.II (M) dated 17.05.2007, 22.08.2019 and 23.05.2022 shall remain unchanged.*
- xxii. *PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021*

Agenda item 46.6

Expansion of Dinesh (Makardhokra -III) Opencast Coal mining project for increase in production capacity from 4.2 MTPA to 4.5 MTPA (increase of 10% w.r.t 3 MTPA) in land area of 919.63 Ha by M/s Western Coalfields Ltd, located in the Village Hevti, Tehsil Umrer, District Nagpur (Maharashtra) – Reconsideration for Environmental Clearance dated 26.05.2022 issued under OM vide F. No. IA3-22/10/2022-IA.III 07.05.2022- [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification]

[Online proposal No. IA/MH/CMIN/412454/2022; File No. J-11015/537/2008-IA-II(M)]

46.6.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022 to avail total 50% relaxation for project “Dinesh (Makardhokra -III) Opencast Coal mining project for increase in production capacity from 4.2 MTPA to 4.5 MTPA (increase of 10% w.r.t 3 MTPA) in land area of 919.63 Ha by M/s Western Coalfields Ltd, located in the Village Hevti, Tehsil Umrer, District Nagpur (Maharashtra)”.

46.6.2 The proposal was earlier considered in the 39th EAC meeting held on 12-13 January 2023 wherein committee has deferred the proposal for submission of information. The PP has submitted the reply of observation made in the 39th EAC meeting as mentioned below:

Sr. No	Observation in 39th EAC Meeting	Compliance
1	PP shall submit the vetted ATR of certified compliance report of the EC letter dated J-11015/537/2008-IA.II (M) dated 29.11.2018 granted for total 40 % expansion	In order to comply with observation made in 39 th EAC meeting, a letter for obtaining vetted ATR has been submitted to Regional Office, MoEF&CC, Nagpur vide letter वेकोली/उमेरर/क्षे.म.प्र./पर्यावरणविभाग/2023-24/330 dated 22.05.2023. Only one condition was observed partially complied in the certified compliance report and No non-compliance

		<p>recorded for Dinesh (Makardhokra-III) Expansion OC by IRO, MoEF&CC.</p> <p>The partially complied condition was observed for delay of more than 7 days in advertisement regarding EC. The EC letter for the project was issued on 28.11.2018 and advertisement could be made on 19.12.2022. Thus, project proponent has requested for condoning delay of additional 13 days in ATR submitted on 03.11.2022.</p> <p>It was discussed with RO, MoEF&CC, Nagpur, the partially complied condition pertaining to delay of advertisement in EC does not required formal issuance of closure report.</p>
2	<p>After achieving the production capacity and complying all specific condition mentioned in the EC letter, PP shall re-collect Baseline data after achieving the production capacity granted for total 40 % expansion along with revised EIA-EMP report incorporating the major changes and their implications.</p>	<p>In compliance of observation made in 39th EAC meeting, the baseline data was re-collected from 15th January to 15th April, 2023 in order to submit the revised EIA-EMP report by May'23 (to comply with point 7 of EAC observations). The coal production from the mine during 2022-23 was 3.00 MTPA. The impact assessment study has been conducted for incremental production capacity from 3.00 MTPA (achieved in 2022-23) to 4.50 MTPA (proposed in 2023-24). All the specific conditions as mentioned in EC letter has been complied as noted by the IRO in its certified compliance report dated 17.10.2022. Based on re-collected baseline data, revised EIA-EMP report has been prepared by incorporating changes and their implications.</p>
3	<p>PP shall submit the status of ETP along with the plan for addition of recycling setup.</p>	<p>The ETP of Dinesh OC mine is in operation and continuously monitored for effluent water. The annual operation and maintenance of ETP for a period of two years from 25.11.2021 to 24.11.2023 is being carried out at the cost of 6.75 Lakhs. It includes regular running a maintenance along with excavation of silt from all tanks. The water treated from the ETP is utilised for dust suppression and watering of plants. The sludge from ETP is dried in sludge drying beds. It is collected by authorised hazardous waste collector for disposal.</p>

		To ensure compliance of effluent standards, monitoring of the ETP effluent is carried out by CMPDIL Nagpur on fortnightly basis for all mines of WCL. The effluent water quality of ETP for previous 2 years is provided in EIA Report.
4	PP shall submit the mine photographs including the dump, 3-tier plantation, ETP and other major mine component certified by the technical department head.	Mine photographs including the dump, 3-tier plantation, ETP and other major mine component certified by the technical department head are attached as Annexure-XIII of revised EIA-EMP report.
5	PP shall submit the valid NOC from CGWA for the withdrawal of Ground water.	As per the above observation, NOC is obtained from CGWA for abstracting Ground Water (NOC No. CGWA/NOC/MIN/ORIG/2019/5548) which was valid up to 09/06/2021. Renewal application for NOC is submitted to CGWA on 07/06/2021. Presently the application is under consideration at CGWA, Delhi and for which online status is displayed as 'Approved'. Formal issuance of certificate is awaited.
6	PP shall submit the status of expenditure plan for the already allocated in Public Hearing Budget including the amount that has been spent already or going to spend in future.	Status of expenditure plan for the already allocated in Public Hearing Budget including the amount that has been spent already or going to spend in future is provided in Section 7.2 of EIA-EMP report.
7	Proposal should be resubmit the proposal for review by May 2023.	Agreed

46.6.3 *The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in view of shortage of coal in the country and PP was required to submit the proposal within six months with collection EIA/EMP based on standard ToR. It has further been observed that EC under this OM was granted on 26th May, 2022.*

Earlier, the committee has reviewed the proposal in the 39th EAC meeting and considered this time after submitting the information. Committee observed that the PP has again not completed important task such as the dump plantation, implementation of conveyor belt and construction Toe wall.

From images it is seen that Dump can be destabilized at any point of time in absence of plantation and retaining wall. Plantation along the mine boundary is still at the seedling stage. Process of getting NoC from CGWA for extracting ground water has not completed which is still at the application stage. Railway Siding with Silo and belt arrangement is at under construction stage. Further, it was noted that PP has reached the production capacity of 3 MTPA against granted capacity of 4.5 MTPA. Therefore, the committee emphasised to complete the above said condition in order to avail the approval of EC issued under OM dated 07.05.2022. EAC finally expressed displeasure on non-compliances and cautioned PP if these are not completed in within 10 months, EAC has no option but to withdraw the instant of 10% special relaxation.

In view of the above, EAC observed that PP has to submit the compliance of below mentioned observation for further consideration of the project:

- i. PP must achieve the production capacity of 4.5 MTPA for availing the recommendation of already issued EC dated 26.05.2023 under OM dated 07.05.2022.*
- ii. PP shall initiate the plantation all along the periphery, and slope of OB dump as well construct retaining wall with proper garland drain.*
- iii. PP shall submit the status of plantation i.e. 30% of total project area through proper drone video along with budgetary provision.*
- iv. PP shall submit the NoC from CGWA for extracting ground water.*
- v. PP shall submit the progress report for the construction work of railway siding with silo and belt arrangement. The PP shall commission the mechanized system before December 2023.*

*The proposal is **deferred** on above lines and can be submitted only after fluffing above points.*

Agenda item 46.7

Expansion of Gevra Opencast Coal Mine project from 49 MTPA to 52.5 MTPA (increase of 10% w.r.t. 35 MTPA) in an ML area of 4184.486 ha of M/s South Eastern Coal Fields Limited, located at Villages Gevra and Mangaon, District Korba (Chhattisgarh) – Environmental Clearance under OM vide F. No. IA3-22/10/2022-IA.III [E177258] dated 07.05.2022 - [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification]

[Online Proposal No. IA/CG/CMIN/420077/2023; F No. J-11015/85/2010-IA.II (M)]

46.7.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022 to avail total 50% relaxation for project “Gevra Opencast Coal Mine project from 49 MTPA to 52.5 MTPA (increase of 10% w.r.t. 35 MTPA) in an ML area of 4184.486 MTPA of M/s South Eastern Coal Fields Limited, located at Villages Gevra and Mangaon, District Korba (Chhattisgarh)”.

46.7.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

- (i) The project area is covered under Survey of India Topo Sheet No. 64 J /11, Scale- 1:50000 and

is bounded by the geographical coordinates ranging from 22°18'00" to 22°21'42" N and 82°32'00" to 82°39' 30" E.

- (ii) Coal linkage of the project is proposed for NTPC and Various thermal power plants.
- (iii) Joint venture cartel has been formed: No
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation, employment to 4391 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as improvements in physical infrastructure; improvements in social infrastructure, increase in employment potential, contribution to the exchequer, meet energy requirement and post-mining enhancement of green cover.
- (vii) Earlier, the Environmental Clearance of Gevra opencast was accorded
 - a. Vide J-11015/85/2010-IA.II(M) Dt: 05th Sept 2022 for Gevra Opencast Coal Mine from 49 MTPA to 52.5 MTPA (increase of 10% w.r.t 35 MTPA) in the Mine Lease Area of 4184.486Ha. of M/s South Eastern Coalfields Limited in district Korba CG- Environment Clearance under OM vide F. No. IA3-22/10/2022-IA.III (E177258) Dt: 07.05.2022- (Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification)
 - b. Terms of reference granted on : NA application made under clause &(ii) of EIA notification OM vide F. No. IA3-22/10/2022-IA.III dt: 07.05.2022 – Availing total 50% relaxation of OM dealing with exemption of public hearing)
- (viii) Total Mine lease areas per block allotment is 4184.486 Ha. Mining plan for 52.5 MTPA was approved by SECL Board in its 132nd meeting held on 03.08.2022. Mine closure plan is an integral part of mining plan.
- (ix) The land usage pattern of the project is as follow

i. Pre-mining Land Usage:

S. No.	LAND USE	WITHIN ML AREA (Ha.)	OUTSIDE ML AREA (Ha.)	TOTAL (Ha.)
1	Agricultural land	1273.426	1247.145	2520.571
2	Forest land	441.410	575.002	1016.412
3	Waste Land	0	0	0
4	Grazing Land	0	0	0
5	Surface Water Bodies	7	0	7
6	Settlements	0	69.280	69.280
7	Others (Specify) Govt. Land	315.414	255.809	571.223
	TOTAL	2037.250	2147.236	4184.486

ii. **Post Mining:**

S No	Pattern of utilization	Total Area (ha)	Reclaimed Area	Un-reclaimed Area

1	Excavation /Quarry Area	0		
	Backfilled Area	1378	1378	
	Final void /Water body	659.250		659.250
2	External Dump	480	480	
3	Built up area (Infrastructure, colony, roads, R & R site)	1243.392		1243.392
4	Safety zone: Undisturbed area & Green belt	423.844	423.844	
	Total	4184.486	2281.844	1902.642

- xi. Total geological reserve reported in the mine lease area is 1940.98 MT (as on 01.04.2014 as per 70 MTY PR) with 1337.68 MT (as on 01.04.2014 as per 70 MTY PR) mineable reserve. Total Mineable reserve within 4184.486 Ha (as on 01.04.2023) is 265.731 MT. Out of total mineable reserve of 265.731 MT within 4184.486 Ha, 265.731 MT are available for extraction. Percent of extraction is 100%.
- xii. 18 nos. seams with thickness ranging from 0.69 m – 43.73 m are workable. Grade of coal is G 10, stripping ratio 1.62 cum/ton, while gradient is 1 in 6 to 1 in 12
- xiii. Method of mining operations envisages by Open cast mining with Surface Miner and Shovel-Dumper combination
- xiv. Life of mine is 06 years.
- xv. The project has 7 nos. external OB dumps in an area of 480 ha with 90 m height and 147.60 Mm³ of OB. 8 nos. internal OB in an area of 1378 ha with 1119.40 Mm³ of OB is envisaged in the project.
- xvi. Total quarry area is 2037.250 ha out of which backfilling will be done in 1378 ha while final mine void will be created in an area of 659.250 ha with a depth of 40 m. Backfilled quarry area of 1378 ha shall be reclaimed with plantation. Final mine void will be converted to water body.
- xvii. Transportation of coal has been proposed from face to in-pit crusher is by trucks, from in-pit crusher to surface Ground bunker is by conveyor system, from Ground Bunker to Silos is by belt conveyor & finally from Silos to consumers: By Rail & MGR.
- xviii. Reclamation Plan in an area of 1863.67 ha, comprising of 480 ha of external dump, 1378 ha of internal dump and 5.672 ha of green belt. Other areas 1243.392 ha includes excavation areas along ML boundary, along roads and infra, embankment area and in township located outside the lease etc. An area of 418.174 ha as Safety Zone.
- xix. 1016.412 ha of forest land has been reported to be involved in the project. The status of diversion of forest land for non - forestry purposes is as under:-

Area (in ha)	Stage-1 /Final FC issued vide letter no. and date	Validity period of FC
100.898	vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008	Co-terminus with the mining lease or 20 years
46.198	vide MoEF Clearance F no.8-81/ 2006-FC dated 20-04-2015	Co-terminus with the mining lease
192.046	vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease
564.885	vide MoEF Clearance F no.8-79/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease
112.385	vide MoEF&CC Clearance F.No. 8-41/2017-FC dated 21.06.2022.	Co-terminus with the mining lease
1016.412	Total forest land for which Stage-1 Forestry Clearance obtained	

(xx) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.

(xxi) Wildlife conservation plan for Schedule I species: NA

(xxii) The ground water level has been reported to be varying between 2.30 m to 11.98 m in post-monsoon and 5.56 to 14.60 m in pre-monsoon season. Total water requirement for the project is 13731 m³/day (Approx) peak demand.

(xxiii) The ground water clearance was obtained on 22.01.2019 for 11487 m³/day withdrawal of ground water vide NOC no. CGWA/NOC/MIN/ORIG/2018/4474, from Central ground water Authority, Ministry of water Resources Govt. of India. Application for renewal of NOC was made online (Application no. 21-4/630/CT /MIN /2017 Dt: 02.12.2020). The proposal has been approved by Chairman CGWA New Delhi on Dt: 19.07.2022. NOC yet to be issued

(xxiv) Public hearing for the project of 35 MTPA capacity in an area of 4184.486 ha was conducted on 22.08.2008 in the premises of Tehsil Office, Katghora, District Korba. Major issues raised in the public hearing include compensation, Rehabilitation & resettlement, Facilities at R&R sites, pollution control etc. Appropriate action to address the issues raised in the Public Hearing have already been taken/are being taken.

(xxv) commitment made by Project Proponent to address Public Hearing concerned in Lieu of corporate Environment Responsibility to be mentioned in the following table

Particulars	Location	Total in Lakhs
Infrastructure creation for Drinking water supply	Dhurena, Bhinjra, Junadih, Vijay Nagar, Awadnagar, Dadarpara, Ganga Nagar & Nehru Nagar	117.08
Sanitation, Art, Culture & sports, Electrification including Solar Power, Cross Drains, , Infrastructure	Vijay Nagar, Ganga Nagar & Nehru Nagar	481.57

Education	Binjhara, Kosmunda, Vijay Nagar, Ghatmuda, Ganga Nagar & Nehru Nagar	59.18
Skill Development, Livelihood	CIPET 520 underprivileged/ unemployed youths	335.40
Roads	By pass road, GevraGhatroad,Hardi Bazar to Urga,	113.92
Solid waste Management facilities	Shakti Nagar &Urja Nagar	290
Scientific support & awareness to local farmers to increase yield of crop & fodder		
Rainwater Harvesting	GM Office, CETI, Gevra House, DAV SaraswatishishuMandhir, Sr. recreation club, Telephone exchange, Sr. Guest house, Beacon school	20
Soil Moisture conservation works		
Avenue plantation	Colony area	543.17
Plantation in community areas	Kasaipali village, Vijaynagar, DipkaGarudnagar,Amgaon,Malgaon.Chai npur,Makanpurpali,Jabar,Chakabuda,Bilai bazar,Saraisingar,Chindpur,Hardibazar	111.41
Health	Medical camps in Ralia (2022-23)	4.13
Agricultural Programme		
Total		2075.86

(xxvii) Consent to Establish cum Operate for capacity (52.50 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on 15.03.2023 and valid for one year

(xxviii) Hasdeo river is the main drainage of the area flowing 08 kms from mine boundary. The study area includes a number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholarnallah. Lilagar river also flows through the study area of project.

(xxix) Regular monitoring of ambient air quality is being carried out with frequency of twice a week. The documented report is submitted to APCCF, MoEFCC, Regional Office, Nagpur, Member Secretary, Paryavan Bhavan , Raipur and RO CECB, Korba along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.

(xxx) There are court cases pending with the project proponent as per the following details:-

1. Details of Court Case

S.No	Case no.	Court	Case Details	Status
1	1217/2007	Presently the case no. is 886/2015 and the	Regional Office, Chhattisgarh Environment Conservation Board, Korba Vs CGM Dipka Extension	The next date of hearing is 28.06.2023.

		case is at Judicial Magistrate Katghora.	Project Gevra Area SECL for coal production in excess of 10 MTPA consented capacity. The Criminal complaint was filed under Sec.15 &17 of E(P) Act and the year of violation was 2001-02 to 2004-05	
2	834/2021	The Supreme Court of India	The Civil Appeal has been filed under section 22 of the National Green Tribunal Act, 2010 against the final order dt: 25.08.2020 of the Ld. National Green Tribunal, Principal Bench at New Delhi in appeal no. 79 of 2018 titled Laxmi Chauhan vs UOI & others	Previous date of hearing was 15.05.2023 before the Registrar. Next date not yet given.

(xxxix) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 1981-82 onwards. Details of production of coal with sanctioned capacity since the commencement of mining operations has been given in point no. xxxvii.

(xxxixii) The project involves 3376 project affected families. R&R of the PAPs will be done as per CIL R&R Policy, whereas Compensation are being done as per CG R&R Policy.

(xxxixiii) Total cost of the project is Rs. 11816.40 Crores. Cost of production is Rs. 566.02 /- per tonne, CSR cost : According to new CSR policy the fund for the CSR should be allocated, based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year, whichever is higher, R&R cost is Rs. 455.96 crores. Environment Management Cost is Rs. 142.82 crores.

(xxxixiv) Consent to Establish cum Operate for capacity (52.50 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on 15.03.2023 and valid for one year

(xxxixv) Past Production details comparison with existing EC

YEAR WISE COAL PRODUCTION SINCE INCEPTION

Year	Approved EC/Consented Capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity
1981-82		0.05	
1982-83		0.32	
1983-84		1.43	
1984-85	(Consent)10.00	3.28	Mine Pre-dated EIA Notification 1994, Was Running on Consents. First Consent letter issued on 06.05.1994.
1985-86	-do-	4.21	
1986-87	-do-	5.00	
1987-88	-do-	6.50	
1988-89	-do-	8.21	
1989-90	-do-	9.70	

1990-91	-do-	11.21	1.21
1991-92	-do-	13.20	3.20
1992-93	-do-	13.30	3.30
1993-94	-do-	14.04	4.04
1994-95	-do-	14.62	4.62
1995-96	-do-	15.44	5.44
1996-97	-do-	16.83	6.83
1997-98	-do-	17.88	7.88
1998-99	-do-	17.29	7.29
1999-2000	-do-	18.02	8.02
2000-01	-do-	18.89	8.89
2001-02	-do-	18.97	8.97
2002-03	-do-	19.54	9.54
2003-04	-do-	21.885	11.89
2004-05	(EC) 25.00	26.15	1.15
2005-06	25.00	26.46	1.46
2006-07	25.00	27.22	2.22
2007-08	25.00	29.055	4.055
2008-09	25.00	32.10	7.10
2009-10	35.00	35.00	-
2010-11	35.00	35.00	-
2011-12	35.00	35.00	-
2012-13	35.00	35.00	-
2013-14	40.00	38.70	-
2014-15	41.00	41.00	-
2015-16	41.00	41.00	-
2016-17	41.00	41.00	-
2017-18	45.00	41.433	-
2018-19	45.00	42.251	-
2019-20	45.00	45.000	-
2020-21	45.00	40.568	-
2021-22	49.00	41.454	-
2022-23	52.50	52.499	-

(xxxvi) Environmental Baseline data was generated from March 2022 to May 2022

- (i) Air quality: Number of sampling location monitored: 12. The result indicates that the maximum and minimum values of PM₁₀ are in the range of 42.0 µg/m³ to 123.1 µg/m³, whereas the PM_{2.5} are in the range of 21.8 to 69.8µg/m³. The SO₂ concentrations within the study area are in the range of 10.0 to 31.1 µg/m³ and the NO_x are in the range of 18.4 to 44.4 µg/m³. Ozone varies from 16.6 to 29.1 µg/m³. Ammonia varies from 14.6 to 24.8 µg/Nm³. Carbon monoxide varies between 0.3 to 0.44 mg/m³. Rest of the parameters like benzene, benzo (alpha) pyrene, arsenic, cadmium, chromium, lead, mercury and nickel were found to

below detection limits.

The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards, 2009 and Coal Mine standards, 2000 and were found to be within the prescribed limit.

(ii) Surface water quality:

Number of sampling location monitored: **10 stations**. The result indicates that the minimum and maximum values of pH ranges between 7.1 to 8.3, DO between 5.8 to 8.5 mg/L; BOD between (<2 mg/l) to 2.6 mg/l and COD between (<5 mg/l) to 10 mg/l. All the results within the prescribed environmental standard -IS 2296:1992 (Tolerance Limit for Inland Surface Waters, Class – C).

46.7.3 Committee observed the following in the EAC meeting:

i. PP has obtained the following EC letters:

Sl. No.	EC (production capacity)	File number	Date of EC granted
1	35 MTPA	J- 11015/484/2007 -IA.II (M)	03.06.2009
2	40 MTPA	J- 11015/85/2010 -IA.II (M)	31.01.2014
3	41 MTPA	J- 11015/85/2010 -IA.II (M)	06.02.2015
4	45 MTPA	J-11015/85/2010–IA.II (M)	21.02.2018
5	45 MTPA	J-11015/85/2010–IA.II (M)	28.03.2019
6	45 MTPA	J-11015/85/2010–IA.II (M)	04.06.2020
7	49 MTPA	J-11015/85/2010–IA.II (M)	10.05.2021
8	52.5 MTPA	J-11015/85/2010–IA.II (M)	05.09.2022

ii. PP has obtained following stage II Forest Clearance:

Sl. No.	Forest Area	File No.	Date of FC (stage II) granted
1	100.898 Ha	F.No.8-33/2005-FC	05.05.2008
2	46.198 Ha	F. No.8-81/ 2006-FC	20.04.2015
3	192.046 Ha	F.No. 8–77/2006 – FC	20.04.2015
4	564.885 Ha	F.No.8–79/2006 – FC	20.04.2015
5	112.385 Ha	F.No.8-41/2017-FC	21.06.2022
Total	1016.412 Ha is having Stage-II forestry clearance		

- iii. Mining plan and mine closure plan for 52.5 MTPA was approved by SECL Board in its 132nd meeting held on 03.08.2022.
- iv. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- v. Approved NoC from CGWA is yet to be submitted to MoEF&CC.
- vi. Public hearing was conducted on 22.08.2008 for capacity of 35 MTPA in mine lease area of 4184.486 ha.
- vii. Consent to Operate has been obtained under Air Act, 1981 and Water Act, 1974 for 52.5 MTPA vide letter no. 8688/TS/CECB/2023, valid upto 14.03.2024.
- viii. PP has obtained the ToR for 70 MTPA vide letter dated 07.03.2022.

46.7.4 The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in view of shortage of coal in the country and PP was required to submit the proposal within six months with collection EIA/EMP based on standard ToR. It has further been observed that EC under this OM was granted on 5th September, 2022.

The PP has submitted the EIA-EMP for capacity of 52.5 MTPA, CTO for same capacity, CCR vide letter dated 02.05.2023 from IRO, MoEF&CC along with past production details for last 10 years. While discussing the compliances of existing EC, the Committee observed that presently PP has constructed mechanized system for 25 MTPA of coal capacity, while other systems i.e 20 MTPA & 30 MTPA have been proposed to be commissioned by June 2023 and March 2024 respectively. With these arrangement, it is inferred that PP shall have capacity of 50 MTPA to handle coal through mechanized by July 2023. But, full capacity upto 75 MTPA would only be achieved by March 2024. The work on addition of 30MTPA is under process. Also, the Committee while discussing certified compliance report observed that additional CAAQMS and installation of mist spray, sprinkling system are still pending. It was advised to PP to implement these by July 2023.

Based on the above, EAC **recommended** the proposal for grant of Environmental Clearance for Gevra Opencast Coal Mine project from 49 MTPA to 52.5 MTPA (increase of 10% w.r.t. 35 MTPA) in an ML area of 4184.486 MTPA of M/s South Eastern Coal Fields Limited, located at Villages Gevra and Mangaon, District Korba (Chhattisgarh) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

- i. PP shall submit the proposal for next expansion only after the compliance of all its previous EC Conditions.
- ii. PP shall complete mechanized system for additional 30 MTPA capacity of coal handling before March 2024 and status report be intimated to IRO, MoEF&CC.
- iii. PP shall submit monitoring report of ETP to IRO, MoEF&CC and ensure that no wastewater shall be discharged outside the boundaries of mine.
- iv. PP shall commission another CAAQMS system by September 2023 and report of IRO with data.
- v. PP shall submit the NOC from CGWA for the withdrawal of Ground water within 3 month to IRO, MoEF&CC.
- vi. PP shall submit the proof of tree plantation through satellite imaginary and with drone survey at identified locations. PP shall complete work of 10 ha Sal nursery and report to IRO.
- vii. PP shall operationalize 10 additional long-range fogging machines by July 2023.
- viii. PP shall submit exact status of diverted nallah through recorded drone video and environment safety measures adopted while diverting.
- ix. EIA-EMP for 70 MTPA shall incorporate the expenditure status of the previous Public hearing held on 22.08.2008 for 35 MTPA and EMP expenditure occurred with documentary proof. Beside, recommendation of sub-committee shall be implemented and its be submitted to IRO, MEF&CC.

- x. *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.*
- xi. *All other conditions stipulated in the previous ECs granted vide letter no. J- 11015/484/2007 - IA.II (M) & J- 11015/85/2010 -IA.II (M) dated 03.06.2009, 31.01.2014, 06.02.2015, 21.02.2018, 28.03.2019, 04.06.2020, 10.05.2021, 05.09.2022 shall be adhered to and remain unchanged.*
- xii. *PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021*

Agenda item 46.8

Expansion of Khadia opencast coal mining project for increase in production capacity from 14 MTPA to 15 MTPA (increase of 10% w.r.t 10 MTPA) in land area of 1640 Ha by M/s Northern Coalfields Ltd. located in the village Khadia, Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) & village Dhudhichua, Tehsil Singrauli, District Singrauli (Madhya Pradesh)- Environmental Clearance under OM vide no. F. No. IA3-22/10/2022-IA.III 07.05.2022- [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification]

[Online Proposal No.IA/UP/CMIN/413536/2023; File No. J-11015/255/2006-IA-II(M)]

46.8.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022 to avail total 50% relaxation for project “Khadia opencast coal mining project for increase in production capacity from 14 MTPA to 15 MTPA (increase of 10% w.r.t 10 MTPA) in land area of 1640 Ha by M/s Northern Coalfields Ltd. located in the village Khadia, Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) & village Dhudhichua, Tehsil Singrauli, District Singrauli (Madhya Pradesh)”.

46.8.2 Committee observed the following during the EAC meeting:

- i. The following EC has been obtained by the PP:

EC Capacity (MTPA)	File no. & Date	Remarks
10.0	J-11015/255/2006-IA.II(M) dated 10.04.2007 with Public Hearing	Public Hearing held on 6 th April, 2005 in M.P. 18 th April, 2006 in U.P.

14.0	J-11015/255/2006-IA.II(M) 23.03.2016	dated	40% expansion-under clause 7(ii), EIA Notification 2006, OM dated 30.05.2014
15.0	J-11015/255/2006-IA.II(M) 27.07.2022	dated	50% expansion-clause 7(ii) of EIA Notification 2006, OM dated 07.05.2022

- ii. The Forest Clearance (FC) detail for total forest land of 844.00 Ha involved in the ML area 1640.00 Ha are as follows:

Forest Land(Ha)	FC Reference No.
750.00	F No.8-298/87-FC dated 30 th July 1990 & lease for 40 years valid up to 29.07.2030
180.00	F No. 8-85/2005-FC dated 14.09.2010 and lease for 30 years valid up to 13.09.2030

- iii. The CTO detail are as follows:

From Madhya Pradesh Pollution Control Board	AW-57297 dtd:28.12.2022, Valid up to:31/12/2023
From Uttar Pradesh Pollution Control Board	Vide No. 166971/UPPCB/Sonebhadra (UPPCBRO)/CTO/both/SONBHADRA/ 2022 dated 16.12.2022 valid up to 31.12.2024

- iv. Mining plan and mine closure for Khadia expansion OCP for 15.0 MTPA has been approved by NCL board on 30.05.2022.
- v. NOC from CGWA is still awaited.
- vi. Life of mine is 11 years from 31.03.2022.
- vii. Past Production details from FY 1993-94 are as follows:

Year	EC Sanctioned Capacity(MTPA)	Actual Production (MTPA)
1993-1994	4.00	1.21
1994-1995	4.00	2.1
1995-1996	4.00	2.6
1996-1997	4.00	3.39
1997-1998	4.00	3.53
1998-1999	4.00	3.13
1999-2000	4.00	3.25

2000-2001	4.00	3.26
2001-2002	4.00	3.268
2002-2003	4.00	3.43
2003-2004	4.00	3.75
2004-2005	4.00	3.93
2005-2006	4.00	3.85
2006-2007	4.00	2.25
2007-2008	10.00	3.045
2008-2009	10.00	3.678
2009-2010	10.00	3.722
2010-2011	10.00	4.395
2011-2012	10.00	4.65
2012-2013	10.00	4.375
2013-2014	10.00	5.139
2014-2015	10.00	5.325
2015-2016	14.00	6.735
2016-2017	14.00	6.006
2017-2018	14.00	8.8
2018-2019	14.00	11.4
2019-2020	14.00	13.183
2020-2021	14.00	14.00
2021-2022	14.00	14.00
2022-2023	15.001	15.00

viii. Environmental baseline data was generated in the winter season 04.10.2021 to 31.12.2021.

46.8.3 *The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in view of shortage of coal in the country and PP was required to submit the proposal within six months with collection EIA/EMP based on standard ToR. It has further been observed that EC under this OM was granted on 27th July, 2022 and PP has submitted the application of its ratification beyond 6 months.*

The Committee noted that PP submitted the EIA-EMP for the production capacity of 15 MTPA, CTO from MPPCB & UPPCB for 15 MTPA, and CCR vide dated 07.06.2023. During deliberation, the Committee noted that there is slightly increase in production capacity beyond the EC capacity of 15 MTPA and it was advised to certify the annual production values from CCO. While discussing the

compliances of existing EC, it was emerged that PP is still in process to comply the EC conditions such plantation, ETP construction, installation of Continuous monitoring station alongwithincompleteworks for the mechanized coal transportation system. The expressed displeasure on non-compliances and instructed PP to implement in a time bound manner with proof of drone video. All non-compliance points should be completed with proof of video and photograph with verification from IRO. Further, committee asked the PP to submit the complete water balance system as excess water was found to be utilised within mine and it was advised to ensure the optimal usage of water in the lease without losses.

In view of the above, EAC observed that PP has to submit the compliance of below mentioned observation for further consideration of the project:

- i. PP needs to complete incomplete works within 6 months and submit the implementation of non-complied EC conditions in time bound manner.
- ii. PP needs to complete the mechanized coal transportation system with proff of drone video.
- iii. PP needs to submit functional status ETP and ensure that no untreated wastewater shall be discharged beyond the mine lease area or into the existing water bodies.
- iv. PP needs to submit complete water balance system including consumption of water in the Mine lease and its utilization.

The proposal is *deferred* for compliance.

Agenda item 46.9

Expansion of Block-B Opencast Coal Mine from 5.47 MTPA to 8 MTPA/ 10 MTPA (Normative/Peak) in mine leases area of 2257.17 ha by M/s Northern Coalfields Limited at village Naudhiya, P.O.- Gorbi, Tehsil Chitrangi, District Singrouli, (Madhya Pradesh)- Regarding the Amendment of terms of reference dated 18.11.2020

[Online proposal No. IA/MP/CMIN/427806/2023; File No. J-11015/80/2013-IA-II(M)]

46.9.1 The proposal is for Amendment of terms of reference dated 18.11.2020 for Block-B Opencast Coal Mine from 5.47 MTPA to 8 MTPA/ 10 MTPA (Normative/Peak) in mine leases area of 2257.17 ha by M/s Northern Coalfields Limited at village Naudhiya, P.O.- Gorbi, Tehsil Chitrangi, District Singrouli, (Madhya Pradesh).

As per submission, the Amendment in TOR is required for change in lease area and the corresponding change in land use for proposed expansion project.

Reason for amendment of ToR:

The expansion project involved diversion of 631.39 Ha of Forest land (71.976 Ha for mining and 559.416 Ha for OB dumping). However, the proposal of diversion of 631.39 Ha of forest land was rejected by the FAC of MoEFCC. Consequently a revised mining plan of Block-B OCP was prepared considering the restriction on use of forest land for OB dumping by increasing th

edump height from 90 m to 120 m and flushing the internal and external OB dumps in Vindhya I & II quarry so that bare minimum forest land i.e. 139.86 Ha (45.86 Ha for excavation and 94 Ha for OB dumping) is required for the expansion project.

46.9.2 EAC observed the following during EAC meeting:

- i. EC for 5.47 MTPA has been granted vide letter No. J-11015/80/2013 IA.II(M) dated 06.08.2014 in mine lease area of 1339 ha.
- ii. TOR has been issued vide letter no. J-11015/80/2013-IA.II(M) dated 18.11.2020.
- iii. Life of mine is 13 years from 01.04.2022
- iv. 139.86 Ha of Forest land for forest clearance pending at MoEF&CC for consideration under stage-I.
- v. Consent to Operate for the existing capacity was obtained from the MPPCB on 30.01.2023 and is valid till 31.03.2024.
- vi. Past production detail are as follows:

Year	EC sanctioned (MTPA)	Actual production (MTPA)	Excess production beyond the EC capacity (MTPA) sanctioned capacity
2006-07	3.50	-	-
2007-08	3.50	2.152	NIL
2008-09	3.50	3.431	NIL
2009-10	4.375	3.355	NIL
2010-11	4.375	3.807	NIL
2011-12	4.375	4.007	NIL
2012-13	4.375	4.375	NIL
2013-14	4.375	4.375	NIL
2014-15	5.47	4.475	NIL
2015-16	5.47	4.101	NIL
2016-17	5.47	5.231	NIL
2017-18	5.47	5.468	NIL
2018-19	5.47	5.469	NIL
2019-20	5.47	5.469	NIL
2020-21	5.47	5.470	NIL
2021-22	5.47	5.470	NIL
2022-23	5.47	5.470	NIL

46.9.3 The EAC after deliberations noted that the instant proposal is for amendment of ToR dated 18.11.2020. Wherein the PP has requested for reducing the mine lease area from 2257.17 ha to 1756.77 ha due to rejection of application in MoEF&CC for 631.39 ha of forest land involved for diversion. Therefore the PP has revised the application for diversion of forest land from 631.39 ha to 139.86 ha and same has been recommended by Govt. of M.P. on 26.05.2023. Now PP has proposed the land use

plan as 45.86 ha for excavation & 94 ha for OB dumping i.e. total 139.86 ha as forest land involved in ML area.

Through KML file, the committee observed that there is overlapping in existing mine area with adjacent mine and PP did not provide the safety zone at existing ML boundary. The Committee while looking this opined that providing safety zone is one of the mandatory requirements for 3-tier plantation at boundary. As another ML boundary having interference to this mine therefore PP has to submit a safety certificate from DGMS with proof from a drone video at overleaping zone of dump site. After discussion PP was advised to explore the additional land for OB dumping without use of forest land and change the mine plan, if required.

In view of the above, EAC observed that PP has to submit the compliance of below mentioned observation for further consideration of the project:

- (i) PP has to submit a safety certificate from DGMS after inspecting the site where two mines are intersecting each other.
- (ii) The PP has to submit a drone video particularly at interference site as well as at dump site (10 min video).
- (iii) PP shall submit the complete detail of all adjacent land available near to the mine lease area.

The proposal is **deferred** on above lines

Agenda item 46.10

EFG Valia Lignite Block for Open cast lignite mining of 5 MTPA capacity in area of 3011.4312 ha of M/s Gujarat Mineral Development Corporation Ltd located at Villages Choramla, Itakla, Jabugam (partial), Rajgargh, Singla, Sodgam, Umargam, Vandariya, Vithalgam, Bhamadiya (partial), Daheli (partial), Pithore(partial), Bharadiya, Kesargam, Kosmadi, Luna, Sinada& Tuna, Taluka, Valia, District- Bharuch, Gujarat - Regarding Terms of Reference

[Online proposal No.IA/GJ/CMIN/429162/2023; File no. IA-J-11015/14/2023-IA-II(M)]

46.10.1 The proposal is for Terms of reference for EFG Valia Lignite Block for Open cast lignite mining of 5 MTPA capacity in area of 3011.4312 ha of M/s Gujarat Mineral Development Corporation Ltd located at Villages Choramla, Itakla, Jabugam (partial), Rajgargh, Singla, Sodgam, Umargam, Vandariya, Vithalgam, Bhamadiya (partial), Daheli (partial), Pithore(partial), Bharadiya, Kesargam, Kosmadi, Luna, Sinada& Tuna, Taluka, Valia, District- Bharuch, Gujarat.

46.10.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting are given as under:

- (i) The project area is covered under Survey of India Topo-sheet No.46 G/2 & 46 G/6 and is bounded by the geographical coordinates ranging from Latitude 21° 31' 21.181" N to 21° 35'37.126"N& Longitude73°11' 9.169"Eto73°15' 28.16" E.

- (ii) Coal linkage of the project: Not applicable as the mine/block is allocated under reserve category and lignite mined from the area would be for GMDC' sown consumption or sale.
- (iii) Joint venture cartel has been formed-Not Applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation-Project will generate employment for about 1300 persons.
- (vi) The project is reported to be beneficial in terms of energy security for the development of country. Also following benefits will be there:
 - Improvement in physical infrastructure like Road Transport facilities, Housing facilities, Water supply and sanitation, Power, Medical facilities, Community development etc. Improvement in social infrastructure like Trade and Commerce etc.
 - Other tangible benefits like indirect employment opportunities to local people in contractual works like housing construction, transportation, sanitation, for supply of goods and services to the project and other community services.
- (vii) Not Applicable, since it is a Greenfield project.
- (viii) Terms of References (ToR) granted on—A Term of References (ToR) is yet to be granted.
- (ix) Total mining lease area as per block allotment is 3011.4312ha. Mine Plan & Mine Closure Plan has been submitted to Ministry of Coal application no —APP00249 dated 15.05.2023.
- (x) The land usage pattern of the project is as follows:

Pre-mining land use details

S. No.	Land Use	Within ML Area (ha)	Outside ML Area (ha)	Total
1.	Agricultural Land	2498.6146	0.00	2498.6146
2.	Forest land	0.0000	0.00	0.0000
3.	Waste land	93.4030	0.00	93.4030
4.	Grazing land	157.5210	0.00	157.5210
5.	Surface Water Bodies	109.2866	0.00	109.2866
6.	Settlements	29.6221	0.00	29.6221
7.	Road	88.0727	0.00	88.0727
8.	Community	34.9112	0.00	34.9112

Post Mining land use details

S.	Land Use (Ha)

No.	Land Use during Mining	Plantation	Water Body	Public Use	Undisturbed	Total
1.	External OB Dump	650.50	0	0	0	650.50
2.	Topsoil Dump	12.50	0	0	0	12.50
3.	Excavation	861.45	754.20	0	0	1615.65
4.	Roads	0	0	4.00	0	4.00
5.	Diversion of River Nala/Canal	25.00	0.00	0	0	25.00
6.	Built up areas	80.00	0	0	0	80.00
7.	Settling Pond	0	2.00	0	0	2.00
8.	Garland Drains	2.00	0	0	0	2.00
9.	Embankment	0	27.00	0	0	27.00
10.	Greenbelt	207.68	0	0	0	207.68
11.	Safety Zone	20.00	0	0	0	20.00
12.	Rationalization Area	204.11	0	0	0	204.11
13.	Undisturbed Area	0	0	0	161.00	161.00
TOTAL		2063.24	783.20	4.00	161.00	3011.44

- (xi) Total Geological Reserve reported in the mine lease area is 458.3800 MT. Total Mineable Reserve is 185.2710 MT. Extractable Reserves are 176.0000 are available for extraction. Percent of extraction is 38.3960 %.
- (xii) Thickness of seams to be worked on:

Tabular Form for seam thickness is attached for reference:

Type	Seam	Thickness Range (m)
Open Cast	Seam IV (Top)(Bottom)	0.60–5.10
	Seam IV (Bottom)	0.80–14.30
	Seam III (Top)	0.50–3.60
	Seam III (Bottom)	0.50–7.70
	Seam II (Top)	0.50–8.30
	Seam II (Bottom)	0.50–10.40
	Seam I	0.75–19.80

Grade of coal: GL6(lignite) (Avg.GCV=2725Kcal/kg) (asper MoC Notification 20th Jan., 2023).
Stripping ratio: 6.6705 (m³/ton) (OB: Lignite); Category of gaseousness: Not Applicable

Average gradient: The dip of the lignite seams varies between 2.6° in major parts of the block to 12.7° in the eastern south-eastern parts of the block.

Maximum thickness of seams: 24.40m (Seam-I)

- (xiii) Method of mining operations envisaged: Mechanized Opencast Mining Method

- (xiv) Life of Mine is 38 years
- (xv) The project has two external OB dumps in an area of 650.50 ha with height of Dump 1: 45 m and Dump 2: 90 m and 344.21 M.cum of OB. Three internal dumps in an area of 1098.5 ha with 813.36M.cum of material are envisaged in the project.
- (xvi) Total quarry area is 1628.15 ha out of which backfilling will be done in 1098.50 ha while final mine void will be created in an area of 517.15 ha with a depth of 150M bgl. Backfilled quarry area of 861.45 ha shall be reclaimed with plantation. Final mine void of 517.15ha and 237.05 ha of back filled area i.e.,754.20ha will be converted into waterbody.
- (xvii) Transportation of Coal:
- Inpit:Rear Discharge Dumpers
 - Surface to siding: Initially by Covered truck.
 - Siding to loading: Initially by Covered truck.

The transportation feasibility study of the EFG Valia Lignite Block will be worked out.

- (xviii) Reclamation has been planned in an area of 650.50Ha & 861.45Ha, for external OB Waste Dump and Internal OB Dump Area, respectively and 20.00 Ha &207.68 Ha in the safety zone & green belt respectively.
- (xix) Forest Diversion proposal is not Applicable
- (xx) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.-There are no National Park, Eco-Sensitive Zones, Wildlife Sanctuaries in 10km radius from the project site
- (xxi) Wildlife conservation plan for Schedule-I Species has been submitted-Site Specific Wildlife Conservation Plan will be prepared for Schedule-I species found during survey.
- (xxii) The ground water level has been reported to be varying between 3.4 to 12.7 m bgl, during pre-monsoon and between 1.9 to 9.2 mbgl during post-monsoon. Total water requirement for the project is 1996.5m³/day. Application for obtaining the approval of the Central Ground Water Authority for NOC for ground water withdrawal will be submitted after the approval of ToR.
- (xxiii) Consent to Operate for the proposed capacity to be submitted after environment clearance to State Pollution Control Board- Will be obtained after grant of EC.
- (xxiv) Kim River, Tokri River & Irrigation Canal is passing through the mine lease. Diversion of same will be proposed.
- (xxv) No court cases, violation cases are pending against the project of the PP.
- (xxvi) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under: Not Applicable since it is a greenfield project.
- (xxvii) The project involves 3631 PAF. R&R of the PAFs will be done as per prevailing laws.
- (xxviii) Total cost of the project is Rs. 8999 Crore. Cost of production is Rs 1800 per tonne., CSR

cost Rs. 2Crore/Annum or Rs.5/Tonne, R&R cost 1529.80 Crore. Environment Management Cost is: Will be incorporated in EIA report.

- (xxix) Consent to operate (CTO) was obtained from the State Pollution Control Board: Since it is a Green Field Project, Consent to operate will be obtained after grant of EC.
- (xxx) Past Production details comparison with existing EC-Not Applicable
- (xxxi) Baseline monitoring status:
 - a) Environmental sensitivity within 10 km buffer zone with distance & direction from the project site like Forest, water bodies, other mines, other washeries, power plants, industries, highways, railway stations, hospitals, schools, colleges etc.(To be mentioned in PFR&EIA/EMP report also). Period/ Season of baseline study carried out - March to May 2023(Pre-Monsoon).

46.10.3 Committee observed the following during EAC meeting:

- (i) Total mining lease area as per block allotment is 3011.4312ha.
- (ii) Life of Mine is 38 years
- (iii) Schedule – I species found during survey.
- (iv) Kim River, Tokri River & Irrigation Canal is passing through the mine lease.

46.10.4 *The EAC after deliberations noted that the instant proposal is a green field project for Terms of Reference. The committee observed that the Kim River & Tokri River flowing through mine lease area, which is important for habitation and also farmers too dependent on it for agriculture. From KML file, the Committee saw large patches of green land and in this context, Committee advised the PP to use option analysis along with cost benefit analysis for choosing the alternate methods of mining without diversion of river. Further, EAC advised that PP shall not prioritize the mining by diverting the river. In order to save river and stream, revised the production capacity shall be decided.*

The Committee advised the PP to involve some river ecologist for proper studying/analysis of existing river stream flowing through ML area. PP shall submit the drone video particularly of the stream passing through the ML area. If required, the Committee asked PP to invite the officer of state irrigation department and of agricultural department too for viable discussion in the EAC meeting. PP shall revise the mining plan considering no diversion of stream and accordingly mining plan map to be prepared. Apart from these, the committee noted that there is also canal that flowing middle of mine lease area but no concrete plan and discussion how this would be managed was mentioned.

In view of the above, EAC observed that PP has to submit the compliance of below mentioned observation for further consideration of the project:

- i. *PP has to submit the option analysis along with cost benefit analysis for choosing the methods of mining as Opencast or Underground without diversion of river flowing through mine lease area.*
- ii. *PP shall submit the suggestions of river ecologist after studying/analyzing existing stream flowing through ML area.*

- iii. *PP shall submit the drone video particularly of the stream passing through the ML area.*
- iv. *PP shall revise the mining plan considering no diversion of rivers, stream and irrigation canal accordingly mining plan to be prepared.*

The proposal is **deferred** on above lines

Agenda No. 46.11

Chotia II captive Coal Mine with production capacity of 1.0 million TPA (Area: 316.826 Ha Out of ML area 1179.826 ha) of M/s. Bharat Aluminium Company Limited (BALCO) located in Salaigot village, Tehsil Podiuprodha, District Korba (Chhattisgarh) - Regarding amendment of EC dated 18.07.2018

[Online proposal No. IA/CG/CMIN/427390/2023 File No.: J-11015/96/2004-IA-II(M)]

46.11.1 The proposal for amendment of EC dated 18.07.2018 for Chotia II captive Coal Mine with production capacity of 1.0 million TPA (Area: 316.826 Ha Out of ML area 1179.826 ha) of M/s. Bharat Aluminum Company Limited (BALCO) located in Salaigot village, Tehsil Podiuprodha, District Korba (Chhattisgarh).

Earlier, the proposal was considered in the 45thEAC meeting held on 31stMay 2023 wherein the committee after deliberation advised PP to apply separate applications on PARIVESH as instant mine area is sub block of the Chotia mine having common mine lease and mine plan but with different ECs of Chotia-1 and Chotia-2. While having detailed discussion, PP was advised to prepare a mine plan and progressive mine closure plan for Chotia mine in two sections separately as a Part A (for Chotia I) and Part B (for Chotia II). Based on the discussions, EAC noted that currently PP has now applied the application for extension of opencast mining operation for next 3 years for Chotia-II block.

46.11.2 The Committee observed the following during the EAC meeting:

- i. EC was granted on 18.07.2018 for 1 MTPA (Opencast)/0.30 MTPA (Underground) in the mine lease area of 316.826 ha by M/s BALCO.
- ii. PP has requested for amendment of specific condition no. 4(i) which stipulates as ***“The capacity of the project shall be 1 MTPA (opencast) for first 5 years and 0.30 MTPA (underground) from 6th year till life of the mine”***.
- iii. PP has achieved the peak rated capacity of 1.0 MTPA in the FY 2022-23 from Chotia-II OC Coal block.
- iv. PP cited the reason for amendment in EC condition dated 18.07.2018, which read as ***“mineable reserve of 2.31 million tonnes available at the mine”*** and requested to opencast mining operations for another three years beyond 17 July 2023 at Chotia II coal block.

46.11.3 The EAC after detail deliberation noted that the instant project is for amendment of specific condition no. 4(i) of EC dated 18.07.2018. The project proponent based on available reserves requested for amendment of EC in terms of extending timeline for another three years. The committee took the cognizance of reasons cited by PP and agreed to extend the timeline to continue the mine operation

through opencast method due to availability of coal reserve. The specific condition no. 4(i) of EC dated 18.07.2018 shall be read as:

“The capacity of the project shall be 1 MTPA (opencast) w.e.f. 17th July 2023 for 3 years”.

Based on the above deliberations, the committee **recommended** to amend the EC letter dated 18.07.2018 for Chotia II captive Coal Mine with production capacity of 1.0 million TPA (Area: 316.826 Ha Out of ML area 1179.826 ha) of M/s. Bharat Aluminium Company Limited (BALCO) located in Salaigot village, Tehsil Podiuprodha, District Korba (Chhattisgarh) by extending the EC condition 4(i) of EC dated 18.07.2018 for 3 year w.e.f 17.07.2023 under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

- i. PP needs to revise the mine plan and progressive mine closure plan for Chotia mine having two sections separately in the form of Part A (for Chotia I) and Part B (for Chotia II).
- ii. PP shall initiate the process to separate the lease area for Chotia I & II within three years.
- iii. All other conditions stipulated in the EC granted vide letter no. J-11015/96/2014-IA.II (M) on 18th July, 2018 shall remain unchanged.
- iv. PP shall create a “Public Grievance Redressal and Monitoring System” for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on “Public Grievance Redressal and Monitoring System.
- v. PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.
- vi. PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.
- vii. PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.
- viii. PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.
- ix. PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.
- x. PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021

Agenda item 46.12

Himgir Coal Washery project for (5 MTPA) in an area of 13.52 ha. Of M/s ACB (India) Limited located in Tehsil Himgir, District Sundargarh, (Odisha) - Amendment in Environmental Clearance dated 22.06.2009 – reg

[Online proposal No.IA/OR/CMIN/298151/2023; File No. J-11015/925/2007-IA.II (M)]

46.12.1 The proposal is for amendment in EC dated 22.06.2009 for Himgir Coal Washery project for (5 MTPA) in an area of 13.52 ha. Of M/s ACB (India) Limited located in Tehsil Himgir, District Sundargarh, (Odisha).

The proposal was considered in the 42nd EAC meeting dated 5th April, 2023 wherein committee deferred the proposal for submission of observation. In the amendment proposal, PP is now requesting to amend the following conditions and proposed for followings:

Specific condition no. (iii): "Project proponent can transport Washed Coal from Washery to Kanika Railway Siding by road with covered trucks instead of belt conveyor system."

Specific condition no. (i): "SPCB shall grant Consent to Operate of 5.0 MTPA Production Capacity for the aforesaid project."

The Project proponent has submitted the following reasons for the amendment of specific condition no. (iii) Such as:

- The Road (Belpahar - Sundergarh PWD Road) passing in front of our washery is a four lane RCC Road used mainly for transportation of Coal of other coal mines in the vicinity including MCL.
- The length of road to be used from our Washery to Railway siding on the same route is only 2.5 Kms.
- Maximum daily Load on the said road is 52,800 as per IRC -73:1980 guidelines. Existing daily traffic load is 3015. Thus, additional traffic load of 256 numbers of 45 T capacity Truck due to transportation of our Washed Coal on the said road will not pose any significant load to the existing traffic.
- We are regularly spraying water by Truck Mounted Canon Spray on the same road. So no significant additional load or the ground fugitive emission will be caused by our transportation. Few Photographs enclosed.

46.12.2 The proposal was considered in the 42nd EAC meeting dated 5th April, 2023 wherein committee deferred the proposal for submission of observation. The PP vide letter dated 06.06.2023 submitted the following information:

S. No.	Observation of EAC	Replied by PP
1	The PP shall submit the comparative analysis of capital investments required in mechanized system vs. expenditure involved in road transportation in light of environmental implication (in terms of pollution load) in both the cases.	The comparative analysis of capital investments required in mechanized system vs expenditure involved in road transportation in light of environmental implication (in terms of pollution load) in both the cases.
2	PP shall submit the valid justification with documents for this instant amendment proposal.	Justification for this amendment is enclosed.
3	PP shall study the traffic impact assessment with one month base line ambient air quality from certified NABET Category A consultant.	Traffic impact assessment with one month base line ambient air quality from Min Mec consultancy Pvt. Ltd. a certified NABET category A consultant is enclosed.
4	The PP shall submit the Consent to Operate of 2.5 MTPA Production Capacity from SPCB.	Consent to Operate order for production of 2.5 MTPA washed coal issued by OSPCB vide letter no. 4936/IND-I-CO-6640 dated 28/03/2023 is enclosed.

46.12.3 *The EAC after deliberation noted that the proposal is for amendment of EC dated 22.06.2009 and was earlier discussed for want of additional information. The Committee discussed the submission of PP for existing and fugitive dust control measures for road transport of washed coal and also expenditure involved towards environment protection measures. During discussion, PP stated that he has obtained the order of 3 MTPA and same time requesting to allow higher capacity so that he can run the plant at full capacity i.e 5 MTPA. From the past record of production, the Committee noted that PP hardly had increased the production of 2 MTPA during the last 11 years and also finds that implementing the belt conveyor system upto railway siding was not economical from his business point of view. However, now based on the traffic study and the submission of PP to enhance the capacity of plant, the committee agreed to transport the washed coal by road for next 3 years for capacity of 4.0 MTPA against 5 MTPA and during this period PP has to complete the mechanization of transportation system as this has been mandatory condition of revocation of closure order. The specific condition will now read as:*

Specific condition no. (iii): "Project proponent can transport Washed Coal from Washery to Kanika Railway Siding by road with covered trucks for 3 years along with mechanization of transportation system shall be completed."

Specific condition no. (i): "SPCB shall grant Consent to Operate of 4 MTPA Production Capacity for the aforesaid project for 3 years accordingly the SPCB shall issue CTO."

*Based on the above, EAC **recommended** the proposal for grant of amendment of EC dated 22.06.2009 for Himgir Coal Washery project for (5 MTPA) in an area of 13.52 ha. Of M/s ACB (India) Limited*

located in Tehsil Hemgir, District Sundargarh, (Odisha) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

- i. PP shall obtain the CTO/CTE for 4 MTPA of washed coal.
- ii. PP shall increase the truck size of 50 tonnes (payload) for transportation of coal through road. PP shall deploy 20% of total vehicle using clean fuel.
- iii. PP shall install the fixed Water sprinkler at distance of 400 mts(not less than 15 Nos.) on both side of road, Fog canon system (3 Nos.), adequate no of mist spray/ jet spray in order to arrest dust. Regular air quality shall be monitored at appropriate location of route to ensure that emission shall not exceed to ambient air quality standard. Data shall be reported to IRO, MoEF&CC and SPCB (fortnightly).
- iv. PP shall construct pukka road and also increase the width of the road for entire length of transportation.
- v. PP shall avoid to use any sensitive location (school, hospital etc.) for transporting the coal.
- vi. PP shall construct 20 bed hospital within the periphery of 5 km of the project area.
- vii. PP shall construct modern English medium school as per the norms of National education policy, 2020 through its CSR activity.

Agenda No. 46.13

Pakri Barwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri- Barwadih, Chepa-Khurud, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkand – Amendment in environmental clearance dated 19.05.2009 - reg.

[Online Proposal number: IA/JH/CMIN/433614/2023; File No. J-11015/692/2007-IA.II (M)]

46.13.1 The proposal for amendment in environmental Clearance dated 19.05.2009 for PakriBarwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri- Barwadih, Chepa-Khurud, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkand.

46.13.2 The EAC during deliberations noted the following :

- i. EC was granted to M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. vide Ministry's letter no. J-11015/692/2007-IA.II (M) dated 19.05.2009 for 15 MTPA in mine lease area of 3319.42 ha. The EC conditions no. 2A(ix) inter-alia states the following:
2A (ix) "Mineral transportation from CHP to Railway siding shall be by closed belt conveyor of a length of 7km. The railway siding shall be provided with Silo Rapid Loading System".
- ii. 1st Amendment: Amendment in EC was accorded regarding permission for transportation of coal by road from crusher point to the Banadag railway siding for PakriBarwadih Coal Mine

Block vide letter dated 29.06.2016 which was valid up to 28.06.2018. As per the EC amendment letter the specific condition no. 2A (ix) may reads as;

“The coal shall be transported through closed belt conveyer system of a length of 13 km to Banadag railway station. The project proponent is permitted for (2) two year to use State Highways/Public Roads for transportation of coal (approx. 35 km) to Banadag railway siding by adopting all mitigative measure to control dust pollution. The project proponent shall put all efforts to expedite completion of service road for belt conveyer so that the same can be utilized for coal transportation by road.”

- iii. 2nd Amendment: Amendment in EC was granted w.r.t. EC condition no. (iii), (v), (vi), (ix) & (x) and other general conditions on 07.12.2017.
- iv. 3rd Amendment: Amendment in EC was granted vide letter dated 14.08.2018 As per the EC amendment letter the specific condition no. 2A (ix) may reads as; *“permitting coal transportation from PakriBarwadih Coal Mining Block to Banadag Railway Siding for a further period of two years i.e. upto 28th June, 2020 as an interim arrangement”*.
- v. 4th Amendment: Amendment in EC was granted vide letter dated 10.11.2020 i.e extension in amendments in EC condition for a period of two years (i.e. upto 28th June, 2022) by road as an interim arrangement and extended up to 28th June, 2023 in view of MOEF&CC Notification S.O. 221(E) dated 18.01.2021.
- vi. Later, PP in view of Ministry’s Notification S.O. 221(E) dated 18.01.2021, which was issued as a relief to projects due to Covid situation, utilized one year timeline, which is extended up to 28th June, 2023. The relevant portion of notification is reproduced below: .
“9A. Notwithstanding anything contained in this notification, the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Prior Environmental Clearances granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19) and subsequent lockdowns (total or partial) declared for its control, however, all activities undertaken during this period in respect of the Environmental Clearance granted shall be treated as valid.”
- vii. Now the PP has again requested to extend the time line to implement the same condition of belt conveyer with silo loading upto December 2024 by citing various reasons related to land acquisition and contractual issues.
- viii. Diversion of 1026.438 ha of forest land involved in the total lease area of 3319.42 ha for non-forestry purposes has been obtained vide MoEF&CC letter No F. No. 8-56/2009-FC dated 11.05.2010 (Stage-I FC) and 17.09.2010 (Stage-II FC).
- ix. Central Ground Water Authority for 5026 KLD has been submitted and the NOC has been obtained vide NOC no. CGWA/NOC/MIN/ORIG/2023/17449 dated 03rd January, 2023.
- x. Public hearing was conducted on 16.04.2017 at Barkagaon for the project of 15 MTPA capacity in an area of 3319.42 Ha.
- xi. Consent to Operate for the existing capacity was obtained from the State PCB on 22.12.2018 and is valid till 31.12.2023.
- xii. Pakwa and Khora Nala are flowing along the Eastern and Western Boundaries of lease respectively. Dumhani Nala is flowing through the Mine Lease Area. Ghaghri river flows South of the Mine lease at a distance of 1.5 km from West to East. Harho River flows at a

- distance of 1.5 km. South of ML area from South West to North. The Dumhani nallah has been diverted in consultation with the Water Resource Department of the State Government.
- xiii. Violation cases pending against the project for Condition (8) of Stage-II Forest Clearance, for which NTPC has already submitted representation.
 - xiv. Court cases pending before the Hon’ble Supreme Court Civil Appeal No. 6249 of 2021 in the matter of National Thermal Power Corporation (NTPC) vs Tripurari Singh &Ors. As per order “*the construction of the conveyor belt could not be completed as per clause 6.3 of the report of the Jharkhand Pollution Control Board (State PCB).....He requests for time till October, 2023 for completion of the construction of the conveyor belt*”.
 - xv. Past Production details comparison with existing EC

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2017-18	15	2.89	Nil
2018-19	15	6.81	Nil
2019-20	15	9.42	Nil
2020-21	15	7.07	Nil
2021-22	15	8.32	Nil
2022-23	15	13.22	Nil

46.13.2 *The EAC, after deliberation noted that the current application of amendment in EC conditions is for relaxation in implementing the condition of conveyor belt and silo loading facility by M/s NTPC. While looking at chronology of earlier amendments taken by PP and lapses of earlier deadlines in complying the condition, EAC expressed displeasure with remarks that PP being one of Maharatna companies is unable to implement the important condition after commissioning of its mine in the year 2017. The Committee noted that PP has so far obtained total 4 amendments of Environmental clearance, out of which three EC amendments were taken for extending the timeline specifically for transportation of coal by road only. In the last amendment, PP had submitted undertaking to complete the said condition till October, 2022, however NTPC has again failed to comply.*

On enquiry about legal implication in the matter, the Committee was informed about the direction of Hon’ble Supreme Court, which is related to the aforesaid EC condition related to implementation of belt conveyor. PP informed that the Hon’ble Supreme Court in its order dated 8th August, 2022 has set the timeline to the complete the conveyor belt and silo loading facility till October, 2023 but PP instead of taking relief from Hon’ble Court wants to seek extension in timeline till December, 2024. PP did not inform the Committee full facts in their prior submission. The committee cautioned PP for concealing the Court direction pertaining to the coal transportation from CHP to Railway siding by closed belt conveyor with Silo Rapid Loading System.

While enquiring about the delays in constructing the silo loading /railway siding alongwith belt conveyor system PP informed to the Committee about contractual issues and difficulty in procurement

of land. Further on discussing other environmental concerns related to coal mine, the committee observed that two streams namely Pakwa and Khora are flowing along the lease Boundaries and another stream of Dumhani is also flowing through the Mine Lease Area. This Dumhani stream has already been diverted by PP in consultation with the Water Resource Department of the State Government. In this regard, to ensure the proper water management of catchment area of diverted stream, the Committee emphasized PP to submit the status report of Dumhani stream to IRO, MoEF&CC before October, 2023 with photographs with drone video. The project proponent was also advised to make all possible effort for protecting catchment area of the streams flowing within the lease boundary as well as along the lease boundary and ensure that no acidic mine water shall contaminate them. Further, PP must carry out detailed hydrological studies of the up and down steams within catchment.

During the discussion the Committee also recognized that instant coal mine is supplying coal to many critical thermal power plants which ensures the regular electricity supply in the country. It was observed that major portion of belt conveyor has been constructed except ~~its few in a small part with portion and under construction work of~~ Silo Rapid Loading System still under construction. PP informed about physical progress of civil works, which has been reported to complete by 76%; while electrical/mechanical works progress by 57% only. From photographs, it was noted that coal transportation largely depends upon service road only, running parallel to belt conveyor. It was advised that PP shall transport the entire coal by service road only, which was made for belt conveyor. The SPCB needs to take care of all mitigation measures in maintaining the air quality within standard all along road i.e. within the national ambient air quality standards. The project proponent shall also to increase the truck/dumpers size ~~upto up to 50-35-4050~~ tonnes for reducing the number of vehicles.

Finally, in view of the Hon 'ble Supreme court order dated 08.08.2022 for Civil Appeal No. 6249 of 2021 (in matter of National Thermal Power Corporation (NTPC) vs Tripurari Singh & Ors.) that "the appeal is disposed of with a direction to the appellant to complete the construction of the conveyor belt on or before October, 2023" and in accordance with the order of Supreme Court, the Committee agreed to extend the timeline for implementing the condition of Environmental clearance by October, 2023. The EC condition no. 2A(ix) shall be read as:

"The coal shall be transported through closed belt conveyor system of a length of 13 km to Banadag railway station. The project proponent is permitted till October, 2023 to use Service road/State Highways for transportation of coal to Banadag railway siding by adopting all mitigative measure to control dust pollution".

Based on the submission of the project proponent, EAC **recommended** the proposal for extension of EC up to October, 2023 due to delay in construction of dedicated conveyor system to the railway siding for Pakri Barwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri- Barwadih, Chepa-Khurd, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkhand, under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions: -

- i. *The PP needs to complete the construction of closed belt conveyor system of a length of 13 km to Banadag railway station. The project proponent is permitted till October, 2023 to use Service road/State Highways for transportation of coal to Banadag railway siding by adopting all mitigative measure to control dust pollution”.*
- ii. *Transportation of coal from service road instead of conveyor belt and silo loading system is subject to the outcome of Order of Hon’ble Supreme Court i.e. Civil Appeal No. 6249 of 2021 (in matter of National Thermal Power Corporation (NTPC) vs Tripurari Singh & Ors.)*
- iii. *The PP shall submit the status of Dumhani nallah to IRO, MoEF&CC before October, 2023 with photographs and drone video for diverted portion of Dumhaninallah. The project proponent shall also make all possible effort towards protecting catchment area of the streams flowing within the lease boundary as well as along the boundary of lease area.*
- iv. *The PP shall deploy the covered truck with tarpaulin having size upto 50 tonnes for transportation of coal through Service road only. SPCB to ensure the strict compliance of condition.*
- v. *The PP shall submit the status report of diverted Dumhani stream to IRO, MoEF&CC before October, 2023 ensuring that proper water management in catchment [area has](#) been made alongwith photographs and drone video for diverted portion. The project proponent shall also make all possible effort for protecting catchment area of other streams flowing within the lease boundary as well as along the boundary of lease area without their diversion.*
- vi. *The PP shall submit the complete compliance report of EC letter dated 19.05.2009 and subsequent amendment of ECs vide letter dated 29.06.2016, 07.12.2017, 14.08.2018 & 10.11.2020 respectively.*
- vii. *All the railway siding involved in loading and unloading of the materials which are prone to generate fugitive dust emissions, should install fixed type water sprinklers for effective dust suppression, should install settling pond of suitable capacity with chemical dosing system for treatment of the runoff water, should construct the wind breaking wall of 20 feet high to prevent the dusts to spread and should do tree plantation along the boundary wall.*
- viii. *PP shall create a “Public Grievance Redressal and Monitoring System” for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on “Public Grievance Redressal and Monitoring System.*
- ix. *PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*
- x. *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.*

- xi. PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xii. PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xiii. PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.*

Annexure-I

Standard EC Conditions for Coal Mining Project (Opencast mining):

All the projects recommended for grant of environmental clearance by the EAC shall also comply with the following Standard EC conditions as per Ministry's circular issued from time to time:

(a) Statutory compliance

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

(b) Air quality monitoring and preservation

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of

PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
 - (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
 - (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid airborne dust. Drills shall be wet operated or fitted with dust extractors.
 - (vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.
- (c) Water quality monitoring and preservation**
- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
 - (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
 - (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
 - (iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
 - (v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
 - (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size

shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

- (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).
- (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
- (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purposive. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- (x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
- (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

(d) Noise and Vibration monitoring and prevention

- (i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

- (ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
- (i) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- (ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
 - (ii) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land shall be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/“post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at

earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

- (vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

- (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages

are the part of mine lease areas or habitations and villages are surrounded by the mine lease area’.

(i) Corporate Environment Responsibility

- (i) The project proponent shall comply with the provisions contained in this Ministry’s OM vide F.No.22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent’s website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x(ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of

the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

Annexure-II

Standard EC Conditions for Coal Mining Project (Underground mining):

All the projects recommended for grant of environmental clearance by the EAC shall also comply with the following Standard EC conditions as per Ministry's circular issued from time to time:

I. Statutory compliance:

- (i) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project
- (ii) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (iii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iv) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area)
- (v) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (vi) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vii) Solid waste/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the

SPCB

- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal

Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

- iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/ mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- iv. Major approach roads shall be black topped and properly maintained.
- v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.
- vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- viii. Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the

Ministry of Environment, Forest and Climate Change/Regional Office.

- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- vi. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.
- vii. Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial purpose. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- ix. Industrial waste water from coal handling plant and mine water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste water.
- x. Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xi. The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.
- xii. The project proponent shall take all precautionary measures to ensure reverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A reverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

IV. Noise and Vibration monitoring and prevention

- i. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in underground mining operations, operation of HEMM,

etc. shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms/guidelines in this regard. Progress in usage of such accessories to be monitored. Adequate awareness programme for users to be conducted.

- ii. The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

V. Mining Plan

- i. Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- ii. No change in mining method i.e. UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).
- iii. Mining shall be carried out as per the approved mining plan (including mine closure plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- iv. Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.
- v. No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.
- vi. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

VI. Land reclamation

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with

fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

- v. A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.
- vi. Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.
- vii. Native tree species shall be selected and planted over areas affected by subsidence.
- viii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Green Belt

- i. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. Action plan, in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife

Department.

- ii. Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall be developed all along the mine lease area in a phased manner. The greenbelt comprising of a mix of native species shall be developed all along the major approach roads/ coal transportation roads.

VIII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
- ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.
- iii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iv. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
- v. Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
- vi. Implementation of Action Plan on the issues raised during the Public Hearings shall be ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees shall be compensated as per the norms laid out R&R Policy of the Company/ or the National R&R Policy/ R&R Policy of the State Government, as applicable
- vii. The project proponent shall follow the mitigation measures provided in this Ministry's

OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment,

- Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
 - vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
 - xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Annexure-III

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. Therecommendations of the approved Site-Specific Conservation Plan / WildlifeManagement Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of schedule-I species in thestudy area)
- (iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water(Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the CentralGround Water Authority.
- (vi) Solid waste/hazardous waste generated in the washery needs to addressed inaccordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules,2016.
- (vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based onthe meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.
- ii. Continuous ambient air quality monitoring stations as prescribed in the statutebe established in the core zone as well as in the buffer zone for monitoring ofpollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on themeteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stationsmay also be installed in addition to the regular monitoring stations as per therequirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by railwith wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas

prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board

- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery up to the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.
- vi. Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.
- vii. Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.
- viii. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- ix. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- x. The temporary reject sites should be appropriately planned and designed to avoid air and water pollution from such sites.

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- iii. Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.
- iv. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the riverfront side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.

- v. Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- vi. The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.
- vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m³/tonne of raw coal.
- xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- xii. The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government

IV. Noise and Vibration monitoring and prevention

- i. The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis
- ii. Adequate measures shall be taken for control of noise levels as per noise pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

V. Coal beneficiation

- i. Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.

- ii. Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

VI. Green Belt

- i. Three tier greenbelt comprising of a mix of native species, of minimum 30 m width shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/transferpoints and also along internal roads/main approach roads.
- ii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis. The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any. as amended time to time.
- ii. Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iii. Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- iv. The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting

infringements / deviation

/ violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

IX. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project authorities shall inform to the Regional Office of the MOEF&CC regarding commencement of mining operations.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution

Control Board and the State Government.

- x. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xi. No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC) with such conditions mentioned therein. No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made
- xii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xiii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xvi. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

ANNEXURE-IV

Generic ToR for coal washery

- i. Siting of washery is critical considering its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washer preferably through closed conveyor belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant along with a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. along with the comments of the Chief Wildlife Warden of the State Govt.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM10, PM2.5, SOx and NOx, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transported by train as far as possible. Road transport of washed coal and rejects should generally be avoided.

In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.

- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out along with Action Plan.
- xiv. O.M.no.J-II0I3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
Characteristics and quantum of coal after washing.
Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. Therejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyer belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.

- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

- (i) An EIA-EMP Report shall be prepared for MTPA rated capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A toposheet specifying locations of the State, District and Project site should be provided.
- (iv) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (v) Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
- (vi) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
- (vii) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (viii) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channeling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion /modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.

- (x) Similarly, if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.
- (xi) Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

LAND USE DETAILS FOR OPENCAST PROJECT should be given as per the following table:

Sl. No.	Land use	Within ML area (ha)	Outside ML area (ha)	Total
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			
4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats,

other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xvi) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xxi) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site, should be given.

- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxvi) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxviii) Efforts be made for maximizing progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void. --to reduce land degradation.
- (xxix) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxx) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

Table 1: Stage-wise Land use and Reclamation Area (ha)

S.N.	Land use Category	Present (1 st Year)	5 th Year	10 th Year	20 th Year	24 th Year (end of mine life)*
1.	Backfilled Area Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area(brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

S. No.	YEAR*	Green Belt	External Dump	Backfilled Area	Others(Undisturbed Area/etc)	TOTAL
1.	1 st year					
2.	3 rd year					
3.	5 th year					
4.	10 th year					
5.	15 th year					
6.	20 th year					
7.	25 th year					
8.	30 th year					
9.	34 th year (end of mine life)					
10.	34-37 th Year (Post-mining)					

* As a representative example

(xxxi) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining

landuse should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

Table 3: Post-Mining Landuse Pattern of ML/Project Area (ha)

S.N.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					

- (xxxii) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxiii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiv) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxvi) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxvii) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxviii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxix) Corporate Environment Responsibility:
- a) The Company must have a well laid down Environment Policy approved by the

Board of Directors.

- b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xl) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xli) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xlii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xliii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xliv) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

FOREST CLEARANCE: Details on the Forest Clearance should be given as per the format given:

TOTAL ML/PROJECT AREA (ha)	TOTAL FORESTLAND AND (ha)	Date of FC	Extent of forestland	Balance area for which FC is yet to be obtained	Status of appl for. diversion of forest land
		If more than, provide details of each FC			

ANNEXURE -VI

**GENERIC TORs FOR AN UNDERGROUND COALMINE
PROJECT**

- (i) An EIA-EMP Report shall be prepared for MTPA rated capacity in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A Study area map of the core zone (project area) and 10 km area of the bufferzone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (iv) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
- (v) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (vii) Original land use (agricultural land/forestland/grazing land/wasteland/waterbodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be

specified.

S. N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights(ha)	Area under Both (ha)
1.	Agricultural land			
2.	Forest Land			
3.	Grazing Land			
4.	Settlements			
5.	Others (specify)			

Area under Surface Rights

S.N.	Details	Area (ha)
1.	Buildings	
2.	Infrastructure	
3.	Roads	
4.	Others (specify)	
	TOTAL	

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water

(surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.

- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The breakup of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main

- mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
- (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxviii) Corporate Environment Responsibility:
- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English

Translation of the same should be provided.

- (xxx) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xxxi) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xxxii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept.(if req.), etc. wherever applicable.

Details on the Forest Clearance should be given as per the format given:

Total ML /Project Area (ha)	Total Forest Land (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl. For diversion of forest land
		If more than one provide details of each FC			

ANNEXURE-VII

GENERIC TORs FOR AN OPENCAST -CUM UNDERGROUND COAL MINE PROJECT

- (i) An EIA-EMP Report would be prepared for a combined peak capacity of.....MTPA for OC-cum-UG project which consists of.... MTPA in an ML/project area of ha for OC and MTPA for UG in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum underground mining.

LIST OF PARTICIPANTS OF EAC (COAL) IN 46TH MEETING HELD ON 26-27 JUNE, 2023 THROUGH VIDEO CONFERENCING

1.	Shri G.P Kundargi			DAYS
		-	Chairman	
2.	Dr. N.P. Shukla	-	Member	P
3.	Shri Suramya Dolarray Vora, IFS(Retd)	-	Member	P
4.	Dr. Umesh Jagannathrao Kahalekar	-	Member	P
5.	Shri K.B.Biswas	-	Member	P
6.	Dr. Nandini.N	-	Member	P
7.	Dr. Unmesh Patnaik	-	Member	A
8.	Professor S S Rai, Representative of IIT/ISM Dhanbad	-	Member	P
9.	Shri M.P Singh, Representative Of CEA	-	Member	P
10.	Dr. Santosh Kumar Hampannavar	-	Member	P
11.	Prof R.K.Giri Representative of IMD	-	Member	A
12.	Dr. Nazimuddin Representative of Central Pollution Control Board	-	Member	P
13.	Shri Lalit Bokolia, Director, MoEFCC	-	Member Secretary	P
