

MINUTES OF 40th MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 16 - 17 FEBRUARY, 2023 THROUGH PHYSICAL MODE.

Confirmation of the Minutes of 39th Meeting of the EAC (Coal): The minutes of the 39th Meeting of the EAC (Coal) held during 12-13 January, 2023 has been confirmed by the Chairman.

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

Consideration of Proposals: The 40th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 16-17 February, 2023 through physical mode. 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. 40.1

Expansion of Balaram OCP (Earlier known as Kalinga OCP) from 8.0 MTPA to 15.0 MTPA with increase of mine lease area from 1309 Ha to 2574.00 Ha (Additional land of 1265 Ha) by M/s Mahanadi Coalfields Limited at villages namely Nakeipasi, Brahmanbahali, Kochianali, Damal, Prasana Nagar, Nathagaon, Majhika, Kalamchhuin, Danara, Natada, Banabaspur, Telipur, Solada, Satyabadipur, Gopalprasadkhamar, Khuringa, and Birabarpur, Tehsil Talehar Sadar, District Angul (Odisha) - For Environmental Clearance reg.

[Proposal No. IA/OR/CMIN/411408/2022; File No. J-11015/09/2013-IA-II (M)]

40.1.1 The proposal is for Environmental Clearance for Expansion of Balaram OCP from 8.0 MTPA to 15.0 MTPA with increase of mine lease area from 1309 Ha to 2574.00 Ha (Additional land of 1265 Ha) by M/s Mahanadi Coalfields Limited at villages namely Nakeipasi, Brahmanbahali, Kochianali, Damal, Prasana Nagar, Nathagaon, Majhika, Kalamchhuin, Danara, Natada, Banabaspur, Telipur, Solada, Satyabadipur, Gopalprasadkhamar, Khuringa, and Birabarpur, Tehsil Talehar Sadar, District Angul (Odisha).

40.1.2 Details of the proposal, as ascertained from the proposal documents are given as under:

- i. The project area is covered under Survey of India Topo sheet no: F45T1 (73H/1) on RF 1:50000 and is bounded by the geographical coordinates ranging from From: Latitude: 20° 53' 33" & 20° 59' 05" N, Longitude : 85° 03' 56" & 85° 06' 57"E To: Latitude : 20° 56' 02" & 20° 59' 05" N, Longitude : 85° 02' 52" & 85° 06' 56"E.
- ii. Coal linkage of the project: Washery APGENCO & Other power houses and basket linkages.
- 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 13th January 2010 has imposed moratorium on grant of environment clearance.

- v. Employment generation:
 - a. Employment given so far to 3687 persons as on 30.09.2022.
 - b. Apart from the above mentioned direct employment potential, the proposed mining project will generate secondary and tertiary employment for the local people.
- vi. The project is reported to be beneficial in terms of
 - a) Contribution to the Exchequer (both State and Central Govt.)
 - b) Improvement of Electrical Power Generation and availability of electricity in rural areas.
 - c) Improvement in physical and social infrastructure like roads, school building, provision of drinking water, community hall, plantation etc.
 - d) Overall economic growth of the country.
- vii. Earlier, the environment clearance to the project was obtained Ministry's letter vide letter No. J-11015/4/87-IA-C, Dated 24th October 1990 for 8 MTPA in the mine lease area of 1309 Ha under EIA, Notification, 1994.
- viii. Total mining lease area as per block allotment is 2574 Ha and as per approved Mining Plan is 2574 Ha. Mining plan (including Progressive Mine closure plan) has been approved by MCL Board vide letter no. MCL/SBP/CS/BD-226/Ext/2020/11151, dt- 29.08.2020 and subsequently corrigendum approved by MCL Board vide letter no. MCL/SBP/CS/BD-227/Ext/2020/11307 dated 17.11.2020.
- ix. The land usage pattern of the project is as follows:

Land use details (Area in Ha)

Sl.No	Type of Land	For 8 MTY project	Total area for 15 MTY expansion
a)	Agricultural	680.93	1909.302
b)	Forest	85.01	278.855
c)	Barren	170.11	76.265
d)	Grazing		49.527
e)	Water bodies	6.60	117.04
f)	Roads	386.76	45.289
g)	Township		97.757
	Total	1329.40	2574

Pre-Mining land use details

S. No.	Particulars	As per Approved P.R and E.C of Balram OCP (8Mty) (A)			Additional land for Balram Expansion OC. project (15Mty) (Ext + Exp) (B)			Total Land for Balram Expansion OC. Project (15Mty) (8Mty+Ext+Exp) (C)
		Forest	Non-Forest	TOTAL	Forest	Non-Forest	TOTAL	
1	Excavation	58.33	609.67	668.00	186.765	1008.935	1195.70	1863.70
2	Ext. OB Dump	0	32.2	32.20	0	0	0	32.20

3	Blasting Safety Zone	26.68	343.32	370.00	0	0	0	370.00
4	Safety Barrier of	0	0	0	1.851	7.449	9.30	9.30
5	Infrastructure	0	14.80	14.80	5.229	54.771	60.00	74.80
6	Others (Magazine +Ser V) Road etc.)	0	224.00	224.00	0	0	0	224.00
7	Total Mining LEASE AREA	85.01	1223.99	1309.00	193.845	1071.155	1265.00	2574.00
8	Colony	0	32.00	32.00	0	0	0	32
9	R&R	0	18.6	18.60	0	134.00	134.00	152.60
10	Others(Rat Mine Boundary +Approach Road)	0	20.4	20.40	0	0	0	20.40
11	SUB TOTAL	0	71.00	71.00	0	13	134.00	205.00
12	TOTAL LEASE	85.01	1294.99	1380.00	193.845	1205.155	1399.00	2779.00

Post Mining

Post-mining land use (at the end of mining activity)							
Sl. No.	Category	Land use (in ha)					
		Plantation	Water body	Dip sideslope, Active dump & haul road	Undis- turbed	Public/ Compa ny use	Total
1	Quarry excavation	1554.24	39.36	270.1	0	0	1863.7
2	Safety zone (7.5mt)	9.3	0	0	0	0	9.3
3	OB dumps (external)	32.2	0	0	0	0	32.2
4	infrastructure	22.44	0	0	5.984	46.376	74.8
5	Blasting Danger	244.2	0	0	25.75	100.05	370
6	Other areas	134.4	0	0	17.92	71.68	224
	MINE LEASE	1996.78	39.36	270.1	49.654	218.106	2574
7	Residential colony	6.4				25.6	32
8	Resettlement site	30.52	0	0	0	122.08	152.6
9	Others	4.08	0	0	0	16.32	20.4
	TOTAL PROJECT	2037.78	39.36	270.1	49.654	382.106	2779

- x. Total geological reserve reported in the mine lease area is 746.21 Mt with 712.134 Mt as mineable reserves. Out of total mineable reserve of 712.134 Mt are available for extraction as on 01.04.2020. Percent of extraction is 96.6%.
- xi. 19 seams with thickness ranging from 0.3 to 22 are workable. Overall Grade of Coal is G-12, Stripping ratio is 2.10 (mineral in tones to overburden in m³) while gradient is 2.75⁰ - 8⁰.
- xii. Method of mining operations envisages by Opencast Mining Method Coal winning by Surface Miner, pay loader & tipper and OB removed by Shovel-Dumper combination.
- xiii. Life of mine is 49 years as on 01.04.2020.
- xiv. The project has one OB dump exist in an area of 32 ha with maximum height of 30 Mtr and 11.28 Mm³ of OB. The OB is being simultaneously backfilled into the de-coaled area (internal OB dumping). An area of 1647.27 ha is proposed for internal OB dump out of which 338.12 Ha already exists as on 31.12.2022. Total 1492.07 Mm³ of OB material is envisaged for backfilling in internal OB dump and out of which 198.34 Mm³ has already been backfilled in the existing project as on 31.12.2022.
- xv. Total quarry area is 1863.7 ha out of which backfilling will be done in 1554.24 ha up to ground level (out of which 338.12 Ha is already backfilled) while final mine void will be created in an area of 309.46 ha of partially backfilled area out of which 39.36 Ha will be converted into water body with a maximum depth of 15 to 40 m. Backfilled quarry area of 1554.24 ha shall be reclaimed with plantation/grass/agriculture.
- xvi. Transportation of coal has been proposed as below.
In mine pit: through Surface miner & by tippers
From surface to siding: 7.0 Mty – Pipe conveyor to washery
5.0 Mty – Belt conveyor to Siding
3.0 Mty – Belt conveyor to Truck loading system
Siding to loading: 7.0 Mty – Pipe conveyor to washery
5.0 Mty – Belt conveyor to Siding
3.0 Mty – Belt conveyor to Truck loading system
- xvii. Reclamation Plan in an area of 1996.78 ha, comprising of 32.2 ha of external dump, 1554.24 ha of internal dump, 9.3 Ha of Green Belt and 244.2 Ha of blasting danger zone. In addition to this, an area of 22.44 ha included in the roads/infrastructure and built-up area and 134.4 Ha in other areas, has also been proposed for green belt development.
- xviii. 278.855 ha of forest land have been reported to be involved in the project. Forest clearance has been obtained for 85.01 ha of forest land for the existing 8 MTY in 28.9.1990 vide letter no. 8-143/89- FC and for proposed (expansion) application for diversion of 193.845 Ha forest land is under process (Proposal no. FP/OR/MIN/59166/2020).
- xix. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10km boundary of the project. However, at a distance of 8.04 kms from North-East boundary of the mine, there is a Kahnejena-Anantapur Elephant Corridor.
- xx. The ground water level has been reported to be varying between 1.5 m to 10.5 m bgl.

Total water requirement for the project is 4.35 MLD.

- xxi. No objection certificate (NOC) obtained from Central Ground Water Authority vide no: CGWA/NOC/MIN/ORIG/2021/14009, dated 10/12/2021.
- xxii. Public Hearing for expansion project (8 to 15 MTPA) held on dated 23rd August 2022 at 11:00 AM at the scheduled location at Jagannath Kalakendra in the district of Angul, Odisha and its proceedings is incorporated in the EIA EMP.
- xxiii. Consent to Operate for the capacity 7.74 Mty has been obtained vide 3572/IND-I-CON-1218 dated 11.03.2022 valid till 31.03.2023 from the State Pollution Control Board.
- xxiv. Bangaru Jhor flows from SW to NE and another Singada jhor flows in adjacent to north western boundary of the block. There is no diversion link to these streams.
- xxv. Baseline data generation study for this expansion projected is conducted for the period from March to June 2021. Regular monitoring of ambient air quality of existing capacity (8 MTPA) is being carried out on fortnightly basis. The documented report is submitted to Regional Office, MoEF&CC, and Bhubaneswar and 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.
- xxvi. No court cases are pending.
- 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 1991-92 and the coal production figures since inception is furnished below: -

Year	Coal Achieved (MT)	Actual Production	Excess production beyond the EC sanctioned capacity
1990 – 91	8.00	0.00	Nil
1991 – 92	8.00	0.13	Nil
1992 – 93	8.00	1.21	Nil
1993 – 94	8.00	1.50	Nil
1994 – 95	8.00	1.76	Nil
1995 – 96	8.00	2.57	Nil
1996 – 97	8.00	3.81	Nil
1997 – 98	8.00	4.34	Nil
1998 – 99	8.00	5.03	Nil
1999 – 00	8.00	6.41	Nil
2000 – 01	8.00	4.90	Nil
2001 – 02	8.00	5.28	Nil
2002 – 03	8.00	5.20	Nil
2003 – 04	8.00	4.03	Nil
2004 – 05	8.00	4.85	Nil
2005 – 06	8.00	3.21	Nil
2006 – 07	8.00	4.13	Nil
2007 – 08	8.00	4.91	Nil
2008 – 09	8.00	3.50	Nil
2009 – 10	8.00	3.61	Nil

2010 – 11	8.00	4.55	Nil
2011 – 12	8.00	5.56	Nil
2012 – 13	8.00	5.63	Nil
2013 – 14	8.00	4.57	Nil
2014 – 15	8.00	3.70	Nil
2015 - 16	8.00	2.52	Nil
2016 – 17	8.00	2.81	Nil
2017 – 18	8.00	2.79	Nil
2018 – 19	8.00	3.63	Nil
2019 - 20	8.00	5.23	Nil
2020 - 21	8.00	6.26	Nil
2021-22	8.00	6.52	Nil
2022-23 (upto Jan)	8.00	6.38	Nil

xxviii. The project involves 3715 project affected families to be resettled. R&R of the PAPs will be done as per Orissa Rehabilitation and Resettlement Policy 2006.

xxix. The sanctioned capital for the project 8 Mty is Rs.516.74 Crs. The additional capital for incremental production of 7.0 Mty is Rs.3504.21 Crores and total capital for the project is Rs.4020.95 Crores. Cost of production is Rs.612.61 per tonne and sale price is 987.17 per tonne, CSR cost is Rs.2.00 per tonne or 2% of the average net profit of the Company of the three immediately preceding financial years whichever is higher, Proposed Rehabilitation site development cost is 233.80 Crores. Proposed R&R cost (excluding land but including house compensation) is 187.96 Crores. Proposed Environment Management Cost is Rs Rs.125.26 Cr (for expansion project.)

xxx. Consent to Operate for the capacity 7.74 Mty was obtained from the State PCB on dated 11.03.2022 valid till 31.03.2023 and for expansion 15 MTPA project, CTO will be obtained after the grant of EC for expansion.

xxxi. Past Production details comparison with existing EC

Year	EC capacity (MTPA)	Actual Production	Excess production beyond the EC sanctioned capacity
1990 – 91	8.00	0.00	Nil
1991 – 92	8.00	0.13	Nil
1992 – 93	8.00	1.21	Nil
1993 – 94	8.00	1.50	Nil
1994 – 95	8.00	1.76	Nil
1995 – 96	8.00	2.57	Nil
1996 – 97	8.00	3.81	Nil
1997 – 98	8.00	4.34	Nil
1998 – 99	8.00	5.03	Nil
1999 – 00	8.00	6.41	Nil

2000 – 01	8.00	4.90	Nil
2001 – 02	8.00	5.28	Nil
2002 – 03	8.00	5.20	Nil
2003 – 04	8.00	4.03	Nil
2004 – 05	8.00	4.85	Nil
2005 – 06	8.00	3.21	Nil
2006 – 07	8.00	4.13	Nil
2007 – 08	8.00	4.91	Nil
2008 – 09	8.00	3.50	Nil
2009 – 10	8.00	3.61	Nil
2010 – 11	8.00	4.55	Nil
2011 – 12	8.00	5.56	Nil
2012 – 13	8.00	5.63	Nil
2013 – 14	8.00	4.57	Nil
2014 – 15	8.00	3.70	Nil
2015 - 16	8.00	2.52	Nil
2016 – 17	8.00	2.81	Nil
2017 – 18	8.00	2.79	Nil
2018 – 19	8.00	3.63	Nil
2019 - 20	8.00	5.23	Nil
2020 - 21	8.00	6.26	Nil
2021-22	8.00	6.52	Nil
2022-23 (upto Jan)	8.00	6.38	Nil

40.1.3 The Committee after detail deliberation noted the following:-

- i. The ToR to this project was granted vide letter no. J-11015/09/2013-IA. II(M) dated 20th September, 2021 for the Balaram OCP (Earlier known as Kalinga OCP) from 8.0 MTPA to 15.0 MTPA with increase in Mine lease area of 1309 ha to 2574.0 ha (additional land of 1265 ha) by M/s Mahanadi Coalfields limited.
- ii. Earlier, the project proponent has obtained the environment clearance vide Ministry's letter No. J-11015/4/87-IA-C dated 24th October 1990 for 8 MTPA in the mine lease area of 1309 Ha.
- iii. The Public Hearing was conducted on 23.08.2022 wherein issues related to Supply of clean hygienic drinking water in local villages, Dust deposition over local water bodies, LED streetlight should be setup, Repair of existing village roads and construction of new roads, Provision of cremation house, Provision for training and skill development for ITI, Diploma & Degree holder and other youth, Free health checkup, treatment and medicine facility to local people, deployment of ambulance in local areas, Plantation in OB-block, avenue in mine lease area as well as vacant areas and along roads in local villages etc.
- iv. In the existing land, the project proponent has obtained the forest clearance for the forest lands of 85.01 ha vide letter no. 8-143/89-FC dated 28.09.1990.

- v. Now, project proponent has to obtain the forest clearance for additional forest land of 193.845 ha out of 278.855 ha of total forest land involved in the mine lease area of Balaram OCP.
- vi. The project proponent has submitted the approved Mining plan (including Progressive Mine closure plan) vide letter no. MCL/SBP/CS/BD-226/Ext/2020/11151 dated 29th August, 2020 and corrigendum of the approved Mining plan has also been submitted vide letter no. MCL/SBP/CS/BD-227/Ext/2020/11307 dated 17th November, 2020.
- vii. PP, while taking amendment of TOR vide letter dated 1st February 2016, had referred the change of name of mine. However, no formal communication regarding change of name has so far been communicated from the MoEF&CC side. Moreover, minutes referred by PP i.e 47th EAC meeting dated 30th November, 2015 to 1st December, 2015 based on which TOR amendment letter was issued, has been expired. Hence PP is to now obtain the formal communication specifically change of name through fresh application on Parivesh.
- viii. The Baseline data has been generated for pre-monsoon period i.e. from 20.03.2021 to 04.06.2021. The Committee observed that the Singada jhor flows in adjacent to north western boundary of the mine lease area.
- ix. The project proponent has obtained the Certified Compliance Report vide letter no. 101-31/EPE dated 28.01.2022.

40.1.4 *The EAC after deliberation noted that the instant project is for expansion of production capacity from 8 MTPA to 15 MTPA in additional mine lease area from 1309 ha to 2574 ha, which contiguous to existing mine. Earlier Environmental Clearance of 8 MTPA production capacity was granted by MoEFCC vide letter dated 24.10.1990. Knowing the fact, that the mine has been in operation since 1990-91 and production is being expanded in additional land from existing mine area, the EAC desired that PP must provide the details of progressive mine closure plan. However, PP did not express satisfactory mine closing details. Therefore, EAC desired to know the status of progressive mine closure with the recorded drone video and Photograph with latitude and longitude. The EAC noted that the project proponent has to obtain the forest clearance for additional forest land of 193.845 ha out of 278.855 ha falls in the mine lease area of Balaram OCP. The project proponent should also submit the area wise detail of minerals i.e. already excavated and being under proposed area. In the instant proposal of expansion, total 193.845 ha of fresh Forest land would be required; the committee therefore desired to know the status of reserve available below this forest area. The committee also noted that some of the villages getting directly affected by the project, therefore the status of the reserve available below under villages should also be mentioned.*

While discussing the compliances of existing EC conditions, the Committee emphasized to setup a dedicated lab within the Mine lease area for testing purpose. During the discussion, the committee also noted that the project proponent needs to submit the detailed coal evacuation including transportation plan showing the comparison between existing and proposed plan in tabular format. Due to expansion, the EAC emphasized to install another CAAQMS in the core zone of mine lease area and the generated air quality data to be displayed on the company

website as well as on the electronic board in the direction of village area.

The committee also stressed for tree plantation, which is found to be inadequate and suggested for planting only Sal tree, being a native species and also to develop the nursery of the same with at least 25,000 of plant capacity. The committee asked the project proponent to explore the dual fuel (i.e. Biofuels) vehicle for transportation within the mine lease area. The Committee also desired for estimation of CO2 emission w.r.t. the quantity of fuel consumed for the mining purpose. Further, the Committee also emphasized to revise the EMP budget after the inclusion of all above points.

In view of the above observations, EAC desired PP to submit the following information for further consideration of the project:

- i. The Project proponent shall submit the ATR to compliance of the non-complied point given in EC letter dated 24.10.1990.*
- ii. The Project proponent shall submit the certified status of the reserve available below fresh forest area.*
- iii. PP shall submit the approved Mine Plan as per discussion during EAC meeting considering actual plan of mining operation instead of based on assumptions and apprehension.*
- iv. The Project proponent shall submit the recorded drone video and Photograph with latitude and longitude showing the current status of the mine closure*
- v. The Project proponent shall submit the area wise detail of minerals i.e. already excavated. Also submit the safeguard that has been taken or to be taken in future for the villages falling in the Mine lease area and for nearby villages.*
- vi. The Project proponent shall submit the certified status of the reserve available below the mentioned villages.*
- vii. The Project proponent shall setup a dedicated lab within the Mine lease area for testing purpose, which is also part of non –compliance (in terms of dedicated lab).*
- viii. The Project proponent shall submit the present status of the Forest Clearance for 193.845 ha.*
- ix. The Project proponent shall submit the existing and proposed transportation plan in tabular format, which reflects the shift/upgradation of coal transport through mechanized system.*
- x. The Project proponent shall submit plan to install another CAAQMS in the core zone of mine lease area with display of values on the company website as well as on the electronic board in the direction of village area and company gate.*
- xi. The Project proponent shall submit details for tree plantation plan including number and location for the Sal tree to be planted.*
- xii. The Project proponent shall submit the plan to develop the nursery of the Sal tree having at least 25,000 of plant capacity and also mention the location for the development of Nursery.*
- xiii. The project proponent to explore the clean fuel (i.e. Biofuels) dumpers for transportation purpose within the mine lease area. The plan should include for the replacement of at least 20% of total vehicle to be used.*

- xiv. *The Project proponent shall submit the revised EMP budget after considering all of the above points.*
- xv. *PP shall not propose to use forest land for dumping of overburden.*

*In view of above, the proposal was **deferred**.*

Agenda No. 40.2

Expansion of Kulda Opencast Coal Mine Project from 19.6 to 21 MTPA (increase of 10% w.r.t. 14 MTPA) in an ML area of 634.205 ha M/s Mahanadi Coalfields Limited, located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) - Reconsideration of Environmental Clearance dated 24.05.2022 issued under OM vide no. F. No. IA3-22/10/2022-IA.III 07.05.2022 - [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification]- reg. [Proposal No. IA/OR/CMIN/416510/2023; File No. J-11015/10/1995-IA-II(M)]

40.2.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022, which has availed 50% relaxation for project “*Expansion of Kulda Opencast Coal Mine Project from 19.6 to 21 MTPA (increase of 10% w.r.t 14 MTPA) in Mine Lease area of 634.205 ha for M/s Mahanadi Coalfields Limited, located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha).*”

40.2.2 The committee during the EAC meeting observed the following:

- i. The following Environmental Clearance was granted at different time series to Kulda Opencast Coal Mine vide letter no. J-11015/10/1995-IA. II (M):
 - a. EC was accorded by Ministry on 24.12.2002 for 10 MTPA in an ML area of 878.29 ha. Expansion in EC was granted by Ministry vide its letter dated 22nd March, 2018 from 10 to 14 MTPA with Public Hearing. Extension in validity of EC was granted on 28th March, 2019, 10th January, 2020.
 - b. EC accorded vide letter dated 02.03.2021 for the expansion of the Kulda OC mining project from 14 MTPA to 16.80 MTPA in the MLA of 634.205 ha under the of OM dated 15.09.2017 (20% increase- stage-1)- **reform EC**
 - c. EC vide letter dated 14.02.2022 for the expansion of the Kulda OC mining project from 16.8 MTPA to 19.6 MTPA in the MLA of 634.205 ha under the provisions of OM dated 15.09.2017 (from 20 to 40% (stage-2)- **reform EC**.
 - d. EC vide letter dated 24.05.2022 for the expansion of the Kulda OC mining project from 19.6 MTPA to 21 MTPA in the MLA of 634.205 ha from 40% to 50% of original EC in compliance of Ministry's OM dated 07.05.2022 under clause 7(ii) of EIA Notification 2006 (from 40 to 50% (stage-3)).
- ii. Life of Mine is 3 years (as on 01.04.2022).
- iii. The Baseline data generated for the period from October, 2022 to December, 2022.
- iv. The EIA-EMP prepared for peak production capacity of 21 MTPA.
- v. 227.89 ha of forest land has been diverted vide letter no. 8-176/1997-FC dated 08.08.2007.

- vi. The Public hearing was conducted for the Kulda OCP with production capacity of 15.0 MTY on 10th January, 2018.
- vii. The project proponent has submitted the CCR dated 31.01.2023 after site visit by IRO on 24.01.2023.

40.2.3 The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in advance (10% beyond 40% from the existing capacity) subject certain conditions related to submission of EIA-EMP report and compliances of existing EC conditions within six months alongwith other statuaries requirements. This EC was granted on 24th May, 2022 by MoEF&CC due to shortage of coal in the country and as per the condition contained therein. The committee noted that proposal was submitted by delay of more than one month beyond the prescribed time limit of six months.

While discussing the Certified Compliance Report of dated 31.01.2023 after site visit by IRO on 24.01.2023, the EAC noted that out of 30 specific conditions, 12 are non-complied and 4 partially complied. The committee made observations on non-compliance of major conditions of the previous EC, which have not been met yet. These conditions are deployment of 40-50 tonnes of trucks/dumper to reduce the fleet size (in place of 25-30 tonnes trucks), avoiding village road (by entering MoU with coal dispatcher), Installation of mobile fog canon & mechanical road sweeping, wind barrier at coal yard, avoiding , conducting carrying capacity study of the area, dedicated laboratory for mine itself, installation of solar light in village, bio-toilets in village, tree plantation on OB dump, plan for protection of flora-fauna, and protective respiratory measures for workers. The committee expressed displeasure while noting that PP is continuing to use village road (till installation of mechanized system), for which he had to enter a revised MoU with coal dispatcher. Not only this PP is continuing to use lower capacity trucks, which should have been upgraded to higher capacity after getting amendment to EC dated 09.01.2023 on extended timeline upto October 2023, to install the mechanized system.

Also, during the discussion the committee emphasized on reducing the timeline for completion of the mechanized system i.e. belt conveyor with silo loading upto railway siding system as PP in this context has already given commitment for October 2023, but now he is again intended to extend the timeline by December, 2023 for capacity of 12.5 MTPA from Kulda and Garjanbahal mines to Sardega RLS (5.72 Km). In this context, the committee emphasized for the submission of relevant tendering documents, ensuring that coal transportation through belt conveyor from Kulda system shall be completed in a time bound manner. EAC expressed displeasure that PP has obtained full relaxation facility i.e 50% expansion; however, major conditions of previous ECs have not been met; rather PP has come for EC grant for 10% expansion (beyond 40% without public hearing). Therefore, EAC also considering coal production requirements, was of the view that PP must complete all non-compliances and come back with proof/documentary evidences. As PP failed to adhere the major condition for environment protection, EAC suggested Ministry to take appropriate action on continued non-compliances of previous EC conditions under the provision of E(P), Act 1986.

*In view of the above, EAC **deferred** the proposal and requested PP to submit full compliances of ECs conditions dated 14.02.2022 and EC amendment conditions dated 09.01.2023.*

Agenda No. 40.3

Expansion of Garjanbahal OC mine for increase in production capacity from 15.6 MTPA to 18.2 MTPA (Peak) in land area of 653.83 ha of M/s Mahanadi Coalfields Limited located at Villages Garjanbahal, Balinga, Karlikachhar, Bankibahal, Bangurkela, Tumulia. Tehsil Hemgir, District Sundargarh (Odisha) – For Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage II - 40% expansion with exemption of public hearing under clause 7 (ii) of EIA Notification) – reg.

[Proposal No. IA/OR/CMIN/272126/2022; File No. J-11015/159/2015-IA-II (M)]

40.3.1 The proposal is for Environment Clearance to Expansion of Garjanbahal OC mine for increase in production capacity from 15.6 MTPA to 18.2 MTPA (Peak) in land area of 653.83 ha of M/s Mahanadi Coalfields Limited located at Villages Garjanbahal, Balinga, Karlikachhar, Bankibahal, Bangurkela, Tumulia. Tehsil Hemgir, District Sundargarh (Odisha), under Ministry's OM dated 11.04.2022 (Stage II - 40% expansion with exemption of public hearing under clause 7 (ii) of EIA Notification).

40.3.2 The information, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given asunder:

- (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- 22°01'16" to 22°02'52" North and Longitude- 83°43'34" to 83°45'14" East.
- (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 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: Employment to 1567 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.
 - 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. J-11015/159/2015-IA-II(M) dated 14.02.2022 for expansion from 13.0 to 15.60 MTPA in the mine lease area of 653.83 Ha.
- (viii) Total mining lease area as per block allotment is 653.83 ha. Mining plan (including Progressive Mine closure plan) has been approved by MCL Board on 16.10.2021.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

Sl. No.	Type of Land	Within ML area	Outside ML area	Total Area
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1	Agricultural	398.65	95.89	494.54
2	Waste land	159.45	45.66	205.11
3	Forest Land	88.90	----	88.90
4	Grazing	Nil	----	Nil
5	Surface water bodies	3.84	-----	3.84
6	Others (specify) settlement	2.99	-----	2.99
Total:		653.83	141.55	795.38

Post Mining

Sl. No.	Land Use Category	Land use (Area in Ha)					
		Left out void/ water body (partly backfilled)	Afforested or arboriculture (backfilled upto ground level)	Forest land (Returned)	Pubic/ Company use	Undisturbed Built up area	Total
1.	Quarry excavation area	100.44	200.48	88.90		--	389.82
2.	Safety zone for blasting	--	5.17	--		-	5.17
3.	OB dump (external)	--	62.58			--	62.58
4.	Road & Infrastructure	-	9.93	--	39.73		49.66
5.	Green belt		67.54				67.54
6.	Undisturbed blasting zone & dipside area	--		--		79.06	79.06
A	Mining lease area	100.44	345.70	88.90	39.73	79.06	653.83

- (x) Total geological reserve reported in the Geological Block is 333.97 MT with 235.16 MT as mineable reserves. 200.67 MT is available for extraction as on 01.04.2021. Percent of extraction is 66.7%.
- (xi) 2 seams with thickness ranging from 1.04 - 4.45 m & 9.97 – 16.11 m are workable. Grade of Coal is G-13; Stripping ratio is 1.02 while gradient is 3-7 degrees.
- (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 11 years (from 2022-23)
- (xiv).The project has three external OB dump in an area of 62.58 ha with 90m height (maximum) and 13.77 Mm³ of OB and one internal OB in an area of 289.38 ha with 204.59 Mm³ of OB is

envisaged in the project.

- (xv)..Total quarry area is 389.82 ha out of which backfilling will be done in 289.38 ha while final mine void will be created in an area of 100.44 ha of partially backfilled area will remain as final mine void with a maximum depth of 140 m. Backfilled quarry area of 200.48 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 conveyors and tippers 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 and is expected to be completed by Oct'2023. Also, as an interim arrangement conveyor belt of 5.72 Km has been proposed for the transportation of coal from pit head to Sardega Siding. Further, Barpalli bulb arrangement is coming up by Dec 2025 which will cater dispatch from all the coal from this mine in an eco-friendly manner.
- (xvii)Reclamation Plan in an area of 462.91 ha, comprising of 62.58 ha of external dump, 289.38 ha of internal dump and 67.54 ha of green belt.
- (xviii) 88.90 ha of forest land have been reported to be involved in the project. Stage II FC obtained for 88.90 ha vide letter no: 8-11/2015 dated 06.03.2018.
- (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) and 1.15 to 5.68 bgl (Post-Monsoon). Total water requirement for the project 4008 KLD (3093 for industrial + 915 for portable use).
- (xxi).NOC from Central Ground Water Authority, New Delhi obtained vide letter no. CGWA/NOC/MIN/ORIG/2021/13468, dated 22.10.2021 and is valid upto 21.10.2023
- (xxii)Public Hearing was held on date 06.04.2016 at 10 AM at Garjanbahal High School of Garjanbahal village under Hemgir Tehsil of Sundargarh District, Odisha for the new project of coal production capacity 13.0 MTPA over an area of 653.83 Ha of Garjanbahal OCP of M/s. Mahanadi Coalfields Limited.
- (xxiii) Consent to Operate for the capacity of 15.60 MTPA has been obtained vide 4216/IND-I-CON-6641 Dt 17.03.2022 valid till 31.03.2023 from the State PCB, Odisha.
- (xxiv) No stream diversion has been proposed for this expansion.
- (xxv)Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to Regional Office, MoEF&CC, and Bhubaneswar 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. Baseline data has been collected for the period from Oct-Dec 2022. All the environmental parameters have been found to be within prescribed limits.
- (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. EC for 13.0 to 15.6 MTPA was granted as per EIA Notification, 2006 and subsequent

amendments/circulars. The coal production from the mine was started from the year 2018-19 onwards. The coal production, realized from the project, from 2018-19 onwards, is as under:

Financial year	EC capacity in MTPA	Actual Production MTPA	Excess Production Beyond the EC Sanctioned Capacity (MTPA)
2018-19	13.0	2.81	0.00
2019-20	13.0	7.59	0.00
2020-21	13.0	11.77	0.00
2021-22	15.6	13.55	0.00
2022-23 (up to 31.01.2023)	15.6	13.62	0.00

- (xxviii) The project involves 1298 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) There is no litigation pending against the project. 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.
- (xxx) Total cost of the project is Rs. 1482.24 Crs. Cost of production is Rs. 359 per tonne, CSR cost is Rs. 2 per 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. 146.07 Crs. Environment Management Cost is Rs. 29.88 Crores.

40.3.3 The EAC after deliberation noted the following:

- Earlier, Environment Clearance was granted to the project for production capacity of 10.0 MTPA (Normative)/13 MTPA (Peak) of M/s MCL vide letter dated 09.11.2017 under the normal procedure of EIA Notifications, 2006. The Public Hearing was conducted on 06.04.2016
- Further, EC was granted for expansion of EC for production capacity from 13 to 15.6 MTPA vide letter dated 14.02.2022 under Ministry’s OM dated 15.09.2017 (Stage-I 20% expansion) with exemption of public hearing under clause 7(ii) of EIA notification 2006.
- Later PP obtained amendment in Environment Clearance on 12.01.2023 for extension in timeline to implement inpit conveyor belt with silo loading system from December, 2022 to October, 2023.
- The project proponent has obtained the Stage II Forest Clearance for 88.90 ha vide dated 06.03.2018 for forest land involved in the project for non-forestry activity.
- Mining Plan & Mine Closure Plan has been approved by MCL Board for 18.2 MTPA vide dated 16.10.2021.
- Certified Compliance Report (CCR) of previous Environment Clearance was submitted based on site visit conducted on 15.02.2023 for Ministry’s EC letter dated 12th January,

2023, 14th February, 2022 and 9th November, 2017. Earlier CCR of IRO dated 10.10.2022 (site visit dated 26.05.2022) was also submitted by Project Proponent. It has been noted that 25 nos. of non-compliance of EC conditions has been identified by Ministry's IRO and PP has been given one-month timeline for submitting action taken report on the non-compliances to IRO.

- Air, water, soil & noise; baseline data has been generated for post monsoon i.e. Oct to Dec, 2022 and the same has been incorporated in EIA/EMP. The details regarding impacts of mining on the AAQ, prediction & modeling using AERMOD software has been given.

40.3.4 *The EAC after detailed deliberation observed that the instant proposal has been applied under Ministry's OM dated 11th April, 2022 for expansion in capacity from 20% to 40% (stage-2) with exemption in public hearing. Prior to this EC was granted for expansion in capacity for 20% (i.e. stage-I; 13 MTPA to 15.6 MTPA) under OM dated 15.09.2017.*

Earlier, while granting EC vide letter dated 09.11.2017, Ministry has stipulated an important condition i.e. "Coal transportation in pit by Dumper/dumper & conveyor from in pit to pit head coal handling plant, Surface to Siding by Conveyor to Pre-Weigh Bin and loading at Siding by Silo loading & rail transport." Further, EAC while granting Stage I i.e. 20% expansion in EC, the committee relaxed the above major non-complied condition for implementation of mechanized system till December, 2022 based on the IRO report. In the same sequence, failing to comply the above mentioned condition, EAC again relaxed to enable coal production considering the peak demand and shortage of the coal in the country and granted amendment of EC vide letter dated 12.01.2023 i.e. extended the timeline from December 2022 till October, 2023 based on commitment of PP. Also, PP through its Director (Technical/Project & Planning) has submitted the undertaking dated 20.02.2023 stating that timeline for submission of NIT and commissioning of ground works for belt conveyor for around 5.72 km will be done by June, 2023 and ground works will be taken by December, 2023.

In the instant proposal, the committee again reviewed and noted non-compliances from the IRO report submitted to Ministry vide letter dated 17.02.2023. Out of 31 specific conditions in EC, 25 conditions reported to be not complied & marginally complied. Also, action taken report/action plan for compliance is yet to be submitted by PP. The committee observed the major non-compliance from the IRO report, which includes as "Non-implementation of in-pit conveyor system with silo loading facility till railway siding, Deployment of 40-50 tonnes covered trucks/dumper in place of 25-30 tonnes of trucks/dumper, NOC from CGWA, Inadequate dust suppression measures (fixed spray/jet spray), bio-toilets in villages, CAAQMS at Garjanbahal site, Monitoring data (heavy metals), PUC of vehicles, solar power light in villages, inadequate Garland drain near dump site, Three tier plantation, Multispecialty hospital as per public hearing, lack of 5-star rating of mine, and plan for Sand separation from OB dump etc." After detailed deliberation, finally. These non-compliances were committed to comply by PP in a time bound manner on which undertaking furnished by the project proponent. The PP same time requested committee to consider this expansion w.e.f. date of achievement of previous level so that continuity of coal production could be maintained without break.

*In view of undertaking given by Director (Technical/Project & Planning) dated 20.02.2023 to comply the non-compliance conditions and considering the scenario of coal demand for expected energy demand, EAC considered the project for expansion and **recommended** the proposal for Environmental Clearance from 15.6 MTPA to 18.2 MTPA (peak) for a period one year from the date of grant of EC considering the non-compliance of previous EC conditions and subject to the submission of following additional conditions:*

- i. Environment Clearance for enhanced capacity (i.e from 15.6 MTPA to 18.2 MTPA) shall be applicable after achievement of previous production level i.e 15.6 MTPA of production level.*
- ii. The Project Proponent shall submit the integrated NIT for Kulda and Garjanbahel mines before June, 2023 and start the ground work by December, 2023 for implementing conveyor belt from inpit to railway siding as per undertaking provided by Director ((Technical/Project & Planning) accordingly the CTO shall be issued by SPCB.*
- iii. PP shall submit the action plan for compliance of non-compliance & partial compliance conditions as highlighted by Ministry's IRO and submit the same within 2 months for completing the work within the stipulated timeline.*
- iv. PP shall submit Certified Compliance Report of all previous ECs by February, 2024 for further review of EAC of EC conditions.*
- v. The project proponent shall submit the video footage and photographs after completion of all above condition, it is mandatory to record the dump site as well as the status of plantation.*
- vi. The project proponent shall start ground construction work for inpit belt conveyor system after completing all the necessary procedures by December, 2023.*
- vii. The Project proponent shall develop the Sal Nursery within six months with the minimum capacity of 25,000 plants in 5 hectare of the project area and distribute freely to local villagers.*
- viii. PP shall only plant Sal trees from now onwards on the reclaimed land and other trees/plants on slopes of Overburden dump*
- ix. PP shall conduct tree plantation on the four lanes stretch of distance 25 Km from Duduka to Kanika (100000 numbers) and submit the certified compliance through DFO within 2 years.*
- x. PP shall conduct tree plantation (100000 numbers) along the four lane road from Bankibahal to Bhedabahal for a distance of 30 Km which is to be completed by December, 2023.*
- xi. PP shall complete the Improvement to Dudaka-Gopalpur-Toparia road" of 22.22 Kms within one year after the grant of EC. Further tree plantation shall be conducted along the said road.*
- xii. PP shall complete the construction and pre-commissioning of ETP proposed for integrated HEMM workshop prior to commissioning of workshop*
- xiii. The PP shall submit the status of expenditure incurred from the budget of Public Hearing to IRO-Bhubaneshwar with its six monthly compliance report.*
- xiv. PP shall submit the work done/activities conducted regarding conservation of Basundhara River as per River Conservation Action Plan for 20 km stretch of the river in Basundhara Area.*
- xv. All other terms and conditions as prescribed in the Ministry's letter dated 9th November, 2017, 14th February, 2022 & 12th January, 2023 shall be applicable*

Agenda No. 40.4

Coal washery of 2.5 MTPA of M/s Hind Multi Services Pvt. Ltd. in an area of 10.11 ha located in District Bilaspur (Chhattisgarh) – Reconsideration for Amendment of Environment Clearance letter dated 18.06.2018 - reg. [Proposal No. IA/CG/CMIN/293408/2022; File No. J-11015/410/2013- IA-II (M)]

40.4.1 The proposal is for amendment of Environment Clearance conditions vide letter dated 18.06.2018 granted to Coal washery of 2.5 MTPA of M/s Hind Multi Services Pvt. Ltd. in an area of 10.11 ha located in District Bilaspur (Chhattisgarh).

40.4.2 The committee during deliberations note the following:

- Earlier, the proposal was considered by EAC in its 37th EAC meeting held during 17-18 November, 2022 and after detailed deliberation, the proposal was deferred wherein the committee requested the PP to submit the information for further consideration.
- The project proponent has now submitted the compliance of observation raised by EAC vide letter dated 28.01.2023 on Parivesh Portal:

S. No.	Point	Reply																																		
i.	PP shall submit one-month ambient air quality data and fugitive emission analysis during operation of washery with control measures as stipulated in EC conditions including a comparison table with data related to pre and post working condition at the Coal washery site for silo system.	<p>One-month data is collected for a period of i.e.1st Dec. 2022 to 31st Dec. 2022 at 4 nos. of locations within the plant premises.</p> <p>The brief AAQ data is as follows:</p> <table><tr><th>S. No.</th><th>Parameter</th><th>Concentration range</th><th>Standard as per NAAQS</th></tr><tr><td></td><td></td><td>(in mg/m³)</td><td>(in mg/m³)</td></tr><tr><td>1.</td><td>PM_{2.5}</td><td>38.8 to 41.6</td><td>60</td></tr><tr><td>2.</td><td>PM₁₀</td><td>61.3 to 67.5</td><td>100</td></tr><tr><td>3.</td><td>SO₂</td><td>13.4 to 18.2</td><td>80</td></tr><tr><td>4.</td><td>NO_x</td><td>18.8 to 25.9</td><td>80</td></tr><tr><td>5.</td><td>CO</td><td>650 to 875</td><td>2000</td></tr></table> <p>Fugitive emission data:</p> <table><tr><th>S.No.</th><th>Parameter</th><th>Concentration range</th></tr><tr><td>1.</td><td>Suspended Particulate Matter (SPM)</td><td>132 to 138 mg/m³</td></tr></table>	S. No.	Parameter	Concentration range	Standard as per NAAQS			(in mg/m ³)	(in mg/m ³)	1.	PM _{2.5}	38.8 to 41.6	60	2.	PM ₁₀	61.3 to 67.5	100	3.	SO ₂	13.4 to 18.2	80	4.	NO _x	18.8 to 25.9	80	5.	CO	650 to 875	2000	S.No.	Parameter	Concentration range	1.	Suspended Particulate Matter (SPM)	132 to 138 mg/m ³
S. No.	Parameter	Concentration range	Standard as per NAAQS																																	
		(in mg/m ³)	(in mg/m ³)																																	
1.	PM _{2.5}	38.8 to 41.6	60																																	
2.	PM ₁₀	61.3 to 67.5	100																																	
3.	SO ₂	13.4 to 18.2	80																																	
4.	NO _x	18.8 to 25.9	80																																	
5.	CO	650 to 875	2000																																	
S.No.	Parameter	Concentration range																																		
1.	Suspended Particulate Matter (SPM)	132 to 138 mg/m ³																																		

S. No.	Point	Reply
		<p>Air Quality modelling has been carried out to assess the incremental GLCs due to the fugitive emission and vehicular emissions, with the existing scenario (i.e. without silo system).</p> <p>Air Quality modelling has also been carried out to assess the incremental GLCs due to the fugitive emission and vehicular emissions, with silo system.</p> <p>The net resultant GLCs (max. baseline concentration + max. incremental GLCs) have been depicted for without silo system & with silo system and same well within the NAAQS standards.</p>
ii.	PP shall submit the immediate action plan in order to improve the air quality in core zone and Buffer zone of the project area.	<p><u>Core Zone</u></p> <ul style="list-style-type: none"> • PP agree to provide 10 no.s of jet spray sprinklers in the plant premises by March 2023. • PP informed that they will provide 2000 no. plant will be planted during next monsoon by July 2023 in the plant premises. <p><u>Buffer Zone</u></p> <p>PP informed that they will plant 1000 nos. of plants in Gatora Village and 1000 nos. of Parsada Village during next monsoon by July 2023.</p> <p>With aforementioned action plan, the air quality in the area will further improve.</p>
iii.	PP shall submit action plan for installation of Continuous Ambient Air Quality Monitoring Station as such to be implemented in six months.	PP informed that they have installed CAAQMS and is connected to SPCB & CPCB servers.
iv.	PP shall submit the action plan and undertaking for plantation along the periphery of the washery.	<ul style="list-style-type: none"> • PP informed that they will provide 10 no.s of jet spray sprinklers in the plant premises by March 2023. • PP informed that 2000 no. plant will be planted during next monsoon by July 2023 in the plant premises.
v.	PP shall submit the layout with the current working area of coal washery.	Plant layout is shown for current working area of the coal washery and same is in order.
vi.	PP shall submit the possible implementation plan with the transportation by rail and to install mechanized	<p>PP explored various modes of conveyer system or loading of washed coal in wagons.</p> <p>PP informed that all Loading System requires a full-length land of approx. 700 to 800 meters for the</p>

S. No.	Point	Reply
	conveyor system and Telescopic chute system for loading of washed coal in wagons.	installation of Silo, as all the Loading System works on Silo mode and in order to have a loading silo and a full-length Silo outhaul line, M/s Hind Energy and Coal Beneficiation India Limited's railway siding must be extended beyond the current dead end. Since the road is higher up than the siding track, a ROB would need to be built to cross it, which is technically and economically impossible. As a result, it is not technically possible to extend the current siding at the dead-end side or to implement the necessary mechanical loading arrangement through a loading silo for Hind Energy and Coal Beneficiation India Limited siding.

- i. The EC was obtained vide letter dated 18.06.2018 for Hind Multi Services Pvt. Ltd. with production capacity of 2.5 MTPA of Coal washery located at Village Gatora, Tehsil Masturi, District Bilaspur, Chhattisgarh.
- ii. The Project proponent has requested for amendment in EC letter dated 18.06.2018 regarding the General Condition no. (c) (i) that is “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.”

40.4.3 *The EAC after detail deliberation observed that instant proposal is for amendment in Environmental Clearance letter dated 18th June, 2018 in condition of loading of clean coal, rejects through silo at railway siding. The compliance of points raised during earlier meeting has been submitted by Project Proponent with collection of ambient air quality data and limitation at current railway siding for construction of silo. It was observed that space at current railway siding is limited and as submitted by PP that silo loading system is technically and economically not feasible. Also, as submitted by PP that there is village road crosses the existing road for passing of NTPC siding.*

Further, EAC noted that currently there is lack of tree plantation in the project area and desired that PP shall increase the plantation with adequate budget. Accordingly, EAC suggested Rs. 40 lakhs/- for carrying out plantation in periphery of the plant and in the villages (fruit bearing trees only). The status on the development of the plantation to be certified by IRO in every six months. Further, the air pollution mitigation with fog cannon and permanent sprinklers shall be increased at railway siding during loading and unloading and at coal storage yard.

*In view of the above, EAC **recommended** the proposal for amendment of environmental clearance dated 18.06.2018 by exempting the conditions or sentence of wagon loading through silo loading system in*

the General Condition no. (c) (i) to Coal washery of 2.5 MTPA of M/s Hind Multi Services Pvt. Ltd. in an area of 10.11 ha located in District Bilaspur (Chhattisgarh), under the provisions of EIA Notifications and its amendments therein subject to the following additional conditions: -

- (i) PP shall install permanent additional jet spray sprinklers (number not less than 50) in the plant premises, coal storage yard, railway siding and other sources of fugitive dust generation within six months i.e. by September, 2023. Further, fog cannons of adequate numbers having 40-100 mts throw length shall be installed at different point of fugitive dust emission and on road used for transportation.*
- (ii) PP shall plant 2000 nos of trees during next monsoon by July 2023 in the plant premises and atleast 1000 nos of tree in the nearby villages (fruit bearing only) by spending Rs. 40 lakhs/-and submit the proof by geotagging it, to Ministry's IRO in every six months.*

Agenda No. 40.5

Sahapur East Underground Coal Mine Project 0.70 MTPA Coal production by Underground Semi Mechanized Method in Mine Lease Area of 659 Ha by M/s Chowgule and Company Private Limited located at Villages Chunia, Senduri, Kathotia, Khamaria Kala, Kholhar Tehsil Sohagpur, District Shahdol and Village Khamariya Khurd, Tehsil Pali, District Umaria (Madhya Pradesh) – Reconsideration for Environmental Clearance- reg. [Proposal No. IA/MP/CMIN/402376/2022; File No. J-11015/280/2010-IA-II (M)]

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

The project proponent vide letter dated 06.02.2023 informed for withdraw of their proposal and requested to defer for further consideration. Accordingly, EAC agreed and deferred the proposal.

*In view of above, the proposal was **deferred**.*

Agenda No. 40.6

Gare-Palma IV/4 Coal Block of Capacity 1 MTPA (Opencast: 0.56 MTPA to 0.84 MTPA (Increase by 0.28 MTPA) & Underground: 0.44 MTPA to 0.16 MTPA (Decrease by 0.28 MTPA) with reduction in mine lease area from 701.512, i.e. 683.272 ha by M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh) - Reconsideration for Amendment of Environment Clearance letter dated 24.05.2019 – reg.

[Online Proposal No. IA/CG/CMIN/293233/2022; File no. J-11015/183/2010 IA-II. (M)]

40.6.1 The proposal is for amendment of Environment Clearance letter dated 24.05.2019 for Gare-Palma IV/4 Coal Block of Capacity 1 MTPA in the mine lease area of 701.512 ha of M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh).

Project proponent has requested for amendment in EC for restructuring of EC capacity for Opencast mine from 0.56 MTPA to 0.84 MTPA and for Underground Mine from 0.44 MTPA to 0.16 MTPA with no change in mine lease area and overall production capacity as per the granted Environmental Clearance.

40.6.2 The EAC during deliberation noted the following:

- (i) Earlier, the proposal was considered in the 37th EAC meeting held during 17 - 18 November, 2022 and after detailed deliberation deferred the project. The committee requested PP to submit the information/observation for further consideration. The project proponent has submitted the following information vide letter dated 04.02.2023 on Parivesh Portal:-

S.No.	Point	Reply
(i)	PP shall submit revised mining plan for restructuring of EC capacity for OC and UG as well as change in mining technology.	PP has submitted In-Principle Approval of Mining Plan and Mine Closure Plan (fifth modification), approved by Coal Controller Organization, Ministry of Coal vide its letter dated 2nd February, 2023 within lease area of 683.272 ha (Project Area 683.272 ha)
(ii)	PP shall submit the valid CGWA clearance for the dewatering purpose.	The project proponent has informed that renewal application through NOCAP dated 29.07.2022, The site inspection was done by the CGWB, Team, Raipur dated 21.09.2022 and the Regional Director, CGWB Raipur has recommended for renewal dated 23.09.2022. Currently the renewal of NOC proposal is being processed at the office of CGWA (Regional Director - HQ) New Delhi.
(iii)	Status of Court case regarding action to be taken by the instant mine and reason of compensation levied by Hon'ble NGT.	<p>The project proponent has informed that the status of OA 104/2018: (Shivpal Bhagat vs Union of India) on 12.09.2022, NGT was pleased to dispose of the OA.</p> <p>However, Hindalco Industries Limited has filed an appeal before the Supreme Court against the compensation levied by NGT.</p> <p>Hon'ble Court ordered that before it proceeds to examine the grievance raised, let the amount of compensation as quantified by NGT be deposited in the</p>

		<p>registry of the Hon'ble Supreme Court, which has been deposited by HIL. On the orders of Hon'ble Supreme Court, the amount has been kept in interest bearing account. Notice was also issued on the Civil Appeal and IA seeking stay of the impugned Order.</p>
(iv)	<p>PP shall submit details of discrepancies in the Mine lease area through an authentic map (885.525 ha or 701.512 ha)</p>	<p>The project proponent has informed that the Mining lease was granted to Prior Allottee over an area of 884 846 ha. Subsequently, the coal blocks were deallocated by Hon'ble Supreme Court vide the order 25.08.2014 & 24.09.2014. Subsequently, the said coal block was allocated to HiL through the auctions conducted under the Coal Mines (Special Provisions) Act, 2015. The existing permissions and approvals granted to Prior Allottee was granted to Successful Bidder i.e. Hindalco, vide section 8 (4) of the CMSP Act. Thus, inter- alia mining lease and EC both were transfer to Hindalco. Subsequently, the block boundaries of coal blocks of Gare Palma sector were notified by Ministry of Coal in October, 2015. The area of the block as notified by MoC was 885.525 Ha. However, the EC granted to prior Allottee was also transferred under the provisions of CMSP Act. The area for working approved in the EC was 701 Ha. Now, Hindalco has proposed a further reduced area from 701, i.e. 683.272 Ha., as not working is proposed beyond the block boundary.</p> <p>The attached plan clearly shows the following:</p> <ul style="list-style-type: none"> a) Block Area of 885.525 area as notified by Ministry of Coal, b) Working area of 683.272 Ha (reduced from 701 Ha), which is

		within the block boundary as notified by MOC.
(v)	PP shall justify adequately why the “Underground operations are not sustainable due to developmental phase” and “slow depillaring process as per mining plan” for this instant mine	The project proponent has informed that this aspect has been dealt with in the Approved Mining Plan, the relevant points are reiterated below. The mine has already been developed by board and pillar method, as was being followed by prior allottee as per approved Mining Plan. The method of de-pillaring approved in the Mining Plan was splitting as final operation (partial extraction method). Subsequently, DGMS has banned the method of partial extraction due to safety reasons, hence, the method of approved mining plan is not implementable. Same has been explained in the approved mining plan and it is proposed to carry out a scientific study through research institutes of repute and the method as may be recommended will be put before Ministry of Coal.
(i)	PP shall withdraw the already obtained ToR for the expansion of Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited from 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) to 1.5 MTPA through opencast method of mining vide letter no. J11015/183/2010-IA.II (M) dated 08.01.2020.	Applications for withdrawal has been submitted vide our letter No. HIL/GP-IV/4 CM-WD/2022 dated 08/12/2022 to the MS EAC (Coal Mining), Delhi.

(ii) Following ECs, EC amendment and EC transfer were granted:

- The EC was granted for Gare IV/4 Coal Mine Project (0.48 MTPA to 1 MTPA of which 0.4 MTPA OC and 0.6 MTPA UG in ML area of 701.512 ha) by M/s Jayaswals Neco Limited vide letter no. J-11015/183/2010-IA. II (M) dated 12.03.2013.
- The said EC of Gare IV/4 Coal Mine Project was transferred from M/s Jayaswals Neco Industries to M/s Hindalco Industries Limited vide letter no. J-11015/183/2010-IA.II (M) was issued vide letter dated 16.04.2015.
- EC amendment for Gare IV/4 Coal Mine Project for OC 0.56 MTPA and UG 0.44 MTPA vide letter no. J-11015/183/2010-IA. II (M) dated 24.05.2019.

(iii) The EAC noted that the coal block area is 885.525 ha as allotted and approved by the Ministry of Coal. However, PP informed that since the earlier allottee/Project Proponent has surrendered

183.334 ha of forest land reported, accordingly amendment in EC vide letter dated 24.05.2019 with total capacity remain at 1 MTPA was granted in the Mine lease area of 701.512 ha which is part of original mine lease area of 885.525 ha.

- (iv) Now, the Project Proponent has submitted the approved Mining plan vide letter dated 14.02.2023 for the project area of 683.272 ha. The Mine plan and Mine Closure Plan (5th Modification) has been prepared by Indian Mine planners and consultants and approved by Ministry of Coal vide its Application No. Gare Palma IV-4CTCG013/APP00229/2022 dated 14.02.2023 for Gare Palma IV-4 for project area of 683.272 ha. It has been submitted that the area for working approved in the EC was 701.512 ha. However now, Hindalco has proposed a further reduced area from 701.512, i.e. 683.272 ha, as no working is proposed beyond the block boundary which is within the block boundary as notified by MOC
- (v) Land use details on the basis of 5th Revision of Mining Plan along with Mine Closure Plan Approved in Feb., 2023 is given below:

a. Pre-Mining Land use details

S. No.	Land Use	Within ML Area (In Ha)	Outside ML Area (In Ha)	Total (In Ha)
1.	Agricultural Land	279.862	0.0	279.862
2.	Forest Land	236.553	0.0	236.553
3.	Waste Land	50.344	0.0	50.344
4.	Grazing Land	65.144	0.0	65.144
5.	Surface Water Bodies	9.767	0.0	9.767
6.	Settlements	0.0	0.0	0.0
7.	Other (Tenancy, Road, Community, Other Govt.)	41.602	0.0	41.602
Total		683.272	0.0	683.272

b. Post Mining Land use details:

Proposed land use	Area (In Ha)
Plantation	190.531
Agricultural Land	115.067
Public/Company Use	54.672
Water harvesting	25.673
Dismantled area	0
Forest land	236.553
Undisturbed	60.776
Total	683.272

- (vi) 5th Revision of Mining Plan along with Mine Closure Plan Approved in Feb., 2023, Life of Mine is ~7 years for Opencast from 2022-23 and ~11 years for Underground mining from 2022-23.

- (vii) 5th Revision of Mining Plan along with Mine Closure Plan Approved in Feb., 2023; 190.531 ha area will be covered under greenbelt/plantation. 01 External dump in patch C created by prior allotted which is technically & bio-logically reclaimed. Internal OB Dump: 45.79 MCuM of OB will be generated from 22-23 to 28-29 (End of OC Operation). Total OB is soil, shale & sandstone. It is proposed to backfill OB in maximum possible de-coaled area. OB backfilled in de-coaled area will be technically & biologically reclaimed in stages for the restoration of mined out land.
- (viii) Forest land of 419.887 ha comes within the mining lease and Forest Clearance has been obtained vide MoEF&CC and letter No. 8112/2002 FC dated 09.06.2003 in favor of JNIL and Forest Clearance was transferred from JNIL to HIL dated 18.05.2015.

40.6.3 *The EAC, after detailed deliberations observed that the instant proposal is brown field project and combination of opencast and underground mines. The project proponent has submitted the proposal for increase in capacity for opencast mine and reduction in capacity within underground mine with no change in overall production capacity of 1 MTPA with the reduction in Mine lease area from 701.512 ha to 683.272 ha.*

EAC noted that a court case (Shivpal Bhagat vs Union of India) on 12.09.2022 in Hon'ble NGT has been disposed by imposing environmental compensation on PP and other agencies. It was informed by PP that the said NGT order has been challenged in the Hon'ble Supreme Court. Based on interim direction of Hon'ble Supreme Court, PP has already submitted the compensation amount. Also, with regard to other direction of Hon'ble NGT regarding transportation, carrying capacity, fly ash, EAC suggested to include the conditions for compliance by Project Proponent.

EAC suggested to PP for the backfilling of the underground mine from the OB dump and status of the same should be submitted within 6 months to IRO. The renewal of NoC from CGWA and accordingly EAC desired to submit the NoC to Ministry's IRO with six monthly compliance report. During the discussion the committee raised the issue related to plantation with allocated budget to develop thick plantation around the periphery of the mine lease area. The PP was advised to develop Sal Nursery with the minimum capacity of 25,000 plants.

The EAC also noted that the project proponent has requested to the Ministry to restrict their lease area upto 683.272 ha as non-working area involved within the granted lease area of 701.512 ha. EAC also suggested that the mine should be completely mechanized in order to reduce the dust pollution within the mine lease area. The project proponent should explore the possibility of 10% of deployment of electric vehicle alongwith with increase of fleet size upto 45-50 tonne with biofuels. The PP shall focus on generation of electricity from solar power plant.

*Based on documents submitted by PP and discussion held in the meeting, EAC **recommended** the proposal for further amendment of EC dated 24.05.2019 for restructuring of EC capacity for Opencast mine from 0.56 MTPA to 0.84 MTPA and for Underground Mine from 0.44 MTPA to 0.16 MTPA with no change in total production capacity of 1 MTPA and with reduction in mine lease area from 701.512 ha to 683.272 ha by M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh), under*

the provisions of EIA Notifications, 2006 and its amendments therein, subject to following additional conditions:

- (i) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP to comply with all the recommendation of Carrying Capacity Study being conducted by reputed institute by CPCB & SPCB.*
- (ii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, Coal transportation is permitted for only one year through road from date of commissioning and subsequently, transport must be done by rail or closed conveyor belt only.*
- (iii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, proper and free health care facilities with multispecialty treatment system shall be provided in coal mine buffer area.*
- (iv) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP shall have to comply that when coal is sold to TPP, there is the agreement to sell that at least 25% Fly Ash of the coal sold, should be accepted by the coal company (seller) from TPP(Purchaser) failing which coal company shall be liable for civil action and other legal measures.*
- (v) PP shall use the Overburden dump for backfilling purpose to bring the mine at the ground level.*
- (vi) PP shall deploy minimum 10% of total Mine vehicle operating, on biofuels and Electric.*
- (vii) The PP shall increase the truck fleet size i.e. upto 50 tonne.*
- (viii) The PP shall install one CAAQMS in the core zone of mine lease area and the data to display on the website as well as on the main entry gate of the organization*
- (ix) The PP shall develop Sal nursery with the minimum plant capacity of 25,000 within 5 ha of project area. Further, Sal tree shall be planted as much as possible while reclaiming during mine closure activity.*
- (x) The PP shall submit the renewal of CGWA NOC in order to smooth continuation of Mines to Ministry's IRO within six months.*
- (xi) All the other terms and condition of earlier EC dated 12.03.2013 and EC amendment dated 24.05.2019 shall remain same.*

Agenda No. 40.7

Wet Type Coal Washery Project based on Heavy Media Cyclone with a capacity of 2.5 MTPA in an area of 3.598 Ha by M/s Horizon Coal Beneficiation Private Limited located at Village Bhaneshar, Tehsil Masturi, District Bilaspur (Chhattisgarh) – For Environmental Clearance – reg.

[Proposal No. IA/CG/CMIN/416526/2023; File No. J-11015/112/2021-IA. II (M)]

40.7.1 The proposal is for Environmental Clearance for Wet Type Coal Washery Project based on Heavy Media Cyclone with a capacity of 2.5 MTPA in an area of 3.598 Ha by M/s Horizon Coal Beneficiation Private Limited located at Village Bhaneshar, Tehsil Masturi, District Bilaspur (Chhattisgarh).

40.7.2 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 falls under Category 'A' of Schedule 2 (a), as per the EIA Notification, 2006 & its amendment till date and will be appraised by EAC (Coal Mining), MoEFCC, New Delhi.
- (ii) The project area is covered under Survey of India Toposheet No- F44K8 and is bounded by the geographical coordinates ranging from 22°2'0.76"N to 22° 2'9.08"N and longitudes 82°18'29.14"E and 82°18'35.93"E.
- (iii) No forest land involves for current project for diversion for non-forestry activity
- (iv) Coal linkage - 2.5 MTPA coal, which is being taken out from the nearby coal mines (Mines of South Eastern Coalfields Ltd. namely Dipka and Kusmunda, through E-Auction, (depending upon linkage of customer) and transported either by rail or road, will be washed in the proposed coal washery.
- (v) Raw coal will be transported by road only from mines. Washed coal and rejects will be transported by road or rail depending upon the MoU with clients.
- (vi) No Joint venture for current proposal.
- (vii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (viii) Employment generation, direct (75) and indirect employment (50) to local people.
- (ix) The project is reported to be beneficial in terms of jobs and improvement of local infrastructure and revenue generation for government.
- (x) Term of Reference was granted by Ministry vide File No- IA-J-11015/112/2021-IA-II(M) dated 14.02.2022.
- (xi) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project. However, one PF i.e. Dalha Protected Forest is at Approx.10.0 km towards East direction from project site.
- (xii) The ground water level has been reported to be varying between 2.26 to 16.52 mbgl during pre-monsoon and between 0.11 to 10.33 mbgl during post-monsoon. Total water requirement for the project is 490 KLD.
- (xiii) The public hearing was held in the presence of Additional District Collector, Regional Officer, CECB, Bilaspur, Devvrat Mishra, Gram Panchayat Members and local Villagers on 28.09.2022 @12:00 PM at Jairamnagar Stadium, Tehsil-Maturi, Distt. Bilaspur (CG) as per the EIA Notification dated 14th September 2006. The date, time and venue of the public hearing were published in Dainik Bhaskar and Hindustan Times newspapers on 28.08.2022. Major issues raised in the public hearing include priority to locals for Jobs, drinking water facility, village road development, plantation and pond cleaning /renovation and water pollution. Appropriate action to address the issues raised in the Public Hearing have already been proposed in EIA-EMP
- (xiv) Lilagar River is flowing 2.1Km away from boundary of Project site.
- (xv) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder.
- (xvi) No R&R involves for current project.
- (xvii) Total project cost is 25 crore.

- (xviii) 2.5 MW electricity will be required for the project. It will be supplied by Chhattisgarh State Power Distribution Company Limited.
- (xix) The site has good connectivity to railway siding (public siding at Jairamnagar railway station, about 1.1 km away) and road.
- (xx) Total available land is 3.598 ha. and the total land is under the possession of the company.
- (xxi) Water supply arrangement for the project will basically cover the industrial and potable water demand. Washery will operate on closed water circuit, therefore, only make-up water is required. Total water requirement is 490KLD.
- (xxii) No violation cases are pending against the project of the PP. Details for Court case are given below:
 - Case No. WPPIL/130/2022, CNR Number CGHC010310932022, Filing date: 26.09.2022, Case status: pending
 - Case No. WPPIL/149/2022, Case Status- Withdraw

40.7.3 The EAC during deliberation noted the following:

- (i) Terms of Reference was granted by Ministry's vide its letter No. J-11015/112/2021-IA-II(M) dated 14.02.2022.
- (ii) The public hearing was held in the presence of Additional District Collector, Regional Officer, CECB, Bilaspur, Devvrat Mishra, Gram Panchayat Members and local Villagers on 28.09.2022 @12:00 PM at Jairamnagar Stadium, Tehsil-Maturi, Distt. Bilaspur (CG) as per the EIA Notification dated 14th September 2006.
- (iii) No forest land involves for instant project.
- (iv) Presently, the project site is being used as transit storage for transportation of coal as coal depot. The project land has been taken on lease for coal washery.
- (v) No forest land is involved in the project area.
- (vi) The EAC observed the status of following court case vide case No.
 - a. Case No. WPPIL/130/2022, CNR Number CGHC010310932022, Filing date: 26.09.2022, Case status: pending
 - b. Case No. WPPIL/149/2022, Case Status: Withdrawn
- (vii) Baseline monitoring has been conducted during 1st Oct. 2021 to 31st Dec., 2021 (post-monsoon season).
- (viii) Air quality: At 8 locations sample were monitored and result indicates that the maximum and minimum values of PM10 are in the range of 63.9 to 85.4 µg/m³, whereas the PM2.5 are in the range of 37.5 to 50.5 µg/m³. The SO₂ concentrations within the study area are in the range of 10.2 to 16.3 µg/m³ and the NO_x are in the range of 16.3 to 27.6 µg/m³. The observed pollutant levels were compared with CPCB. National Ambient Air Quality Standards and found to be within prescribed norms. The incremental increase in the values was projected to be 1.34 µg/m³ for PM10.
- (ix) Surface water quality: Surface water samples have been collected from 8 different locations within study area. The result indicates that the maximum and minimum values of DO ranges

between 5.4 to 6.5 mg/l, TDS between 340 to 419 mg/l, COD between 22 to 36 mg/l, BOD between 7.3 to 10.6 mg/l (at nearby pond).

- (x) It was also noted that buffer area of the project is having one schedule I species (i.e. Crocodile) park, established by Government of Chhattisgarh.
- (xi) 0.83 MTPA rejects will be generated from the proposed coal washery plant which will be sold to power plant.
- (xii) During the processing, the PP has submitted an Affidavit to the Ministry vide letter dated 23.02.2023 to fulfill all commitment made before the EAC. The PP has now proposed the EMP budget of Rs. 421 Lakh.
- (xiii) PP has submitted the budget for Action Plan to address the concerns raised during Public Hearing of Rs. 38 lakhs. Activities listed in the plan is proposed to be completed in the year 2023. The capital cost for environmental management of the proposed project is estimated to be Rs.383 lakhs. Rs.96 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

40.7.4 The EAC, after detailed deliberation noted that the instant proposal is a Greenfield coal washery project. As per the Kml file the committee noted that the two big water reservoirs available in the nearby location of project area. It was advised to explore the pond water in consultation with Gram Panchayat/concerned authority for the purpose of washery including plantation etc., which would reduce the burden on the Ground water. Accordingly, PP needs to rejuvenate the pond through desilting and regular cleaning. The PP shall also explore the installation of rainwater harvesting facility in the project area as well as in nearby villages as water conservation measures. It was desired that no ground water shall be used during monsoon season and operation of washery to be done only on stored water in pond.

The committee took a note of court case pending against the project of the PP. Details for Court case are given below:

- (i) Case No. WPPIL/149/2022, Case Status - Withdraw/Disposed off
- (ii) Case No. WPPIL/130/2022, CNR Number CGHC010310932022, Filing date: 26.09.2022, Case status: pending

As per available information, the first case is disposed off and in 2nd case main contention of applicant is on affect due to notification of state for declaring the Kotmisonar Crocodile Conservation Reserve alongwith other issue. Though committee discussed other issues however, it was desired that Ministry may seek information regarding applicability of NBWL Clearance.

During the discussion, EAC observed some sensitive (school) infrastructure near to the project boundary; therefore, the EAC restricted PP for not installing any type mechanical machine in the 500 m radius of all sensitive location to prevent from any type of Noises. The PP was advised to take extra mitigation measures such as acoustic window and wind barrier, and thick plantation, which should be based on consultation with concerned authority. Based on observations of EAC, PP vide its letter dated 17th February, 2023 has submitted undertaking to adhere with observation of EAC raised during deliberation.

The EAC also advised to install one CAAQMS within the project area i.e towards sensitive location from project site. Based on traffic study, PP needs to optimize the transportation route and fleet size of vehicle used. Further, regarding washery rejects & transportation of clean coal, EAC desired, since the railway siding is nearby the project area, 100% of raw coal, clean/washed coal and rejects should be preferred to be transportation by rail mode only.

*Based on documents submitted by PP and discussion held in the meeting, EAC **recommended** the Environment Clearance for Wet Type Coal Washery Project Based on Heavy Media Cyclone with a capacity of 2.5 MTPA in an area of 3.598 Ha by M/s Horizon Coal Beneficiation Private Limited located at Village Bhaneshar, Tehsil Masturi, District Bilaspur (Chattisgarh), under the provision of EIA Notifications, 2006 and its amendments therein along with the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- i. PP to comply the outcome of court direction w.r.t. court case pending with High court.*
- ii. PP to obtain the CTO for 2.5 MTPA capacity after grant of EC.*
- iii. The technology so chosen for ETP within washery should conform to 'Zero Liquid Discharge'. No treated wastewater shall be discharged outside the boundaries of project area.*
- iv. The PP should explore the extraction of water from pond with the permission from Gram Panchayat/concerned authority for the purpose of washery and also for other purposes like plantation etc.*
- v. Ground water abstraction shall not be more than 350 KLD by taking conservation measures from pond recharge and rainwater harvesting. Necessary NOC shall be obtained from CGWA.*
- vi. Heavy metal content in raw coal, and washed coal shall be analyzed once in a year and records maintained thereof and it should be reported in IRO, report.*
- vii. PP to fulfill all the commitment made to address the public hearing issued in time bound manner as committed and a compliance report should be furnished to IRO in every six monthly compliance report*
- viii. Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads. A detailed action plan with budgetary provision should be submitted within 6 months to IRO. Areal images in this regard needs to be submitted in six monthly reports to IRO.*
- ix. PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side with consultation of SPCB. The real time data so generated shall be uploaded on company website and linked it with website of CPCB & SPCB. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- x. PP to undertake the recruitment of a full-fledged qualified manpower with Environmental Engineer/Env. Science degree background in Environment Management Cell etc at coal washery site for compliance of EC conditions.*
- xi. PP to transport raw coal through dedicated road connected to National Highway to project site and transport 80% washed coal & washery rejects through railway with silo loading at railway siding and 20% washed coal & middling rejects by road. CTO shall be issued accordingly. PP to make arrangement for belt conveyor system to transport coal from washery to railway siding.*

- xii. *No village road shall be used for transportation of raw/washed coal.*
- xiii. *Monitoring of compliance of EC conditions may be done with third party audit every year.*
- xiv. *Fixed type water sprinklers at distance of 50 meters shall be installed along road transportation and near the village/habitat area to avoid dust mitigation.*
- xv. *PP shall ensure that quantity of stored coal and rejects should not exceed more than 1 month of total capacity.*
- xvi. *The project proponent shall conduct periodical training for the truck drivers for imparting safety training. The safety audit shall be conducted through a third party once in every two years.*
- xvii. *The project proponent will provide the training programme related to the health and safety to the employee engaged in the operation and maintenance.*
- xviii. *The project proponent shall conduct the meeting with the school authority about noises and dust mitigation measures and minutes to be submitted to the Ministry within 6 months from the date of grant of EC.*
- xix. *The PP shall provide the acoustic window infrastructure to the nearby available educational buildings with thick green belt around them with committed budgetary provision. The works shall be completed within 1 year from date of issue of EC. The action taken report be submitted to IRO accordingly.*
- xx. *PP to develop the public grievance system in form of whats app in case of any pollution issue arises, a complaint could be lodge by local people. In this regard, adequate awareness shall be given to public through appropriate methods after grant of EC.*
- xxi. *The PP should not install any type mechanical machine in the 500 m radius of all sensitive location in order to prevent it from any type of extra Noises.*
- xxii. *The PP shall rejuvenate the pond by the process of desilting and cleaning. Regular maintenance to be done for its rejuvenation for local people use and extracting water for washery.*
- xxiii. *The PP shall install the rainwater harvesting facility in the project area as well as in the nearby villages in order to collect the additional amount of rain water for reuse or recharge to groundwater as case may be.*
- xxiv. *PP to deploy the 40-45 tons of truck maximum by reducing the fleet size for vehicle to be used for Washery project.*

Agenda No. 40.8

Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA by M/s Sarda Energy Minerals Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh) - Reconsideration for Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion) – reg.

[Proposal no. IA/CG/CMIN/416221/2023; File no. J-11015/37/2004-IA-II(M)]

40.8.1 The proposal is for Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20%) for Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA within the MLA of 277.10 Ha by M/s Sarda Energy Minerals

Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chhattisgarh).

40.8.2 The committee during deliberation noted the following:

- Earlier, PP submitted the proposal for expansion in capacity and EAC in 29th meeting held on 25-26 April, 2022 considered the proposal and after deliberation, it was deferred for submission of adequate information as per the OM dated 15.09.2017.
- Now, PP has submitted the proposal under Ministry's OM dated 11.04.2022 for expansion in capacity for stage-1 i.e. 20% in continuation to earlier deferred points.
- The EC for Gare Palma IV/7 Coal Block was earlier accorded to M/s Raipur Alloys & Steel Limited vide letter No. J-11015/37/2004 IA.II (M) dated 30.09.2005.
- After deallocation of coal block by Supreme court and M/s Monnet Ispat & Energy Limited became successful bidder. The EC was transferred from M/s Raipur Alloys & Steel Limited to M/s Monnet Ispat & Energy Limited vide letter No. J-11015/37/2004.1A II (M) dated 11.05.2015.
- Further, after Coal block re-auction process, M/s Sarda Energy & Minerals Limited had been declared as the successful bidder for Gare Palma IV/7. The EC was transferred from M/s Monnet Ispat & Energy Limited to M/s Sarda Energy and Minerals Limited with the production capacity of 1.2 MTPA vide dated 02.06.2021.
- The Mining Lease has been executed by the State Government on 23.11.2021 is over an area of 277.100 Ha.
- The project proponent has submitted the following compliance of all conditions mentioned in OM dated 11.04.2022 w.r.t expansion under 7 (ii) (a) (Stage I for 20% expansion):

Sl. No.	Condition as per OM	Compliance
(i)	The project should have gone through the public hearing process, at least once, for its existing EC capacity on which expansion is being sought, except those categories of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments.	The project proponent has submitted that the existing project is granted EC by MoEF&CC vide File No. J-11015/37/2004 IA.II (M), dated 30.09.2005. Public Hearing for our existing project was conducted by Chhattisgarh Environment Conservation Board dated 08.01.2003 at Tehsil Gharghoda, District Raigarh.
(ii)	There should not be change in Category of the project from 'B2' to 'B1' or 'A' due to proposed modernization or expansion.	Our earlier EC was granted by EAC, under category "A" as per EIA notification 2006 vide File No. J-11015/37/2004-IA-II (M), dated 30.09.2005.

(iii)	There is no additional land acquisition or forest land diversion involved for the proposed expansion or there is no increase in lease area with regard to mining vis-a-vis the area mentioned in the EC, based on which public hearing has been held earlier.	The project proponent has submitted total land of the present plant is 277.100 ha and no additional land acquisition or forest land diversion is involved for the proposed expansion as per earlier granted EC dated 30.09.2005.																														
(iv)	The proposed expansion shall not be more than 50% of production capacity as mentioned in the prior EC, issued on the basis of public hearing held and the same shall be allowed in minimum three phases	The project proponent has proposed only for expansion upto 50% from the earlier granted EC. The instant application is for grant of Stage - I expansion capacity i.e. upto 20% of granted EC capacity.																														
(v)	Predicted environmental quality parameters arising out of proposed expansion / modernization shall be within the prescribed norms and the same shall be maintained as per prescribed norms.	<div>Fresh baseline data has been collected during March to May 2022. The details of Incremental Loads after expansion are as follows:</div> <table><tr><th>Descript ion</th><th>Permissi ble value (µg/m3)</th><th>Back grou nd value (µg/ m3)</th><th>Incre menta l GLC (µg/m 3)</th><th>Total Predict ed GLC (µg/m3)</th></tr><tr><td>PM10</td><td>100</td><td>71.2</td><td>1.341</td><td>72.541</td></tr><tr><td>PM2.5</td><td>60</td><td>41.3</td><td>1.238</td><td>42.538</td></tr><tr><td>NO2</td><td>80</td><td>15.7</td><td>0.0613</td><td>15.76</td></tr><tr><td>SO2</td><td>80</td><td>8.2</td><td>0.0014</td><td>8.201</td></tr><tr><td>CO</td><td>4000</td><td>390</td><td>3900.143</td><td>390.143</td></tr></table> <div>The values of PM10 and PM2.5 due to air emissions and vehicular movement on the adjacent road near the project site were in permissible range within the project site.</div>	Descript ion	Permissi ble value (µg/m3)	Back grou nd value (µg/ m3)	Incre menta l GLC (µg/m 3)	Total Predict ed GLC (µg/m3)	PM10	100	71.2	1.341	72.541	PM2.5	60	41.3	1.238	42.538	NO2	80	15.7	0.0613	15.76	SO2	80	8.2	0.0014	8.201	CO	4000	390	3900.143	390.143
Descript ion	Permissi ble value (µg/m3)	Back grou nd value (µg/ m3)	Incre menta l GLC (µg/m 3)	Total Predict ed GLC (µg/m3)																												
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SO2	80	8.2	0.0014	8.201																												
CO	4000	390	3900.143	390.143																												
(vi)	The proposed expansion should not result in reduction in the	As a result of this re-demarcation of Block Boundries, the mining lease area has reduced from																														

	greenbelt area as stipulated in the earlier EC, or if the existing ratio of greenbelt is more than 33%, after expansion it should not reduce below 33%.	earlier 335.736 to 277.100 Ha. Accordingly, the greenbelt area earmarked within the mining lease had to be revised as 18.52 Ha.
(vii)	The project proponent should have satisfactorily complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/consultation proceedings and also the commitments given while granting previous expansion, as may be applicable. This shall be duly recorded in the certified compliance report issued by the IRO/CPCB/SPCB, which should not be more than one year old at the time of submission of application.	<p>On request of SEML, the IRO, MoEF&CC issued the Condition Certificate for the Compliance stipulated in the existing EC along with its observations vide letter no 3-44/2005(ENV)/790 dated 04/07/2022.</p> <p>SEML complied with all the observation and thereafter the IRO, MoEF&CC issued closure on observations vide letter no 3- 44/2005(ENV)/1092 dated 12/12/2022.</p> <p>Copy of IRO letters dated 04/07/2022 and 12/12/2022 are enclosed.</p>
(viii)	Public Consultation shall be undertaken [if applicable as per table below] by obtaining response in writing, as per para 7 III (ii) (b) of EIA Notification 2006, except those categories of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments	<p>Public consultation is not applicable for our current application as we have applied for 20% expansion in production capacity of coal as per OM dated:- 11.04.2022 & 30.05.2022.</p> <p>SEML assures that Public consultation as per guidelines of MoEF&CC will be conducted before application of Final Phase i.e. 40% to 50%.</p>
(ix)	Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	The CEMS has been installed.

- EIA/EMP report is prepared in accordance with the O.M. dated 30.05.2022 issued vide File no. IA3-22/2022-IA.III [E177258] for proposed expansion in the production capacity by 50% of the Original EC capacity (i.e., from 1.2 MTPA to 1.8 MTPA)
- No change in Methodology is proposed - The excavation of coal is being carried out by opencast mining method and the same methodology shall be used post expansion.

- There are no National Parks, Sanctuary, Biosphere Reserve, Tiger Reserves and Elephant Reserve/Corridor in the study area impacted within 15 km.
- Base Line Environmental Data at the Project Site & 10 km study area from March 2022 to May 2022 (Pre-Monsoon as per condition prescribed in the standard ToR pertaining to various environmental components including air, noise, water, land and biological components along with parameters of human interest which may be affected due to proposed Project.
- Total mining lease area as per block allotment is 482 ha. Revised Mine Plan with mine closure plan for Expansion of production capacity from 1.2 MTPA to 1.8 MTPA with Mining Lease Area of 277.10 ha has been approved by Ministry of Coal.

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

a) Mining Land Use (ha)

Tenancy	Agriculture	256.122
	Township	--
	Grazing	--
	Barren	--
	Water Bodies	--
	Road	--
	Community / other Use	--
Govt. Non Forest	Agriculture (Sewabhumi)	5.528
	Township	--
	Grazing	9.344
	Barren/other use (water bodies)	3.435
Forest	Reserve	--
	Protected	--
Free Hold		2.671
Total		277.100

b) Proposed Land use:

S.No.	Land use	Land use as per Revised AMP (ha)
1.	Excavation area	248.44
2.	Top Soil Storage	---
3.	External OB Dump	7.890
4.	Other use	1.65
5.	Infrastructure area	0.60
6.	Green Belt	18.52
7.	CHP area	---
	Total	277.100

Note: The entire Mining Lease area is Coal Bearing area as such most of the infrastructure and Proposed CHP area is included in Excavation area at sl. No. 1 hence not reflected separately at Sl.No.5 Infrastructure area and Sl.No 7 CHP area.

- Post mining land-use.

S. No.	Land Use during mining	Land use (Proposed)	Land use (End of Life)	Land Use (Post Closure)					
				Plantation	Water Body	Agricultural land	Public Use	Undisturbed	Total
1	External OB Dump	7.89	7.89			7.89			7.89
2	Top soil Dump								
4	Excavated area	248.44							
	Backfilled area		143.24			143.24			143.24
	Excavated Void		105.20		68.29	36.91			105.20
5	Road & Infrastructure	0.60	0.60			0.60			0.60
6	Built up areas								
7	Green Belt	18.52	18.52	18.52					18.52
8	Safety Zone								
9	Undisturbed area								
10	Haul Road b/w quarries	1.65	1.65			1.65			1.65
Total		277.10	277.10	18.52	68.29	190.29	0	0	277.10

- Core Area = **277.10 Ha**
- Total geological reserve reported in the mine lease area is 239.045 MT with 48.84MT mineable reserves. Out of total mineable reserve of 48.84MT, 46.40MT is available for extraction. Percent of extraction is 21.567%
- Method of mining operations envisages by Opencast, Shovel Dumper, Surface Miner.
- Life of mine is 24 years.
- No forest land has been reported to be involved in mine lease area. Approval under the Forest (Conservation) Act, 1980 for diversion of forest land for non-forestry purposes application.
- No any sighted species falls under schedule -I of Wildlife Protection Act 1972.
- Consent to Operate for the existing capacity was obtained from the State PCB on 03/08/2021 vide letter no. 2962/TS/CECB/2021 and is valid till 31/03/2024.
- Kelo River is flowing about 1.2 km away towards East direction of Karwahi opencast Coal Mine Lease Area is flowing. The river will not be diverted in consultation with the Water Resource Department of the State Government.
- Total cost of the project is Rs 80.98 Cr (Rs. 73.98 Cr Existing + 7 Cr for Proposed Expansion.) Basic Cost of production is estimated around INR 800/T and the =Sale price will depend on

market demand. CSR cost as per Companies Act 2013, R&R cost is N.A. Capital Cost for Environment Management Cost is Rs. 1084 Lakhs and Recurring Cost = 236 Lakhs

- Further, PP vide its letter reference no. SEML/ENV/EC/RAI/5477 dated 18th February, 2023 submitted the reply based on issues deliberated in EAC meeting as desired by EAC.
 - Greenbelt Development Plan: The Entire Mining Lease Area (277.100 Ha) is Coal Bearing. Accordingly, identified 18.52 Ha Non Workable Area for Development of Greenbelt shall be covered under plantation with 66,370 no of trees.
 - A Greenbelt of 7.5 Mtr Width using Miyawaki Technique with an average density of 5000 no of trees/Ha. is proposed to be developed all along the periphery of the mining lease boundary.
 - Further it is proposed to increase the density of the existing developed area of 8.76 Ha (prior 2022-23) from 1500 trees/Ha to 2500 trees/Ha by gap plantation.
 - Layout of the coal Mine Earmarking Developed and Proposed Greenbelt area
 - Point-wise compliances status of points raised during the public hearing held on 08.01.2003

40.8.3 *The EAC, after deliberation noted that earlier the committee in the 29th EAC meeting directed to PP for applying in proper application in Form-II on Parivesh at central level. Earlier, the project proponent had applied for expansion of EC before the release of Notification dated 20.04.2022. Due to this the proposal is continued to consider at the central level.*

Subsequently, EAC noted that the instant proposal is brown field project and applied under Ministry OM dated 11th April, 2022 (Stage I 20% expansion). The EAC advised to the project proponent for commissioning of conveyor belt within 6 months i.e. upto December, 2023. As the lease transferred from the previous leasee, the project proponent has to take care of the complete plantation in the mine lease area. Further, EAC advised to prepare 5-year plantation plan including the preparation of Garland drain and retaining wall. The project proponent shall have target to plant atleast 1 Lakh number in next 3 years by Miyawaki method. Being an old mines, the project proponent shall have systemic mine closure plan.

*Based on the document submitted and discussion held in the EAC meeting, the EAC **recommended** the Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion) for Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA within the MLA of 277.10 Ha by M/s Sarda Energy Minerals Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh), under the provisions of EIA Notification, 2006 and its amendments therein, along with the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- (i) *PP shall obtain CTE/CTO for capacity enhancement upto 1.44 MTPA.*
- (ii) *As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shiyopal Bhagat & Ors vs UIO, PP to comply with all the recommendation of Carrying Capacity Study being conducted by reputed institute by CPCB & SPCB.*

- (iii) *As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, Coal transportation is permitted for only one year through road from date of commissioning and subsequently, transport must be done by rail or closed conveyor belt only.*
- (iv) *As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, proper and free health care facilities with multispecialty treatment system shall be provided in coal mine buffer area.*
- (v) *As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP shall have to comply that when coal is sold to TPP, there is the agreement to sell that at least 25% Fly Ash of the coal sold, should be accepted by the coal company (seller) from TPP(Purchaser) failing which coal company shall be liable for civil action and other legal measures.*
- (vi) *The project proponent shall implement the mechanized system in the Mine lease area before December, 2023.*
- (vii) *The project proponent shall prepare 5 year plantation plan along with the preparation of Garland drain and retaining wall.*
- (viii) *The project proponent shall make plantation plan of atleast 1 Lakh number in next 3 years by Miyawaki method.*
- (ix) *The project proponent shall prepare the systemic mine closure plan.*
- (x) *The project proponent shall prepare the transportation plan with best possible route. The dedicated pukka road route should not be pass from any village area.*
- (xi) *PP shall deploy minimum 10% of total Mine vehicle operating, on biofuels and Electric.*
- (xii) *The PP shall increase the truck fleet size i.e. upto 45-50 tonne.*
- (xiii) *The PP shall develop Sal nursery with the minimum plant capacity of 25,000 within 5 ha of project area. Further, Sal tree shall be planted as much as possible while reclaiming during mine closure activity.*
- (xiv) *PP shall install fixed fog cannon (mist spayer) all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.*
- (xv) *PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.*
- (xvi) *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.*
- (xvii) *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*

- (xviii) *Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- (xix) *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup at site itself which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non- compliance or infringement should be reported to the concerned authority*
- (xx) *All the condition stipulated in the EC letter and Transfer letter vide F. No. J-11015/37/2004-IA.II (M) dated 30.09.2005 and 11.05.2015 resp. shall remain unchanged.*

Agenda No. 40.9

Bhivkund underground Coal Mine project of production capacity 0.72 MTPA (Normative)/1.08 MTPA(Peak) in the mine lease area of 802 Ha of M/s Sunflag Iron & Steel Company Ltd. located at villages Visapur and Nandgaonpode and Urban Area of Ballarpur Tehsil Ballarpur, District Chandrapur (Maharashtra) - For Terms of Reference reg.

[Proposal No. IA/MH/CMIN/408507/2022; File No. J-11015/252/2010-IA-II (I)]

40.9.1 The proposal is for Terms of Reference for Bhivkund underground cum opencast Coal Mine project of production capacity 0.72 MTPA(Normative)/1.08 MTPA(Peak) in the mine lease area of 802 Ha of M/s Sunflag Iron & Steel Company Ltd. located at villages Visapur and Nandgaonpode and Urban Area of Ballarpur Tehsil Ballarpur, District Chandrapur (Maharashtra).

40.9.2 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. 26 M/5 and is bound by the geographical coordinate's latitude ranging from 19° 51' 19"N-19° 54' 05"N and longitudes 79° 18' 08" E-79° 20' 30"E.
- (ii) No coal linkage is proposed. Coal will be for commercial sale in any manner or for any purpose.
- (iii) Joint venture cartel has not been formed.
- (iv) Project does not fall in Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance. The nearest polluted area is Ballarpur at 0.03 km, E
- (v) Employment generation: employment to about 800 persons (700 for underground mine) will be provided from the project.
- (vi) The project is reported to be beneficial in terms of direct & indirect employment opportunities in mine & transportation, predominantly underground working will less surface disturbance, contribution to state exchequer, social & physical infrastructure development in surrounding villages, etc.
- (vii) Environment clearance for the project is being obtained first time under EIA Notification since

this is a new proposed project.

- (viii) Total mining lease area as per block allotment is 802 ha. Mining Plan (including Progressive Mine Closure Plan) is under approval by the Ministry of Coal, Government of India. Their Internal Committee constituted under MMDR Act 1957 for approval of Mining Plan / Mine Closure Plan during their meeting held on 24/01/2023 through Video Conference has given approval. Approval letter is awaited.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

Land use pattern	Within ML Area	Outside ML Area	Total
Agricultural land	753.46	0.00	753.46
Forest Land	-	-	-
Waste land	27.95	-	27.95
Grazing land	-	-	-
Surface water bodies	4.8	-	4.8
Settlements	5.23	-	5.23
Others (Specify)			
Old excavation area	-	-	-
Old OB Dumps	-	-	-
Roads	10.56	-	10.56
R & R Colony	-	-	-
Staff Colony	-	-	-
Green Belt	-	-	-
Balance Area	-	-	-
Total Project area	802.00	0.00	802.0

Post Mining land use details (Area in Ha)

Sl. No.	Description of area	Land use (Ha.)					
		Plantation	Agriculture	Water body	Public use	Un-disturbed	Total
1.	External OB dump	-	22.99	-	-	-	22.99
2.	Top soil dump	-	8.12	-	-	-	8.12
3.	Excavation	-	57.57	9.0	-	-	66.57
4.	Roads	-	-	-	0.13	-	0.13
5.	Built up areas (UG entry, road, infrastructure, embankment)	-	18.01	-	7.97	-	25.98
6.	Green belt (safety zone)	6.15	-	-	-	-	6.15
7.	Undisturbed area	-	-	-	-	653.43	653.43

Sl. No.	Description of area	Land use (Ha.)					
		Plantation	Agriculture	Water body	Public use	Un-disturbed	Total
8.	Rationalization area	-	17.63	-	-	-	17.63
9.	Diversion/ below River/ nala/ Canal	-	-	-	-	-	0.00
10.	Water body (settling pond)	-	1.00	-	-	-	1.00
11.	Staff Colony	-	-	-	-	-	0.00
Total		6.15	125.32	9.0	8.1	653.43	802.00

- (x) Total geological reserve reported in the mine lease area is 102.264 MT with 87.8770 MT are mineable reserve. Out of total mineable reserve of 87.8770 MT, 50.5900 MT are available for extraction. Percent of extraction is 49.47 %.
- (xi) Four coal seams with thickness ranging from 0.10 to 12.15 m are workable. Average grade of coal is G9/ G10, stripping ratio 3.0994 cum/t, while gradient is 1 in 6 to 1 in 30 degree.
- (xii) Method of mining operation is envisaged by both underground as well as opencast method
- (xiii) Life of mine is 73 years (underground 64 years, opencast 11 years with first two years overlapping with last two years of underground).
- (xiv) During open cast mining, the project has one external OB dump in an area of 22.99 ha with 30 m height and 2.89 Mm³ of OB. One Internal OB in an area of 57.57 ha. with 22.13 Mcum of OB is envisaged in the project (including 2.89 Mm³ rehandled external dump & 1.54 Mcum³ top soil).
- (xv) Total quarry area is 66.57 ha (depth 100 m) out of which backfilling will be done in 57.57 ha while final mine void will be created in an area of 9.0 ha with a depth of 30 m bgl. Backfilled quarry area of 57.57 ha shall be reclaimed and converted to agriculture land. Final mine void will be converted into water body.
- (xvi) Transportation of coal has been proposed by conveyors to CHP at UG mine pit head and by dumper to OC mine pit head, and then from surface to consumers or siding by tippers.
- (xvii) Reclamation Plan (for agriculture) in an area of 125.320 ha, comprising of 22.99 ha of external dump (Overburden), 8.12 ha of top soil dump, 57.57 ha of backfilled internal dump, 1.00 ha settling pond, 8.92 ha infrastructure and road, 17.63 ha rationalization area and 9.09 ha UG entry area. In addition to this, an area of 6.150 ha, included in the safety zone has also been proposed for green belt development.
- (xviii) No forest land has been reported to be involved in the project.
- (xix) There are no National Parks/ Wildlife Sanctuaries within 10 km boundary of the project. Buffer area of Tadoba Andheri Tiger Reserve (TATR) is present at a distance of 13.3 km from ML boundary and TATR eco sensitive zone is present at a distance of 8.1 km, NE
- (xx) Wildlife conservation plan for schedule – I species shall be prepared after receipt of ToR.
- (xxi) The ground water level within study area has been reported to be varying between 5-15 m bgl in pre-monsoon and 1.6-11.6 m in post monsoon season. Total water requirement for the project will be 106 KLD (underground operations), 178 KLD (opencast operations) and for the

overlapping period of two years when both UG & OC shall be operational, it will be 176.5 KLD.

- (xxii) Application for obtaining the approval of the Central Ground Water Authority for ground water withdrawal for domestic purposes will be submitted on completing the hydrogeological study.
- (xxiii) Public hearing for the project of 0.72 MTPA (peak 1.08 MTPA) capacity in an area of 802 ha will be conducted after preparation of draft EIA on basis of the ToR received from MoEF&CC.
- (xxiv) Wardha river (perennial) is flowing along the boundary of lease. The river will not be diverted.
- (xxv) Regular monitoring of ambient air quality shall be carried out on fortnightly basis after commencement of operation. The documented report shall be submitted to RO, MPCB and also to MoEF&CC along with half yearly EC compliance report.
- (xxvi) No court cases, violation cases are pending against the project of the PP.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine has not been started.
- (xxviii) Total cost of the project as on date is about Rs. 12,500 lakhs. Cost of production is Rs. 2200-2400 per tonne, CSR cost will be 2% of the average profit of three years as per Companies Act. Capital and recurring Environment Management Cost shall be worked out during preparation of EIA-EMP report.

40.9.3 The EAC during deliberations noted the following:

- The instant proposal is greenfield project for underground as well as for opencast coal mine, allocated by Ministry to Coal to the M/s M/s Sunflag Iron & Steel Company Ltd
- Wardha river (perennial) is flowing along the boundary of lease. The river will not be diverted. PP has proposed to construct embankment along the bank of river Wardha.
- No forest land has been reported to be involved in the project.
- The project is located in Critically Polluted Area of Chandrapur (Maharashtra) as per latest score of CPCB.

40.9.4 *The EAC, after detailed deliberation observed that the instant proposal is a green field underground coal mine project wherein no surface activity will be conducted except that of mining infrastructure, shaft/incline, storage etc. It was observed that Wardha river flowing near to the Mine lease area, therefore EAC advised to have 100 m of safety distance from the same. The PP also mentioned that only 9 ha of project area will be used for development of infrastructure. Subsequently, EAC proposed to complete the subsidence study before filling application for EC on Parivesh. PP is also required to take permission for Ground water intersection as well as a hydrogeological study has been proposed for the mine lease area and no nallah to be diverted. During the discussion EAC advised PP for taking some extra mitigation measures as project area lie in the Severally polluted area of Chandrapur (Maharashtra). Since life of mine of project is 73 years and major extracted quantity will be from UG mining operation, therefore, EAC advised PP to go with UG only and modify the mine plan for UG.*

*Based on the above discussion, EAC **recommended** the proposal for Terms of Reference for Bhivkund underground Coal Mine project of production capacity 0.72 MTPA (Normative) / 1.08*

MTPA(Peak) in the mine lease area of 802 Ha of M/s Sunflag Iron & Steel Company Ltd. located at villages Visapur and Nandgaonpode and Urban Area of Ballarpur Tehsil Ballarpur, District Chandrapur (Maharashtra) with following additional specific conditions to be followed:

- (i) PP to modify the mine plan for UG and EIA/EMP shall be prepared for UG mining operation.*
- (ii) PP should submit the real time aerial footage and video of the Mining lease area made through drone with a special focus on the area adjacent to the rivers.*
- (iii) The PP shall conduct the hydrogeological study as the large water body flowing very near to the Mining lease area.*
- (iv) PP shall conduct detailed study the subsidence, its impact due to mining activity and propose mitigation/management measures.*
- (v) Public Consultation, including public hearing, shall be conducted through concerned SPCB in the concerned districts 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.*
- (vi) The PP shall submit the transportation related option study to optimize the transportation system through rail/road.*
- (vii) The PP shall submit the permission for Ground water intersection.*
- (viii) PP shall submit Letter of Intent from concerned State Government based on allocation of coal block from Ministry of Coal.*
- (ix) PP to submit the Mining plan approved by the Ministry of Coal for the peak capacity of 3 MTPA.*
- (x) Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. 12 nos of Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- (xi) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- (xii) 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.*
- (xiii) Detailed Social Impact Assessment shall be prepared in villages for Rehabilitation and Resettlement. R & R Activity shall be proposed with timeline and allotted fund with the approval of District Commissioner/collector. A need based sample survey, family-wise, should be undertaken to assess their requirements, and action programs prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.*
- (xiv) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA) only for mining activity.*
- (xv) Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.*
- (xvi) 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.*

- (xvii) PP shall explore to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal.
- (xviii) PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any Eco-sensitive zone and areas and further is no corridor of Elephants & Tigers. Also, it should include with certified map with exact distance from any Wildlife Sanctuary.
- (xix) 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.

Agenda No. 40.10

Wet type Coal washery based on Heavy Media cyclone of 2.6 MTPA & Iron Ore Beneficiation Plant of 1.2 MTPA of M/s Vedanta Washery and Logistic Solutions Pvt Limited located at Village Kunkuni , Tehsil Kharsia, District Raigarh (Chhattisgarh) - For Terms of Reference - reg.

[Proposal No. IA/CG/CMIN/416623/2023; File No. J-11015/117/2014-IA.II (M)]

40.10.1 The proposal for Terms of Reference for Wet Type Coal washery based on Heavy Media cyclone of 2.6 MTPA & Iron Ore Beneficiation Plant of 1.2 MTPA of M/s Vedanta Washery and Logistic Solutions Pvt Limited located at Village Kunkuni, Tehsil Kharsia, District Raigarh (Chhattisgarh).

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

- (i) The project area is covered under Survey of India Topo Sheet No 6410 Project site and is bounded by the geographical coordinates ranging from Latitude: 21°59'18.12"N, Longitude: 83° 10'19.88"E.
- (ii) Coal linkage of the project is proposed for commercial sale of Coal.
- (iii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (iv) Employment generation, direct employment to 275 persons will be provided from the project.
- (v) The project is reported to be beneficial in terms of direct and indirect employment generation in that region.
- (vi) Total land available with company is 19.865 ha and company has its own existing operational railway siding within project site on land measuring 4 ha. So, thereafter balance land will be used for the proposed project, which is 15.865 Ha.
- (vii) The land usage pattern of the project is as follows: Total available land is 19.865 Ha (including railway Siding). Land is barren land and no forest/ Government is involved within the site.
- (viii) No forest land has been reported to be involved in project area.
- (ix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project
- (x) Wildlife conservation plan for schedule – I species has to be prepared during EIA/EMP study.

- (xi) Total water requirement for the project is 339 KLD.
- (xii) Regular monitoring of ambient air quality is being carried out on Monthly basis. The documented report is submitted to RO, MoEF, SPCB 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.
- (xiii) No court cases, violation cases are pending against the project of the PP.
- (xiv) The project involves Nil project affected families.
- (xv) Total cost of the project is Rs 95 Cr. Cost of production will depend on market demand. CSR cost as per Companies Act 2013, R&R cost is N.A. Environment Management Cost is Rs. 1.5 Crores.

40.10.3 The EAC during deliberations noted the following:

- The instant proposal is for Terms of Reference regarding coal washery as well as iron ore beneficiation.
- 15.630 ha land is taken on lease basis from CSIDCL for industrial use. 4.235 ha on lease basis from private owners and will be diverted for industrial use.
- No forest area is involved in the project area for non-forestry activity.
- The site is located near the railway siding and also there are ponds created by Project Proponent for dust suppression. The same ponds can also be further enhanced for to meet the proposed requirement.
- Project Proponent proposed to use ground water for the operation of washery and beneficiation plant though EAC noted that river Mand is near to the project site and can explore the usage instead of ground water.
- Settled slurry of the thickener will be dewatered in a Multi Roll Belt Press Filter. The dewatered filter cake will be sold. There will be no solid wastes. Entire rejects and fines will be sold.

40.10.4 *The EAC, after detailed deliberation observed that the instant proposal is a green field Coal washery project, which is proposed nearby operating railway siding. It was observed that 940 KLD of ground water shall be used for operation, however EAC desired that PP shall see the possibility of using surface water from its available pond and Mand river existing near the project site. No ground water shall be used for operation of the plant except for domestic purpose.*

It was further advised that there is no limitation of space near the railway siding so PP must propose for conveyor system for washed coal and clean iron ore through silo loading system. The internal transportation may be conducted by truck on concrete road.

Further, since the project involves iron ore beneficiation, PP shall design and construct the tailing pond with impermeable membrane wherein there is no seepage of water in ground water. The rejects from coal sedimentation tank and tailing pond shall be briquetted before sale.

*Based on the above discussion, EAC **recommended** the proposal for Terms of Reference for Wet Type Coal washery based on Heavy Media cyclone of 2.6 MTPA & Iron Ore Beneficiation Plant of 1.2 MTPA of M/s Vedanta Washery and Logistic Solutions Pvt Limited located at Village Kunkuni, Tehsil Kharsia,*

District Raigarh (Chhattisgarh), under the provisions of EIA Notifications, 2006 and its amendments therein, along with following additional specific conditions:

- (i) 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 proposed project inviting comments and their redressal*
- (ii) No ground water shall be used for any purpose by the Company instead PP shall explore surface water or mine water from nearby available pond or Mand River.*
- (iii) Study shall be carried for sustenance of water supply to cater to projected demand of the proposed washery throughout planned life of the washery.*
- (iv) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted.*
- (v) The washing technology so chosen should conform to 'Zero Liquid Discharge'.*
- (vi) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- (vii) For proper baseline air quality assessment, 8 monitoring stations in the downwind areas based on wind rose pattern of the area with area covering 10 km radius of buffer zone, shall be set up for collection of air quality data and air quality modeling.*
- (viii) All internal road and connecting road to washery shall be proposed to be constructed of Concrete.*
- (ix) Washery rejects shall be proposed to be used only in FBC based power plant/Thermal Power Plant and accordingly, PP should produce MoU with users during EC appraisal*
- (x) PP shall provide the details of the raw coal quality / specifications, source of coal supply and long term agreement with coal mine.*
- (xi) PP shall provide the details of technology to be used for coal washing and a guarantee of minimum ash % reduction by 5-7% of raw coal post washing and the associated environmental benefits of doing so for the consumption of washed coal at the steel and cement plant and rejects at the power plants from Climate Change perspective*
- (xii) Thick green belt of adequate width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.*
- (xiii) PP shall use the already existing railway siding and shall propose to install conveyor system with silo loading system and accordingly no road transportation will be allowed for raw and washed coal and rejects.*
- (xiv) PP shall enhance the storage capacity of already existing water pond to store water for atleast 15 days storage period.*
- (xv) Traffic Impact Assessment study shall be carried out road transportation (if any).*
- (xvi) Clarification from The Principal Chief Conservator of Forests (PCCF) that washery does not fall under corridors of any National Park and Wildlife Sanctuary and submit the authenticated list of species (separately for schedule I species) from State Forest Department.*
- (xvii) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*

- (xviii) Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report.
- (xix) The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality
- (xx) PP should submit the real time aerial footage and video of the project area made through drone.
- (xxi) Project proponent shall provide comprehensive plan for utilization of coal washery rejects and rejects from iron ore beneficiation plant.
- (xxii) Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.
- (xxiii) Details of the technology and process involved for beneficiation should be given.
- (xxiv) Estimation of the fines going into the washings should be made and its management described.
- (xxv) Detailed material balance should be provided

Agenda No. 40.11

Cluster VIII Coal mining project of production capacity 5.603 MTPA in total mine lease area of 1183.92 ha by M/s Bharat Coking Coal Limited located in Jharia Coalfields, District Dhanbad (Jharkhand) – For 4th Amendment of Environmental Clearance letter dated 15.02.2013 reg. [Proposal No. IA/JH/CMIN/297114/2023; File No. J-11015/298/2010-IA.II (M)]

40.11.1 The proposal is for amendment of Environmental Clearance letter dated 15.02.2013 for the Cluster VIII Coal mining project of production capacity 5.603 MTPA in total mine lease area of 1183.92 ha by M/s Bharat Coking Coal Limited located in Jharia Coalfields, District Dhanbad (Jharkhand).

40.11.2 The Committee during the discussion noted the following:

- Earlier, Environment Clearance was granted by Ministry to Cluster VIII Coal Mining Project of 5.603 MTPA capacity in mine lease area of 1183.92 Ha. (1200.41-16.49) of M/s Bharat Coking Coal Limited located in District Dhanbad (Jharkhand) on 15th February, 2013. Amendment in EC was granted by Ministry on 15th July, 2018 and 15th November, 2020 due to restructuring of production capacities of individual mine in the Cluster.
- Now, PP has again requested for amendment in EC for restructuring the production capacities as mentioned below:

S l. N o	Name of the Mine		Initial EC (Dated 15.02.2013			Amendment dated 15.11.2020 (Existing)			Modification sought		
			Peak Product ion Capacit y (MTPA)	Lease Area (Ha)	Type of Min e	Peak Product ion Capacit y (MTPA)	Lease Area (Ha)	Type of Mine	Peak Producti on Capacity (MTPA)	Lease Area (Ha)	Proposed Amendment
		Type of Min e									

1	Bastacolla Colliery	OC	0.13	239.45	Mixed	1.80	239.45	Mixed	2.10	239.45	Change in Capacity
		UG	0.429								
2	Bera Colliery	OC	0.195	209.56	OC	0.195	209.56	OC	0.195	209.56	No Change
		UG	0.247		UG	0.247		UG	0.247		No Change
3	Dobari Colliery	UG	0.312	146.90	OC	3.86	146.90	OC	3.86	146.90	No Change
4	Ghanoodih Colliery	OC	1.82	73.0	OC	1.82	73.00	OC	1.82	73.00	No Change
5	Kuya Colliery	UG	0.13	324.01 (340.50-16.49)	OC	2.60	324.01 (340.50-16.49)	OC	2.80	324.01 (340.50-16.49)	Change in Capacity
		OC	0.78								
	Goluckdih (NC)	OC	1.56								
6	Kujama Colliery	OC	0.78	191.0	OC	0.78	191.00	OC	0.78	191.00	No Change
	Total		5.603*	1183.92		5.603*	1183.92		5.603*	1183.92	

- The reason and justification for the said restructuring is faster excavation of coal from Kuya and Bastacolla is necessary for clearing floor of base seam to facilitate backfilling and faster fire liquidation for compliance of Master Plan approved by Govt. of India. Air quality impact predication was carried out considering worst case scenario of incremental increase of 0.4 MTY. The incremental production for carrying out AQIP has been considered as 0.2 MT for Bastacolla Colliery and 0.2 MT for Kuya Colliery as peak productions for both mines will be achieved different years to off set loss of production in other mine and total production of the Cluster remains within the EC capacity.
- Further, it has been submitted that no new area is to be included for mine operation as well as for dumping of OB. There is only re-arrangement of production between units of Cluster. Also, the compliance of all EC conditions was duly examined by Regional Office of State Pollution Control Board for renewal of CTO granted on 30.12.2022 based on Inspection Report Ref no. 1098 dated 28.09.2022. Furthermore, the RO, MoEFCC had also carried out inspection on 18/19.06.2018 of Cluster VIII and issued certified RO compliance in respect of Original EC Order dated 15.02.2013 and 1st Amendment granted on 15.06.2018.

40.11.3 *The EAC after deliberation observed that the instant proposal is for amendment of EC dated 15.02.2013 particularly for increase in capacity of Bastacolla and Kuya Collery which are sub-set mines without any changes in overall capacity and change in lease hold area. EAC observed the*

justification of Project Proponent as justifiable and overall there is no impact of production and increase in area.

Further, as informed the coal seams are exposed and there is no generation of OB for excavation of coal. The compliance status of conditions granted during EC and EC amendments were deliberated during the meeting alongwith the certified compliance of EC conditions by JSPCB vide letter dated 28.09.2022 submitted for granting Consent to Operate.

*Based on the above discussion, EAC **recommended** the proposal for amendment of EC dated 15.02.2013 particularly for increase in capacity of Bastacolla and Kuya Collery from 1.80 to 2.10 MTPA and 2.6 to 2.8 MTPA respectively without any changes in overall EC capacity (5.603 MTPA) and mine lease hold area (1183.92 ha) for Cluster VIII Coal mining project of production capacity 5.603 MTPA in total mine lease area of 1183.92 ha by M/s Bharat Coking Coal Limited located in Jharia Coalfields, District Dhanbad (Jharkhand), under the provisions of EIA Notifications, 2006 and its amendments therein, subject to following additional condition for environmental safeguards;*

- (i) PP to obtain the latest CTO from SPCB after grant of EC amendment, reflecting the capacities of each mines within overall mine lease area (1183.92 ha).*
- (ii) PP shall to install 5 numbers of fog cannon with adequate throw length for suppression of fugitive dust in opencast mine within 6 months.*
- (iii) PP shall deploy 5 numbers of mechanical sweeper for road cleaning in and around the 5 km of the project area.*
- (iv) PP shall obtain Certified compliance report of previous EC and EC amendments letter from Ministry's IRO-Ranchi within six months from the date of issue of this letter.*
- (v) PP shall conduct grassing on 15.00 Ha OB Dump and Plantation on 25.00 Ha within 1 one year and status shall be submitted with geotagged proof to Ministry's IRO with six monthly compliance report.*

Annexure-I

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

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

(a) Statutory compliance

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

(b) Air quality monitoring and preservation

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

etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

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

- (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
 - (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).
 - (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
 - (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
 - (x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
 - (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.
- (d) Noise and Vibration monitoring and prevention**
- (i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such

accessories to be monitored.

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

(e) Mining Plan

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

(f) Land reclamation

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

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

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

(g) Green Belt

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

(h) Public hearing and Human health issues

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

activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area’.

(i) Corporate Environment Responsibility

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

(j) Miscellaneous

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

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

Annexure-II

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

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

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB
- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

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

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

- vi. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.
- vii. Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial purposes. 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 riverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A riverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

IV. Noise and Vibration monitoring and prevention

- i. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in underground mining operations, operation of HEMM, etc. shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms/guidelines in this regard. Progress in usage of such accessories to be monitored. Adequate awareness programme for users to be conducted.
- ii. The noise level survey shall be carried out as per the prescribed guidelines to assess noise

exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

V. Mining Plan

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

VI. Land reclamation

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

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

VII. Green Belt

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

VIII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
- ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.
- iii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iv. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
- v. Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
- vi. Implementation of Action Plan on the issues raised during the Public Hearings shall be ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees shall be compensated as per the norms laid out R&R Policy of the Company/ or the National R&R Policy/ R&R Policy of the State Government, as applicable
- vii. The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. Corporate Environment Responsibility

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

X. Miscellaneous

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

commencement of mining operations.

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

Annexure-III

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. 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, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. 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 PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As,

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

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- iii. Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.

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

IV. Noise and Vibration monitoring and prevention

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

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

V. Coal beneficiation

- i. Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.
- ii. Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

VI. Green Belt

- i. Three tier greenbelt comprising of a mix of native species, of minimum 30 m width shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/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. The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any. as amended time to time.
- ii. Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iii. Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- iv. The project proponent shall follow the mitigation measures provided in this

Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders /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 thirdparty 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 n
- ii. 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.
- iii. 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.
- iv. 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.
- v. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂,

NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

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

ANNEXURE-IV

Generic ToR for coal washery

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

is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.

- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out along with Action Plan.
- xiv. O.M.no.J-II0I3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted: Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc). Characteristics and quantum of coal after washing. Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. 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 conform to the effluent standards as prescribed under

Environment (Protection) Act, 1986

- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

approach roads, major haul roads, etc should be indicated.

- (ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion /modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.
- (x) Similarly, if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.
- (xi) Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters

for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xvi) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xxi) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3

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

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

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

	under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

* As a representative example

- (xxxi) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining landuse should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

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

S.N.	Land use during Mining	Land Use (ha)

		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					

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

GENERIC TORs FOR AN UNDERGROUND COAL MINE 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 (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The breakup of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and

- for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
 - (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
 - (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
 - (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
 - (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
 - (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
 - (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
 - (xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
 - (xxviii) Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system

of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

- (xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xxx) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xxxi) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xxxii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept.(if req.), etc. wherever applicable.

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

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

ANNEXURE-VII

GENERIC TORs FOR AN OPEN CAST - CUM UNDERGROUND COAL MINE PROJECT

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

LIST OF PARTICIPANTS OF EAC (COAL) IN 40th MEETING HELD DURING 16-17th FEBRUARY, 2023 THROUGH PHYSICAL MODE

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