

**MINUTES OF 7<sup>th</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE ( COAL) FOR ENVIRONMENTAL APPRAISAL OF COAL MINING PROJECTS HELD ON 29<sup>th</sup> JANUARY, 2021.**

**Friday, 29<sup>th</sup> January, 2021**

**Confirmation of the Minutes of 6<sup>th</sup> Meeting of the EAC (Coal) held on 13<sup>th</sup> January, 2021:** No comment was made from members of the committee on the minutes of the 6<sup>th</sup> meeting of the EAC held during 13<sup>th</sup> January, 2021 therefore the Minutes of the Meeting (MoM) of 6<sup>th</sup> EAC meeting was confirmed.

**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 7<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 29<sup>th</sup> January, 2021 through video conferencing with support NIC team due to Covid-19 lockdown. The EAC considered proposals as per agenda adopted for the meeting. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

**Agenda No. 7.1**

**Expansion of Kulda Opencast Coal Mine Project from 14 MTPA to 19.60 in an ML area of 634.205 ha by M/s Mahanadi Coalfields Limited, located in Post Jagruti Vihar, District Sambalpur, (Odisha)- For Environmental Clearance under Clause 7(ii) of EIA Notification, 2006 (Ministry OM dated 15th September, 2017)– Reg.**

**[Online Proposal No. IA/OR/CMIN/187854/2020; File No. IA-J- 11015/10/1995-IA.II (M)]**

7.1.1 The proposal is for grant of Environment Clearance (EC) for Expansion of Kulda Opencast Coal Mine Project from 14 MTPA to 19.60 in an ML area of 634.205 ha by M/s Mahanadi Coalfields Limited, located in Post Jagruti Vihar, District Sambalpur, (Odisha) under Clause 7(ii) of EIA Notification, 2006.

7.1.2 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 N/12 & 64 N/16 (RF 1:50000) and is bounded by the geographical coordinates ranging from Latitude- 21° 42' 00" to 21° 44' 30" N and Longitude- 83° 43' 00" to 83° 46' 30" E
- (ii) Coal linkage of the project: To various Power Plants (VZP/TNEB, KPKD, KIG, BTMT, BTPC, STDV, MIGK, VSPS etc.)
- (iii) Joint venture cartel has been formed: Not Applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: Direct employment to 341 persons

- (vi) The project is reported to be beneficial in terms of Contribution to the Exchequer (both State and Central Govt.), Improvement of Electrical Power Generation and availability of electricity in rural areas and Overall economic growth of the country.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification 2006 vide Ministry's letter no. No. J-11015/10/1995-IA. II (M) dated 10.01.2020 for 14.0 MTPA in the mine lease area of 634.205 Ha.
- (viii) Total mining lease area as per block allotment is 634.205ha. Mining plan (including Progressive Mine closure plan) has been approved by MCL Board on 30.11.2020.
- (ix) The land usage pattern of the project is as follows:  
Pre-mining land use details (Area in Ha)

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	259.794	37.500	297.294
2	Forest Land	227.890	Nil	227.890
3	Wasteland	146.521	22.900	169.421
4	Grazing Land	Nil	Nil	Nil
5	Surface Water Bodies	Nil	Nil	Nil
6	Settlements	Nil	Nil	Nil
7	Others (Specify)	Nil	Nil	Nil
	<b>Total Project Area</b>	<b>634.205</b>	<b>60.400</b>	<b>694.605</b>

### Post Mining

Post-mining land use (at the end of mining activity)							
Sl. No.	Category	Land use (in Ha)					Total
		Plantation/ grass carpeting	Water body	Dip side slope & haul road	Undisturbed	Built-up area	
1	Excavation Area	211.47	17.64	92.80	-	-	321.91
2	OB dump Area (External)	160.502	-	-	-	-	160.502
3	Infrastructure	25.23	-	-	-	100.927	126.157
4	Embankment	3.51	-	-	-	14.049	17.559
5	Other area incl safety zone & Road/Nallah Diversion	8.077	-	-	-	-	8.077
	<b>Total Mining Lease</b>	<b>408.789</b>	<b>17.64</b>	<b>92.80</b>	<b>-</b>	<b>114.976</b>	<b>634.205</b>
6	Resettlement site	-	-	-	-	37.5	37.5
7	Rehabilitation Site	-	-	-	-	22.9	22.9
	<b>Total Project Area</b>	<b>408.789</b>	<b>17.64</b>	<b>92.80</b>	<b>-</b>	<b>175.376</b>	<b>694.605</b>

- (x) Net geological reserve reported in the Kulda Geological Block is 245.71 MT with 172.49 MT (including the depleted reserve) as mineable reserves. 85.79 MT is available for extraction as on 01.04.2020. Percent of extraction is 70.20%.
- (xi) 3 seams with thickness ranging from 0.06 m to 34.07 m are workable. Grade of Coal is G-14; Stripping ratio is 1.02 while gradient is 5° to 8°.
- (xii) Method of mining operations envisages by Opencast Mining by Shovel – Dumper/Ripper-dozers in OB/ parting; Surface miner, pay loader & tipper in coal.
- (xiii) Life of mine is 5 years (from 2020-21)
- (xiv) The project has only one external OB dump in an area of 160.502 Ha (presently around 69.04 Ha) with 80-90 m (presently around 60 m) height and 37.33 Mm<sup>3</sup> (reported quantity as on 01.04.2020) of OB and one internal OB in an area of 211.47 Ha (Presently 44.16Ha) with 17.24Mm<sup>3</sup> (reported quantity as on 01.04.2020) of OB is envisaged in the project.
- (xv) Total quarry area is 321.91 Ha (Presently 207.02Ha) out of which backfilling will be done in 211.47 ha. while final mine void will be created in an area of 17.64 ha of partially backfilled area will remain as final mine void with a maximum depth of 200 m. Backfilled quarry area of 211.47 ha shall be reclaimed with plantation/grass/agriculture. Final mine void will be converted into a water body.
- (xvi) Transportation of coal has been proposed in mine pit to surface by tippers, from surface to siding by tippers and dumpers and at sidings by pay loader/railway rakes. Work order dt: 20-01-2021 issued for 20 MTPA Rapid Loading System with belt & surge bin adjacent to Sardega siding for Rs. 403.66 Cr.
- (xvii) Reclamation Plan in an area of 380.049 ha, comprising of 160.502 ha of external dump, 211.47 ha of internal dump and 8.077 ha of green belt.
- (xviii) 227.89 ha of forest land have been reported to be involved in the project. Stage II FC obtained vide no.- F.No.8-176/1997-FC, Dt.- 08.08.2007.
- (xix).No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project
- (xx)..The ground water level has been reported to be varying between 3.10 m to 7.65 m bgl (Pre-monsoon) & 1.15m to 5.68 m (Post Monsoon). Total water requirement for the project is 3913 KLD out of which incremental water demand is 1040 KLD (Potable -188 KLD and Industrial 852 KLD). The potable water requirement is being and will be met from Basundhara West old quarry. The same arrangement will continue for expansion project. Industrial water demand is being and will be met from mine water sump.
- (xxi).NoC from Central Ground Water Authority, New Delhi for abstraction of ground water obtained on vide NOC dt: 09.12.2020.
- (xxii)Public Hearing was held on date 10.01.2018 at 11 AM at Stadium field near Jagannath Mandir, Basundhara Area, Tikilipada of Hemgir Tahasil of Sundargarh District, Odisha for the Expansion of coal production capacity from 10.0 MTPA to 15.0 MTPA over an area of 634.205 Ha of Kulda OCP of M/s. Mahanadi Coalfields Limited.
- (xxiii) Consent to Operate for the existing capacity has been obtained vide 3903/IND-I-CON-5125 Dt 27.03.2020 valid till 31.03.2021 from the State PCB, Odisha.
- (xxiv) Chhatan Jhor is passing through mine lease area, hence, straightening of Jhor is required. The permission for straightening of Chhatan Jhor has been granted from State Authority vide letter no.-2609/dt. -17.12.2019. Proposal has been initiated by the Project proponent

based on the letter referred above. The estimated amount is 33.83 Lakh. Diversion of Raigarh-Sundergarh state highway crossing through the mining area is completed. Alternative diversion road has been provided on the top of the embankment provided against Basundhara river and Chattarjhor nallah.

- (xxv) Fresh Base line data generated for the period of Oct'20 to Dec'20. All values of the parameters are well within permissible limit.
- (xxvi) No court cases are pending in the court. However, the R&R of all the villages falling in this project area are being carried out under the direction of “Claims Commission” appointed by Hon’ble Supreme Court of India.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. after obtaining EC for 10 MTPA in the year 2002, under the provisions of EIA Notification, 1994 as amended on 04.05.1997 and 10.04.1997. EC for 14MTPA was granted as per EIA Notification, 2006 and subsequent amendments/circulars. The coal production from the mine was started from the year 2007 onwards. The coal production, realized from the project, from 2007-08 onwards, is as under:

<b>Year</b>	<b>EC sanctioned capacity (MTY)</b>	<b>Actual Production (MTY)</b>	<b>Excess production beyond the EC sanctioned capacity</b>
2007-08	10.00	0.15	--
2008-09	10.00	2.47	--
2009-10	10.00	3.43	--
2010-11	10.00	5.02	--
2011-12	10.00	5.54	--
2012-13	10.00	5.50	--
2013-14	10.00	5.27	--
2014-15	10.00	4.80	--
2015-16	10.00	8.02	--
2016-17	10.00	10.00	--
2017-18	14.00	10.07	--
2018-19	14.00	12.81	--
2019-20	14.00	13.62	--
2020-21 (up to 09.01.2021)	14.00	11.94	--
<b>Total</b>		<b>95.31</b>	<b>--</b>

- (xxviii) The project involves 572 project affected families. R&R of the PAPs is being done as per Orissa Rehabilitation and Resettlement Policy 2006. The R&R of all the villages falling in this project area are being carried out under the direction of “Claims Commission” appointed by Hon’ble Supreme Court of India.
- (xxix) Total cost of the project is Rs. 622.21 Crs. Cost of production is Rs.255.59per tonne, CSR cost is Rs.2per tonne or 2% of the average net profit of the Company of the three immediately preceding financial years whichever is higher, R&R cost is Rs.63.40Crs. Environment Management Cost is Rs 76.90 Crores.
- (xxx) Consent to operate (CTO) will be obtained from the State Pollution Control Board after

the grant of Expansion in capacity/amendment of Environmental Clearance.

(xxxii) Past Production details comparison with existing EC-

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2017-18	14.00	10.07	0
2018-19	14.00	12.81	0
2019-20	14.00	13.62	0
2020-21 (up to 09.01.2021)	14.00	11.94	0

(xxxiii) The mine has been inspected by the RO, MoEF&CC on 06.11.2020. Certified Compliance report received vide letter dated 11.12.2020. Action taken Report to observations of RO, MoEF&CC during the inspection submitted to RO, MoEF&CC on 21.12.2020

7.1.3 The EAC during deliberations noted the following:

The proposal is for grant of Environment Clearance (EC) to Expansion of Kulda Opencast Coal Mine Project from 14 MTPA to 19.60 in an ML area of 634.205 ha M/s Mahanadi Coalfields Limited, located in Post Jagruti Vihar, District Sambalpur, (Odisha) under Clause 7(ii) of EIA Notification, 2006 i.e. with exemption of Public Hearing

Earlier Environment Clearance for Kulda OCP Expansion of 14 MTPA has been granted by MoEF&CC vide letter no. J- 11015/10/1995-IA.II(M) dated 22<sup>nd</sup> March, 2018 for one year. Extension of EC granted on 28<sup>th</sup> March, 2019 for one year and further extended on 10<sup>th</sup> January, 2020 for life of the mine or 30 years as per EIA Notification, 2006.

The Mining Plan and Mine Closure Plan of Kulda Expansion OCP (19.6 MTPA) has been approved by M/s MCL Board vide letter no MCL/SBP/CS/CR-42/2020-21/11330 dated 30<sup>th</sup> November, 2020.

One season Baseline data has been generated for the period of October, 2020 to December, 2020. Total 10 monitoring (2-core zone, 8-buffer zone) location has been selected for the baseline monitoring. Modelling has been done for incremental coal and OB considering all activities e.g. drilling, blasting, loading, unloading, transportation (upto Sardega siding) etc. with control measures.

Out of all the monitoring stations, Hemgir stations showed highest PM10 level and necessary mitigation shall be done.

Earlier Public Hearing was conducted by PP 10<sup>th</sup> January, 2018 at 11 AM during the previous expansion proposal

Project Proponent submitted that life of the mine as per available geological reserve is only 5 years.

Compliance of the requirements of Ministry's OM dated 15<sup>th</sup> September, 2017 for 40% expansion without conducting Public Hearing is detailed as below :

Sr. No.	Requirements as per OM	Compliance
1	Predicted air quality parameters are within the prescribed norms	The predicted absolute values PM10, PM2.5, NO2 and SOx are well within the permissible limits at all the locations considering maximum baseline value
2	Coal Transportation is through conveyor system up to the silo and then loading to railway wagon, involving no transportation through roads.	<p>Incremental 5.6 MTPA of coal will be dispatched through rail mode from nearby Sardega Siding.</p> <p>Coal will be dispatched through belt conveyor and RLS, which is coming up adjacent to Sardega Siding at an estimated value of ₹404.87 Cr. Work order for the same has been issued on 20-01-2021.</p> <p>Additional dust control measures such as static fog cannons, fixed sprinklers, mobile fog cannons etc. have already been deployed at Sardega Siding.</p>
3	The Coal mining is done through deployment of surface miner, replacing three dust generating operations of conventional mining system namely drilling, blasting and crushing in one go	100% Coal Production will be done through eco-friendly surface miner
4	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	<p>Public Consultation has been conducted on 10-01-2018 for total ML area of 634.205 Ha.</p> <p>No additional land is required for proposed project</p>
5	Compliance Status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory	<p>Certified Compliance Report by Ministry's Regional Office, Bhubaneswar submitted vide letter dated 11<sup>th</sup> December, 2020, after site inspection conducted on 6<sup>th</sup> November, 2020.</p> <p>Overall observation of RO, Bhubneshwar is as mentioned below:</p> <p>"Minor non-compliances detected (not of immediate danger to health &amp; safety of the people). Letter issued to project authorities for taking corrective measures."</p>
6	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as	<p>EC-Obtained on dated 10-01-20</p> <p>FC-Obtained on dated 08-08-07</p> <p>CTE- Obtained on dated 26-03-18</p>

	applicable, Forest Clearance, etc are satisfactorily fulfilled.	CTO- Obtained on dated 27-03-20 Mining Plan- Approved on dated 30-11-20 CGWA- Obtained on dated 09-12-2020
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EAC sought further information by PP regarding details of expenditure incurred vis-a-vis provisions provided in EIA/EMP, details of the transportation of coal and installation of Continuous Ambient Air Quality Monitoring Stations at the earliest. It was reported that continuous monitoring system has been installed, however, after instrument calibration, it would be put in operation soon. It was advised that incidental/regular hike in parameter should be analysed for effectiveness of EMP. The data of all three CAAQMS as submitted by the project proponent in the meeting should be checked regularly by Ministry's Regional Office, MoEFCC, Bhubneshwar and be uploaded in the company's website.

The details of all three CAAQMS are given below:

Sl. No.	Name of Station	Location	Remarks/Timeline
CAAQMS-1	Jagannath Temple near Tikilipara	220 03' 43.10''N 830 44' 38.56''E	Installation completed. Analyzer is under calibration and trial run. Real time data logging will be started by 28 <sup>th</sup> Feb 2021.
CAAQMS-2	CMPDI camp near Gopalpur	220 03' 14.84''N 830 42' 18.50''E	
CAAQMS-3	Near Nursinghpur village	220 02' 43.66''N 830 45' 18.77''E	Installation in progress. Completion by 15 <sup>th</sup> Mar 2021.

PP submitted that the issues raised during the public hearing were mainly related to Air pollution, Water pollution, drinking water supply & employment. The summarized expenditure is mentioned below:

S. N	PUBLIC HEARING ISSUES	Expenditure in ₹ lakhs	Proposed In ₹ lakhs
1	Air Pollution (Incl. infrastructure & Control measures)	2252.49 (details given in Table-1,2,3 &4)	4,73,032 (details given in Table-5)
2	Water pollution (Control Measures)	29.51	163.00 104 lakhs-Toe wall against Extn. OB dump. 59 lakhs- Renovation of ETP
3	Drinking Water Supply to peripheral villages	86.04 (in last 3 years)	306.00

4	Employment for unemployed youth		
	(i) Direct Employment	343 nos.	42 nos are under process
	(ii) Indirect employment	505 nos have been employed.	520 nos. (Approx.)
	(iii) Skill development Initiatives		
	(a) Project 'CCDP-Utthan': Comprehensive Community Development Program Under the 'CCDP-Utthan' Comprehensive Community Development Programme, 6174 families living in 40 villages of Sundargarh, Jharsuguda, Angul and Sambalpur districts have been given training on livelihood and skill development for five and half years commencing from 2018-19. Training has been given for cattle development, goat development, backyard poultry farming, fodder development programme, Agri horticulture development programme, awareness creation and capacity building programme etc.	Beneficiaries: 6174 families ₹ 20.29 Crore (on-going)	
	(b) Multi- Skill Training Programme: A MoU has been signed between MCL and Central Institute of Petrochemicals Engineering & Technology, Centre for Skilling & Technical Support, Bhubaneswar. under this project, a six-month multi-skill training on electrical, mechanical, plumbing and agricultural tools are being given to the unemployed youths among the project affected families.	24 students in first batch Rs. 41.45 Lakhs (On going)	
	(c) Aahar Mandal & Desi Beej Ghar Programme: In association with  Project 'Ahaar Mandal', an initiative of promoting organic farming among rural community of Hemgir block, Sundargarh district under CSR of MCL is under implementation (Rs. 25 Lakh).	200 SC & ST farmers of 10 villages. ₹ 25 Lakhs (ongoing)  200 farmers ₹ 22.53 lakhs (ongoing)	



	Desi Beej Ghar the project to provide support for cultivation & preservation of indigenous seeds, and create an eco-system for marketing the product to fellow farmers through seed bank. The project will be implemented in Hemgir block, Sundargarh district. Overall, 200 farmers will be provided training on mechanisms for preservation of indigenous seeds. 22.53 lakhs	
	(d) Other CSR works in peripheral Areas	₹1659.84 lakhs from 2017-18 to 2019-20 (Table 6) ₹ 3832.75 Lakhs – major CSR works approved in 2020-21 (Table -7)

**Table 1: Expenditure on Dust Control Measures adopted inside the mine lease area**

S. N	Dust suppression units	Location	Quantity	Trips/Tanker/day	Expenditure incurred
1	Mobile water tanker(28Kl)	OB & Coal Haul roads	02	08	220.76 Lakhs
2	Mobile water tanker (20Kl)	Coal and OB face	02	08	12.21 Lakhs
3	Mobile water tanker (12Kl)	Coal and OB face	01	08	10.44 Lakhs
4	Mobile water tanker (10Kl)	Coal and OB face	01	08	9.36 Lakhs
5	Fixed Sprinkler (20m throwing capacity)	Internal CT road	77	08	3.08 lakhs
6	Instant Shower	Exit Gates	5	As required	7.49 Lakhs
	<b>TOTAL</b>				<b>289.89 Lakhs</b>

**Table 2: Expenditure on Dust Control Measures adopted outside the mine lease area**

Sl.No.	Location	Distance covered/Trip	Control measures implemented	Expenditure incurred (₹)
1	Barpali to Duduka Chowk	2.0Km	Mobile tanker (4Kl) – 7 Trip/day	<b>13.04 lakh</b>
2	Tumulia Chhak to Bankibahal	2.7Km	Mobile Fog Canon (12Kl)- 8Trip/day	<b>6.51 lakh</b>
3	Bankibahal to Numbering point	1.0Km	Mist Sprayer (8LPS) (40 nos.) – 8 Times/day	<b>14.50 lakh</b>

4	Numbering point to petrol pump	1.0Km	Mobile Fog Canon (12Kl)- 6 Trip/day	<b>6.51 lakh</b>
5	Gopalpur Diversion road	1.2Km	Mobile Tanker (8Kl) – 7 Trip/day	<b>11.01 lakh</b>
6	Sardega Siding	1.5Km	Mobile Fog Canon (12Kl)- 6 Trip/day Static Fog Canon (100m throw) (2nos.)- 8 Times/day	<b>6.51 lakh</b>
	<b>TOTAL</b>			<b>43.58 lakh</b>

**Table 3: Expenditure on Additional Air Control Measures implemented during April 2018- Nov 2020**

Sl. No.	Name of Infrastructure	Capacity/ Quantity	Date of Commissioning	Investment	Remarks
<b>Rail &amp; Road Infrastructure</b>					
1	Jharsuguda - Sardega Railway line	53.1 Km (Single line)	April 2018	1129 Cr.	<b>Completed</b>
2	Sardega Spur siding	20.0 Mty	April 2018	17.99 Cr	<b>Completed</b> There was an increase in rail despatch by 6% in 2019-20.
3	Concrete road to Sardega Spur siding.	6.0 Km	March 2019	19.50 Cr	<b>Completed.</b>
4	Transport Road from Siarmal to Bankibahal	2.7 Km	January 2020	16.36 Cr	<b>Completed</b>
5	Strengthening & widening of Transport Road from Duduka to Kanika siding	25 Km	July 2020	209.40 Cr	<b>Completed</b>
	<b>TOTAL</b>			<b>1392.25 Cr</b>	

**Table 4: Additional Air Control Measures implemented during April 2018-Dec 2020**

Sl. No.	Air Quality Control Measures	Date of Commissioning	Investment	Remarks
<b>Air Quality Control Measures</b>				
1.	Mist sprinklers along Concrete road to Sardega Spur siding.	Sept 2019	<b>162 Lakhs</b>	80 nos. Mist type Fixed sprinklers.
2.	Transport Road from Barpalli to Bankibahal	January 2020	<b>13.34 Lakhs</b>	40 nos. Mist type Fixed sprinklers

3.	Mobile Fog Cannons – 02nos.	Sep-Oct 2020	<b>200 Lakhs</b>	02 nos. hired for 03 year for OB/Coal haul roads
4.	Trolley mounted Fog Cannons 100 Mtr Throw	Nov/Dec 2020	<b>44.25 Lakhs</b>	05 nos. installed at coal stock & OB / Coal road junctions.
5.	Mechanical Road Sweeper	March 2020	<b>50.25 Lakhs</b>	1 no.
6.	Plantation	2018-2020	<b>83.48 Lakhs</b>	96,715 nos.
	Total		<b>553.32 Lakhs</b>	

**Table 5: Proposed Dust Control Measures under Basundhara Area**

Sl. No.	Dust Control Measure	Financial Provision (₹)	Tentative Timeline
1	04 nos. of Mechanical Road sweeper on hiring basis for 3 years	6.4 Cr	Mar' 2021
2	04 nos. of Truck Mounted mobile Fog Cannon – 40 m throw – on hiring basis for 3 years	6.70 Cr	Mar' 2021
3	Vertical Greenery System along a length of 1 Km	0.32 Cr	May' 2021
4	Wheel washing system-01 no.	0.41 Cr	Jul'2021
5	Installation of 34 nos. of Static Fog Canon with 100m throwing capacity	4.87 Cr	Sep'2021
6	Transport road from Basundhara(W) Exn. Mine boundary to Sardega Spur siding	6.6 Cr	Sept' 2021
7	Plantation along CT Roads with a length of 12.5 RKM	2.40 Cr	Sept'2021
8	RLS with surge bin adjacent to Sardega siding	403.66 Cr	Feb' 2022
9	Construction of four lane road from Bankibahal to Bhedabahal for a distance of 30 Km	398.96 Cr	Dec' 2023
10	Jharsuguda – Sardega Railway line Ph-II i.e., Doubling of line, const. of loading bulb at Barpalli, const. of double line fly-over at Jharsuguda stn.	2900 Cr (addl. approx.)	31.03.2025
11	Loading Bulb with 03 nos. silo & 04 nos. RLS on 07 nos. rail line at Barpali yard		31.03.2026
12	Belt from Kulda-Garjanbahal OCP to silo at Barpalli loading Bulb	1000 Cr (approx.)	31.03.2026
	Total	4730.32 Cr	

**Table 6: Control measures taken up & proposed for Overburden dumps**

Sl. No.	Control Measure	Expenditure incurred for completed activities	Financial Provision for Proposed activities
1	Technical Reclamation	0.87 Cr	27 Cr
2	Biological Reclamation (Plantation + Slope stability work using Geo Textile)	1.59 Cr	13.15 Cr
3	Retaining Wall	0.04 Cr	0.79 Cr
4	Garland Drain with Check Dams	0.22 Cr	0.16 Cr
	<b>Total</b>	<b>2.72 Cr</b>	<b>41.1 Cr</b>

**Table 7: CSR activities in peripheral areas during last three years**

Sl No	Head	Amount in Rupees Lakhs		
		2017-18	2018-19	2019-20
1	Drinking Water	9.69	25.34	51.01
2	Education	24.83	27.50	69.60
3	Environment	20.14	61.59	55.69
4	Healthcare	0.89	2.62	2.24
5	Road	0.00	132.17	194.42
6	Rural Sports	1.81	12.65	0.00
7	Rural Development	11.49	39.30	121.66
8	Others	0.00	797.20	0.00
	<b>TOTAL</b>	<b>68.85</b>	<b>1098.37</b>	<b>494.62</b>

**Table 8: Major CSR works approved in 2020-21 in Sundargarh distt.**

Sl.	Major CSR works	Amount in ₹ lakh
1	Development of Barpali as a Model village under Basundhara Area.	977
2	Construction of black top road from Tikilipara to Barpali station under Basundhara Area.	1126
3	Construction of 50 bedded hostel at Basundhara High School, Tiklipara under Basundhara Area.	90
4	Different development works at peripheral villages of Basundhara Area in Sundargarh district.	971
5	Sinking of borewell at different villages of Sundargarh district near Basundhara Area.	277

6	Construction of Open Pandal at different villages of Sundargarh district near Basundhara Area.	295
7	Implementation of lighting system at critical junction (accident prone area) from Duduka to Bhasma main road of Sundargarh distt.	96.75
	Total	3832.75

Break-up of the capital cost and recurring cost of the EMPs along with the timeline for incurring the capital cost.

S. N	PARTICULARS	Capital investment (Departmental) (₹ Lakh)	Expenditure (₹ Lakh)	Remarks
1	Resettlement & Rehabilitation Cost	6341.00	9934.42	In progress
2	Dust Suppression Cost	478.49	553.32	Completed
3	ETP/STP	176.23	29.51	₹ 83.00 lakhs provisioned for renovation. By July 2021
4	Garland and storm water drainage	183.60	30.00	Cumulative in nature
5	Compensatory afforestation cost	211.01	67.51	Completed
6	Arboriculture including avenue plantation	114.50	69.31	In progress
7	Rainwater Harvesting	22.80	0.00	By July 2021
8	Peripheral Village community development	127.45	1592.99	Completed
9	Environmental Data Generation	35.00	48.14	Completed
	<b>Total</b>	<b>7690.08</b>	<b>12325.20</b>	

Details of the transportation of coal

#### Transportation Details

Sl n.	Period	Production (Mty)	Mode		
Arrangement		→	Through rail Mode from siding	JPL/JSPL by Belt/road	By road to nearby consumers
1	2020-21	18.0	12.0	4.0	2.0

2	2021-22	19.6	13.6	4.0	2.0
3	2022-23	19.6	13.6	4.0	2.0
4	2023-24	19.6	13.6	4.0	2.0
5	2024-25	19.6	13.6	4.0	2.0
6	2025-26	8.39	2.39	4.0	2.0

**N.B**

- I. Sardega Railway Siding to be upgraded with RLS system of 20 Mty Capacity from 2022-23.**
- II. Dispatch by Belt/pipe conveyor to JPL/JSPL planned to be operationalized from 2022-23.**

*7.1.4 The EAC, after detailed deliberation and considering submission/commitment of Project Proponent **recommends** the proposal for grant of Environment Clearance upto 20% Expansion of Kulda Opencast Coal Mine Project from 14 MTPA to 16.8 in an ML area of 634.205 ha M/s Mahanadi Coalfields Limited, located in Post Jagruti Vihar, District Sambalpur, (Odisha) based on Ministry's OM dated 15<sup>th</sup> September, 2017 under the provision of clause 7(ii) of EIA Notification, 2006 and 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 for environmental safeguards:*

- (i) All previous Environmental Clearances issued by Ministry for this project shall be applicable along with this conditions*
- (ii) All the 3 continuous air quality monitoring station should be made operation by March 2021 and the real time data so generated to be uploaded on company website. In addition, data should also be displayed digitally at entry and exist gate of mine lease area for public display.*
- (iii) Adequate effectiveness of EMP should be analyzed from the offset/hike of air pollution data from continuous monitoring station and quarterly report shall be generated and submitted with 6 monthly compliance report to RO, MoEF&CC.*
- (iv) The PP shall complete all non-compliance/ partial compliance in one year and the action taken report shall be submitted to Regional Office of the MOEF&CC*
- (v) PP should opt specific mitigative measures for the straightening of Chattan Jhor. Regular monitoring of the flow rate of chattan Jhor Nallah shall be carried out and record maintain*
- (vi) Quality of polluted water generated from the operations which include COD and acid mine drainage and metal contamination shall be monitored along with TDS, DO, TSS. The monitored data shall be uploaded on the website of the company as well as displayed at the site in public domain.*
- (vii) PP shall submit a third party assessment of EC Compliance shall be undertaken once in three years through agency like ICFRI/ NEERI/IIT or any other expert agency identified by the Ministry to Ministry's Regional Office.*
- (viii) Continuous Monitoring at Occupational safety and health hazards and the Corrective action need to be ensured.*
- (ix) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- (x) PP to plant 100,000 nos. of native trees with broad leaves along the villages and 50,000 no of trees along the transportation route to prevent the effect of air pollution in 2 years. A proper*

*mechanism to be put in place for massive plantation by hiring expert agency in 2 years for proper survival of trees.*

- (xi) *Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road*
- (xii) *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 MoEFCC.*

## **Agenda No. 7.2**

**Basantpur Tapin Coking Coal Washery of 4 MTPA in an area of 32.47 ha of M/s Central Coalfields Limited, located in Kedla, District Ramgarh (Jharkhand) – Reconsideration for Environment Clearance –Reg.**

**[Online Proposal No. IA/JH/CMIN/77450/2018; File No J-11015/97/2018- IA.II(M)]**

**7.2.1** The proposal is for Environment Clearance for Basantpur Tapin Coking Coal Washery Project of 4MTPA capacity in lease area of 32.03 Ha of M/s Central Coal Field Limited located in Village-Basantpur, Post- Kedla, District- Ramgarh, Jharkhand.

**7.2.2** The EAC during deliberations noted the following:

Earlier the proposal was considered by EAC in its 2<sup>nd</sup> meeting held on **28<sup>th</sup> September, 2020**. The EAC after deliberations deferred the proposal for further information. PP has submitted the compliance of observation of EAC with respect to following points:

<b>Sr. No</b>	<b>Observations of EAC</b>	<b>Compliance / Submission of Project Proponent</b>															
1	Explore the possibility of laying conveyor belt for transportation of coal from nearest mine. PP shall provide the plan for reduction of number of trucks for transportation of coal and fleet to be redesigned.	<p>Basantpur-Tapin Coking Coal Washery has been planned to receive raw coal from several running mines. The approximate distance of washery from mines are given below:</p> <table border="1"> <thead> <tr> <th><b>Name of Mine</b></th><th><b>Distance (in KM)</b></th><th><b>Quantity (in MTPA)</b></th></tr> </thead> <tbody> <tr> <td>Parej East OCP</td><td>9</td><td>1.43</td></tr> <tr> <td>Jharkhand OCP</td><td>8</td><td>0.8</td></tr> <tr> <td>Tapin North OCP</td><td>12</td><td>1.42</td></tr> <tr> <td>Tapin South OCP</td><td>15</td><td>0.35</td></tr> </tbody> </table>	<b>Name of Mine</b>	<b>Distance (in KM)</b>	<b>Quantity (in MTPA)</b>	Parej East OCP	9	1.43	Jharkhand OCP	8	0.8	Tapin North OCP	12	1.42	Tapin South OCP	15	0.35
<b>Name of Mine</b>	<b>Distance (in KM)</b>	<b>Quantity (in MTPA)</b>															
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		<p>The total length of conveyor belt for handling 4.0 MTPA from the above mines is estimated to be 44 KM, which is techno-economically not feasible.</p> <p>The proposed Kotre-Basantpur-Pachmo project will start operations in near future and it will be the prime source of raw coal for Basantpur-Tapin Coking Coal Washery. A conveyor belt has been envisaged from Kotre-Basantpur-Pachmo project to the proposed washery.</p> <p>High capacity trucks of 27 tonnes capacity will be deployed for transportation of coal. This will help in reduction in overall traffic density in the region.</p> <p>The detailed Traffic Impact Assessment has been submitted at Chapter: 7 Section: 7.9 of EIA/EMP report.</p> <p>The road transport will be eliminated completely once the proposed Kotre-Basantpur-Pachmo project commences operation.</p>
2	PP shall submit plan for utilization of water only from mine and no ground water shall be used.	<p>Source of water for operation of the washery is mine water of Kedla Underground Project at a distance of about 3.75 km from proposed washery site.</p> <p>Application for obtaining NOC for using mine water for washery was made vide application no- 21-4/642/JH/IND/2020 dated - 01/04/2020.</p> <p>The same was considered by CGWA and CGWA stated that the firm has ascertained that no ground water is withdrawn for the project and entire quantity of water required is fulfilled through water from nearby mining discharge or quarry. That OC mine water may be treated as surface water and therefore no NOC may be required.</p>
3	Plan of utilisation of washery rejects with MoU with FBC boilers/power plants as per the MoEF&CC notification.	<p>The maximum quantity of generation of reject from the proposed 4 MTPA Basantpur-Tapin washery will be 1.49 MTY. Reject will be transported to the temporary reject storage site, located within the proposed washery site.</p> <p>Rejects from coking coal washery are of good quality and according to Conceptual report prepared by CMPDIL the average grade of reject of proposed Basantpur-Tapin washery will fall under G13 grade (GCV range 3401-3700 KCal/Kg).</p> <p>At present there are sufficient customers for the reject. The reject may be sold to different consumers mainly power, brick &amp; sponge iron industries through MOU or E-auction route by rail or road mode on regular basis.</p>
4	Impact of washery on nearby agricultural land and flora-fauna. Proper	<p>The land for the proposed washery has been acquired under CB Act. The land for washery is non-forest in nature. Washery operations will have impact on the terrestrial ecosystem mainly from deposition of air pollutants.</p>



	flora management plan needs to be prepared.	<p>Emissions from washery operations are expected to be within the prescribed standards and therefore, will have no adverse and noticeable impact on vegetation and crop lands.</p> <p>Apart from provision of dust control measures in washery, it is also proposed to develop a green belt with around 50,850 plants in and around the proposed washery premises at an approximate cost of Rs. 80 Lakhs. The trees will be planted in open areas of 11.14 Ha around the washery and along 1.708 Km of road approaching the washery.</p> <p>After the closure of the washery, it is proposed to develop plantation in additional 16.86 Ha at an approximate cost of Rs. 45 lakhs to mitigate impact on terrestrial eco-system .</p> <p>Core Zone consists entirely of Tenancy land and there is no endangered fauna. As there are ongoing projects adjacent to the proposed project, no additional impact on Fauna is envisaged due to operation of washeries and mines.</p> <p>The baseline data related to Flora &amp; Fauna was generated by M/s Wolkem India Limited (WIL) during pre-monsoon 2019 around 10 km radius from the project site. During the site visit, no endangered fauna was observed in core zone &amp; buffer zone but consultation with local villagers &amp; as per secondary sources, Peafowl exist in study area.</p> <p>Avifauna Peafowl come under Schedule-I species as per Indian wildlife (protection) Act, 1972 was found in the buffer zone.</p> <p>Conservation plan prepared and submitted to PCCF, CWLW, Govt. of Jharkhand on dtd. 24/02/2020.</p> <p>A total of ₹ 32.00 Lakhs has been kept as financial provisions for maintaining conservation plan for this washery.</p> <p>A total of Rs. 32.00 Lakhs has been kept as financial provisions for conservation of Peafowl.</p>
5	Proper Air pollution mitigation measures at site with installation of Continuous Ambient Air Quality Station during operation of project.	<ol style="list-style-type: none"> <li>1. Installation of fixed water sprinkling system at the ground coal stock for raw coal.</li> <li>2. Raw coal crushers to be fully enclosed.</li> <li>3. 02 Nos of Mobile Mist Sprayers are proposed in premises &amp; Coal Transportation Road</li> <li>4. 02 Nos of Sweeping Machines are proposed for the reduction in the particulate matter on the coal transportation road.</li> <li>5. Additional plantation (green belt) of 03 meters strip around the washery premises has been proposed.</li> <li>6. Providing enclosures at belt conveyor transfer points and suitable covers for preventing dust leakages from conveyor sides and top.</li> <li>7. Development of Green Belt along periphery of the plant area &amp; transportation route.</li> </ol>

		<div>8. CAAQMS : NIT issued and bids received on 16-01-2021. Bid evaluation is in progress. The activity wise expenditure is listed below for air pollution mitigation measures are given below:</div> <table><tr><th colspan="3">Original proposed Capital Estimate for Air Pollution Control Measures</th></tr><tr><th>SN</th><th>Particular</th><th>Cost (in Rs. Lakh)</th></tr><tr><td>(i)</td><td>Dust Control Equipment in Coal Crusher House</td><td>20</td></tr><tr><td>(ii)</td><td>Dust Controls Measures for ground raw coal storage / Water sprinkling, Enclosures etc.</td><td>10</td></tr><tr><td>(iii)</td><td>Dust Control Measures for CHP</td><td>5</td></tr><tr><td>(iv)</td><td>Water Sprinklers</td><td>40</td></tr><tr><td>(v)</td><td>Green Belt</td><td>15</td></tr><tr><td>(vi)</td><td>Road Widening &amp; Black Topping</td><td>50</td></tr><tr><td></td><td>Sub-Total</td><td>140</td></tr></table> <table><tr><th colspan="3">Additional Capital Estimate</th></tr><tr><th>SN</th><th>Particular</th><th>Cost (in Rs. Lakh)</th></tr><tr><td>(i)</td><td>Auto sensor mist water sprinkler (6 circuit, Hopper &amp; Crusher etc.)</td><td>25</td></tr><tr><td>(ii)</td><td>Sweeping Machine</td><td>110</td></tr><tr><td>(iii)</td><td>Mist Sprinkler</td><td>175</td></tr><tr><td>(iv)</td><td>Static mist type sprinkler</td><td>50</td></tr><tr><td>(v)</td><td>Green Belt</td><td>65</td></tr><tr><td>(vi)</td><td>Conservation Plan</td><td>32</td></tr><tr><td>(vii)</td><td>Rainwater harvesting</td><td>8</td></tr><tr><td>(viii)</td><td>CAAQMS Station</td><td>100</td></tr><tr><td></td><td>Sub-Total</td><td>565</td></tr></table>	Original proposed Capital Estimate for Air Pollution Control Measures			SN	Particular	Cost (in Rs. Lakh)	(i)	Dust Control Equipment in Coal Crusher House	20	(ii)	Dust Controls Measures for ground raw coal storage / Water sprinkling, Enclosures etc.	10	(iii)	Dust Control Measures for CHP	5	(iv)	Water Sprinklers	40	(v)	Green Belt	15	(vi)	Road Widening & Black Topping	50		Sub-Total	140	Additional Capital Estimate			SN	Particular	Cost (in Rs. Lakh)	(i)	Auto sensor mist water sprinkler (6 circuit, Hopper & Crusher etc.)	25	(ii)	Sweeping Machine	110	(iii)	Mist Sprinkler	175	(iv)	Static mist type sprinkler	50	(v)	Green Belt	65	(vi)	Conservation Plan	32	(vii)	Rainwater harvesting	8	(viii)	CAAQMS Station	100		Sub-Total	565
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6	Adherence to the compliance to Issues raised during Public Consultation with the timeline and budgetary provision.	<div>Major issues raised in the Public Hearing of Basantpur Tapin Washery &amp; corresponding action plan &amp; Budgetary allocation is listed below:</div> <table><tr><th>S N</th><th>Particular of Public Hearing</th><th>Budgetary</th><th>Timelin e</th><th>Nature</th></tr></table>	S N	Particular of Public Hearing	Budgetary	Timelin e	Nature																																																							
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				<b>Allocati on</b>		
		1	Prevention of Pollution from washery operation	Rs 735 Lakhs	Year 1 - Year 3	Capital
		2	Development of Green Belt	Rs 80 Lakhs	Year 1 – Year 6	Revenue
		3	CSR Expenditure including health, education, drinking water etc.	As per Company's Act	Yearly	CSR Expenditur e
		4	Employment & Land compensation	As per the specifics	As per claim submitted by affected persons.	Capital
		5	Corporate Environmental Responsibility	Rs 540 Lakhs	Through out the project life	CER Cost of the project
		Sector-wise CSR EXPENDITURE (2014-15 to 2019-20) CENTRAL COALFIELDS LTD. Has been given In addition, a sum of Rs. 5.4 Crores is also allocated for CER expenditure for Basantpur -Tapin Coal washery.				
7	Fund allotment for greenbelt is too less and more fund should be allotted for developing peripheral plantation.	<p>The previous provision of Rs. 15 Lakhs for development of green belt increased by additional Rs. 65 Lakhs. Thus, the total proposed expenditure for development of green belt is Rs. 80 Lakhs.</p> <p>In addition, Rs 5 Lakhs has been proposed under conservation plan for development of green belt for protection of fauna.</p> <p>The year-wise green belt development plan has been presented It is also proposed to develop green belt/plantation of 37,150 trees in approximately 14.86 Ha after closure of washery operation at a tentative cost of Rs. 45 Lakhs.</p>				
8	Distance of Chutuwa nallah/stream near washery and impact due	<p>Chutua Nala is flowing at a safe distance (600 meters) from project boundary.</p> <p>As a part of the baseline study carried out for the project, surface water samples from Chutua Nallah (Upstream) and Chutua</p>				

	to washery operations shall be presented.	Nallah (Downstream) was collected. The washery is designed for ‘Zero Discharge’ and as such no wastewater will be generated. Thus, the proposed washery operation will have no impact on the quality of water flowing through Chutua nallah. Fortnightly monitoring of the water quality of Chutwa Nallah (upstream/downstream) is carried out and the same will continue in future as well.																											
9	Land of dumping of rejects shall be reduced to keep the rejects only for 2 months and accordingly greenbelt land should be increased	<p>As directed by EAC, the land for dumping of rejects is reduced by approximately 3.75 Ha. Consequently, the area for green belt has increased from 9.39 Ha to 13.14 Ha. The revised land use is shown below:</p> <table><tr><th>S N</th><th>Description of Activity / Facility / Plant / Others</th><th>Land Use of the proposed washery as per earlier submitted EIA/EMP report</th><th>Revised Land Use of the proposed Washery</th></tr><tr><td>1</td><td>Main Plant</td><td>14.19</td><td>14.19</td></tr><tr><td>2</td><td>Green Belt</td><td>9.39</td><td>13.14</td></tr><tr><td>3</td><td>Slurry Pond</td><td>1.04</td><td>1.04</td></tr><tr><td>4</td><td>Reject Dumping Yard</td><td>7.41</td><td>3.66</td></tr><tr><td colspan="2">Total</td><td>32.03 Ha</td><td>32.03 Ha</td></tr></table> <p>For construction of the washery and temporary storage of reject, 32.47ha land is required which includes 8 Ha identified as reject storage site. The land is tenancy in nature. There is no forest land involved.</p>				S N	Description of Activity / Facility / Plant / Others	Land Use of the proposed washery as per earlier submitted EIA/EMP report	Revised Land Use of the proposed Washery	1	Main Plant	14.19	14.19	2	Green Belt	9.39	13.14	3	Slurry Pond	1.04	1.04	4	Reject Dumping Yard	7.41	3.66	Total		32.03 Ha	32.03 Ha
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Total		32.03 Ha	32.03 Ha																										
10	PP shall rework on the layout of washery so that coal storage area, crushing units and rejects storage area shall not be near the villages.	<p>The washery layout is planned to maximize the distance between the washery and the village. The layout of rejects storage has been redesigned. By reducing the Reject Yard to 3.66 Ha, the distance between Reject Yard and village has increased from 50 m to 250m. It is also proposed to develop the Green belt between reject site &amp; the habitation.</p> <p>Raw Coal, washed coal and washed power coal will be stored in storage bunkers. Storage bunkers are planned to be located at the farthest point from the village. Crushing units are also planned at a distance of 250 from the village.</p> <p>The revised layout of the washery has been shown during the EAC</p>																											

Ministry granted Terms of Reference for the said project vide MoEF&CC letter No. J-11015/97/2018-IA.II(M) dated 7<sup>th</sup> January, 2019. Public Hearing was conducted on 9<sup>th</sup> October, 2019 at Mandir Parishar, Basantpur in the presence of Shri Jugnu Minz, Additional Collector, Ramgarh. Shri Ashok Kumar Yadav, Regional Officer, JSPCB, Hazaribagh and Mithilesh Jha, Assistant Scientific Officer, JSPCB HQ, Ranchi were present from Jharkhand State Pollution Control Board.

Major issues raised during Public Hearing were regarding arrangements made for prevention of pollution, action plan for saving Chutuwa Nala, effects on groundwater, pollution due to present kedla washery, action taken in terms of education, sports, playgrounds, health centers, action taken under CSR, pollution due to road transportation of coal and its mitigation measures, employment.

EAC also took a note of a Public grievance on this project wherein representatives from Village Basantpur and Pachanda has written grievance to Hon'ble Prime Minister. PP replied with reason to choose the current site for washery and responded the action taken on CSR activities along with mitigation measures adopted to mitigate the pollution affecting nearby villagers. The Committee further was of the view of taking stringent mitigation measures by PP by way of plantation, traffic & reject management.

During discussion in meeting, Project Proponent has submitted an undertaking that the entire amount of rejects generated from Basantpur-Tapin Coking Coal Washery will be offered for sale only to Thermal Power Plants, Steel Plants of SAIL and Sponge Iron Plants.

Basantpur Tapin Coking Coal Washery is a new proposed project using Jig/HM Separation/Spiral/Flotation technologies or combination thereof. The economic life of the washery has been considered as 18 years.

It has been envisaged that Raw coal will be received by belt conveyors in the washery and washed coal will be transported by road to Chainpur siding, which is approx. 17km from washery site. Clean coal and washed coal (power) will be conveyed by belt conveyors from their respective covered storage facilities at washery end to Railway Siding for onward loading through Rapid Loading System (RLS) (@ 5,500 tph) or through any other mechanical means into the Railway wagons as per Railway norms and dispatch to customers specified by the CCL.

The drainage is by easterly flowing Bokaro River on the south and Chutua Nala, a tributary of Bokaro River on the North.

Six Ambient Air Quality Monitoring stations were selected as per the Guidelines mentioned in IS: 5182 (Part-14): 2000 for Rapid Environmental Impact Assessment in the project area. different types of water samples viz, Drinking Water Sample from South West (SW) and South – 2, Surface Water Sample from Chutuanala Upstream & Chutuanala Downstream and Effluent Sample from Tapin Washery during the monitoring period.

Socio- economic and occupational health survey was conducted in basically three villages of Project Area. One village has been considered as core zone because land is being acquired from that village. Socio-economic data has been generated for the area of the study i.e., 10 kms from the periphery of the project core zone

All vegetation data of this study were collected during pre-monsoon 2019 around 10 km radius from the project site. The flora & fauna component of the study area does not include any rare or endangered species. However, it is reported that *peacock* enter into the agricultural field of the Villages and needs conservation. *Python Molurus* and *Varanus bengalensis* are the schedule I species found in the list of Reptiles and Amphibians Observed in The Buffer Zone

In the present study, to assess the water table configuration, a network consisting 64 dug wells, covering most of the villages falling within the core and buffer zone, was established in the study area and water levels were monitored. There is no Permanent Observation Well (PoW) of CGWB in the study area (buffer zone) of Basantpur Tapin Coking Coal Washery. The pre-monsoon and post monsoon historical groundwater levels for the last few years (2003 to 2019) recorded by CMPDI at the nearest permanent hydrograph stations like at Basantpur Basti (WB-40), Kotre (Pachanda) Basti (WB-39) Ichakdih Basti (Well No.: WB-05) and Pundi Basti (Well No.: WB-25) located within the core zone and buffer zone were collected. The water level fluctuation varies from 6.35 m (2008 at Ichakdih Basti) to 0.52 m (2011 at Pundi Basti) with an average fluctuation of 3.28 m in the area

The water required will be around 730 KLD (0.06 cum/tonne)

PP submitted that as per the data collected from the Central Ground Water Board, Mid Eastern Region, Patna, the stage of ground water development in the Mandu Block is 76.51%, in which Kedla UGP and its buffer zone located and the region falls within the “Safe” category. So, artificial recharge is not urgently required in the buffer zone of the proposed washery

Traffic studies were carried out at three locations on the existing road to estimate the existing traffic load on either side of the intersections. It has been proposed to transport the raw coal from Tapin South OC, Tapin North OC, Parej East OC, Jharkhand OC, Kedla OC and Kedla UG to Basantpur Tapin Coking Coal Washery by the existing road. The total length of road is about 25 km. At present, this road is being used for coal transportation by tipping trucks and by locals residing in villages like Tapin, Parej, Dukashmar, Kedla Ghato, Parsabera etc.

**7.2.3** *The EAC, after deliberation **recommends** the proposal for grant of Environment Clearance to Basantpur Tapin Coking Coal Washery Project of 4MTPA capacity in lease area of 32.03 Ha of M/s Central Coal Field Limited located in Village-Basantpur, Post Kedla, District Ramgarh (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 project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed capacity of 4 MTPA prior to commencement.*
- (ii) *PP to install 2 continuous ambient air quality monitoring station at suitable location preferably one village side. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- (iii) *Adequate effectiveness of EMP should be analysed from the offset/hike of air pollution data from continuous monitoring stations and quarterly report shall be generated and submitted with 6 monthly compliance report to RO, MoEF&CC.*
- (iv) *The height of the boundary of the plant should be of 10 mts atleast all along the nearby villages.*
- (v) *Third party monitoring (by NEERI/CIMFR/IIT/NITs) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive the impact at regular interval of 3 years*

- (vi) *Water quality and Bioassay test of Bokaro River shall be monitored quarterly and submitted to State Pollution Control Board. No wastewater shall be discharged in river.*
- (vii) *Project Proponent shall submit the Bokaro River Conservation plan encompassing different source of pollution alongwith financial commitments and its implementation to be done by respective municipal body within one year. Or else if plan already prepared by concerned authority the financial support for the purpose may be done under CSR.*
- (viii) *Project Proponent shall develop three Tier Green belt developments in 13.14 Ha (atleast 50 mtrs width) in and around the periphery of washery within 3 years.*
- (ix) *Commitment made during public consultation process shall be adhere to. As proposed, budget earmarked for CER activities shall be considered as part of Environment Management Plan, which shall be accomplished within period of 5 years.*
- (x) *Surface runoff from Storage yard of coal, reject dumps shall be stored in settling tank and later treated before any usage and quality shall be check frequently.*
- (xi) *Road inside and at periphery of the washery plant shall be constructed of concrete only.*
- (xii) *Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- (xiii) *The total industrial water demand (peak) in operation phase shall be met by utilizing mine water only. No surface and ground water to be drawn.*
- (xiv) *Water storage ponds shall be constructed of appropriate depth in nearby village in collaboration with Gram Panchayats.*
- (xv) *Fund allocated in Wildlife Conservation Plan for schedule I species shall be deposited within six months of issue of EC letter. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.*
- (xvi) *100% washery rejects shall be used only in FBC Power Plants/Thermal Power Plant as proposed by Project Proponent and MoU to be signed for this purpose and copy of which shall be provided to RO, MoEF&CC after commission of plant.*
- (xvii) *Transportation of rejects shall only be in 40 to 50 tonne trucks only if railway siding is not present at utilization points. If railway siding is available at FBC Power Plants/Thermal Power Plant, then no transportation shall be allowed by trucks.*
- (xviii) *Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- (xix) *Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.*
- (xx) *The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours*
- (xxi) *PP shall pay to farmers of agricultural land if there is any loss found by concerned District*

*Commissioner as per extent rules or norms*

*(xxii) Raw coal, washed coal and rejects shall be stored in covered silos or in dome shaped storage*

*(xxiii) Transport of raw coal, clean coal, middling shall be by rail with wagon loading through silo.*

*(xxiv) Project proponent to plant 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.*

### **Agenda No.7.3**

**Capacity enhancement of coal washery from 1.6 MTPA to 4.1 MTPA with an increase in land area from 16.45 ha to 20.64 ha within the existing plant premises of M/s KJSL Coal and Power Private Limited at Village- Dhatura, Tehsil Pali, District Korba (Chhattisgarh) For Environment Clearance-reg.**

**[Online Proposal No. IA/CG/CMIN/194017/2005; File No J-11015/9/2020- IA-II(M)]**

7.3.1 The proposal is for grant of Environment Clearance for expansion of coal washery from 1.60 MTPA to 4.10 MTPA with an extension of land use from 16.45 ha to 20.64 ha within the existing plant premises at Village Dhatura village, Tehsil Pali, District Korba (Chhattisgarh).

7.3.2 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/7, J/8, 64 J/11, 64 J/12 and is bounded by the geographical coordinates ranging from 22°15'23.17"-22°15'38.82"N to 82°31'55.49"-82°32'21.05" E.
- (ii) Sources: Raw coal will be sourced from Korba area (Dipka mine/Gevra mine /Kusmunda mine), Raigarh Area and CIC Fields of SECL. Transportation of raw coal from mines to washery site will be done by tipping trucks (Dipka- 5.6 km,N, Gevramine – 7.4 km, NNE, Kusmunda mine – 10.0 km, NE ) via existing SECL coal transportation through road/rail. Washed coal will be transported through nearest road at about 19 km, E from site.
- (iii) No joint venture has been formed.
- (iv) The project site does not fall in the Critically Polluted Area (CPA), where MoEF&CC has imposed moratorium on grant of environment clearance vide its OM dated 13<sup>th</sup> January, 2010.
- (v) The project will provide direct employment of about 220 persons (70 existing + 150 proposed).
- (vi) The project will improve the socio-economic status of the society in the region by generating direct and indirect employment opportunities. The project will contribute additional revenue to the State & Central exchequers in the form of taxes, cess, etc.
- (vii) Consent to Establish (CTE) was issued by Chhattisgarh Environment Conservation Board (CECB), Raipur, Chhattisgarh vide Lr. No6089/TS/CECB/2005 Dated 27.12.2005.
- (viii) Standard Terms of Reference (TOR) were issued vide MoEF&CC letter No. IA-J-11015/9/2020-IA-II(M) dated 16<sup>th</sup> March, 2020.
- (ix) Total area under possession is about 20.64 ha. Out of which existing plant is in an area of about 16.45 ha. The land for capacity enhancement is about 4.19 ha. New 2.50 MTPA unit



will be established on vacant land which is appurtenant to the existing plant premise. No additional land acquisition will be involved for the expansion project.

- (x) The land usage pattern of the project is as follows:

**LANDUSE DISTRIBUTION**

Sr. No.	Description	Existing [1.60 MTPA]	Proposed [2.50 MTPA]	Total [4.10 MTPA]
1	Land for washery (ha)	2.00	2.75	4.75
2	Land for reject disposal area (ha)	0.75	0.25	1.00
3	Land for greenbelt development (ha)	2.65	1.19	3.84
4	Land for coal storage yard and truck tripling system yard (ha)	10.05	0.00	10.05
5	Land for raw water reservoir (ha)	0.50	0.00	0.50
6	Land for fabrication / construction yard etc. (ha)	0.50	0.00	0.50
Total (ha)		16.45	4.19	20.64

- (xi) Transportation of raw coal from mines to washery site will be by tipping trucks (Dipka – 5.6 km, N, Gevra mine – 7.4 km, NNE, Kusmunda mine – 10.0 km, NE) via existing SECL coal transportation through road/rail. Washed coal will be transported through nearest road at about 19 km, E from the project site.
- (xii) There are no national parks, wild life sanctuaries and eco-sensitive zones in 10 km Study area.
- (xiii) Water allocation for the existing unit of 1.60 MTPA obtained from State Water Resource department vide letter no:1140/Ms KJSL Coal & Power /2017/Korba dated: 23.03.2017. A request letter has been submitted to the State Water Resource Department for additional water requirement. (letter no: KJSL/2020-21/ENV/07 dated 18.12.2020).
- (xiv) Public Hearing for proposed capacity enhancement of coal washery from 1.60 MTPA to 4.10 MTPA was conducted on 29.12.2020 at existing plant premises of village panchayat, Dhatura, Pali tehsil, Korba district, Chhattisgarh state under the Chairman Ship of Additional District Collector, Korba. Major issues raised in the public hearing are employment, CSR and Environment protection. Appropriate action to address the issues raised in the Public Hearing has already been proposed. Proposed budget on CSR activities will be about Rs. 33 Lakhs. Pollution control measures will be taken with an allotted budget of Rs. 43 Lakhs.
- (xv) Consent to Operate as Air & Water Act was issued by Chhattisgarh Environment Conservation Board (CECB), Raipur, Chhattisgarh vide Lr 3074& 3072/TS/CECB/2018 respectively dated 11.07.2018, valid up to 31.08.2021.
- (xvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. Ambient air quality monitoring carried out during study period 1<sup>st</sup> December 2019 to 29<sup>th</sup> February 2020. Ambient Air Quality Results: PM<sub>10</sub> :42.1 -62.7 µg/m<sup>3</sup>; PM<sub>2.5</sub> :11.6 -36.2 µg/m<sup>3</sup>; SO<sub>2</sub> :10.1-23.4 µg/m<sup>3</sup>; NO<sub>2</sub> :11.7 -27.6 µg/m<sup>3</sup>; CO :281 -423 µg/m<sup>3</sup>. The concentrations of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, CO, NH<sub>3</sub>, Pb, BaP, As, Ni and C<sub>6</sub>H<sub>6</sub> are observed to be well within the NAAQ standards prescribed by Central Pollution Control Board (CPCB) for industrial and rural /residential zone.
- (xvii) No court cases, violation cases are pending against the project.

- (xviii) The project does not involve any violation of the EIA Notification, 2006 and amendment issued thereunder.
- (xix) Cost of existing project is Rs. 34 Crores. Estimated cost for proposed expansion project is about Rs. 30 Crores. Total estimated cost of the project after expansion is about Rs. 64 Crores. A budget of about Rs.43 Lakhs per annum will also be earmarked for environmental protection including monitoring activities.

### 7.3.3 The EAC, during deliberations noted the following:

The proposal is for grant of Environment Clearance for expansion of coal washery from 1.60 MTPA to 4.10 MTPA with an extension of land use from 16.45 ha to 20.64 ha within the existing plant premises at Village Dhatura village, Tehsil Pali, District Korba (Chhattisgarh).

Consent to Establish (CTE) was issued by Chhattisgarh Environment Conservation Board (CECB), Raipur, Chhattisgarh vide Lr.No6089/TS/CECB/2005 Dated 27.12.2005. Consent to Operate as Air & Water Act was issued by Chhattisgarh Environment Conservation Board (CECB), Raipur, Chhattisgarh vide Lr 3074& 3072/TS/CECB/2018 respectively dated 11.07.2018, valid up to 31.08.2021

Standard Terms of Reference (TOR) were issued vide MoEF&CC letter No. IA-J-11015/9/2020-IA-II(M) dated 16<sup>th</sup> March, 2020

Public Hearing was conducted on 29.12.2020 at existing plant premises of village panchayat, Dhatura, Pali tehsil, Korba district, Chhattisgarh state under the Chairman Ship of Additional District Collector, Korba. Major issues raised in the public hearing are pollution causing harm to agricultural fields, employment, necessary measures are required for water and air pollution, CSR activities and Environment protection.

Baseline environmental status based on primary data collected from 1<sup>st</sup> December, 2019 to 29<sup>th</sup> February, 2020 representing the winter season. Ambient Air Quality Monitoring (AAQM) stations were set up at nine locations. Two surface water and eight ground water samples were collected as grab samples. The noise monitoring was conducted for determination of noise levels at eight locations in the study area. For prediction of maximum Ground Level Concentrations (GLC's), the air dispersion modeling software (AERMOD version 7.1.0) was used.

There are no historical/tourist/archaeologically important places in the study area. There are no endangered flora and fauna in the study area. However, there is no forest in the proposed project area. No migration route observed or recorded. Common Indian Monitor (*Varanus bengalensis*) and Peacock (*Pavo cristatus*) are the two schedule I species that has been reported from the study area. Though they are included in Schedule I they are placed under the least concern (LC) category by the IUCN

There is no forest land in the project area. Further there are no protected areas/eco-sensitive zones (notified under the Wildlife Protection Act 1972) within 15 km from the project boundary

Heavy Media Bath Technology, will be used for concentration of the coal in the existing plant (1.6 MTPA throughput) and proposed new plant (2.5 MTPA throughput) respectively after proposed expansion plan is envisaged.

Impact due transportation of coal: The observation from predictions reveal that the maximum incremental concentrations of PM<sub>10</sub>, HC, NO<sub>x</sub> and CO are 0.05 µg/m<sup>3</sup>, 0.06 µg/m<sup>3</sup>, 0.38 µg/m<sup>3</sup> and 10.2 µg/m<sup>3</sup> respectively likely to occur at 100 m from the center of the road

The water requirement will be met from nearby Lilagar nadi. No water drawl from groundwater sources are envisaged during construction or operation phases

Jorahabadri village (0.5 km, WSW) is the nearest habitation as per study area marked on topo sheet. Dhatura village is about 1.2 km from the project site

The water requirement for the proposed 2.50 MTPA additional coal washery will be about 420 KLD. The total water requirement of 525 KLD for proposed expansion and existing capacity will be met from the nearby Lilagar nadi. KJSL has constructed earthen pond in the industrial premises for storage of rain water. The diameter of pond is about 100 m x 40 m x 8 m and further proposed to add two more ponds to increase its water storage capacities.

The drainage of the project area, there is no first order or second order streams flowing in the project site. Therefore, drainage of surface run-off is not likely to be affected either during construction or during operational phase

Certified Compliance Report from Regional Office, Chhattisgarh Environment Board, Korba has been submitted by project proponent dated 15th December, 2020 and found satisfactory.

*7.3.4 The EAC, after detailed deliberation **recommends** the proposal for grant of Environment Clearance to Capacity enhancement of coal washery from 1.6 MTPA to 4.1 MTPA with an increase in land area from 16.45 ha to 20.64 ha within the existing plant premises of M/s KJSL Coal and Power Private Limited at Village Dhatura, Tehsil Pali, District Korba (Chhattisgarh), 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 project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed capacity of 4.1 MTPA prior to commencement.*
- (ii) PP shall submit a third party assessment of EC Compliance shall be undertaken once in three years through agency like ICFRI/ NEERI/IIT or any other expert agency identified by the Ministry to Ministry's Regional Office.*
- (iii) PP shall install Continuous Ambient Air Quality in plant and link it to State Pollution Control Board and data so obtained shall be displayed at entry gate for public domain and also made available to company website.*
- (iv) PP should maintain the 5 km road of transportation road and Budget should be given for annual basis for the maintenance of road.*

- (v) *Thick Greenbelt of adequate width at the final boundary or along the transportation route in the down wind direction of the project site shall be developed.*
- (vi) *PP shall reduce the Coal storage area, raw and product and install fire safety measures.*
- (xiii) *Continuous Monitoring at Occupational safety and health hazards and the Corrective action need to be ensured.*
- (xiv) *Project Proponent shall develop three Tier Green belt developments in 3.84 Ha (atleast 50 mtrs width) in and around the periphery of washery within 3 years.*
- (xv) *PP shall install atleast 5 nos of fog mist sprayer in the premises to reduces air pollution.*
- (xvi) *Commitment made during public consultation process shall be adhere to. As proposed, budget earmarked for CER activities shall be considered as part of Environment Management Plan, which shall be accomplished within period of 5 years.*
- (xvii) *Water quality and Bioassay test of Lilagar River shall be monitored quarterly and submitted to State Pollution Control Board. No wastewater shall be discharged in river.*
- (xviii) *Surface runoff from Storage yard of coal, reject dumps shall be stored in settling tank and later treated before any usage and quality shall be check frequently*
- (xix) *Road inside and at periphery of the washery plant shall be constructed of concrete only.*
- (xx) *Two additional water storage ponds shall be constructed of appropriate depth in plant premises for washery operation.*
- (xxi) *Fund allocated in Wildlife Conservation Plan for schedule I species shall be deposited within six months of issue of EC letter. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.*
- (xxii) *100% washery rejects shall be used only in FBC Power Plants/Thermal Power Plant as proposed by Project Proponent.*
- (xxiii) *Transport of raw coal, clean coal and middling shall be by rail/road (in 40-50 tonnes dumpers only)*
- (xxiv) *Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- (xxv) *Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.*
- (xxvi) *The illumination and sound at night at project sites disturb the villages in respect of both human and animal population as Johradbri habitation is at about 0.6 km. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours*
- (xxvii) *PP shall pay to farmers of agricultural land if there is any loss found by concerned District Commissioner as per extent rules or norms*
- (xxviii) *Raw coal, washed coal and rejects shall be stored in covered silos or in dome shaped storage with wind shields/ wind breaking walls,*

- (xxix) Project proponent to plant 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.
- (xxx) PP shall spend budget of Rs.20 lakhs every year on development and maintenance of road up to 5 km from the plant boundary in coordination with SECL & State Government.

#### **Agenda No.7.4**

**Hingula Washery of 10 MTPA in an area of 27 ha of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) – Reconsideration for Amendment in Environment Clearance – reg.**

**[Online Proposal No. IA/OR/CMIN/18276/2013; File No J-11015/67/2013- IA-II(M)]**

7.4.1 The proposal is for amendment in Environment Clearance for Hingula Washery Project of 10 MTPA capacity in mine lease area of 17.65 Ha of M/s Mahanadi Coalfields Limited located in village Danara, Tehsil Talcher, District Angul (Odisha).

7.4.2 The EAC during deliberations noted the following:

Earlier the proposal for amendment was considered by the EAC in its 45<sup>th</sup> meeting held on 27<sup>th</sup> May, 2019, 48<sup>th</sup> meeting held on 3-4 October, 2019 and 50<sup>th</sup> EAC meeting held on 15<sup>th</sup> November, 2019. EAC after deliberation sought some clarification/inputs.

PP has submitted the compliance of EAC observation (15<sup>th</sup> November, 2019)

<b>Observation</b>	<b>Compliance</b>
Utilization of washery rejects and also the revision of the mine plan of Balram OCP is still not submitted and thus, desired that PP must comply all the observation before coming to EAC. EAC also insisted that PP may co-ordinate with Ministry of Coal for earlier finalization of policy of utilization of Washery rejects.	<p>The Hingula Washery is proposed in the lease hold area of Balram OCP, Hingula Area MCL. The Mine plan and Mine closure plan for Balram OCP (15.0 MTY) was approved by MCL Board in its 226<sup>th</sup> and 227<sup>th</sup> meeting held on 12.08.2020 and 30.10.2020 respectively. In the approved mine plan, the location of the proposed Hingula Washery and temporary reject storage site has been included and shown Chapter 8, Page-4 Chapter 9 &amp; Plate no. Gen-III &amp; Gen-IV.</p> <p>Utilisation of washery rejects: MCL would like to submit that Construction of washery will take around 20 months after grant of EC &amp; other statutory clearances and subsequently commercial operation will start. Reject generation will take place after start of Commercial operation. MCL has already taken</p>

	<p>up the matter with MoC for the finalization of Policy of Utilisation of Washery Rejects.</p> <p>However, MCL floated a Request for Expression of Interest (REoI) on 17.10.2019 to know the interest of the prospective consumers (who have their own power plants or likely to set-up the same) to purchase the rejects from the proposed three washeries namely Hingula, Jagannath and IBValley at Lakhanpur of MCL for their captive use. A demand of 19.782 Million Tonnes per annum against the total likely quantity of rejects generation of 5.93 MT per annum from these washeries (including 2.15 MTPA from Hingula Washery) was received from prospective consumers. Rejects will be sold to consumers through Memorandum of Understanding (MoU), e-auction or other available modes of sale.</p> <p>The list of consumers who expressed their willingness to purchase the washery rejects has been shown during the EAC Meeting.</p>
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Earlier, Environment Clearance for the project has been granted by the Ministry on 28<sup>th</sup> October, 2015, washery based on the technology of Heavy Media Cyclone, was to be constructed and operated on BOM basis

PP has submitted that there is no change in capacity. The amendment is being sought in EC on the basis of details of L-1 bidder finalized for the proposed Hingula washery (10 MTPA) after issue of LoI to L-1 bidder for construction of Hingula washery (10 MTPA) on BOM basis

7.4.3 Following are the changes or modification proposed by project proponent during its meeting at EAC

S. No.	Point No. of EC granted	Existing Point	Modification proposed
1.	Pt. No. 3(ii)	Equipment will be imported from South Africa	No overseas equipment to be imported as per present offer of the L-1 bidder.
2.	Pt. No. 3(iii)	Hingula Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade G-11 & Ash content ranging between	Hingula Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade G-13 & Ash content ranging between (38.3-46.3%) of Hingula-II

		(34.5-42.5 %)) of Hinugla-II Expansion OCP (Phase-III).	Expansion OCP (Phase-III) (15 MTPA).
3.	Pt. No. 3 (viii) – Employment Generated/ to be generated	Washery will be constructed on BOM concept; hence employment will be generated by BOM Operator. Around 173 (for operation of washery).	Washery will be constructed on BOM concept; hence employment will be generated by BOM Operator. Around 254 (for operation of washery).
4.	Pt. No. 3 (x) Land usage of the project	17 ha land is required for proposed Hingula Washery. 10 ha land is required for temporary storage for rejects. 17 + 10 = 27 ha land required for washery & rejects storage has already been acquired and is in possession of MCL. All the 27 Ha land is non coal bearing.	17.65 ha land is required for proposed Hingula Washery site. 10 ha land is required for temporary storage for rejects. 17.65 + 10 = 27.65 Ha of land required for washery construction & rejects storage has already been acquired and is in possession of MCL. All the 27.65 Ha land is non-forest, non- agricultural, undeveloped and non coal bearing. Variation in land area (0.65 Ha) is due to error in measurement done earlier. After fresh measurement and calculation of land area 17.65 Ha is for washery site.
5.	Pt. No. 3(xi)	The coal grade is G-11	The coal grade is G-13.
6.	Pt. No. 3 (xii)	The total estimated water requirement is 1273 m <sup>3</sup> /hr at 0.09 m <sup>3</sup> /tonne of raw Coal.	Total estimated water requirement is 0.12 m <sup>3</sup> /tonne of raw Coal (on dry basis) as per the LoI issued to L-I bidder.
7.	Pt. No. 3 (xviii) – Cost	Total capital cost of the project is 321.96 Crores.	Total capital cost of the project is Rs. 424.42 Crores as per the LoI issued to L-I bidder.
8.	Pt. No. 3 (A) (iii)	Detailed note to be provided on utilisation of rejects if it is more than 80 % ash content.	The ash content in reject shall be 75.2% on air dried basis with monthly average ash % of 42.3% of raw coal on ADB. Policy for Disposal and Utilisation of Rejects produced from CIL Washeries (Existing & Future)” communicated by CIL vide CIL letter no. CIL/PMD/Ws/41/350 dated 24.07.2018

Source of water for operation of the plant shall be Gandhi Sagar (Mine sump)/ Matti Quarry/ any other mine sump which is approximately at a distance of 3.0 Km from the site.

7.4.4 The EAC, after deliberation **recommends** the proposal for grant in amendment in Environment Clearance for Hingula Washery of 10 MTPA in an area of 27 ha of M/s Mahanadi Coalfields Limited located in, District Angul (Odisha), 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 for environmental safeguards:

- (i) PP shall store rejects for only month in proposed site before sending it to FBC power plant/Thermal Power Plants and maintain the datasheet for checking by regulatory authorities.
- (ii) 100% washery rejects shall be used only in FBC Power Plants/Thermal Power Plant as proposed by Project Proponent. MoU shall be signed with Power Plants for reject utilization.
- (iii) The total industrial water demand (peak) in operation phase shall be met by utilizing mine water only
- (iv) Third party monitoring (by NEERI/CIMFR/IIT/NITs) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive the impact at regular interval of 3 years
- (v) Project Proponent shall develop three Tier Green belt developments (atleast 50 mtrs width) around the periphery of washery within 3 years.
- (vi) Surface runoff from Storage yard of coal, reject dumps shall be stored in settling tank and later treated before any usage and quality shall be check frequently.
- (vii) Road inside and at periphery of the washery plant shall be constructed of concrete only.
- (viii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (ix) Transportation of rejects shall only be in 40 to 50 tonne trucks only if railway siding is not present at utilization points. If railway siding is available at FBC Power Plants/Thermal Power Plant, then no transportation shall be allowed by trucks.
- (x) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (xi) Raw coal, washed coal and rejects shall be stored in covered silos or in dome shaped storage facility.
- (xii) Transport of raw coal, clean coal, middling shall be by rail with wagon loading through silo.
- (xiii) Project proponent to plant 150,000 nos. of native trees with broad leaves along the transportation route in two years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.
- (xiv) A dedicated mechanism to be devised by engaging party who shall drive massive tree plantation for the company by engaging expert agency, accomplishing the task of plantation, maintenance including tree survival in 2 years.

#### **Agenda No.7.5**

**Hindustan Lalpeth Opencast Coal Mining Project from 0.59 to 1 MTPA in ML area 311.66 ha of M/s Western Coalfields Limited located near village Mana, Tehsil and District Chandrapur (Maharashtra) – For Revalidation of Environmental Clearance under Ministry’s Notification dated 6<sup>th</sup> April, 2018 -reg**

**[Online Proposal No. IA/MH/CMIN/79185/2006; F.No. J-11015/93/2005- IA.II(M)]**



#### 7.5.1 The EAC, during deliberations noted the following

The proposal is for revalidation of Environment Clearance dated 14<sup>th</sup> July, 2006 granted by the Ministry in favour of Hindustan Lalpeth Opencast Coal Mining Project from 0.59 to 1 MTPA in ML area 311.66 ha of M/s Western Coalfields Limited located near village Mana, Tehsil and District Chandrapur (Maharashtra), in pursuance of this Ministry's Notification dated 6th April, 2018.

Project area involves 72.21 ha of forest land. Stage-II forest clearance for diversion of forest land has been obtained for non-forestry purposes, as mandated under the Forest (Conservation) Act, 1980 on for 72.22 ha on 8th May, 2001.

Public hearing for the project was conducted by the State Pollution Control Board on 20<sup>th</sup> July, 2004. Renewal for Consent to operate has been applied and granted till 31<sup>st</sup> March, 2020. Formal Letter is awaited by the State Pollution Control Board.

#### 7.5.2 The proposal was earlier considered by the EAC in its meeting held on 27<sup>th</sup> May 2019, wherein committee desired for additional inputs / details in respect of the following

S. No	Observation of EAC	Compliance
1.	Public notice shall be issued through concerned SPCB for information of the stakeholders about the present coal mining operations inviting comments and their redressal,	<p>The public notices were published through Maharashtra Pollution Control Board in the national and local newspapers (The Hitavada &amp; Loksatta) in English and Local Language on 03/09/2020 inviting comments, suggestions, objections within 30 days of publication of the public notice.</p> <p>Based on the above public notices, a letter was received from the office of District Collector Chandrapur regarding comments /objection by Pragriti Foundation, Chandrapur in respect of revalidation of Environment Clearance for Hindustan Lalpeth OC. The aforesaid letter is placed</p> <ul style="list-style-type: none"><li>• The point wise reply/ compliance report in respect of the objections raised by Pragriti Foundation was submitted to SRO, MPCB, Chandrapur vide वेकोली/चक्षे/हिलाउक्षे/उक्षेप्र /कार्मिक/671dated 22.10.2020.</li></ul> <p>The objector is a society registered under the Society Registration Act, having Regn. No. MH-298/2015. The aim &amp; object of the objector society is to protect environment throughout the length and breadth of Maharashtra, and more particularly in Chandrapur District, which is one of the most polluted districts in</p>

		<p>India. As your good selves are aware, Chandrapur is at Sr. No. 4 in the National Index of most polluted districts and at Sr. No. 2 of Maharashtra State Index of most polluted districts.</p> <p>EAC deliberated on the compliance of point raised after Public Notice.</p>
2.	Mining Plan and Progressive Mine Closure Plan duly approved by the competent authority.	<p>The Mining plan including mine closure plan of Expansion of Hindustan Lalpeth OC Mine (with Peak Capacity of Coal 1 MTPA &amp; Mine Lease area of 311.66 Ha) as per OM F.No.34011/28/2019-CPAM dated 29/5/2020 of Ministry of Coal is attached herewith.</p> <p>The Mining Plan has been approved in 325th meeting of Board of Directors. WCL confirmed vide resolution: WCL/Office of CS/BM- 325/2020-21/467, dated: 08.10.2020.</p> <p>Key features of Mining plan along with land use pattern and status of reclamation have been shown during the EAC</p>
3.	Compliance status of the conditions stipulated in the environmental clearance from the concerned Regional Office of the Ministry	<p>The site visit of the project was carried out on 23.09.2020.</p> <p>The Compliance Certificate of existing EC has since been received from Regional Office, MoEF&amp;CC, Nagpur vide its letter File No.3-45/2006/(ENV)/7353 Dated: 19-10- 2020.</p> <p>The ATR has also been submitted to Regional Office, MoEF&amp;CC, Nagpur vide letter no 673, Dated: 22.10.2020</p> <p>All the documents are placed in presentation has been shown during the EAC.</p>
4.	Valid Consent to operate from the State Pollution Control Board for the present mining operations	<p>The Consent to Operate issued, by Maharashtra Pollution Control Board dated 17.06.2020 valid upto 31.03.2021 for capacity of 1 MTPA vide No: Format1.0/CAC/UANNo.0000089061/CR-2006000735 is placed herewith</p>
5.	Redressal of issues raised during the public hearing conducted by the SPCB	<p>The Public Hearing of Hindustan Lalpeth OC was carried out on 20-07-2004. The Minutes of the meeting as well as Action taken report on the</p>

		<p>redressal of issues raised during the public hearing conducted by Maharashtra Pollution Control Board.</p> <p>The major issue raise such as danger of flood to Arwat village due to overburden, damages due to blasting, impact on agriculture due to dust, tree plantation especially between villages and mines and dumps, ground water table recharging works &amp; effective utilization of Mine water discharge, initiate mass community development program in the vicinity of affected villages. EAC deliberated on the compliance of issues raised earlier.</p>
6.	Coal production realized from the mine from 1993-94 vis-à-vis capacity stipulated in the environment clearance	<p>Coal production was started from the year 1983-84. The EC obtained for Hindustan Lalpeth Opencast Coal Mine Expansion Project for capacity 0.59 MTPA to 1 MTPA in a Land Area of 366.11 Ha was secured on 14th July 2006 vide No. J-11015/93/2005- IA.II (M). The production figures year wise since obtaining EC till date has been given.</p>
7.	Need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent. Also, impact of the CSR activities undertaken at an interval of 5 years to be evaluated and a report to be submitted.	<p>In Chandrapur Area of WCL, the need assessment survey of the villages which are under a radius of 25 KMs of its mines/Area HQ is carried out by the CSR Department of the Area. For the need assessment study, WCL personnel dealing with CSR regularly visit nearby villages, hold discussions with the villagers, sarpanch and other dignitaries, District administration etc. to assess the need for social upliftment/development activities in the villages. CSR department also considers the requisition from Gram Panchayats and other state rural bodies for CSR activities in the locality. Annual Action Plan for CSR is prepared after the scrutiny of need-based survey/requisitions received from villages as per the CIL CSR Policy and the same is submitted to the Area CSR Committee. All proposals under CSR activity are examined by the CSR Committee keeping in view the Companies Act 2013, latest DPEs guideline together with cost benefit analysis.</p> <p>The activities of the CSR Committee also involve the following:</p> <ol style="list-style-type: none"> <li>1. Interact with the concerned State Officials/Govt. officials, if required to confirm the areas for</li> </ol>

		<p>undertaking activities under CSR and ensure to avoid duplicity of the job.</p> <p>2. To decide the priority of the activities to be undertaken under CSR.</p> <p>3. To interact with the CSR Implementing agencies for determining the activities to be undertaken.</p> <p>4. The Committee will monitor and review the progress of activities Undertaken/completed from time to time.</p> <p>Implementation</p> <ul style="list-style-type: none"> <li>Project activities identified under CSR are implemented by Specialized Agencies which include Elected local bodies such as Panchayats, Voluntary Agencies (NGOs), Institutes/Academic Organizations, Trusts, Mission etc., Self-help groups, Government, Semi-Government and autonomous organizations, private consultants etc. Specialized Agencies could be made to work singly or in tandem with other agencies.</li> </ul> <p>The Observation and finding has been given during the EAC.</p>
8.	Forest clearance for diversion of forest land as required under the Forest (Conservation) Act, 1980, as the case may be, of the forest land involved in the project.	The Stage-I Clearance/In Principal approval of the central government for diversion of 36.98 Ha reserved forest land No. 485 in Chandrapur Forest Division under section 2 of Forest (Conservation) Act 1980 was obtained on 16th April 2018 vide File.No.8-115/1995-FC(Vol). The Stage II approval of the Central Government was granted under Section 2 of the Forest (Conservation) Act, for non-forestry use of 36.98 ha of Reserved Forest land on 28th September, 2020 File.No.8-115/1995-FC(Vol).
9.	Details of court cases and the compliance of the orders, if any.	There are no court cases / compliance of order pending pertaining to Environmental aspect in respect of subject mine.

*7.5.3 The EAC, after deliberation **recommends** the proposal for grant of revalidation of Environment Clearance dated 14<sup>th</sup> July, 2006 to Hindustan Lalpeth Opencast Coal Mining Project from 0.59 to 1 MTPA in ML area 311.66 ha of M/s Western Coalfields Limited located near village Mana, Tehsil and District Chandrapur (Maharashtra) for life of the mine or 30 years whichever is*

earlier, as required under Ministry's Notification dated 6<sup>th</sup> April, 2018, 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 for environmental safeguards:

- (i) PP shall implement rain water harvesting mechanism in order recharge the ground water or as water conservation measure in addition to the proposed structure.
- (ii) PP shall carry out regular monitoring of Ground water level and quality.
- (iii) Effective safeguard measures for prevention of dust generation and subsequent suppression like regular water sprinkling shall be carried out in areas prone to air pollution. The Fugitive dust emission from all sources shall be regularly controlled by installation of required equipment's. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB
- (iv) The PP shall submit time bound action plan to the concerned Regional Office of Ministry within 6 months from the date of issuance of EC for undertaking the activities committed during the Public Consultation.
- (v) PP shall install two continuous air quality monitoring station and made operation by December 2021 and the real time data so generated to be uploaded on company website. In addition, data should also be displayed digitally at entry and exist gate of mine lease area for public display.
- (vi) Adequate effectiveness of EMP should be analyzed in the offset/hike of air pollution data from continuous monitoring station and quarterly report shall be generated and submitted with 6 monthly compliance report to RO, MoEF&CC.
- (vii) Continuous monitoring of Occupational health safety and other health hazards and the corrective actions need to be ensured.
- (viii) 5 nos. of Fog canon (mist sprayer) shall be installed to reduce the impact of air pollution
- (ix) Water quality and Bioassay test of Erai River shall be monitored quarterly and submitted to State Pollution Control Board. No water shall be discharged in river without treatment
- (x) Project proponent to plant 150,000 nos. of native trees with broad leaves along the periphery of habitation/villages to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer
- (xi) Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and also explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity
- (xii) The Project Proponent shall complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xiii) 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 MoEFCC.*

#### **Agenda No.7.6**

**Amrapali Opencast Coal Mine from 14.4 MTPA to 25/35 MTPA (Normative / Peak) in an ML area of 619.87 ha of M/s Central Coalfields Limited located in District Chatra (Jharkhand) - For Environmental Clearance – reg.**

**[Online Proposal No. IA/JH/CMIN/123390/2019; File No. 11015/109/2003-IA (M)]**

7.6.1 The proposal is for Environmental Clearance for Expansion of Amrapali Opencast Coal Mine project of 25 MTPA in project area of 619.87Ha of M/s Central Coalfields Limited located in Block: Tandwa, District Chatra (Jharkhand).

7.6.2 Details of the proposal, as ascertained from the proposal documents as well as gathered from the discussions in the meeting, are given as under:

- (i) The project area is covered under Survey of India Topo Sheet No: 73-A/13 and is bounded by the geographical coordinates ranging from 23°52'36.34"N to 23°53'54.82"N latitude 84° 58'44.35"E to 85°1'32.38"E longitude.
- (ii) Coal linkage of the project is proposed for generation of Energy Sector for various customers through Basket linkage. At present coal is being transported through Shivpur railway siding. A new railway siding, Amrapali siding adjacent to the mine boundary is under commissioning. In future, it is proposed to dispatch coal through Amrapali railway siding.
- (iii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed moratorium on grant of environment clearance.
- (iv) Employment generation: The project has given a boost to the economy of the area by providing primary and secondary employment to local people. Total number of permanent & temporary employment is approximately 650.
- (v) The project is reported to be beneficial in terms of improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy and steel sector requirement; Productive utilization of existing manpower of project.
- (vi) Earlier, the environment clearance to the project was obtained under EIA Notification-2006 vide Ministry's letter No J-11015/109/2003-IA.II(M) dated 20.03.2020 for 14.4 MTPA in project area of 619.87 Ha.
- (vii) Standard Terms of Reference granted vide No.J-11015/109/2003-IA.II(M) dated 20.05.2020.
- (viii) Mining Plan (including Progressive Mine Closure Plan) has been approved by the 494<sup>th</sup>CCL Board meeting held on 04.12.2020.
- (ix) The land usage pattern of the project is as follows:

**Pre-mining land use details:**

Particulars	Total land for Amrapali OCP (Ha)		
	Forest (NF+GMKJJ)	Non- Forest	Total
Quarry	392.75	32.47	425.22
Dump	60.14	29.02	89.16
Industrial Area ( Workshop, CHP, Substn, office etc.)	26.75	0	26.75
Nala Diversion	2.85	0.25	3.10
Safety Zone	4.70	14.22	18.92
Embankment/Garland Drain/ Diversion of Public Road	14.45	8.27	22.72
Haul Road	30.00	4.00	34.00
<b>Total</b>	<b>531.64</b>	<b>88.23</b>	<b>619.87</b>

**Post-mining land use details:**

Land Use During Mining		Proposed Land Use After Reclamation	
Particulars	Area (Ha)	Particulars	Area (Ha)
Quarry	425.22	Backfilled Area Reclaimed With Plantation	178.00
		Void/ Haul roads left over for future use	247.22
External Dump	89.16	Reclaimed with plantation	77.16
		Land for Future Use	12
Industrial Area	60.75	Industrial area for future use	60.75
Safety Zone/green belt	28.92	Plantation on Safety Zone/ Green Belt	26.12
		Land for Future Use	2.8
Embankment/Garland Drain/Diversion of Public Road/Nala Diversion	15.82	Land for public Use	15.82
<b>Total Area in Ha.</b>	<b>619.87</b>	<b>Total Area in Ha.</b>	<b>619.87</b>

- (x) Total geological reserve is 486.50 MT in Amrapali Block and 203.31 Mtes in Kishanpur Block. The balance mineable reserve is 79.50 MT. The per cent of extraction would be 100 %.
- (xi) 08 seams with thickness ranging from 1 m – 20 m are workable. Grade of coal is Grade-F, stripping ratio 1.05, while gradient is 3° to 7°.
- (xii) The method of mining would be opencast method of mining with Surface miner and shovel-dumper combination.
- (xiii) The balance life of mine is 4 years.
- (xiv) The project has 1 external OB dumps in an area of 89.16 Ha with 60 m height and 24.41Mm<sup>3</sup> of OB. 2 internal OB in combined area of 271.71 ha with 74.95Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total Quarry area is 425.22 Ha. The final mine void would be in 153.50 Ha with depth an average up to 90 m below GL. Backfilled quarry area is of 271.71 Ha, out of which 178 Ha shall be reclaimed with plantation. Final mine void will be converted into water body.

- (xvi) Transportation of coal has been proposed by dumper in mine pithead, from surface to siding by tipping trucks.
- (xvii) Reclamation Plan in an area of 281.28Ha, comprising of 77.16Ha of external dump, 178.00Ha of internal dump and 26.12ha of green belt & safety zone.
- (xviii) 531.64 ha of forestland have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 531.64 Ha of forestland for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No.8-48/2008-FC Dt.12.10.2010.
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) The ground water level has been reported to be varying between 6.50 m to 10 m during pre-monsoon and between 0.95 m to 6.50 m during post-monsoon. Total water requirement for the project is 2280KLD.
- (xxi) Application for obtaining the approval of the Central Ground Water Authority has been submitted vide no: 21-4/699/JH/MIN/2020 Dated: 29.11.2020.
- (xxii) Public hearing for the project of 25.00 MTY capacity in an area of 619.87 Ha was conducted on 17.11.2020. Major issues raised in the public hearing include mitigation of air & water pollution, compensation, employment opportunity, medical facilities & provision of drinking water etc. Appropriate action to address the issues raised in the Public Hearing shall be taken.
- (xxiii) CTO issued vide no: JSPCB/HO/RNC/CTO-6645615/2020/1408 dated 01.09.2020 for 12 MTPA, valid till 30.06.2021. CTE issued for 14.4 MTPA vide no: JSPCB/HO/RNC/CTE-7811934/2021/7 dated: 08.01.2021. CTO issued for 14.4 MTPA vide no: JSPCB/HO/RNC/CTO-7819614/2020/712 dated: 26.03.2020 till 30.09.2020. Renewal under process at JSPCB.
- (xxiv) Chundru and Barki rivers flowing west to east and north to south respectively control the drainage of the block. The Barki River marks the eastern boundary of the property with a safe distance of about 100 mtrs.
- (xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB and also to MoEF&CC 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.
- (xxvi) A case filed in NGT, New Delhi vide in O.A. OA No. 28/2020/EZ on 11.05.2020 regarding non-compliance of EC conditions of Amrapali OCP. Another case filed in NGT, New Delhi vide OA No. 06/2020/EZ dated 28.10.2020.
- (xxvii) 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 2013-14 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:

<b>Year</b>	<b>Coal (Million tes)</b>	<b>OBR(Mcum )</b>
2013-14	-	2.54
2014-15	2.55	17.74
2015-16	4.79	6.24
2016-17	6.23	4.19
2017-18	6.5	6.96



2018-19	10.2	12.23
2019-20	12.79	13.80

(xxviii) The project involves 452 project-affected families. R&R of the PAPs will be done as per R&R Policy of CIL.

(xxix) Total capital cost of the project, as per EPR of Amrapali OCP (25/35 MT), is Rs. 513615 Lakhs. Cost of Production is Rs. approximately Rs. 881.75/- per tonne. CSR cost is Rs.2/- per tonne. The R&R cost, as per approved EPR, is 21908.00 Lakhs. Similarly, Environment Management Cost is Approximately Rs. 122004.50 lakhs.

(xxx) Past production details comparison with existing EC is as follows:

Year	Coal (Million tes)	EC Capacity
2013-14	-	12.00
2014-15	2.55	12.00
2015-16	4.79	12.00
2016-17	6.23	12.00
2017-18	6.5	12.00
2018-19	10.2	12.00
2019-20	12.79	14.00

7.6.3 The EAC during deliberations noted the following:

The proposal is for Environmental Clearance for Expansion of Amrapali Opencast Coal Mine. Earlier, Environment Clearance to the project was granted by the Ministry vide its letter No J-11015/109/2003-IA.II (M) dated 20<sup>th</sup> March, 2020 for 14.4 MTPA in project area of 619.87 Ha.

Public Hearing was conducted on 17<sup>th</sup> November, 2020 under the Chairmanship of Shri Santosh Kumar Sinha, Additional Collector, District Chatra at Project Office, Village-Honhe, Post-Tandwa. Major issues highlighted during public hearing are compliance of previous public hearing issues has not been completed, employment, health issues due to pollution, hospital facilities should be provided, pollution due to transportation of coal, no expenditure on CSR activity for local villages, compensation of land, pollution due to shivpur railway siding, no expenditure has been done from DMGT fund, cracks due to blasting, river pollution due to mining, doctors not coming in hospital

Application for obtaining the approval of the Central Ground Water Authority has been submitted vide no: 21-4/699/JH/MIN/2020 Dated: 29.11.2020

531.64 ha of forestland have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 531.64 Ha of forestland for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No.8-48/2008-FC Dt.12.10.2010.

Mining Plan (including Progressive Mine Closure Plan) has been approved by the 494<sup>th</sup> CCL Board meeting held on 04.12.2020

Baseline ambient air quality status of the study area, baseline ambient air quality has been monitored at 9 locations in core and buffer zone of Amrapali OCP in the pre-monsoon period of 2020 i.e. from 2<sup>nd</sup> March, 2020 to 15<sup>th</sup> May, 2020.

Socio-economic study of core and buffer zone of Amrapali OCP was carried out by M/S Sonar Bharat Environment & Ecology Pvt Ltd. during pre monsoon season of 2017. Study on the flora and fauna in the study area (10km) has been carried out by Projects and Development India Pvt. Ltd. in the Pre-monsoon period of 2017. The projected radius of influence due to Amrapali Expansion OCP on groundwater has been estimated and ranges between 450.0 mt to 500.0 m from the mine periphery

Bariki river is the major drainage of the project. Dhudumati nala, which is flowing across the project and Honhe nala which forms the west boundary of the project are two major nalas flowing in the vicinity of proposed working and these nalas finally merge into barki river and Chundru river respectively. The Barki nadi and Chundru nadi are the major tributaries of Garhi nadi.

A Bahutchuan nala which is the small seasonal tributary of Chundru nadi flows from north to south in the west of the project at a safe distance of 60m

The seasonal Dudhmatia Nala, which flows from west to east in the north of the project through the project boundary, needs to be diverted along a stretch of 1,500 m. The diversion of nala is proposed

*7.6.4 The EAC noted that since obtaining EC of 14.4 MTPA in March 2020, another expansion applied due available coal reserve. However, adequate pollution mitigation measures in project are still lacking in terms of transportation, planation and dust control. Therefore, the EAC after detailed deliberation was of the view that proposal requires further analysis. Also, it was observed that compliance in existing EC conditions are not adequately addressed. The dudhmatia stream which was required to diverted has not yet been diverted which is being polluting the Barki river (visible from kml file). The Committee noted that there are two cases pending in Hon'ble NGT. One is regarding non-compliance of EC conditions of EC dated 3<sup>rd</sup> January, 2006 and against EC dated 20<sup>th</sup> March, 2020 (expansion without public hearing). EAC desired, PP shall further submit the details on the following points.*

- (i) PP shall submit compliance of EC conditions which are still non-complied with proof/photograph.*
- (ii) The PP should come up with proposal/installation of continuous air quality monitoring stations with photographs. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which analyse the samples*
- (iii) PP shall justify for considering two different emission factors source for AQIP modelling and further modelling has been conducted only for normative production capacity*
- (iv) PP shall propose the measures to be taken for reduction of air pollution due to internal and external transportation of mine.*
- (v) PP shall submit the specific mitigative measures for Dudhmatia Nala flow through the mining leasehold area. Detailed diversion plan along with its impact on Barki river shall be provide with allocated fund and timeline and likely Impact of mining on Chundru, Garhi river shall be submitted.*
- (vi) PP should submit proper adequate response to public hearing issues with financial commitment and submit year wise breakup and timeline for Action Plan for addressing the issues.*
- (vii) Fresh socio-economic study and study on flora and fauna shall be submitted since it is older than 3 years.*

- (viii) *The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this PP should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this plantation in the safety zone at lease boundary the plantation should be completed within 2 years only.*
- (ix) *PP to submit R &R in respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.*
- (x) *Impact on nearby agricultural land and on biological Environment. Proper biological management plan needs to be prepared.*
- (xi) *Comprehensive Plan for supplying/distribution with piped water to the nearby habitation in villages/ settlements (particularly for habitation coming under zone of influence).*
- (xii) *PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken.*
- (xiii) *PP shall state the reason of high variation (% variation) of proposed production capacity between Normative and peak values.*
- (xiv) *Plan of OB Dumping and rehandling and management of enhance capacity to be given with proper layout*
- (xv) *Plan for coal transportation from pit head to Amrapali Railway Siding through belt conveyer to be completed in 2 years.*
- (xvi) *PP shall submit impact of blasting with adequate safeguard on nearby villages*
- (xvii) *PP shall submit additional provision i.e capital and recurring cost by proposing additional EMP measures including dust suppression as suggested by Ministry's Regional office*

The proposal was **deferred** on above lines

#### **Agenda No.7.7**

**Pundi Opencast project with 5.00 MTPA in ML area of 774.26 ha of M/s Central Coalfields Limited located in District Ramgarh, (Jharkhand) – For Term of Reference (ToR) – reg.**

**[Online Proposal No. IA/JH/CMIN/192384/2021; File No J- 11015/95/2012-IA-II(M)]**

7.7.1 The proposal is for ToR for Pundi OCP Project of 5MTPA capacity in project area of 774.26 Ha of M/s Central Coalfields Limited located in village Pundi, Mandu & KK Basaudiin Tehsil Mandu District: Ramgarh, Jharkhand. The proposal is for Fresh ToR under EIA-2006.

7.7.2 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 Toposheet No 73E/5 & 73E/9 and is bounded by the geographical coordinates ranging from latitudes 23° 46' 5.31" to 23° 47' 58.17" North and longitudes 85° 29' 17.82" to 85° 32' 14.71" East.
- (ii) Coal linkage of the project is proposed through Basket Linkage for various power plants & other industries.
- (iii) Joint Venture: No Joint Venture
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: The project has created employment opportunities both for skilled and semi-skilled persons in the area. Total direct number of employment from the project is approximately 584.
- (vi) Benefits of the project: Improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy and steel sector requirement; Productive utilization of existing manpower of project.
- (vii) Pundi OCP is an existing project of Central Coalfields Limited and has been in operation since FY 1982-83. The project was earlier submitted to MoEF&CC for grant of Environment Clearance (EC) and it was accorded TOR vide letter No. J-11015/95/2012-IA.II(M) Dated 16.12.2013 for a capacity of 2.5 MTPA(Normative)/3.0 MTPA(Peak). As the proposed expansion involved a total area of 648.50 ha, with 595.53 ha of forestland where the Stage-I FC was yet to be issued, the project was deferred. The proposal was resubmitted on 14.04.2018 in line with requirement of MoEF&CC OM Dated: 14.03.2017 and 16.03.2018 as a violation project.
- (viii) The project report of Pundi Expansion OCP was revised to minimize the forestland requirement other than the quarry and essential infrastructure.
- (ix) The expansion PR of Pundi OCP (5.00 MTPA) was prepared within the project area of 774.26 Ha, and was approved by CIL Board in its 414<sup>th</sup> Meeting held on 11.11.2020 with a capital outlay of 713.35 Crs.
- (x) The land usage of the project is as follows:

SN	Details of land use	Forest land	Non-Forest	Area in Ha.
1	Quarry	470.51	203.99	674.5
2	Colony	1.6	6.73	8.33
3	CHP	12.14	0	12.14
4	Conveyor(4 KM * 12 m)	0.48	4.32	4.80
5	Workshop, Sub-Station and Others	19.85	0	19.85
6	Roads on Surface	13.02	0.27	13.29
7	Safety Land/ Embankment	19.04	11.31	30.35
8	Nallah Diversion	6.62	4.38	11
<b>Total</b>		<b>543.26</b>	<b>231</b>	<b>774.26</b>

The post mining land use plan is given below:

Land Use During Mining			Proposed Post Mining Land Use	
SN	Particulars	Total Area in Ha.	Particulars	Total Area in Ha.
1	Quarry	674.5	Internal Dump Reclaimed with Plantation	551
			Mine Void filled with water	123.5
2	Workshop, Sub-Station and Others	19.85	Plantation on dismantled infrastructure land	36.79
3	CHP	12.14		
4	Conveyor (4 KM * 12 m)	4.8		
5	Roads on Surface	13.29	Roads for Future Use	13.29
6	Safety Zone and Embankment	30.35	Plantation on Safety Zone and Embankment	30.35
7	Nala Diversion	11	Water Body	11
8	Colony	8.33	Colony	8.33
<b>Total Area</b>		<b>774.26</b>	<b>Total Area</b>	<b>774.26</b>

- (xi) Total geological reserve is 149.51 MTe. The remaining mineable reserve is 117.80 MT, extractable reserve is 117.80 MT. The percent of extraction would be 100 %.
- (xii) There will be 08 seams with seam thickness from 0.40 to 16.60 m. The coal grade is W-IV. The stripping ratio is 3.36 Cum/tonne.
- (xiii) Considering the geo-mining conditions shovel-dumper combination with drilling and blasting has been proposed for Overburden mining and Surface Miner-F.E.Loader-Dumper combination for coal.
- (xiv) Balance life of mine is 27 years as on 01.04.2020.
- (xv) Total volume of overburden of the proposed OCP has been estimated as 395.24 Mcum. It is proposed to store total OB in the internal dump. However, in the initial stages of mine development, it is proposed to dump 15.94 Mcum of OB externally on the land proposed for Quarry in the dip side and later re-handled to the internal dump.
- (xvi) The total Quarry area is 674.5 Ha. At the final stage, it is proposed to reclaim the internal dump of 551 Ha with plantation and leave 123.5 Ha with quarry filled with water.
- (xvii) Transportation: it is proposed that the coal from elevating conveyor will be fed to tripper conveyor, which will discharge the coal into 10000te on ground bunker. The coal from bunker shall be reclaimed by 1800 tph plough feeder to feed the 4 km long pipe conveyor, which shall finally discharge into Topa washery.
- (xviii) Stage-II FC for 52.97 Ha of forestland has been obtained vide letter number F.No.8-46/2004-FC Dated: 06.08.2008. Forest application for 595.53 ha of forestland was submitted earlier vide FP/JH/MIN/14060/2015 on 27.07.2015. It is being revised to 490.29 ha of forest land as per the revised PR of 774.26 ha.
- (xix) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

- (xx) Total water requirement for the project is 1,599KLD.
- (xxi) Application for ground water clearance vide application no: 21-4/385/JH/MIN/2019 Dated: 02.04.2019.
- (xxii) Last Consent to Operate for the existing capacity was obtained from the Jharkhand State Pollution Control Board on 29.07.2019 and was valid till 31.12.2019. The project is not operational since 01.01.2020.
- (xxiii) The drainage of the block is dendritic and the area falls in the catchment area of the Bokaro river which is flowing through the eastern side of the block. Hesagora Nala need to be diverted in the eastern part of the quarry.
- (xxiv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB and also to MoEF&CC. 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.
- (xxv) No court cases, violation cases are pending against the project of the PP.
- (xxvi) The coal production from the mine was started since before the year 1993-94. The coal production, realized from the project, since inception, is as under:

<b>Year</b>	<b>Coal(in MT)</b>	<b>Year</b>	<b>Coal(in MT)</b>
1982-83	0.03	2001-02	0.18
1983-84	0.11	2002-03	0.27
1984-85	0.16	2003-04	0.25
1985-86	0.11	2004-05	0.40
1986-87	0.08	2005-06	0.48
1987-88	0.24	2006-07	0.55
1988-89	0.52	2007-08	0.62
1989-90	0.66	2008-09	0.43
1990-91	0.70	2009-10	0.81
1991-92	0.66	2010-11	0.57
1992-93	0.55	2011-12	0.50
1993-94	0.38	2012-13	0.52
1994-95	0.24	2013-14	0.55
1995-96	0.24	2014-15	0.46
1996-97	0.30	2015-16	0.35
1997-98	0.26	2016-17	0.35
1998-99	0.20	2017-18	0.265
1999-2000	0.25	2018-19	0.193
2000-01	0.23	2019-20	0.035

- (xxvii) Proposed Project covers 3 revenue villages in the Ramgarh District viz., Pundi, Mandu & KK Basaudi village. Around 400 PAFs were identified in these villages for Rehabilitation and Resettlement. Around 24.90 Crores has been allotted for carrying R&R.
- (xxviii) Total capital cost of the project was Rs. 713.35 Crores as per approved Project Report. CSR Cost will be as per CSR policy & Companies Act, 2013. The Environmental Management Cost Rs 212.85 Crore including compensation for Govt. & Tenancy Land.

### 7.7.3 The EAC during deliberations noted the following:

Pundi OCP is an existing project in the Kuju area of Central Coalfields Limited and has been in operation since 1982-83.

The project was earlier submitted to MoEF&CC for grant of Environment Clearance (EC) and it was accorded TOR vide letter No. J-11015/95/2012-IA.II(M) Dated 16.12.2013 for a capacity of 2.5 MTPA(Normative)/3.0 MTPA(Peak). The public hearing for the project was also conducted on 07.09.2015 and it was last appraised by EAC (Thermal & Coal Mining Projects) in its 49th meeting on 07-08.01.2016. As the proposed expansion involved a total area of 648.50 ha, with 595.53 ha of forestland where the Stage-I FC was yet to be issued, the project was deferred.

The expansion PR of Pundi OCP (5.00 MTPA) was prepared within the project area of 774.26 Ha, and was approved by CIL Board in its 414th Meeting held on 11.11.2020 with a capital outlay of 713.35 Crs.

*7.7.4 The EAC, after detailed deliberation **recommends** the proposal for grant of Terms of Reference to Pundi Opencast project with 5.00 MTPA in ML area of 774.26 ha of M/s Central Coalfields Limited located in District Ramgarh (Jharkhand), with specific conditions as below and as defined in the Standard ToR under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto.*

- (i) PP should submit the certified authenticated/Audited production figures from the revenue department or department of mining and geology of State Government or certificate from Coal Controller for production capacity since 1993-94.*
- (ii) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.*
- (iii) PP shall be assessing the damage assessment of environment against the excess production against the quantities for not taking EC.*
- (iv) Cumulative Impact Assessment Study of the area shall be carried over by project proponent*
- (v) PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.*
- (vi) Clarification from PCCF that mine does not fall under corridors of any National Park and Wildlife Sanctuary and does not involve any violation of forest area and wild sanctuary.*
- (vii) PP should bring out the awareness campaign to be carried out on various Environmental issues, practical training facility to be provided to the environmental engineer/diploma holders, mining engineer/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.*
- (viii) Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area*

- (ix) *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- (x) *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA)*
- (xi) *Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted*
- (xii) *Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report.*
- (xiii) *The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality.*
- (xiv) *PP shall provide an integrated mine production and mine reclamation plan of which the systematic and post mining land form management / landscape management of mining area, internal, and external dump area will be integral. Both internal and external dumps shall be regarded and reshaped to reduce its height as close to the original surface level as possible for better land use post mining activities.*
- (xv) *PP shall provide the details of mining technology/methodology proposed to be adopted for coal mining operations and its associated environmental benefits of using from Climate Change perspective.*
- (xvi) *The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no consent to operate for project to be issued till the project is granted EC.*
- (xvii) *The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.*
- (xviii) *Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.*
- (xix) *Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.*
- (xx) *The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.*
- (xxi) *In case of violation of undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated, the ToR/Environmental Clearance shall be liable to be terminated forthwith.*
- (xxii) *Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to prepare accordingly.*
- (xxiii) *The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.*



- (xxiv) PP shall be submitting R & R in respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.
- (xxv) Description of water conservation measures proposed to be adopted in the Project should be given.
- (xxvi) Details of toe wall and garland drain to be constructed along the OB dump.
- (xxvii) Reclamation to be done using geo-texturing technique of the dumps close to habitation and a cause of visual intrusion.
- (xxviii) Details of Water spraying (static water sprinklers) at coal stock yard and along the permanent haul road.
- (xxix) Details of black topping of permanent haul roads.
- (xxx) Minimum 100 m distance to be maintained from dumps to habitation and three tier green belt to be developed.
- (xxxi) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples
- (xxxii) PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- (xxxiii) PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- (xxxiv) PP should clearly bring out the details of the manpower to be engaged for this project with their roles/responsibilities/designations. In addition to this PP should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP).
- (xxxv) PP should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this PP should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this plantation in the safety zone at lease boundary the plantation should be completed within 2 years only.
- (xxxvi) PP should submit the real time aerial footage and video of the Mining lease area.

## **Additional item with the permission of chairman**

### **Agenda 7.8**

**Ramagundam Opencast-III Expansion-II Coal Mine Project from 6.30 (Peak 6.80) MTPA to 8.82 (Peak 9.52) MTPA in mine lease area of 2070.10 ha M/s Singareni Collieries Company Limited located near Jallaram Village Mandal Kamanpur District Peddapalli (Telangana) - Environmental clearance under the provision of clause 7(ii) of EIA Notification, 2006 - reg.**

**Online Proposal No. IA/TG/CMIN/120211/2019**

The proposal is for grant of Environment Clearance to Ramagundam Opencast-III Expansion-II Coal Mine Project from 6.30 (Peak 6.80) MTPA to 8.82 (Peak 9.52) MTPA in an ML area of 2070.10 ha M/s Singareni Collieries Company Limited located near Jallaram Village Mandal Kamanpur District Peddapalli (Telangana), under the provision of clause 7(ii) of EIA Notification, 2006

The proposal has been recommended by EAC in its 5<sup>th</sup> meeting held on 23<sup>rd</sup> December, 2020 with certain terms & conditions therein. One of the conditions as mentioned below:

*(xv) Mining shall be carried out only by surface miners for the project (as proposed)*

M/s SCCL vide its letter dated 6th January, 2021 has requested for correction in the 5<sup>th</sup> EAC minutes of meeting pertaining to their project. It has been requested to exclude the conditions of surface miners as at point no. xv of EAC recommendation.

Since it was deliberated in 53<sup>rd</sup> EAC meeting that surface miners cannot be deployed due to following reasons.

- As the project is extracting coal from the remnant pillars of the erstwhile underground mine, there is every danger of bogging down of the surface miner in the developed galleries
- there will not be sufficient working space for deployment of surface miner as the coal extraction is carried at multiple locations spread over in different parts of the mine
- Presence of number of thin seams and higher gradient coal seams which is not suitable for efficient working of surface miner
- Drag line is already in operation which is environmental friendly

The propose technology for the project is shovel dumper combination. In view of above, PP has requested to consider for excluding the condition for deployment of surface miners in the project.

*EAC after deliberations, observed that since the utilisation of surface miner is technically not feasible for mining operations in this mine hence it was **recommended** to exclude the condition from its earlier recommendation.*

**The meeting ended with thanks to the Chair.**

**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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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 25<sup>th</sup> 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 PM<sub>10</sub>/PM<sub>2.5</sub>) 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 air borne 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.
- (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 25<sup>th</sup> 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-IA.11 (M) dated 27<sup>th</sup> 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 purpose viz. 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 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.

**(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 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 27<sup>th</sup> 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 & it's 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 29<sup>th</sup> 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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approve 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; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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 OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> 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.

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**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. (incase 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 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, SO<sub>2</sub> and NO<sub>x</sub>. 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 air borne 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 viz. 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 revarian /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 3<sup>rd</sup> November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, alongwith 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 green belt 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 Hearing 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 OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> 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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve 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.

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**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. 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. (incase 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 waste/hazardous waste generated in the washery needs to be addressed in accordance 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, SO<sub>2</sub> and NO<sub>x</sub>. 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. carried out at least once in six months.
- ii. 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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.
- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with 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 upto 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 appropriate 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 river front 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 m<sup>3</sup>/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.
- xii. 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.
- xiii. 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/transfer points 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.
- 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 29<sup>th</sup> 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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve 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.

## **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; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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 MOEFCC 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.
- ix. 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.
- x. 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
- xi. 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.
- xii. 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 a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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**Generic ToR for coal washery**

- i. Siting of washery is critical considering to 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 washery preferably through closed conveyer 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 alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Repot 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. alongwith 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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub>, 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 transport 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 alongwith Action Plan.
  - xiv. O.M.no.J-11013/25/2014-IA.I dated 11<sup>th</sup> 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. The rejects 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 conveyor 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.

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## **ANNEXURE-V**

### **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-channelling 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.

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

Sl. No.	Landuse	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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> 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 maximising 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 Landuse and Reclamation Area (ha)

S.N.	Land use Category	Present (1 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> 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 <sup>st</sup> year										
2.	3 <sup>rd</sup> year										
3.	5 <sup>th</sup> year										
4.	10 <sup>th</sup> year										
5.	15 <sup>th</sup> year										
6.	20 <sup>th</sup> year										
7.	25 <sup>th</sup> year										
8.	30 <sup>th</sup> year										
9.	34 <sup>th</sup> year(end of mine life)										
10.	34- 37 <sup>th</sup> 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 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.

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:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - 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 (ha)	Date of FC	Extent of forestland	Balance area for which FC is yet to be obtained	Status of appl for. diversion of forestland
		If more than , provide details of each FC			

**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 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.
- (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/water bodies) 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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> 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 break up 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 /Project (ha)	ML Area	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			

**GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE 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.

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**Email**

**Munna Kumar Shah**

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**Fwd: Draft MoM for 7th EAC meeting**

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**From :** Munna Kumar Shah <munna.shah@gov.in> Mon, Feb 08, 2021 04:27 PM  
**Subject :** Fwd: Draft MoM for 7th EAC meeting  
**To :** lk.bokolia <lk.bokolia@nic.in>

FYI Pls

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**From:** gpkundargi@gmail.com  
**To:** "Munna Kumar Shah" <munna.shah@gov.in>  
**Sent:** Monday, February 8, 2021 4:12:10 PM  
**Subject:** Re: Draft MoM for 7th EAC meeting

Dear Munna Kumar ji  
I have gone through the corrected draft  
Minutes. It is in order & approved. You are requested to take further action.  
Thank you  
G P Kundargi

On Mon, 8 Feb, 2021, 3:38 pm Munna Kumar Shah, <[munna.shah@gov.in](mailto:munna.shah@gov.in)> wrote:  
Dear sir

The undersigned is directed to send the draft MoM for 7th EAC meeting. As per telephonic conversation, the correction has been made.

May pls see and approve for further uploading in the PARIVESH Portal.

Thank you

Regards

Munna Kumar Shah  
Scientist D

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**LIST OF PARTICIPANTS OF EAC (COAL) IN 6<sup>th</sup> MEETING OF HELD DURING 13<sup>th</sup> JANUARY, 2021 THROUGH VIDEO CONFERENCING**

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