

## **MINUTES OF 37<sup>th</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 17-18 NOVEMBER, 2022 THROUGH VIDEO CONFERENCE.**

**Confirmation of the Minutes of 36<sup>th</sup> Meeting of the EAC (Coal) held on 20-21 October, 2022:** The minutes of the 36<sup>th</sup> Meeting of the EAC (Coal) held on 20-21 October, 2022 as 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 36<sup>th</sup> Meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 20-21 October, 2022 through video conferencing with support NIC team. 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. 37.1**

**Expansion of Jayant Opencast Project in Singrauli Coalfield from 25 MTPA to 30 MTPA in Project Area of 3177.171 Ha by M/s Northern Coalfields Limited located at village Garda, District Singrauli, Madhya Pradesh - Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion)**

**[Online Proposal No. IA/MP/CMIN/262330/2022; File No. J-11015/12/2017-IA.II (M)]**

**37.1.1** The PP has applied the proposal for Environmental Clearance under Ministry's OM dated 11.04.2022 for expansion of Jayant Opencast Project in Singrauli Coalfield from 25 MTPA to 30 MTPA in Project Area of 3177.171 Ha by M/s Northern Coalfields Limited located at village Garda, District Singrauli, Madhya Pradesh.

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

- (i) The project area is covered under Survey of India Topo Sheet No 63L/12 and is bounded by the geographical coordinates ranging from 24°6'26.08"N to 24°11'40.86"N and longitudes 82°38'2.01"E to 82°40'55.64"E.
- (ii) Coal linkage of the project is proposed for Singrauli Super thermal power station (SSTPS) of NTPC and other thermal power stations of the nation and other consumers.
- (iii) Joint venture cartel has not been formed.
- (iv) Though PP informed that Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance, the currently location fall under SPA, being Singrauli area as per the current score.
- (v) Employment generation: 619 nos. of permanent employment will be provided from the project.

- (vi) The project is reported to be beneficial as the project will be able to supply planned quantity of coal to Singrauli Super Thermal Power Station (SSTPS) of NTPC through their own MGR system, other thermal power stations of the nation and other consumers by Public Railway system, thus meeting the energy requirement of the country. It will also enhance the socio-economic activities in the adjoining area.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, vide Ministry's letter No F.No. J-11015/12/2017-IA.II (M) date 29.08.2018 for 25 MTPA in mine lease area of 3177.171 ha.
- (viii) Total mining lease area as per block allotment is 3177.171 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the NCL board on 31/10/2021.
- (ix) The land usage pattern of the project is as follows:

**a) Pre-mining**

S. No.	Land Use	Within Mine lease Area (Ha)	Outside mine lease area (Ha)	Total
1.	Agricultural Land(Tenancy	1481.540	NIL	1481.540
2.	Forest Land	1180.171	NIL	1180.171
3.	Wasteland	-	NIL	-
4.	Grazing land	-	NIL	-
5.	Surface water bodies	-	NIL	-
6.	Settlements	-	NIL	-
7.	Others (Government land)	515.460	NIL	515.460
Total		3177.171	NIL	3177.171

**b) During Mining:**

S. No.	Land Use during Mining	Land Use (Ha)				Total
		Plantation	Water Body	Public Use	Undisturbed	
1.	External OB Dump	118.65				
2.	Top soil Dump					
3.	Excavation	1840				
4.	Roads	440.65				
5.	Built up areas					
6.	Green belt	93.30				
7.	Safety Zone					
8.	Undisturbed Area	684.571				
9	Total	3177.171				

**c) Post- Mining:**

S.No.	Land use during Mining	Post mining Land Use (ha)				
		Plantation	Water Body	Public Use	Others	
1	External OB dump	118.65	-	-	-	118.65
2	Top soil dump	Top soil will be completely used in reclamation of dumps.				
3	Excavation	1589.00	251.00	-	-	1840.00
4	Roads & railway	96.75	-	0.00	-	96.75
5.	Built-up area (Infrastructure & colony)	178.75	-	261.90	-	440.65
6	Greenbelt	93.30	-	-	-	93.30
7	Undisturbed area (Safety Zone, wasteland, vacant land and Mudwani dam)	625.371	59.20	-	-	684.571
Total		2605.071	310.20	261.90	-	3177.171

(x) The geological reserve reported in the mine lease area is 367.59 MT with 339.86 MT mineable reserves. Out of total mineable reserve of 367.59 MT, 339.86 MT are available for extraction. Percent of extraction is 92.54%.

(xi) Thickness of all 3 nos. Seams are as follows :

Sr. No.	Coal seam	Thickness (M)	
1	Purewa top	4	13.07
2	Purewa bottom	3.4	15.17
3	Turra	11.9	21.65

Grade of coal is G-10,stripping ratio 3.06, while gradient is 2° to 4°

- (xii) Method of mining operations envisages by Combined system of mining deploying dragline, shovel –dumper and surface miner method.
- (xiii) Life of mine is 8 years.
- (xiv) The project has 02 nos of external OB dumps in an area of 118 ha with 90 m height and 60 Mm<sup>3</sup> of OB. 02 nos. Of internal OB dump in an area of 1589 ha with 1809.72Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total quarry area is 1840 ha out of which backfilling will be done in 1589 ha while final mine void will be created in an area of 251ha with a depth of 30 to 40 M. Backfilled quarry area of 1589 ha shall be reclaimed with plantation. Final mine void will be converted 251 ha.
- (xvi) Transportation of coal has been proposed by in mine pit head, from surface to silo by belt conveyor through CHP.
- (xvii) Reclamation Plan in an area of 2605.071 ha, comprising of 118 ha of external dump, 1589 ha of internal dump and 897.421 ha of green belt at the end of mining. In addition to this, an area

of ha, included in the safety zone/rationalization area, has also been proposed for green belt development.

- (xviii) 1180.171 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 1180.171 ha of forest land for non-forestry purposes has been obtained for the same.
- (xix) No any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- (xx) Wildlife conservation plan for schedule – I species has been submitted: Not applicable
- (xxi) The ground water level has been reported to be varying between 3.40 m to 6.68 m during pre-monsoon and between 1.85 m to 5.52 m during post-monsoon. Total water requirement for the project is 11654 KLD.
- (xxii) NOC for 25 MTPA capacity has been obtained from Central Ground Water Authority for vide no CGWA/ NOC / MIN/ ORIG/ 2021/ 12798 has been submitted on 01/09/2021.
- (xxiii) Public hearing for the project of 25 MTPA capacity in an area of 3177.171ha was conducted on 13/12/2017 at Officer’s club, Jayant Project under the Chairmanship of the DM, Singrauli. Major issues raised in the public hearing included rehabilitation & employment of outsees, social and economic problem of oustees and affected population like availability of drinking water, electricity and employment and Appropriate action to address the issues raised in the Public Hearing have already been taken.
- (xxiv) Consent to Operate for the existing capacity was obtained from the State PCB on. AW-54576 and is valid till 30/11/2022.
- (xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to MPPCB and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxvi) 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 there under. The coal production from the mine was started from the year onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under:

<b>Year</b>	<b>EC sanctioned capacity (MTPA) (As per project sanctioned capacity)</b>	<b>Actual Production (MTPA)</b>	<b>Excess production beyond the EC sanctioned capacity</b>
1977-78	10.0	0.15	NIL
1978-79	10.0	0.75	NIL
1979-80	10.0	1.10	NIL
1980-81	10.0	1.57	NIL
1981-82	10.0	1.17	NIL
1982-83	10.0	1.90	NIL

1983-84	10.0	3.00	NIL
1984-85	10.0	3.24	NIL
1985-86	10.0	3.62	NIL
1986-87	10.0	4.44	NIL
1987-88	10.0	5.34	NIL
1988-89	10.0	6.75	NIL
1989-90	10.0	8.66	NIL
1990-91	10.0	9.32	NIL
1991-92	10.0	9.20	NIL
1992-93	10.0	7.85	NIL
1993-94	10.0	8.01	NIL
1994-95	10.0	5.73	NIL
1995-96	10.0	7.54	NIL
1996-97	10.0	9.40	NIL
1997-98	10.0	9.42	NIL
1998-99	10.0	8.59	NIL
1999-00	10.0	9.15	NIL
2000-01	10.0	9.30	NIL
2001-02	10.0	9.12	NIL
2002-03	10.0	9.01	NIL
2003-04	10.0	9.66	NIL
2004-05	10.0	10.00	NIL
2005-06	10.0	9.90	NIL
2006-07*	10.0	10.57	0.57
2007-08*	10.0	12.79	2.79
2008-09	15.50	13.02	NIL
2009-10	15.50	13.35	NIL
2010-11	15.50	15.50	NIL
2011-12	15.50	14.11	NIL
2012-13	15.50	12.70	NIL
2013-14	15.50	11.74	NIL
2014-15	15.50	11.85	NIL
2015-16	15.50	14.40	NIL
2016-17	15.50	15.40	NIL
2017-18	15.50	15.50	NIL
2018-19	25.00	18.365	NIL
2019-20	25.00	19.53	NIL
2020-21	25.00	21.03	NIL
2021-22	25.00	24.746	NIL

(xxviii) The project involves 1599 Nos. of project affected families. R&R of the PAPs will be done as per RFCTLAR Act 2013 & CIL R&R policy.

- (xxix) Total cost of the project is Rs. 272567.00 lakhs. Cost of production is Rs 723.45 /- per tonne. CSR cost is Rs. 2 per tonne, R&R cost is Rs 661.254 crores. Environment Management Cost is -a) Capital Rs 6.75 Crore & b) Recurring Rs 20.51 Crore per year on average.
- (xxx) Consent to operate (CTO) was obtained from the State Pollution Control Board on 01.11.2021 and is valid till 30.11.2022.

**37.1.3** The committee during the EAC meeting observed the following:

- i. The Project proponent has obtained the following environmental clearance:

Ministry's letter no.	Date	Production Capacity	Provision of EIA Notification, 2006	Public Hearing (PH)
J-11015/4/82-Env.5/IA.II (M)	04.12.1992	10 MTPA	EIA Notification, 2006	No PH
J-11015/374/2007-IA.II(M)	01.05.2008	12.50 MTPA	EIA Notification, 2006	With PH
J-11015/382/2008-IA.II (M)	10.12.2008	15.50 MTPA	under Clause 7(ii) of EIA Notification, 2006	No PH
J-11015/12/2017-IA.II (M)	29.08.2018	25 MTPA	EIA Notification, 2006	With PH

- ii. The project has obtained the following Forest Clearance (FC) for total forest land 1180.171 Ha involved in the ML area 3177.171 Ha.

Forest Clearance (FC) Reference No.	Forest Land (Ha)
Acquired under CBA (A&D) Act, 1957 & broken before FC Act, 1980	943.000
Vide letter No. 8-67/2002-FC(Pt.) dated 12.08.2002; renewal granted on 27.01.2021	100.000
Vide letter No. 8-158/90-FC dated 16.01.1997	68.290
Vide letter No. 8-93/99-FC dated 25.01.2000	50.881
Vide letter No. 8-26/2015-FC dated 12.04.2018	18.000
<b>Total Forest Land (Ha)</b>	<b>1180.171</b>

- iii. Public hearing was conducted on 13th December, 2017 for production capacity of 25 MTPA in the Mine lease area of 3177.171ha. During the public hearing, major issues were raised related to the Rehabilitation, Employment, Social and Economic problem. The affected Population Desired to Have Facility of Drinking Water and Electricity.
- iv. NOC for Ground Water abstraction has been valid from 07.09.2021 to 06.09.2023 vide NOC no. CGWA/NOC/MIN/ORIG/2021 /12798.
- v. As per Hon'ble NGT order in the Matter of O.A. No. 1038/2018 (CEPI Matter) MPCB

submitted the action Plan for severely polluted area Singrauli (MP, Part) to CPCB, Delhi vide dated 15.07.2020 wherein it is mentioned that the Northern Coal Limited, Jayant Project, Singrauli, Madhya Pradesh categorized as Red.

- vi. Mining plan containing the mine closure plan for capacity of 30 MTPA was approved by NCL board in its 268th meeting held on 31.10.2021.
- vii. The life of mine is 8 years from 2022-23.
- viii. Based on presentation, EAC observed that the project proponent has not complied the following specific conditions of EC letter dated 29.08.2018:

**Specific condition no. (i):** *“To control the dust production at source, crusher and in-pit belt conveyors shall be provided with mist type sprinklers.”*

**Specific condition no. (ii):** *“Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc”.*

**Specific condition no. (iii):** *“Thick green belt of adequate width in the down wind direction of the project site shall be developed to mitigate/check the dust pollution. Plantation plan shall be prepared in consultation with the State Forest Department”.*

In view of the above conditions, EAC observed that the project proponent was not able to control dust and other fugitive emission by providing sufficient numbers of water sprinkling/mist spraying on houl roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding.

- ix. Presently, PP has failed to install the CHP after getting EC vide dated 29.08.2018 for 25 MTPA in MLA of 3177.171 ha. However, PP informed that the New CHP for 15 MTPA is likely to be commissioned phase wise by 1<sup>st</sup> Dec 2022 to 31<sup>st</sup> March 2023. PP could not bring the plan for CHP for addition capacity upto 25 MTPA.
- x. Seasonal stream and Ballia Stream join the Govind Ballav Pant (GBP) Sagar. As per the kml file Ballia Stream is passing through the mine lease area.
- xi. After the submission of project proponent, EAC noted the following requirement of as per the OM dated 11.04.2022 :

S. No.	Criteria of OM dated 11.04.2022	Submission of Project proponent

1.	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 category of project which have been exempt as per para 7 III (i) of EIA Notification 2006 and its amendments.	The project proponent had conducted the PH on 13.12.2017 for capacity of 25 MTPA under clause 7(i) of EIA notification-2006 for EC letter no. J-11015/12/2017-IA.II (M) dated 29.08.2018.
2.	There should not be change in category of the project from 'B2' to 'B1' or 'A' due to proposed modernisation or expansion.	The project remains category 'A' after the proposed expansion.
3.	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-à-vis the area mentioned in the EC, based on which public hearing has been held earlier.	The project doesn't involve in any additional land acquisition or forest land diversion and no increase in lease area with regard to mining. The Mining lease area remain 3177.171 ha.
4.	The proposed expansion shall not be more than 50% 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 proposed expansion is below 50% i.e. 20% equals to 5 MTPA (increase from 25 to 30 MTPA).
5.	Predicted environmental quality parameters arising out of proposed expansion / modernization shall be within the prescribe norms and the same shall be maintained as per prescribe norms.	The environmental quality parameters for proposed expansion are slight more than the prescribe norms.
6.	The proposed expansion should not result in reduction in the 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%	The project proponent informed that there will not be any reduction of greenbelt area and the PP promised that the greenbelt will be more than 33%.
7.	The project expansion proponent should have satisfactory complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing / consultation proceeding and also the	The project proponent submitted the certified compliance report vide letter dated 19.04.2022 wherein it has been observed that many conditions are not complied, particularly in context of SPA.



	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.	
8.	Public Consultation shall be undertaken [if applicable as per table below] by obtaining response in written, as per Para 7 III (ii) (b) of EIA Notification-2006, except those category of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments.	No public consultation is required for expansion up to 20% in production capacity.
9.	Effluent monitoring including air quality monitoring system as specified in the existing EC, if stipulated, should have been installed.	<p>The project proponent submitted that the Effluent and air quality are regularly monitored as per the EC and standard guidelines. The reports are regularly submitted to SPCB and IRO, MOEF&amp;CC, Bhopal and other authorities.</p> <p>The Jayant project has installed a Continuous Ambient Air Quality Monitoring System in its lease area. The reports are regularly submitted to SPCB and CPCB.</p>

*37.1.4 The EAC, after deliberation observed that instant proposal is applied for expansion of Jayant Opencast project in Singrauli Coalfields under Ministry's OM dated 11.04.2022. The Committee noted that though there is no increase in mine lease area and involvement of forest land but other criteria mentioned in OM dated 11.04.2022 are not completely complied by the project proponent in terms of compliance of major condition for CHP with belt conveyor and green belt.*

*While discussing the compliance report of IRO dated 19.04.2022, the Committee noted that the CHP of 15 MTPA capacity is still under construction, which was stated to be completed another 8 months as per the submission of PP. However, PP failed to submit the clear cut timeline and contractor hired for the purpose has already slipped the timeline. Therefore, the committee emphasized to complete the work of CHP as early as possible as this condition was already stipulated in EC and being considered as major non-compliance. The committee mandatorily emphasized to implement prior to taking next expansion in view of mine being located in the Singrauli, which is currently in the category of Severally polluted area. It was also noted that the report submitted by MPCB to CPCB on "action plan for Severely Polluted Area Singrauli (MP, PART)" has highlighted the Northern Coal Limited, Jayant*

*Project, Singrauli, MP as red category. The Committee also emphasized to implement the in-pit belt conveyor system in place of the proposed connecting pucca road.*

*EAC also observed that the concentration of PM10 (at two locations within premises) are far exceeding to the prescribed limits i.e. 406 microgm /m<sup>3</sup> and 477 microgm /m<sup>3</sup> and at another location, the value of PM2.5 has been found to be 101 microgm /m<sup>3</sup>, which indicates that pollution control measures have not been adequately implemented for coal handling and its transport. It was also observed that there is lack of green belt implantation which should be about 30%; however, PP could not depict the coverage of tree plantation during the presentation in the project area (percent form). As per the OM dated 11.04.2022, PP is required to implement the greenbelt more than 33% however, PP is still lacking even to complete the 33% of green belt and non-compliance is also observed in certified compliance report submitted to IRO vide letter dated 19.04.2022.*

*Apart from above, the Committee noted that as per kml file the Ballia Stream joining the Govind Ballav Pant (GBP) Sagar is passing through the mine lease area, However PP was not able to explain the protection measures for Ballia Stream. Therefore, committee desires that PP needs to clarify whether this particular stream is a source stream or tributary of a river. The Committee opined that during the course of mining the project proponent shall not be allowed to divert or damage any source stream or tributary of river. The Committee has also taken a note on the operational status of STP & utilization of treated waste water for sprinkling in polluted area. In this regard, the committee desired to know the status of operation or upgradation of STP as defined in the State Action Plan.*

*In view of the above, the Committee destined that the project proponent should submit the following details: -*

- (i) In view of the Severely Polluted Area (Singraulli), PP needs to submit the application of expansion of production only after achieving 90% weighted physical progress of CHP/belt conveyor work as given in existing EC.*
- (ii) PP also needs to work out the coal evacuation /transportation plan within the mine lease area and outside the mine with mechanized system. Accordingly, PP needs to come with adequate presentation for existing and proposed transportation routes along with mitigation measures required due to selective road transportation. A proper tabular form incorporating quantity of coal and mode of transportation from one location to another with defined transportation route shall be provided.*
- (iii) PP needs to submit a clarification on the need of diversion Ballia stream flowing within mine lease area and submit its plan for protection.*
- (iv) PP needs to submit the adequate action plan for pollution control measures with the budgetary allocation as the Mine lease area falls in the severally polluted area of Madhya Pradesh.*
- (v) PP needs to submit the certified action taken report from Integrated regional office of MoEF&CC for the non-compliance points as observed by IRO.*
- (vi) PP needs to take the immediate pollution mitigation measures for reduction of PM10 and PM2.5 levels as observed within in Mine lease area and submit the same with one-month air quality data*

*in the said location.*

- (vii) *The PP shall submit the operation status or upgradation of STP and upgradation, if any as per the State's Action Plan.*

*The proposal is accordingly **returned** on above lines*

### **Agenda No. 37.2**

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

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

**37.2.1** The proposal is 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).

**37.2.2** 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 64E/7 & 64E/8 and is bounded by the geographical coordinates ranging from Latitude: 23° 14' 21" N to 23° 15' 37" N, Longitude: 81° 18' 48" E to 81° 20' 28" E.
- (ii) Coal linkage of the project is proposed for commercial sell of Coal.
- (iii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (iv) Employment generation, direct employment to 725 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) Terms of Reference granted on (for EC proposals): On the environmental clearance front, the coal mine had received a Terms of Reference on 23.5.2013 vide letter no. J-11015/280/2010-IA-II (M). The EIA/EMP was prepared based on the baseline data collected for summer season. Public hearing was held on 27.08.2013 Sahapur East underground Coal project was recommended for Environment Clearance previously for production capacity of 0.7 MTPA vide letter no. J-11015/280/2010-IA.II (M) dated 08.07.2014 in favour of the prior allottee M/s National Mineral Development Corp Ltd. with the specific condition which states that 'The formal environmental clearance will be issued only after the Stage-I clearance for the forest land involved in the project has been obtained and submitted. For the purpose, a maximum time limit

of one year will be provided to the proponent during which the project will be kept in abeyance'. The EC has not been formally granted. Before granting the final Environmental Clearance, the Sahapur East coal block was de-allocated by Hon'ble Supreme Court of India vide their Judgement dated 25.08.2014 and as per Ministry of Coal promulgated The Coal Mines (Special Provisions) Ordinance, 2014 notification the said coal block was cancelled.

- (vii) The ToR letter was issued on 22.11.2021 for capacity of 0.6 MTPA in mine lease area of 594.401 ha. Amendment in ToR regarding change in mine lease was granted on 16.12.2021, 12.05.2022 and 28.06.2022
- (viii) Total mining lease area as per block allotment is 659 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Ministry of Coal on 27.12.2012
- (ix) The land usage pattern of the project is as follows:

**Pre-mining land use details**

(Area in Ha)

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	522.794	--	522.794
2	Forest Land	12.733	--	12.733
3	Wasteland	0.000	--	0.000
4	Grazing Land	5.995	--	5.995
5	Surface Water Bodies	27.544	--	27.544
6	Settlements	60.071	--	60.071
7	Others (Specify)	29.863 (Govt Land – 18.745 Cremation ground – 2.015 Road – 9.002, Khal Khaddar – 0.101)	--	29.863
	Old Excavation Area (East Quarry)		--	
	Old Excavation Area (West Quarry)		--	
	Old OB Dumps		--	
	Roads & Mine Infrastructure		--	
	R & R Colony		--	
	Staff Colony		--	
	Green Belt		--	
	Balance Area		--	
	Total Project Area =	659	--	659

## Post Mining

S.N.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump	--	--	--	--	0.00
3.	Excavation	--	--	--	--	0.00
4.	Roads	1.998		2.17	--	4.168
4.	Built up area	6.352	0.40	2.70	--	9.752
5.	Green Belt	--	--	--	--	--
6.	Undisturbed Area	--	--	--	642.88	642.88
7	Nala diversion	--	2.20	--	--	2.20
	TOTAL	8.350	2.60	4.87	642.88	659

- (x) Total geological reserve reported in the mine lease area is 63.363 MT with 51.49MT mineable reserve. Out of total mineable reserve of 51.49MT, 22.187 MT are available for extraction. Percent of extraction is 35.01%.
- (xi) 5 seams with thickness ranging from 1.20m to 5.94 m are workable. Grade of coal is G8, while gradient is 1° to 2°.
- (xii) Method of mining operations envisaged by underground board and pillar method.
- (xiii) Life of mine is 34 years.
- (xiv) The project has 02 external OB dumps in an area of 0.5 ha with 5m height and 17000 Mm<sup>3</sup> of OB. No internal dumps will be envisaged in the project.
- (xv) Transportation of coal has been proposed by Coal tippers from bunkers/pit head stockpile to stock yards at railway sidings or other nearby destinations.
- (xvi) 12.733 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 12.733 ha of forest land for non-forestry purposes is in process (Proposal no. FP/MP/MIN/147526/2021).
- (xvii) Principal Chief Conservator of Forest & Wildlife, Govt of Madhya Pradesh vide its letter dated 26.09.2022 has stated that project area does not involve any National Park, Eco-sensitive Zone, Tiger Corridor, Elephant Corridor, Biosphere Reserve. It has further stated that project area is at a distance of about 34.53 km from Bandhavgarh Tiger Reserve, Buffer, Eco-sensitive Zone is at 27.08 km and Bandhavgarh-Achanakumar Corridor is 4.67 km.
- (xviii) The ground water level has been reported to be varying between 6.45m to 9.60m during pre-monsoon and between 4.12m to 6.36 m during post-monsoon. Total water requirement for the project is 394KLD.
- (xix) Approval of the Central Ground Water Authority - Not Applicable.
- (xx) Public hearing for the project of 0.70 MTPA capacity in an area of 659 ha was conducted on 13.08.2022 at Primary School, Village Khamariya Khurd, Tehsil-Pali, District –Umariya, Madhya

Pradesh on 13.08.2022 at 11.30 AM a under the Chairmanship of Chief Executive Officer, District Panchayat, Umaria, Smt. Ela Tiwari, as representative of Collector / District Magistrate Umaria and Shri Sanjeev Mehra, Regional Officer of M. P. Pollution Control Board, Shahdol. Major issues raised in the public hearing include providing employment to local people, Infrastructure development of local School and development of green belt in village Khamariya Khurd, Drinking Water Supply in nearby areas, Road Development and maintenance work in Khamariya Khurd, Concern about health of local people, Concern about lower ground water level with the usage of ground water, Filling of nearest ponds with mine water & construction of Stop dams, Development of Sports activity in nearby villages, Providing Solar Street Lighting, and Construction of Community Center. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are as under MoEFCC Office Memorandum dated 30.09.2020

- (xxi) Ghinachunia nalla is flowing within the western boundary of lease. The nallah will be diverted in consultation with the Water Resource Department of the State Government.
- (xxii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted 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.
- (xxiii) No court cases, violation cases are pending against the project of the PP.
- (xxiv) R&R of the PAPs is in progress.
- (xxv) Total cost of the project is Rs. 390 crores. Cost of production will depend on market demand. CSR cost will be proposed after public hearing in Final EIA report as per OM dated 30th September 2020 vide letter no. F.No. 22-65/2017-IA.III by MOEF & CC budget allocation for CER., R&R cost is N.A. Environment Management Cost is Rs. 22 Cr.

### **37.2.3** The committee observed the following during EAC meeting:

- (i) The Committee observed that the following TOR and its amendment vides Letter No. J-11015/280/2010-IA-II (M):
  - a) The ToR letter was issued on 22.11.2021 for capacity of 0.6 MTPA in mine lease area of 594.401 ha.
  - b) The Amendment in ToR was issued on 16.12.2021 for capacity of 0.7 MTPA in mine lease area of 659 ha.
  - c) The 2<sup>nd</sup> Amendment in ToR was issued on 12.05.2022 for capacity of 0.6 MTPA in mine lease area of 619 ha.
  - d) The 3<sup>rd</sup> Amendment in ToR was issued on 28.06.2022 for capacity of 0.7 MTPA in mine lease area of 659 ha.
- (ii) The baseline data encompassing air, water, noise, soil, ecology & biodiversity and socio economic has been generated from December, 2020 to February 2021.
- (iii) Public Hearing on 28.07.2022 at Shahdol district & on 13.08.2022 at Umaria district, Madhya Pradesh since the project area lies in two district for production capacity of 0.70 MTPA in MLA of 659 Ha. During the PH major issues raised to provide employment to

local people, Infrastructure development of local School and development of green belt in village, environmental pollution, ground water extraction, to release water in senduri drain and Narwar drain so that farmers can get help, medical system for health, providing pension facilities to land of people above 50 years on acquisition of their land, construction of traffic roads, creation of water harvesting facilities in the villages, implementation of water treatment plant, construction of culvert in village chuniya.

- (iv) PP has submitted the proposal on PARIVESH vide proposal no. FP/MP/MIN/147526/2021 to obtain the FC (Stage-I) for the Forest land of 12.733 ha involved in the Mine lease area of 659 ha.
- (v) Online application has been submitted to Central Ground Water Authority (CGWA) is in process.
- (vi) The Committee observed that the mining plan has been approved vide letter No. 13016/31/2010-CA-I dated 27.12.2012 for the total mining lease area of 659 ha.
- (vii) The Committee observed through kml file that the Ghinachunia Stream or Nala is passing through the Mine lease area, and the committee has not allowed diverting the Stream or Nala.
- (viii) The Committee observed that the Peacock (*Pavo cristatus*) and Tiger (*Panthera Tigris*) found within the study area of Shahdol & Umaria District. Conservation plan for the said Schedule I species of 7.8 Crores i.e. 2% of total project cost has been submitted to PCCF, Bhopal vide dated 22.09.2022 with budgetary provision to protect these species.

*37.2.4 The EAC, after deliberations noted that instant project is a greenfield underground coal mine. All EAC members have appreciated the effort made by the project proponent for showing the recorded video of Mine lease area by using the drone technology. The project has conducted public hearing on 28.07.2022 and 13.08.2022 in two districts since the project area lies in two districts, wherein the major issues raised to provide employment to local people, Infrastructure development of local School and development of green belt in village. Finding sufficient barren land in mine lease area, the Committee emphasized to setup the solar power plant on the Barren land area as well as outside the premise based on its viability.*

*During the course of discussion, committee observed that the Mining plan and Mine Closure Plan has been approved vide letter No. 13016/31/2010-CA-I dated 27.12.2012 (10-year-old) for total mining lease area of 693 ha with 0.7 MTPA capacity, however EIA/EMP is prepared for 659 ha. It was desired that PP shall submit the approved Mine Plan and Mine Closure Plan as per approved ToR for which EIA/EMP has been prepared. The Committee noted that the approved mining lease area as per the mining plan was greater than the granted lease area during the ToR.*

*Further, it was noted that the project proponent has conducted the subsidence study for mitigation/prevention during mine operation for safety purpose. During the presentation, it was noted that some of important structures on the surface of Sahapur East coal block such as habitations of 4 villages (Chunia, Kathotia, Sinduri and part of Khamaria), Ghinachunia nala, a road passing through the southeastern part of the block which connects Shahdol on northeast and Khameria in south west.*

*The Committee noted that a Ghinachunia Stream or Nala is passing through the Mine lease area, the Committee emphasized for not diverting the Stream or Nala in any circumstances.*

*During the course of discussion, it was found that the Bandhavgarh-Achanakmar Tiger Corridor lies at a distance of 4.9 km from the project site. The project proponent has to implement necessary protection measures of the Bandhavgarh-Achanakmar Tiger corridor. The committee also emphasized on water conservation in terms of proper utilization of Ground water and Ground water, which should only be used for domestic consumption. An artificial water pond should be created on the safe surface area for the purpose of Ground water recharge, Agriculture and mining purpose.*

*Subsequently, the Committee observed that the project proponent had submitted the proposal on PARIVESH vide proposal no. FP/MP/MIN/147526/2021 to obtain the FC (Stage-I) for the Forest land of 12.733 ha involved in the Mine lease area of 659 ha. However, Stage-I FC of forest land for non-forestry activity is yet to be obtained.*

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

- (i) PP shall submit the approved Mine Plan and Mine Closure Plan as per approved ToR for which EIA/EMP has been prepared.*
- (ii) PP shall submit proper plan with undertaking to setup the solar power plant in the Barren land area within the premise of MLA as well as outside the premise of MLA and Villages.*
- (iii) PP shall submit undertaking that there shall not be diversion of Ghinachunia Stream or Nalah.*
- (iv) PP shall submit Letter of Intent granted by State Government for conducting mine activity before grant of Mine Lease*
- (v) PP shall clarify the level (i.e. District Magistrate/ADM/SDM etc) of the officer (in this case CEO, District Panchayat, Smt. Ela Tiwari) from the District authority under whom the PH was conducted in Umaria District as per provisions of EIA Notifications, 2006 and its amendments therein.*
- (vi) PP shall submit signed and legible copy of Environment Policy of its company.*
- (vii) PP shall submit the traffic impact assessment considering the size of trucks/dumpers as 40-50 tonnes comparing with lower capacity of fleet and action plan for implementing chute system for loading into trucks shall be submitted.*

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

### **Agenda No. 37.3**

**Pauni Opencast Coal Mining Project of 0.90 MTPA in an ML area of 255 ha M/s Western Coalfield Limited located at District Chandrapur (Maharashtra) - For Amendment in Environmental Clearance - reg.**



**[Online Proposal No. IA/MH/CMIN/293612/2022; File No. J-11015/118/2013-IA-II (M)]**

**37.3.1** The proposal is for amendment in the Environmental Clearance dated 24.12.2014 granted by Ministry to Pauni Opencast Coal Mining Project of 0.90 MTPA in an ML area of 255 ha M/s Western Coalfield Limited located at District Chandrapur (Maharashtra) for reduction in area from 255 ha to 239.58 ha.

**37.3.2** The EAC during deliberation noted the following:

Earlier, The Environmental Clearance for the expansion of Pauni opencast from 0.72 to 0.90 MTPA in the Mine lease area of 255 ha granted vide letter No. J-11015/118/2013-IA.II (M) dated 24.12.2014.

Project proponent has requested to MoEF&CC vide letter dated 03.11.2022 for amendment in EC letter dated 24.12.2014 to reduce the Mine lease area from 255.0 ha to 239.58 ha that is reduction of 15.42 ha of land based on the approved mining plan for 1296.42 ha of Gauri-Pauni expansion OC Phase – I since the said area is proposed to be used in Pauni II Expansion project in future.

Mining Plan (with built-in Mine Closure Plan) for Gauri Pauni Expansion OC Phase – I has been approved by competent authority (i.e. WCL Board) for production capacity 3.5 MTPA within land area of 1296.42 ha (1291.42 ha Mining lease and 5 ha for resettlement of Pauni Village) in its 345th meeting held on 19.09.2022 and communicated vide resolution no. WCL/Office of CS/BM-345/2022-23/454 dated 20.09.2022.

During the presentation it was noted that the proposed mine lease area after amalgamation will be 1296.42 Ha which involves **239.58 ha of Pauni OC**, 676.53 ha of Gauri-I & II OC (239.58+676.53=916.11) and 380.31 Ha of additional land (375.31 Ha -within ML area and 5.0 Ha - Outside ML area).

*37.3.4 The EAC, after deliberation observed that the instant proposal is only for reduction in mine lease area of Pauni OC since major portion of Pauni OC shall be amalgamated in Gauri Pauni OC project. It was also observed that the Pauni OC Mine was already exhausted in FY 2020-21 and consequentially the project proponent has separately proposed for amalgamation with existing adjacent Gauri I & II (A) OC through different proposal.*

*Based on the above discussion, EAC **recommended** for the amendment in the Environmental Clearance for Pauni opencast mine vide letter dated 24.12.2014 to reduce the Mine lease area from 255.0 ha to 239.58 ha i.e reduction of 15.42 ha of land for the correction of records and for the requirement of the approved mining plan for 1296.42 ha of Gauri-Pauni expansion OC Phase – I of M/s Western coalfield Limited, located at District Chandrapur, Maharashtra, under the provisions of EIA Notifications, 2006 and its amendments therein.*

**Agenda No. 37.4**

**Amalgamation with expansion of Gauri- Pauni Open Cast Mining Project for increase of production from 3.40 MTPA (2.50 + 0.90) to 3.50 MTPA with increase in Mine Lease area from 916.11 ha (676.53 + 239.58) to 1296.42 ha (1291.42ha + 5 ha) of M/s Western Coalfields Limited located at Villages Gauri & Pauni, Taluka Rajura, District Chandrapur, (Maharashtra) – For Reconsideration of Environmental Clearance- reg.**

**[Online Proposal No. IA/MH/CMIN/284193/2021; File No. J-11015/242/2008-IA. II(M)]**

**37.4.1** The proposal for Environmental Clearance for Amalgamation with expansion of Gauri - Pauni Open Cast Mining Project for increase in production capacity from 3.40 MTPA (2.50 + 0.90) to 3.50 MTPA with increase in Mine Lease area from 916.11 ha (676.53 + 239.58) to 1296.42 ha (1294.42 + 5) of M/s Western Coalfields Limited located at Villages Gauri & Pauni, Taluka Rajura, District Chandrapur, (Maharashtra).

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

Earlier, the project was considered and deliberated by EAC in 34<sup>th</sup> meeting held on 23<sup>rd</sup> August, 2022 and in 36<sup>th</sup> meeting held on 20<sup>th</sup> and 21<sup>st</sup> October, 2022 for grant of Environmental Clearance of Gauri – Pauni Open Cast Mining project and the proposal was deferred for want of additional information. The compliance was submitted by project proponent on 04.11.2022 and accordingly is being considered by EAC in its 37<sup>th</sup> meeting held during 17 - 18 November, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

Sr. No.	Observation of EAC	Reply of Project Proponent
1	The EAC, after deliberation observed that instant proposal is for expansion in capacity from brown field opencast coal mining project by merging two ECs of Gauri OC and Pauni OC. <b>The project falls under critically polluted area of Chandrapur having CEPI Score of 76.41.</b>	The project proponent has submitted that both Gauri OC and Pauni OC mines are outside the Critically Polluted areas of Chandrapur as per the report published by Maharashtra Pollution Control Board (MPCB) in July' 2020.  PP has submitted the clarification from Maharashtra Pollution Control Board vide its letter No. MPCB/SROC/617/2022 dated 24.11.2022. It has been stated that MIDC Chandrapur, MIDC Tadali, Ghuggus, & Ballarpur Area is covered under Critically Polluted Area as per CEPI. M/s WCL Ballarpur OCP and WCL Ballarpur Colliery Pit 3 & 4 falls under CPA of Ballarpur region.

		Further, M/s WCL Sasti Expansion OCP, Gauri Deep OCP, Gouri-I & II (A) OCP, Pauni OCP & Pauni II OCP does not fall under Critically Polluted Areas of Ballapur region.
2	The Committee noted that the project area for the Pauni OC has been reduced from 255 ha to 239 ha; however, PP did not take amendment of earlier EC of Pauni OC, which mandatorily required as extant rules of EIA, Notification, 2006. Therefore, EAC advised <b>PP to first take amendment of the existing Environmental Clearance granted vide letter No. J-11015/118/2013-IA.II (M) dated 24.12.2014</b> regarding the expansion of Pauni opencast from 0.72 to 0.90 MTPA in the Mine lease area of 255 ha. Subsequently, PP may apply the merger of two Environmental Clearance i.e Gauri I & II, Pauni OCP.	The project proponent informed that the Environment Clearance was accorded for Expansion of Pauni Opencast for increase in production capacity from 0.72 MTPA to 0.90 MTPA in an ML area of 255.0 ha, located at district Chandrapur, Maharashtra by MoEF&CC under para 7 (ii) of EIA Notification, 2006 vide letter no. J-11015/118/2013-IA.II (M) dated 24.12.2014. The project area for the Expansion of Pauni OC has been reduced from 255.0 ha to 239.58 ha based on the Approved Mining Plan of Gauri Pauni Expansion OC Phase-I (involving land area of 1296.42 Ha). Application for amendment in EC letter dated 24.12.2014 has been submitted on PARIVESH portal vide dated 03.11.2022.
3	Further, it has also been noted that there was concerns raised during Public Hearing regarding flooding in villages due to diversion of nallah/streams and damage of agricultural field due to siltation. EAC desired that PP should clarify in detail about addressing this concerns with mitigation measures	The project proponent informed that the flooding, damage of agriculture field due to siltation did not occur due to diversion of any nallah or stream. There was rainfall of 264 mm on 22.07.2021 which was highest in last 20 years and was unprecedented. However the flood water was there for short period only and WCL had extended all possible help including evacuation and providing shelter and food.
4	Also, PP also need to clarify how many streams/nallah have already been diverted on KML file and specify whether any information was earlier submitted to the Ministry for taking approvals.	The project proponent informed that two nallahs (Pauni Nallah and Chincholi Nallah) passing over the coal bearing area of Pauni OC and Gauri I & II (A) OC respectively, had been diverted.
5	Besides, mode of transportation of coal from mine with route and quality of road being used to be submitted in detail in context of public hearing issues raised by local people	The project proponent informed that as per the approved Mining Plan, the Mode of transportation of Coal from Mine is Road and Rail. From the mine pit coal will be transported to the Ballarpur Railway by totally blacktopped road covering a distance of

		about 10 km. this road passes entirely within WCL lease area.	
		Regarding the Quality of road, following is submitted	
		Sl. No	Description
		1	Type of Road Bitumin
		2	Location Gouri CHP to Ballarpur Siding
		3	Length of Road About 10 km
		4	Width of Road 7 m
		5	Cross section details Bitumen – 75 mm MPM – 75 mm WBM – 75 mm WBM 2 – 75 mm

**37.4.3** *The EAC after deliberations noted that as per “Revised Action Plan for Industrial Cluster in Critically Polluted Areas - Chandrapur” Published by Maharashtra Pollution Control Board (MPCB) in July’ 2020, the project area lies outside the critically polluted area. Also, PP has submitted the proposal for reduction of mine lease of Pauni OCP as desired by EAC is being recommended separately vide agenda item no 37.3. The Committee also observed that two nallahs (Pauni Nallah and Chincholi Nallah) had already been diverted, which were passing over the coal bearing area of Pauni OC and Gauri I & II (A) OC respectively. However, the Committee emphasized that no Stream/Nallah shall be diverted at least for next 5 years. EAC advised that the project proponent should have dedicated annual maintenance plan for diverted Nallah, specifically for silt management. During the EAC meeting the committee also emphasized the project proponent to develop the dedicated coal corridor in order to ease the transportation.*

*In view of the above, EAC **recommended** the proposal for grant of Environmental Clearance for the Amalgamation with Expansion of Gauri - Pauni OC mining Project with the increase in production capacity from 3.40 MTPA (2.50 + 0.90) to 3.50 MTPA and increase in Mine Lease area from 916.11 ha (676.53 + 239.58) to 1296.42 ha (1291.42 ha & 5.00 ha outside boundary for village rehabilitation) of M/s Western Coalfields Limited located at Villages Gauri & Pauni, Taluka Rajura, District Chandrapur (Maharashtra), under the provision of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- (i) The project proponent shall obtain Consent to establish and operate from the State Pollution Control Boards for the proposed peak capacity of 3.5 MTPA (Peak) prior to commencement of the increased production.*

- (ii) *PP shall implement conveyor system with silo loading facility till railway siding within 3 years (March-2025) as committed by PP with Sasti OCP and No road transportation shall be allowed beyond this time; accordingly, SPCB shall not grant CTO for road transportation.*
- (iii) *PP to install a continuous air quality monitoring station at suitable location in consultation with SPCB with 9 months and data so generated shall be displayed to company main gate. Data so generated shall be linked with SPCB/CPCB website.*
- (iv) *PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size till Rapid loading sytem and conveyor belt system is commenced (i.e. till March, 2025).*
- (v) *All previous Environmental Clearances issued by Ministry for this project shall be read with instant EC and applicable with this conditions.*
- (vi) *PP to obtain IRO certified post closure plan for excluded area of 15.42 ha (After reduction from 255 ha to 239.58 ha).*
- (vii) *PP shall install sand/aggregate segregation plant for suitable capacity to extract sand and construction aggregate within 2 years of issue of this letter.*
- (viii) *Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles*
- (ix) *PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc.*
- (x) *No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.*
- (xi) *PP shall pay to farmers of agricultural land if there is any loss due to pollution/damange due to blasting activity found by concerned District Commissioner as per extent rules or norms*
- (xii) *PP to prepare annual maintenance plan for diverted Stream/Nallah, and implement specifically for silt management to maintain the flow of stream.*
- (xiii) *PP shall complete all non-compliance/ partial compliance in one year and the action taken report shall be submitted to Regional Office of the MOEF&CC.*
- (xiv) *PP shall submit a third party assessment of EC Compliance shall be undertaken once in three years through agency like ICFRI/ NEERI/IIT or any other expert agency identified by the Ministry to Ministry's Regional Office.*
- (xv) *Continuous Monitoring at Occupational safety and health hazards and the Corrective action need to be ensured.*
- (xvi) *Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- (xvii) *Project proponent to plant 100,000 nos. of native trees with broad leaves along the villages and 50,000 nos of native trees along transportation route to prevent the effect of air pollution in 2 years. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.*
- (xviii) *PP shall divert the PWD road connecting Sakhri Village to Gauri Village (about 4.5.00 km) after taking consent from Gram Panchayat for alternate road (nearest available route). PP shall contribute in the fund for alternate road and maintenance charges of this road shall also be spent by M/s WCL.*

- (xix) *The Project Proponent should submit the detailed plantation plan in tabular format (year wise for entire life of mine) with proper capital and recurring cost. PP shall undertake the adequate plantation with the seedling of 10 ft height with at least 90% survival rate and the plantation shall be completed within 3 years from the start of mining operations. The casualties of each year shall be replaced every year with new saplings and such number of saplings shall not be counted in the number of saplings proposed to plant in that year.*
- (xx) *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.*

### **Agenda No. 37.5**

**Expansion of Garjanbahal OC mine for increase in production capacity from 13.0 MTPA to 15.6 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 Amendment in Environmental Clearance letter dated 14.02.2022 reg.**

**[Online Proposal No. IA/OR/CMIN/268128/2022; File No. J-11015/159/2015- IA-II (M)]**

**37.5.1** The proposal for amendment in Environmental Clearance vide letter dated 14.02.2022 for Expansion of Garjanbahal OC mine for increase in production capacity from 13.0 MTPA to 15.6 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).

PP is requesting for amendment in existing EC condition regarding extending the timeline for in-pit belt conveyor system, silo loading system and allowing road transportation and transportation of coal through village road, being given as specific condition no iv, vii, xii and xiii.

**37.5.2** The Committee during the EAC meeting observed the following:

- (i) EAC observed that the Project proponent requested to MoEF&CC vide letter dated 07.06.2022 for amendment in specific condition no. (iv), specific condition no. (viii), specific condition no. (xii) and specific condition no. (xiii) of the EC letter dated 14.02.2022. The specific conditions are as follows for amendment:
- a) Specific Condition (iv): PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed after December, 2022 and accordingly, SPCB shall not grant CTO for road transportation after December, 2022.

- b) Specific Condition (viii): PP should not transport coal through road passing through any village and further ensure that its consumers of coal are also not using village road and passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.
  - c) Specific Condition (xii): PP shall commence Rapid loading system with conveyor belt system by December, 2022 and no road transportation shall be carried out by road towards Sardega siding after December, 2022.
  - d) Specific Condition (xiii): PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size till Rapid loading system and conveyor belt system is commenced (i.e. till December, 2022).
- (ii) The following ECs were obtained vide Ministry's letter no. J-11015/159/ 2015.IA. II (M) for Mine lease area of 653.83 Ha by M/s Mahanadi Coalfields limited:
- a. The EC was granted vide letter dated 09.11.2017 for production capacity of 13.0 MTPA under EIA Notification 2006.
  - b. The EC was granted vide letter dated 14.02.2022 for increase in production capacity from 13.0 MTPA to 15.6 MTPA under Ministry's OM dated 15.09.2017.
- (iii) Mining plan (including Progressive Mine closure plan) has been approved by MCL Board on 16.10.2021.
- (iv) Life of mine is 12 years (from 2021-22).
- (v) Stage II FC has been obtained for 88.90 ha of forest land vide letter no: 8-11/2015 dated 06.03.2018.
- (vi) 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.

**37.5.3** *The Committee, after deliberations observed that Ministry had issued the Environmental Clearance to Garjanbahal Project under OM dated 15.09.2017 as per clause 7 (ii) of EIA Notification, 2006. Earlier, EC for production capacity of 13 MTPA was granted on 09.11.2017 as per the normal procedure of EIA, Notification, 2006 wherein EIA-EMP was prepared along with public hearing. Subsequently, PP had obtained expansion of EC under the OM dated 15.09.2017 for production capacity from 13 MTPA to 15.6 MTPA (Increase in 20% production capacity) on 14.02.2022. This EC dated 14.02.2022 was granted with condition as PP could not implement the condition of inpit belt conveyor as mandatory condition given in the earlier EC dated 09.11.2017.*

*In the above background, the committee noted that the condition of inpit conveyor with silo loading facilities has been the primary criteria for granting expansion under OM dated 15.09.2017. It is pertinent to mention that all these ECs shall have to comply with the conditions of implementing the mechanized system of coal transportation on which PP had failed to implement. In the expansion of EC (i.e 20% expansion) after the promise by PP, the conditions were stipulated to expedite the implementation of conveyor system within a given timeline i.e December 2022. In the present amendment, PP is rather requesting to allow the road transportation without giving concrete plan for implementing the belt conveyor system.*

*The Committee finally noted that the project proponent has not made serious efforts to comply the specific condition no. (iv), (viii), (xii) and (xiii) of the EC letter dated 14.02.2022 after gaining the advantage of said OM. The Committee expressed displeasure for not making sincere effort in timely complying the EC conditions. The committee emphasized to submit the complete compliance of all ECs in order to protect the environment. The committee advised PP that the proponent should proactively implement the in-pit conveyor system with silo loading facility and reduction of fleet size till rapid loading system as much as possible.*

*The committee opined that giving relaxation of road transportation upto December 2023 seems to be unrealistic without having concrete timeline. The Committee emphasized that PP must take efforts to implement the condition of in-pit conveyor without any delay and submit the micro level plan of its implementation in next 6 months with undertaking. PP to rework with the contractor who is supposed to complete the work. Regarding deployment of 40-50 tones dumper, it was advised to submit the detail list of contractor employed for widows/defense personal with number of trucks and its tonnage and also information of trucks being used by other private players of low capacity. The committee advised to rework their contract agreement to comply with EC condition.*

*In view of the above, the project proponent shall submit the following details: -*

- (i) PP shall submit the list of contractors employed with their details such as Defense/widows/other private players etc. using low capacity trucks against the total numbers and worked out the use of higher fleet size.*
- (ii) PP shall submit detailed action plan along with legal undertaking to comply the conditions of in-pit conveyor system with further squeezed timeline.*

*In view of above, the project was **deferred** for submission of observation.*

### **Agenda No. 37.6**

**Gare-Palma IV/4 Coal Block of Capacity 1 MTPA of M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh) – 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)]**

**37.6.1** The proposal for amendment in Environmental Clearance dated 24.05.2019 for Gare-Palma IV/4 Coal Block of Capacity 1 MTPA of M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh).

PP has requested to restructuring of mining operation for Opencast mine from 0.56 MTPA to 0.84 MTPA and for Underground Mine from 0.44 MTPA to 0.16 MTPA within same mine lease area by keeping same production capacity.



**37.6.2** The Committee during the EAC meeting observed the following:

- (i) The EAC observed that the Project proponent requested to MoEF&CC vide letter dated 18.10.2022 for amendment in EC letter dated 12.03.2013 regarding the 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 as per the granted Environmental Clearance.
- (ii) The revised Mine lease area of 701.512 ha.
- (iii) As per the documents, Kelo river and Bendranala found in the Mine lease area and shall not be diverted.
- (iv) This was a violation case for excess production during the year 2009-2010. The credible action has been taken against the project proponent.
- (v) The following ECs, EC amendment and EC transfer were granted:
  - a. The EC was obtained for Usha underground coal mine project by M/s Jayaswals Neco Limited vide letter no. J-11015/11/2002-IA.II (M) dated 09.03.2004.
  - b. The EC was obtained for Usha Opencast cum underground coal mine project by M/s Jayaswals Neco Limited vide letter no. J-11015/11/2002-IA.II (M) dated 31.12.2007.
  - c. The EC was obtained 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.
  - d. Transfer of EC for Gare IV/4 Coal Mine Project 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.
  - e. 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.
- (vi) The FC had been obtained for 419.887 hectares vide dated 09.06.2003, however 183.334 ha of forest land was surrendered. Therefore, the revised forest land within the ML area is 236.553 Ha which was approved by MOEF 8 -112/2002-FC vide dated 20.04.2010.
- (vii) Transfer of FC for Gare IV/4 Coal Mine Project for 419.887 ha of forest land for coal mining from M/s Jayaswals Neco Industries to M/s Hindalco Industries Limited.
- (viii) ToR was granted 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. J-11015/183/2010-IA.II (M) dated 08.01.2020.

**37.6.3** *The Committee, after deliberations observed that the Project proponent has submitted the proposal for amendment in EC dated 12.03.2013 regarding the 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 (i.e. increase in production capacity from opencast method and reduction in underground capacity) with mine lease area of 701.512 ha as per the granted Environmental Clearance. Earlier, PP*

*has obtained similar amendment in EC on the principle of increasing the capacity from opencast and reduction from underground with overall capacity remaining as of EC capacity.*

*During the discussion, it was observed that the EC was granted on 12.03.2013 for mine lease area of 701.512 ha while during the presentation the project proponent has presented for the increased mine lease area of 885.525 ha. It was opined that the project proponent should address the discrepancies in the Mine lease area through an authentic map. During the presentation, EAC noted the statement of PP that the “Underground operations are not sustainable due to developmental phase” and “slow depillaring process as per mining plan”; however, the same needs to justify adequately.*

*EAC observed that due to restructuring of EC capacity for OC and UG as well as change in mining technology will require modified mining plan. However, the project proponent could not submit the same. EAC also observed that the project proponent did not submit the valid CGWA Clearance. Subsequently, EAC noted with observation that the project proponent has 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. J-11015/183/2010-IA.II (M) dated 08.01.2020. The instant proposal itself creates conflict due to grant of ToR proposal on 08.01.2020 (since as per order of Hon’ble NGT in Shivpal Bhagat matter, there shall no conversion of underground mine to opencast in Tamnar and Garghoda Tehsil of Raigarh District, so EAC emphasized to withdraw ToR granted proposal for having more clarity.*

*The Committee after detailed discussion noted that the project proponent also need to submit the details regarding action to be taken by the instant mine in context of the Court order issued vide original application no. 104/2018 (Shivpal Bhagat Vs UOI) and imposition of compensation and status of Appeal in Hon’ble Supreme Court.*

*In view of above, PP shall submit the following details for further compliance: -*

- (i) PP shall submit revised mining plan for restructuring of EC capacity for OC and UG as well as change in mining technology.*
- (ii) PP shall submit the valid CGWA clearance for the dewatering purpose.*
- (iii) Status of Court case regarding action to be taken by the instant mine and reason of compensation levied by Hon’ble NGT.*
- (iv) PP shall submit details of discrepancies in the Mine lease area through an authentic map (885.525 ha or 701.512 ha)*
- (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*
- (vi) 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. J-11015/183/2010-IA.II (M) dated 08.01.2020.*

In view of above, the project was **deferred** for submission of observation.

### **Agenda No. 37.7**

**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 (Chhatisgarh) - For Amendment of Environment Clearance - reg.**

**[Online Proposal No. IA/CG/CMIN/293408/2022; File No. J-11015/410/2013- IA-II (M)]**

**37.7.1** The proposal for amendment in Environmental Clearance granted by Ministry vide letter dated 18.06.2018 for 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 (Chhatisgarh).

The project proponent requested to amend the General condition no. (c) (i) particularly for “***The transportation of clean coal and rejects shall be by rail with wagon loading through silo***” by replacing silo.

**37.7.2** The EAC during deliberation noted the following:-

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*”.

To justify the request, PP has submitted a detailed study carried out by M/s. RCC (Infra) Consultants Pvt. Ltd., Nagpur an approved consultants of South East Central Railways to carry out Feasibility Study for development of proposed silo loading arrangement for existing siding. It has cited many reason wherein the said condition is not feasible to implement.

Conclusion as per their report was as mentioned below:-

- As per existing guidelines of Indian Railways, block rake has to be handled from the siding, Thus, provision of loading silo will require provision of full-length line of minimum 720 m CSL at either end of proposed loading silo, which will act as Pre-Silo and Post-Silo line.
- In addition, as the existing siding is provided with electric traction, an engine reversal line will be a must for reversal of electric engine after placement of inward empty rake on pre-silo line.
- Existing Railway siding is having a R&D line of full-length capacity along with an engine reversal line. Thus, the R&D line will serve as pre-silo line on provision of loading silo, after existing shunting neck.

- The land beyond existing siding premises is agricultural land of farmers which will be acquired for construction of proposed loading silo along with post-silo line.
- This village road crosses the existing siding of M/s NTPC. A road over bridge (ROB) has been constructed across existing road for passing of NTPC siding. Thus, the road is at higher elevation of about 5-6 m from existing track of M/s Hind Energy and Coal Beneficiation India Limited siding.
- Thus, for extending the railway siding of M/s Hind Energy and Coal Beneficiation India Limited beyond existing dead end for having loading silo along with full length Silo outhaul line, this village road has to be crossed. As the road is at higher elevation from existing siding track, it has to be crossed by constructing a ROB, which is prima-facie not feasible techno-commercially. As such, extension of existing siding at dead end side is not feasible and required mechanical loading arrangement through loading silo for Hind Energy and Coal Beneficiation India Limited siding is not technically feasible.

**37.7.3** *The EAC after deliberations, noted that on PP was unable to give the proper justification in the proposed amendment as air quality data with pollution mitigation measures, with and without silo, are not correlated. Also, it was noted that Project Proponent did not comply the EC condition particularly related to the development of three tier greenbelt system with minimum of 30 m width all along the washery area, installation of online monitoring system. Due to lack of proper mitigation measures and non-compliance of the condition for three tier greenbelt development. the monitoring value shown by the project proponent during the presentation was higher for PM10, PM2.5, SO2, and NOx. The Committee emphasized to take immediate action to reduce the pollution in the core zone as well as in the buffer zone of Coal washery area. Further, committee asks the project proponent to explore mechanized conveyor system with chute system in order to reduce the pollution load on environment.*

*The Committee desired that PP should submit a monitoring report (1-month data) with silo and without system linked it with mitigation measures. PP should also monitor and submit the status of the air quality at multiple location of the project area in its buffer zone. Further, Committee requested the project proponent to explore the alternative mechanical arrangement in order to reduce the pollution and improve the work efficiency at site. During the course of discussion, the committee emphasized upon the collection of one month air quality data within the premise and outside the premise of coal washery area.*

*In view of above, PP shall submit the following details for further compliance: -*

- (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.*
- (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.*
- (iii) PP shall submit action plan for installation of Continuous Ambient Air Quality Monitoring Station as such to be implemented in six months.*
- (iv) PP shall submit the action plan and undertaking for plantation along the periphery of the washery.*

- (v) PP shall submit the layout with the current working area of coal washery.
- (vi) PP shall submit the possible implementation plan with the transportation by rail and to install mechanized conveyor system and Telescopic chute system for loading of washed coal in wagons.

In view of above, the project was **deferred** for submission of observation.

### **Agenda No. 37.8**

**Vastan Lignite Mine of 1.2 MTPA in the Mine Lease area of 1536 ha of M/s SLPP-Gujarat Industries Power Company Ltd. located at Village Nani Naroli, Taluka Mangrol, District Surat (Gujarat) – For Terms of Reference (under MoEF&CC’s SOP dated 28.01.2022 -Violation category)**

**[Online Proposal No. IA/GJ/CMIN/401740/2022; File No.: J-11015/40/1995-IA. II(M)]**

**37.8.1** The proposal is for Terms of Reference (MoEF&CC’s OM dated 28.01.2022 for Violation category) for Vastan Lignite Mine of 1.2 MTPA in the Mine Lease area of 1536 ha of M/s SLPP-Gujarat Industries Power Company Ltd. located at Village Nani Naroli, Taluka Mangrol, District Surat (Gujarat). Earlier, the project was considered by EAC in its 36<sup>th</sup> meeting held on 20 - 21 October, 2022 for grant of Terms of Reference under MoEF&CC’s OM dated 28.01.2022 (Violation category) of Vastan Lignite Mining project and the proposal was deferred as project proponent did not attend the meeting.

**37.8.2** The details of project as submitted by project proponent:

- (i) The project area is covered under Survey of India Topo Sheet **No 46 G/3** and is bounded by the geographical coordinates ranging from 21<sup>0</sup>22’ 29.91”N & 21<sup>0</sup> 27’ 01.45” N and Longitude 73<sup>0</sup> 04’ 16.05” E & 73<sup>0</sup> 08’ 13.23” E.
- (ii) Lignite Ore linkage of the project is proposed for Captive use for M/s Gujarat Industries Power Company Limited (GIPCL) 500 MW Thermal Power Plant (Surat Lignite Power Plant) located at village Nani Naroli, District Surat, Gujarat.
- (iii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC’s vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (iv) Employment generation, Direct employment to 905 persons will be provided from the project.
- (v) The project is reported to be beneficial in terms of Environmental, Social, Financial aspects.
- (vi) Total mining lease area as per block allotment is 1536 ha. Mining Plan has been approved by the Government of India, Ministry of Coal, on 15.12.1995. The Progressive Mine Closure had been approved by the Ministry of Coal on 08-07-2014. However, GIPCL has further revised the Mine Closure Plan providing the details pertaining to use of Reclaimed Mining Land and External OB Dump Area for installation of Solar PV Panel Power Plant and accordingly, a revised Mine Closure Plan was submitted to the Ministry of Coal on 11.07.2018 and approval accorded vide

letter no. CPAM-43011/1/2018-CPAM, dated 29/10/2020 w.r.t. Installation of Solar Power Plant on the reclaimed land of backfilled area and on the external dump area.

(vii) The land usage pattern of the project is as under:

**Pre-mining land use details (In Ha):**

Land Use	Within ML Area	Outside ML Area	Total (Ha)
Private Land/Waste Land	1536.00	Nil	1536.00
Forest Land	Nil	Nil	Nil
Total Project Area	1536.00	Nil	1536.00

**Landuse during Mining (In Ha):**

Sr. No.	Description	Land Use During Mining (ha)
1	External OB Dump	210.00
2	Mineral Storage	7.00
3	Excavation Area ( North & South Quarries)	1033.50
4	Roads	10.00
5	Settling Pond + Nallah	4.10
6	Office Complex/Camp	10.00
7	Retaining wall and Garland drain	0.27
8	Plantation ( Green Belt)	200.50
9	Balance Area (Undisturbed Area+ Area under Vastan Village+ Mine lease Area between Canal and Mine Lease Boundary on Western Side)	53.90
	Total Area	1536.00

**Post Mining Land Use (As per Mining Plan and Final Mine Closure Plan for Vastan Lignite Mine) (In Ha):**

Type	Land Use	land use	Land Use (Post Closure)						
	(Proposed)	(End of Life)	Agricultural Land	Plantation	Water Body	Public/ Company Use (Installation of Solar Power Plant)	Forest Land (Returned)	Undisturbed	Total
Excavation Area	716.43								

Type	Land Use	land use	Land Use (Post Closure)						
	(Proposed)	(End of Life)	Agricultural Land	Plantation	Water Body	Public/ Company Use (Installation of Solar Power Plant)	Forest Land (Returned)	Undisturbed	Total
Backfilled Area		533.70		138.26		395.44			533.70
Excavated Void		182.73			182.73				182.73
Top Soil Dump.	22.63	22.63				22.63			22.63
External Dump /surface dump (Temporary)	180.76	180.76				180.76			180.76
Safety Zone	24.54	24.54		24.54					24.54
Haul road between quarries	1.99	1.99				1.99			1.99
Road Diversion.									
Diversion/ Nala / Canal. Below River	12.09	12.09			12.09				12.09
Settling Pond	1.36	1.36			1.36				1.36
Road & Infrastructure area.	39.76	39.76				39.76			39.76
Rationalisation Area.									

Type	Land Use	land use	Land Use (Post Closure)						
	(Proposed)	(End of Life)	Agricultural Land	Plantation	Water Body	Public/ Company Use (Installation of Solar Power Plant)	Forest Land (Returned)	Undisturbed	Total
Garland Drains.	1.53	1.53			1.53				1.53
Embankment.	9.02	9.02				9.02			9.02
Green Belt.	205.54	205.54		205.54					205.54
Water Reservoir Near Pit									
UG Entry.									
Undisturbed / Mining Rights for UG.	320.35	320.35						320.35	320.35
Resettlement.									
Pit Head Power Plant									
Water Harvesting									
Agricultural Land									
Total	1536.00	1536.00	0.00	368.34	197.71**	649.60*	0.00	320.35*	1536.00

\*As per the approval granted from Ministry of Coal vide letter dated 16/04/2021 for the amendment in approved Mine Closure Plan of Vastan Lignite Mine w.r.t. Installation of Solar Power Plant on the reclaimed land of backfilled area/ any other area within the mine lease hold area including external OB/IB dump area, apart from afforestation to the extent possible as per Vastan Lignite Mine requirement.



\*\*Void of about 97.00 Ha in Vastan North and about 80.00 Ha in Vastan South will be converted into water body, which is about 11.50% of total lease hold area.

- (viii) Total geological reserve reported in the mine lease area is 47.70 MT with 36.00MT mineable reserve for Opencast Mining. Percent of extraction is 75.47 %.
- (ix) There are 3 seams with thickness varying from 0.10 m to 11.90 m. The Lignite ore is having a Calorific value = 2600 Kcal/Kg, Ash %=12, Fixed Carbon % = 23, Moisture %=47 and VM % = 22.
- (x) Method of mining operations envisaged is by opencast method.
- (xi) No Objection Certificate (NOC) to abstract Ground Water for Vastan Lignite Mine from Central Ground Water Authority (CGWA), New Delhi was granted by Central Ground Water Authority (CGWA) vide dated 21/10/2021.
- (xii) Balance Life of mine is 4-5 years.
- (xiii) The project has one external OB dumps in an area of 210 Ha in which 85 Mm<sup>3</sup> OB has been accommodated. Till 31-03-2018 197.17 Mm<sup>3</sup> OB has been concurrently backfilled in the worked out area of North Quarry. Further about 82.194 Mm<sup>3</sup> OB shall be generated till the end of mine life which will be dumped internally. The Total quantity of Waste generated will be 364.36 Mm<sup>3</sup> till conceptual plan period.
- (xiv) Total quarry area is 716.43 Ha and proposed to be worked upto a depth of 110 m. After concurrent backfilling at the conceptual stage an area of 177.00 Ha (About 11.50%) shall remain as a void having a depth of 40 m which shall be properly fenced. In future this can be used as a water reservoir.
- (xv) Transportation of Lignite produced is by road from mine pit head to the Lignite Stack yard and from the Lignite Stack yard to SLPP by a Belt Conveyor.
- (xvi) The Reclamation Plan proposed in the Mining Plan and Final Mine Closure Plan for Vastan Lignite Mine envisages Green Belt in an area of 368.34 Ha, a void of 177.00 Ha (About 11.50%), undisturbed area of 320.35 Ha and reclaimed area of 649.60 Ha. The undisturbed area and reclaimed area will be utilized for the installation of Solar PV Panel Power Plant.
- (xvii) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xviii) Total water requirement for the project is 982. 20 m<sup>3</sup>/Day.

**37.8.4** The Committee observed the following during the EAC meeting:

- The EC was obtained for Vastan Lignite Mine vide letter no. J-11015/40/95-IA.II (M) dated 19-06-1996 by M/s SLPP-Gujarat Industries power Company ltd.
- Project Proponent has submitted the proposal for revalidation of its EC based on Ministry's Notification dated 6<sup>th</sup> April, 2018, which was recommended by EAC. However, on further examination, the project was noted to be exceeded the production capacity beyond the EC capacity. The proposal had exceeded the sanctioned production capacity of mine in the year 2009-10 and 2010-11 by 0.0357 and 0.0415 respectively against permissible production capacity of 1.8 MTPA (as per CTO) as well as capacity mentioned in mine plan.

- Accordingly, PP has now submitted the proposal to obtain ToR under SoP for handling violation cases.
- The life of mine is 4-5 years.
- The project proponent was obtained the revise Mine Closure vide letter no. CPAM-43011/1/2018-CPAM, dated 29/10/2020 including the installation of Solar Power Plant.
- The Public Hearing was conducted on 12.03.2013. Further the project proponent had issued the Public Notice through concerned SPCB viz. GPCB on 15/10/2020 in English and vernacular language and further desired exemption in Public Hearing.

*37.8.5 The EAC after deliberations observed that the instant project is being considered under Violation category as per the Ministry's OM dated 28.01.2022 (i.e SOP for handling Violation cases). The proposal had exceeded the sanctioned production capacity of mine in the year 2009-10 and 2010-11 by 0.0357 and 0.0415 respectively against permissible production capacity of 1.8 MTPA (as per CTO) as well as capacity mentioned in mine plan. The EAC during the discussion observed that the project need to revalidate as the previous EC was granted under the EIA notification, 1994 on 19.06.1996 for Vastan Lignite Mine. The EAC emphasized that the project need to prepare Damage assessment report, Remediation plan, Natural & Community Resource Augmentation plan (NCRAP) and the complete compliance report as per the OM dated 28.01.2022.*

*The Committee also noted that the life of mine is 4 to 5 years therefore the project must submit Mine closure plan after approval of concerned authority including scope of generation of renewable energy. PP during presentation requested for exemption of public hearing as the project had already conducted the Public hearing on 12.03.2013 and also invited the public suggestion in 2020 while taking revalidation of EC. The Committee also found that PP would maintain the similar capacity i.e 1.2 MTPA (1.8 MTPA peak), which PP has been operating since beginning i.e 1996. Hence the committee in this background recommended to exempt the Public hearing under Para 7 (ii) of EIA Notification, 2006 but project should go for public consultation by inviting suggestions again after releasing the fresh Public Notice.*

*Based on the above, EAC **recommended** the proposal for grant of Terms of Reference to Vastan Lignite Mine of 1.2 MTPA in the Mine Lease area of 1536 ha of M/s SLPP-Gujarat Industries Power Company Ltd. located at Village Nani Naroli, Taluka Mangrol, District Surat (Gujarat) under MoEFCC's OM dated 28.01.2022 with following specific conditions along with standard conditions under the provisions of EIA Notification, 2006 with exemption of public hearing.*

### **Specific condition**

- PP shall issue public notice in local media, newspapers (English, Hindi and local language Report 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.*
- PP shall submit the action taken report of the Public hearing which was held on 12.03.2013 alongwith issues arising after taking public suggestions.*

- (iii) *PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.*
- (iv) *PP shall assess the damage assessment of environment against the excess production against the quantities for not taking EC/valid EC after the October 2018 till now and accordingly prepare Remediation plan, Natural & Community Resource Augmentation plan (NCRAP) etc.*
- (v) *Certified compliance report of previous EC from Ministry's Regional Office shall be submitted.*
- (vi) *Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- (vii) *The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.*
- (viii) *PP should bring out the awareness campaign to be carried out on various Environmental issues, practical training facility to be provided to the environmental engineer/diploma holders, mining engineer/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.*
- (ix) *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.*
- (x) *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- (xi) *The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.*
- (xii) *Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.*
- (xiii) *The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.*
- (xiv) *The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986.*
- (xv) *PP shall submit legal undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common cause vs Union of India and Ors.*
- (xvi) *In case of violation of above said undertaking to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated, the ToR/Environmental Clearance shall be liable to be terminated forthwith.*

### **Agenda No. 37.9**

**Expansion of Kulda Opencast Coal Mine Project of production capacity of 21 MTPA with an increase in area from 634.205 Ha to 921.305 Ha by M/s Mahanadi Coalfields Limited, located in Ib Valley Coalfields at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) - For Terms of Reference reg.**

**[Online Proposal No. IA/OR/CMIN/401934/2022; File no. J-11015/10/1995-IA-II (M)]**

**37.9.1** The proposal for Terms of Reference for Expansion of Kulda Opencast Coal Mine Project of production capacity of 21 MTPA with an increase in area from 634.205 Ha to 921.305 Ha by M/s Mahanadi Coalfields Limited, located in Ib Valley Coalfields at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha).

**37.9.2** 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 Topo-Sheet No. 64 N/12 & 64 N/16 (RF 1:50000) and is bounded by the geographical coordinates ranging from Latitude- 21o42'00" to 21o44'30" N and Longitude- 83o43'00" to 83o46'30" E
- (ii) Coal linkage of the project: To various Power Plants (Basket linkage)
- (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: 870 manpower will be deployed which will provide direct employment and other near about 2,500 people will also be attracted to an economically resurgent area providing service/education etc.
- (vi) The project is reported to be beneficial in terms of
  1. Contribution to the Exchequer (both State and Central Govt.)
  2. Improvement of Electrical Power Generation and availability of electricity in rural areas.
  3. 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-11015/10/1995-IA. II (M) dated 24.05.2022 for 21.00 MTPA in the mine lease area of 634.205 Ha. The environment clearance to the expansion project is yet to be obtained under EIA Notification 2006
- (viii) Total mining lease area as per block allotment is 921.305 ha. Mining plan (including Progressive Mine closure plan) has been approved by MCL Board on 17.08.2022.
- (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 (Ha)		Outside ML area (Ha)		Total Area (Ha)
		Existing	Proposed	Existing	Proposed	Proposed
1	Agricultural/Tenancy	259.794	99.07	37.500	0.00	396.364

2	Waste land	146.521	26.18	22.900	0.00	195.601
3	Forest Land	219.37	134.69	0.000	0.000	354.06
4	Grazing	0.000	28.68	0.000	0.000	28.68
5	Surface water bodies	0.000	7.00	0.000	0.000	7.00
Total:		625.685	295.62	60.400	0.00	981.705

### Pre-Mining Land Use:

Particulars	Existing			Proposed		
	Forest	Non-Forest	Total	Forest	Non-Forest	Total
Excavation Area	187.155	134.755	321.910	110.92	107.15	218.07
Infrastructure/Embankment and other area including safety zone	36.615	115.178	151.793	9.84	49.28	59.12
External OB dumps	4.120	156.382	160.502	13.93	4.5	18.43
Mine Lease Area	219.37	406.315	634.205	134.69	160.93	295.62
Residential Colony	0.000	37.500	37.500	0	0	0
Rehabilitation site	0.000	22.900	22.900	0	0	0
Outside lease area	0.000	60.400	60.400	0	0	0
Total	219.37	466.715	694.605	134.69	160.93	295.62

\*8.52 Ha forest land has been re-diverted from existing Kulda OCP to Basundhara Washery. Hence, 8.52 Ha has to be subtracted from the infrastructure area of existing lease area.

### Post-Mining land use (Core Zone-Mine Lease Area)

Sl. No.	Land Use during Mining	Land Use (Ha)					
		Plantation/grass carpeting	Water Body	Dip side slope & haul road	Un-disturbed	Public/Company	Total
1.	Excavation Area	393.94	15.76	130.28	--	--	539.98
2.	Infrastructure including Safety Zone (7.5m around mine boundary) and embankment	60.718	--	--	16.191	125.484	202.393
3.	External OB Dump	178.932	--	--	--	--	178.932

	Total	633.59	15.76	130.28	16.191	125.484	921.305
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- (x) Total geological reserve reported in the Kulda Geological Block is 438.90 MT with 360.45 MT (including the depleted reserve) as mineable reserves. 218.63 MT is available for extraction as on 01.04.2022. Percent of extraction is 77.37%.
- (xi) 3 seams with thickness ranging from 0.12-1.84 m & 30.05 to 34.07 m are workable. Grade of Coal is G-13; Stripping ratio is 1.11 while gradient is 50 to 80.
- (xii) Method of mining operations envisages by Opencast Mining by Shovel – Dumper/Ripper-dozer in OB/ parting; Surface miner, pay loader & tipper in coal.
- (xiii) Life of mine is 11 years
- (xiv) The proposed project has two external OB dumps in an area of 178.932 ha with 80-90 m height and 73.00 Mm<sup>3</sup> of OB and one internal OB in an area of 524.22 ha with 255.78 Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total quarry area is 539.98 ha out of which backfilling will be done in 393.94 ha. while final mine void will be created in an area of 15.76 ha of partially backfilled area will remain as final mine void with a maximum depth of 200 m. Backfilled quarry area of 393.94 ha shall be reclaimed with plantation/grass/agriculture. Final mine void will be converted into a water body.
- (xvi) 1) Within the Mine: Truck transportation from mine face to pit top. 2) Surface Coal Transport: The entire blast free coal will feed to proposed Silos to be located at Barpali loop except around 2.0Mty conventionally produced will be catered by the existing Feeder breaker circuits. However, till the commissioning of the proposed MGR Loop at Barpali yard the entire coal will be dispatched through Kanika and Sardega sidings as well as road sale.
- (xvii) Reclamation Plan in an area of 633.59 ha, comprising of 178.932 ha of external dump, 393.94 ha of internal dump and 15.297 ha of green belt.
- (xviii) 354.06 ha of forest land have been reported to be involved in the project. Stage II FC obtained 227.89 ha vide no.- F.No.8-176/1997-FC, Dt.- 08.08.2007 and 8.52 Ha has been re-diverted to Basundhara Washery out of already diverted 227.89 Ha of forest land.
- (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 1.15m to 7.65 m bgl. Total water requirement for the project is 4412 KLD.
- (xxi) Approval of the Central Ground Water Authority has been submitted vides letter no. 21-4/2112/OR/MIN/2018, Dt: - 28.09.2018 for Ground water withdrawal and NoC from CGWA, New Delhi obtained on 09.12.2020.
- (xxii) Public Hearing for the project of 21 MTPA capacity in an area of 921.305 Ha will be conducted and its proceedings will be incorporated in the EIA/EMP.
- (xxiii) Consent to Operate for the existing capacity i.e 19.6 Mty has been obtained vide 3139/IND-I-CON-5125 dated 25.02.2022 valid till 31.03.2023 from the State PCB, Odisha.
- (xxiv) Chhatan Jhor is passing through mine lease area, hence, straightening of Jhor was required. The permission for straightening of Chhatan Jhor, has been granted from State Authority vide

letter no.-2609/ dated 17.12.2019. The Diversion of Chhatan Jhor has already been completed.

- (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.
- (xxvi) No court cases are pending in the court. However, the R&R of all the villages falling in this project area are being carried out under the direction of “Claims Commission” appointed by Hon’ble Supreme Court of India.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under after obtaining EC for 10 MTPA in the year 2002, under the provisions of EIA Notification, 1994 as amended on 04.05.1997 and 10.04.1997. EC for 14MTPA to 21 Mty was granted as per EIA Notification, 2006 and subsequent amendments/circulars. The coal production from the mine was started from the year 2007 onwards. The coal production, realized from the project, from 2007-08 onwards, is as under:

(xxviii)

Year	EC sanctioned capacity (MTY)	Actual Production (MTY)	Excess production beyond the EC sanctioned capacity
2007-08	10.00	0.15	--
2008-09	10.00	2.47	--
2009-10	10.00	3.43	--
2010-11	10.00	5.02	--
2011-12	10.00	5.54	--
2012-13	10.00	5.50	--
2013-14	10.00	5.27	--
2014-15	10.00	4.80	--
2015-16	10.00	8.02	--
2016-17	10.00	10.00	--
2017-18	14.00	10.07	--
2018-19	14.00	12.81	--
2019-20	14.00	13.62	--
2020-21	16.80	15.73	--
2021-22	19.60	18.49	--
2022-23 (up to 14.10.2022)	21.00	10.07	--

- (xxix) The project involves 975 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.

(xxx) The total cost of this expansion project is Rs. 378.52 Crs. Cost of production is Rs.255.59 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.6340Crs. Environment Management Cost is Rs 76.90 Crores.

**37.9.3** The EAC observed the following during the EAC meeting:

- (i) The Project proponent has obtained the following environmental clearance 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 22.03.2018 from 10 to 14 MTPA with Public Hearing. Extension in validity of EC was granted on 28.03.2019 and 10.01.2020.
  - b) EC was accorded by Ministry on 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 provisions of OM dated 15.09.2017 (20% increase- stage-1).
  - c) EC was accorded by Ministry on 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).
  - d) EC was accorded by Ministry on 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. This was stage-3 expansion.
- (ii) The Forest Clearance for 227.89 ha out of total forest land of 354.06 ha was issued vide F.No. 8-176/1997-FC, dated 08.08.2007 and 8.52 Ha was re-diverted to Basundhara Washery out of already diverted 227.89 Ha of forest land.
- (iii) The life of mine is for 3 years from 2021-2022.

**37.9.4** *The EAC after detail deliberations noted that the project involves 354.06 ha of Forest land out of which stage II FC has been granted for 219.37 ha on 08.08.2007 and for the remaining 134.69 ha, forest clearance application has been submitted through proposal no. FP/OR/MIN/50293/2020. EAC, while discussing the forest area, desired that PP shall not divert the 8.5 ha of forest land in the mine lease area of 921.305 ha which is non-coal bearing area. PP should make the provisions to save the forest land area.*

*Basundhara River which is flowing very adjacent to the Boundary of mine lease area and all along the mines of M/s MCL, needs to conserve or save the river and PP should demarcate at least 100m as safe distance from the river and expedite the implementation of River Conservation Plan in consultation with State Government. Further, it was informed that PP to prepare a consolidated plan to conserve the river with keeping precaution that the seepage water shouldn't be directly discharge into the mine lease area.*



Based on the above, EAC **recommended** the proposal for grant of Terms of Reference to Expansion of Kulda Opencast Coal Mine Project of production capacity of 21 MTPA with an increase in area from 634.205 Ha to 921.305 Ha by M/s Mahanadi Coalfields Limited, located in Ib Valley Coalfields at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha), with following specific conditions along with standard conditions under the provisions of EIA Notification, 2006:

- (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 present coal mining operations inviting comments and their redressal.
- (ii) PP shall apply for EC only after commissioning of inpit conveyor system with silo loading facility at Railway Siding.
- (iii) PP shall comply 90% of all previous EC conditions before application for EC and accordingly it should be authenticated/certified in Certified compliance report by IRO's Statement
- (iv) PP shall obtain 5-star rating in terms of Environment Compliance from Ministry of Coal as per rating system implemented by Ministry of Coal
- (v) PP shall submit the Stage-I FC for the remaining forest land of 134.69 ha out of total mine lease area of 921.305 ha.
- (vi) PP shall submit a consolidated plan to conserve the river with keeping precaution that the seepage water shouldn't be directly discharge into the mine lease area.
- (vii) PP shall maintain atleast 100m of safe distance from the river with latitude and longitude after every 100m from one location to another and accordingly Approved Mine Plan should be submitted.
- (viii) PP shall prepare the Mining Plan in such a manner that condition prescribed by EAC shall intact from environment point of view. EIA-EMP shall accordingly be prepared on the suggested stipulation with point-wise compliance & in accordance with recommendations of Mining Plan.
- (ix) 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.
- (x) PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.
- (xi) PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.
- (xii) Inpit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding. No transportation of coal by trucks/dumpers shall be proposed in EIA/EMP.
- (xiii) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- (xiv) Detailed report on comparison of diesel consumption and CO2 emission by using conventional shovel dumper method and surface miner cum shovel dumper (for OB) shall be prepared and submitted.
- (xv) PP shall conduct physical and strength analysis and accordingly propose to install Sand Segregation Plant within certain timeframe.

(xvi) PP shall submit three-dimensional (3D) Modelling of progress of mining activity (stage wise) vis-à-vis impact of extraction of ground water

**Agenda No. 37.10**

**Jawahar Khani Opencast Mine [Amalgamation of JK-5 OC and 21 Incline (Conversion to OC)] with a production capacity of 2.50 MTPA (Peak- 3.75 MTPA) in the project area of 1114.507 ha by M/s The Singareni Collieries Company Limited in Yellandu area, near Villages Sudimalla & Rompaid, Mandal Yellandu, District Bhadradi Kothagudem and Village Usirikayalapalle, Mandal Singareni, District Khammam (Telangana) - For Terms of References- reg.**

**[Online Proposal No. IA/TG/CMIN/403791/2022; File No. 23-257/2018-IA (III)]**

**37.10.1** The proposal is for Terms of References for Jawahar Khani Opencast Mine [Amalgamation of JK-5 OC and 21 Incline (Conversion to OC)] with a production capacity of 2.50 MTPA (Peak- 3.75 MTPA) in the project area of 1114.507 ha by M/s The Singareni Collieries Company Limited in Yellandu area, near Villages Sudimalla & Rompaid, Mandal Yellandu, District Bhadradi Kothagudem and Village Usirikayalapalle, Mandal Singareni, District Khammam (Telangana).

**37.10.2** The EAC, during deliberations noted the following:

Earlier, the project was considered and deliberated by EAC in its 33<sup>rd</sup> meeting held during 25-26 July, 2022 for grant of Terms of References. Accordingly, the proposal was considered by EAC in 37<sup>th</sup> meeting held during 17<sup>th</sup> to 18<sup>th</sup> November, 2022 and was deferred for want of compliance. Subsequently, EAC observed the following during the EAC meeting:

- 1) The project proponent had submitted the 50% work of RP&NCRAP cost pertaining to JK-5 OC Project (Violation Category). The activity wise details mentioned below:

Activity	Activity	Total Cost of Work (Rs.Lakhs)	Cost of Works Completed (Rs.Lakhs)	Amount spent in %
<b>Remediation Plan</b>	Dust suppression	50.00	41.09	82.10
	Avenue Plantation	12.80	8.20	64.00
	RWH Structure	10.00	0.00	0.00
	Supply of potable water RO Plants	37.50	24.45	65.20
	<i>Sub-total</i>	<b>110.30</b>	<b>73.74</b>	<b>66.80</b>

<b>NRAP</b>	Solar LED lights	55.00	43.18	78.50
	Check dams	45.00	0.00	0.00
	<i>Sub-total</i>	<b>100.00</b>	<b>43.18</b>	<b>43.18</b>
<b>CRAP</b>	Community halls	48.00	9.54	19.80
	Godown	45.00	24.47	54.30
	Parks	45.60	12.17	26.68
	<i>Sub-total</i>	<b>138.60</b>	<b>46.18</b>	<b>33.31</b>
<b>PH COMMITMENT WORKS</b> (1% Contribution from capital cost against community welfare activities)	Laying of CC roads	50.00	36.89	73.78
	School building and Community hall	50.00	25.02	50.04
	Open Gym	15.60	15.59	100.00
	<i>Sub-total</i>	<b>115.60</b>	<b>77.50</b>	<b>67.04</b>
<b>Total</b>		<b>464.50</b>	<b>240.60</b>	<b>51.79</b>

2) The PP had submitted the expenditure incurred certification vide letter dated 16.11.2022 for an amount of Rs. 2,40,60,023.54 (Rupees Two Crore Forty Lakh Sixty Thousand and Twenty-Three and paisa fifty-four only).

- The project involved 213.0077 ha of forest land have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980.
- The details of forest land diversions for surface rights are furnished below.
  - i. For Surface Rights - 151.8519 Ha.
  - ii. For Underground Rights - 61.1558 Ha.
- Online application (Proposal No.FP/TG/MIN/49581/2020) was submitted to MoEF & CC on 18.09.2020 for surface rights 151.8519 Ha.
- UG rights were already obtained for 61.1558 Ha:
  - i. vide F.No. 8-54/91-FC(PL), dated 25.07.2008 & valid up to 14.04.2024.
  - ii. vide F.No. 8-260/1985-FC, dated 20.07.2018 & valid up to 31.12.2034.

**37.10.3** The EAC after detail deliberation observed that the instant proposal for amalgamation of 2 mines (i.e. JK-5 OC and 21 incline). Out of these two, JK-5 OC was granted Environment Clearance

by MoEF&CC on 09.06.2022 under violation category. Earlier, the said project did not comply the Remediation Plan, Natural Remediation & Community Resource Augmentation Plan and PP has applied for ToR. But, now PP has completed about 50% of the activities listed in existing EC dated 09.06.2022 and with the commitment to comply 100% activities before grant of Environment Clearance. The committee noted that M/s SCCL is planning to convert their underground mine (21 Incline) to opencast; hence the PP should submit the complete surface detail with proper justification and cost benefit analysis. For transportation of extracted coal, EAC also opined that the closed conveyor belt system for transportation of the coal must be installed before the commencement of the amalgamated mine.

Further, EAC noted that the compliance of violation EC conditions (EC dated 9th June, 2022) granted to JK-5 OCP shall be completed upto 90-100% towards activities committed for Remediation Plan and Natural and Community Augmentation Plan.

Therefore, in view of above, the Committee **recommended** the proposal for grant of Terms of Reference to Jawahar Khani Opencast Mine [Amalgamation of JK-5 OC and 21 Incline (Conversion to OC)] with a production capacity of 2.50 MTPA (Peak- 3.75 MTPA) in the project area of 1114.507 ha by M/s The Singareni Collieries Company Limited in Yellandu area, near Villages Sudimalla & Rompaid, Mandal Yellandu, District Bhadrachari Kothagudem and Village Usirikayalapalle, Mandal Singareni, District Khammam (Telangana) with following specific conditions along with standard conditions under the provisions of EIA Notification, 2006:

- (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 present coal mining operations inviting comments and their redressal. PP should submit the real time aerial footage and video of the Mining lease area made through drone.
- (ii) PP shall carry out drone survey of mine lease area (both mines)
- (iii) PP shall submit the plan for implementation of continuous air quality monitoring station.
- (iv) PP shall apply for EC only after compliance of earlier EC conditions upto 90% (including 90-100% compliance of Remediation Plan and Natural and Community Augmentation Plan) and the same shall be certified by Ministry's IRO.
- (v) PP shall obtain 5-star rating in terms of Environment Compliance from Ministry of Coal as per rating system implemented by Ministry of Coal.
- (vi) PP shall prepare the Mining Plan in such a manner that condition prescribed by EAC shall intact from environment point of view. EIA-EMP shall accordingly be prepared on the suggested stipulation with point-wise compliance & in accordance with recommendations of Mining Plan.
- (vii) PP shall submit the Stage-I FC for the forest land of involved in total mine lease area.
- (viii) PP shall prepare progressive mine closure plan from remediation and reclamation point of view for mine lease area.
- (ix) PP shall prepare adequate EMP addressing the issues raised in the last public hearing including redressal of public comments arising from public notices and provide sufficient budgetary provision to implement the plan.

- (x) *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.*
- (xi) *PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.*
- (xii) *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.*
- (xiii) *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- (xiv) *Detailed report on comparison of diesel consumption and CO2 emission by using conventional shovel dumper method and surface miner cum shovel dumper (for OB) shall be prepared and submitted.*
- (xv) *PP shall submit three-dimensional (3D) Modelling of progress of mining activity (stage wise) vis-à-vis impact of extraction of ground water*
- (xvi) *PP shall not use forest land for any other purpose other than extracting coal and all other activities shall be proposed on non-forest areas only.*

#### **Agenda No. 37.11**

**Expansion of North Urimari OCP from 3 to 3.6 MTPA in total ML area of 535.82 ha of M/s Central Coalfield Limited located in village Urimari, Tehsil Barkagaon, District Hazaribagh (Jharkhand) - For Amendment of Environment Clearance letter - reg.**

**[Online Proposal Number: IA/293690/2022; File No. J-11015/307/2005-IA- II (M)]**

**37.11.1** The proposal is for amendment in the Environmental Clearance letter dated 18.02.2022 for Expansion of North Urimari OCP from 3 to 3.6 MTPA in total ML area of 535.82 ha of M/s Central Coalfield Limited located in village Urimari, Tehsil Barkagaon, District Hazaribagh (Jharkhand).

**37.11.2** The EAC during deliberation noted the following:

Project proponent has requested for amendment/extension in EC letter dated 18.02.2022 to amend the specific condition no. (iv) that is “*PP shall implement the work of North Urimari Railway siding on or before September, 2022 and Belt conveyor system with CHP and Silo loading system till December, 2022*” and specific condition no. (v) i.e “*PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed after December, 2022 and accordingly, SPCB shall not grant CTO for road transportation after December, 2022*”

PP has submitted that coal will be dispatched through CHP Silo loading system and North Urimari railway siding after commissioning by December 2023 and July 2023 respectively. However, till commissioning of CHP Silo and North Urimari Railway siding is completed by L&T and RITES

respectively, as an intermediate arrangement, coal is being transported by tarpaulin covered trucks to Saunda B Railway Siding. Saunda B Railway Siding is connected to the project by 8 km black topped road. Current status of CHP Silo and Railway Siding is stated in the subsequent slides. Further, Pollution control measures have been undertaken along coal transport road and Saunda B Railway Siding.

**37.11.3** *The EAC after deliberations observed that earlier PP has obtained the EC under OM dated 15.09.2017 under clause 7(ii) of EIA, Notification, 2006 with condition of implementing belt conveyor system with silo loading for rail transport. However, the project proponent has completed 80% of work related to development of North Urimari Railway Siding and CHP with Silo and Conveyor system. The PP had given contract to L&T and RITES for completion of development work on time. However, committee emphasised that all the developmental work should be completed on or before December, 2022 as per the EC Condition. The EAC during the course of discussion felt that the PP needs time to complete the rest 20% work; accordingly, EAC agreed to extend the time till July, 2023. During this extended period of time the project proponent has to complete all type of development work.*

*Based on the above discussion, EAC **recommended** amendment in the Environmental clearance for North Urimari OCP (3 to 3.6 MTPA) to implement the work of North Urimari Railway siding, Belt conveyor system with CHP & Silo loading system and to implement in-pit conveyor system with silo loading facility till railway siding on or before July, 2023 and accordingly extension to comply was recommended with the following specific conditions;*

- i. PP shall implement the work of North Urimari Railway siding and Belt conveyor system with CHP and Silo loading system till July, 2023.*
- ii. PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed after July, 2023 and accordingly, SPCB shall not grant CTO for road transportation after July, 2023.*

### **Agenda No. 37.12**

**Expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.36 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar, District Singrauli (Madhya Pradesh) – Reconsideration of Environment Clearance under OM dated 11.04.2022 (Stage-I expansion) reg.**

**[Online Proposal No. IA/MP/CMIN/287311/2022; File No. J-11015/355/2006-IA-II (M)]**

**37.12.1** The proposal is for Environment Clearance under OM dated 11.04.2022 (Stage I expansion) for Expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.36 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar, District Singrauli (Madhya Pradesh).

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

Earlier, the project was considered and deliberated by EAC in its 35<sup>th</sup> meeting held on 26-27 September, 2022 for grant of Environment Clearance under OM dated 11.04.2022 (Stage I expansion) for Expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.36 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited and the proposal was deferred for want of additional information. The compliance was submitted by project proponent on 09.11.2022 and accordingly the proposal was considered by EAC in its 37<sup>th</sup> meeting held during 17 – 18 November, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

<b>Sr. No.</b>	<b>Observation of EAC</b>	<b>Reply of Project Proponent</b>
<b>1</b>	PP to furnish the approved mining plan, which is mandatorily required as per MoEF&CC Office Memorandum dated 11th April, 2022.	The PP had informed that the Mining Plan for Annual production of 3.92 MT prepared by Min Mec Consultancy Pvt. Ltd, New Delhi and same was approved by Board of Directors of JPVL on 5th November 2022. The copy of resolution passed by the Board of Director of JPVL has been submitted.
<b>2</b>	PP to furnish Wildlife Conservation Plan as per the said OM and its status of implementation.	<p>The PP had informed that the Wildlife Conservation Plan of Impact Area of Amelia (North) Coal Block had been prepared by Dr. R. C. Sharma, IFS (Retd.), Founder PCCF, Chhattisgarh and Ex Wild Life Chief &amp; C.W.L.W (Undivided M.P.) in September 2012. The same was approved vide letter no, F-5-2/2010/10-3/2591 dated 01.11.2012. Accordingly, an amount of Rs 14 crores had been deposited by the prior allottee. MPSMCL in CAMPA on 24.11.2012 towards pro-rata share of Amelia (North) (Coal Block).</p> <p>The wildlife plan since then is being implemented by the Office of the Principal Chief Conservator Forest (Wild Life), Bhopal.</p>
<b>3</b>	Year-wise of production status since grant of EC separately for OC and UG mine duly endorsed department of mines.	The PP had informed that the authorized official of Mining Division, District- Singrauli vide letter no. 2794/Kanij/ Co. Utapp/ 2022 dated 14.10.2022 has issued the year wise production status since grant of EC till September, 2022. The coal production and coal dispatch from the mine has been submitted year wise.

4	A time bound action plan for non-complied environmental conditions of existing EC to be provided	The PP had submitted the time bound action plan for non-complied environmental conditions of existing EC.
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**37.12.3** *The EAC, after deliberations noted that instant project is a brown field project and applied under OM dated 11.04.2022 for enhancement of total 20% capacity under para 7(ii) of EIA Notification, 2006. EAC in length discussed the information submitted on 09.11.2022, particularly related to the approved Mining plan, Wildlife Conservation Plan, Year-wise production status and a time bound action plan for non-complied environmental conditions. The committee noted that mine plan has been approved by company's Board.*

*EAC also observed that there is court case in Hon'ble Supreme Court on the instant mine i.e. C.A. No. 6233/2019 "M/s Jaiprakash Power Ventures Ltd. vs Human Right Redemption Social Welfare Association of India and Ors regarding pollution of kanchan river due to overburden dump. EAC has also discussed the IRO report, which found to be satisfactory. Further, it was desired to increase the plantation on OB and progressive reclaimed area.*

*Further, based on documents and facts submitted by PP, EAC **recommended** the proposal for expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.36 MTPA (Stage I i.e. 20% expansion) in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar, District Singrauli (Madhya Pradesh) subject to final order C.A. No. 6233/2019 "M/s Jaiprakash Power Ventures Ltd. vs Human Right Redemption Social Welfare Association of India and Ors and under EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- (i) PP shall comply all the conditions stipulated by Ministry's EC vide its letter no. No. J-11015/355/2006-IA.II(M) dated 20th July, 2007 and complete the non-compliance.*
- (ii) PP to implement the Action Plan as framed by SPCB/CPCB for specific project that falls under Singrauli as severally polluted area and implement in time bound manner.*
- (iii) Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor. No road transportation shall be conducted.*
- (iv) PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- (v) 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.*
- (vi) PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.*



- (vii) PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.
- (viii) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust
- (ix) Progressive backfilling of mine and progressive reclamation by conducting tree plantation of OB dump shall be done
- (x) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

Additional Specific conditions as the area falls under Severely Polluted Areas (SPAs)

- (i) Transportation of materials by rail/conveyor belt shall be implemented
- (ii) Encourage use of cleaner fuels for trucks, If the roads required to be widened upto nearest railway siding, the same be constructed to avoid traffic congestion.
- (iii) Increase green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.
- (iv) Greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be implemented.
- (v) Assessment of carrying capacity of mine & road transportation shall be done as per the State Plan/instructions.
- (vi) Reuse/recycle of treated wastewater shall be implemented as feasible with latest technology. Zero liquid discharge concept may be adopted.
- (vii) PP to install Continuous monitoring station for ambient air quality and also continuous effluent quality in ETP shall be installed. Data so generated shall be linked with respective SPCB and CPCB websites.
- (viii) A detailed water harvesting plan may be prepared by the project proponent for water augmentation and submitted to Regional Office of MoEF&CC.
- (x) The project proponent shall install STP for generated domestic wastewater and should meet for discharge standards.
- (xi) More stringent norms for management of hazardous waste like oil container, ETP sludge etc shall be adopted. The waste generated should be preferably utilized in co-processing.
- (xii) Monitoring of compliance of EC conditions may be submitted with third party audit every year.

**Agenda No. 37.13**

**Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) - For Environmental Clearance (As per O.M. dated 11.04.2022) reg.**

**[Online Proposal No. IA/WB/CMIN/400339/2022; File No. J-11015/375/2006-IA-II(M)]**

**37.13.1** The proposal is for Environment Clearance under OM dated 11.04.2022 (Stage I expansion) for Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal).

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

Earlier, the project was considered and deliberated by EAC in its 35<sup>th</sup> meeting held during 26- 27 September, 2022 for grant of Environment Clearance under OM dated 11.04.2022 (Stage I expansion) for Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited and the proposal was deferred for want of additional information. The compliance was submitted by project proponent on 14.11.2022 and therefore the proposal was considered by EAC in its 37<sup>th</sup> meeting held during 17 – 18 November, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

<b>Sr. No.</b>	<b>Observation of EAC</b>	<b>Reply of Project Proponent</b>
i	PP shall submit the approved mining plan as per office memorandum vide dated 11th April, 2022 from the Competent Authority.	The Project proponent had submitted the approval of Mining plan vide letter dated 14.11.2022.
ii	PP shall submit the updated status of compliance of existing EC conditions in a tabular form with proof, which are reported to be non-complied by IRO. Also to submit the time bound action plan to implement all non-compliance conditions including plan for plantation of trees.	The Project proponent had submitted the updated status of compliance and time bound action plan of existing EC conditions vide letter dated 11.11.2022.
iii	PP shall submit performance /operational status of ETP.	The PP had informed that the construction of ETP is under progress, the performance report of the ETP will be submitted.

**37.13.3** *The EAC, after deliberations noted that instant project is a brown field project and applied under OM dated 11.04.2022 for enhancement of total 20% capacity under para 7(ii) of EIA Notification, 2006. EAC in length discussed the information submitted on 14.11.2022, particularly related to the Mining plan approved for rated capacity of 3.00 MTPA / 4.5 MTPA (Peak capacity) by the Coal Controller Organization a subordinate organization of Ministry of Coal vide letter dated 14.11.2022. Subsequently, EAC noted that the project proponent committed to complete the construction work of ETP and ensured to the EAC for submission of performance report of the ETP to IRO by 15.12.2022.*

*Further, based on documents and facts submitted by PP, EAC **recommended** the proposal for expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited under EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- (i) PP to obtain the CTO for production of 1.2 MTPA production capacity from SPCB.*
- (ii) PP shall complete the work of ETP on time and submit the performance report to IRO.*
- (iii) PP to obtain its pending groundwater clearance within 3 months from Ground Water Board/CGWA.*
- (iv) PP shall comply all the conditions stipulated by Ministry's EC vide its letter no. J-11015/375/2006-IA.II (M) dated 17th May 2007 and complete the non-compliance within 3 months.*
- (v) Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road. No road transportation shall be conducted.*
- (vi) PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- (vii) 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.*
- (viii) PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.*
- (ix) PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.*
- (x) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.*
- (xi) Progressive backfilling of mine and progressive reclamation of OB dump shall be done.*
- (xii) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of*

*India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.*

### **Vetting of EAC regarding Corrigendum in Minutes of Meeting of 36<sup>th</sup> meeting held on 20-21 October, 2022**

**37.14 Expansion of Opencast coal mine -1A from 3 MTPA to 7 MTPA in Mine Lease area of 2005.8 ha by M/s Neyveli Lignite Corp Ltd located in district Cuddalore (Tamil Nadu) regarding inclusion for manufacturing of Crushed Stone Sand of 0.262 Million m<sup>3</sup> per annum (0.42 MTPA-peak) – For Reconsideration of Amendment in Environment Clearance – reg.**

**[Online Proposal No. IA/TN/MIN/220488/2021; File no. J- 110115/02/2012-IA.II (M)]**

**37.14.1** The proposal for amendment in Environmental Clearance for Expansion of Opencast coal mine -1A from 3 MTPA to 7 MTPA in Mine Lease area of 2005.8 ha by M/s Neyveli Lignite Corp Ltd located in district Cuddalore (Tamil Nadu) regarding inclusion for manufacturing of Crushed Stone Sand of 0.262 Million m<sup>3</sup> per annum (0.42 MTPA-peak) and other mineral was considered, deliberated and recommended by EAC in its 36<sup>th</sup> meeting held on 20-21 October, 2022 subject to certain terms and conditions therein.

EAC has recommended for inclusion for manufacturing of Crushed Stone Sand of 0.262 Million m<sup>3</sup> per annum (0.42 MTPA-peak).

However, after uploading of MoM on PARIVESH Portal, PP vide its Lr.No. 120/NLCIL/Mine-IA/EC Amendment dated 4th November, 2022 communicated to Ministry that application is for amendment to EAC for **inclusion of Minor Mineral Silica Sand of 2.13 MTPA, Ball Clay of 1.28 MTPA and Fire Clay of 0.98 MTPA and Crushed stone sand (M-sand) of 5.0 MTPA** for Mine-IA. Also, the Minutes of meeting contains the discussion about extraction of associated Minerals like Silica Sand, Ball Clay, Fire Clay and for Crushed stone sand (M-sand). But in EAC minutes published, it is mentioned that EC amendment is recommended for Crushed Stone Sand of 0.262 Million m<sup>3</sup> per annum (0.42 MTPA-peak) instead of Crushed Stone sand (M-Sand) (5.0 MTPA) as typographical error.

EAC noted that additional minerals with change in capacities were added by Project Proponent during reply of observation of EAC to Ministry on PARIVESH Portal and after approval of its Mine Plan. The

same was presented and deliberated during 36th EAC meeting but inadvertently it did not come into the recommendation in Minutes of Meeting.

Further, PP has submitted that Neyveli Mining project area is 30 Kms away from the Severely Polluted Area (SPA) of Cuddalore SIPCOT complex as per CPCB website link [https://cpcb.nic.in/industrial\\_pollution/New\\_Action\\_Plans/CEPI\\_Action%20Plan\\_CUDDLORE.pdf](https://cpcb.nic.in/industrial_pollution/New_Action_Plans/CEPI_Action%20Plan_CUDDLORE.pdf). However, no such letter or communication from State Pollution Control Board has been submitted that mine is away from SPA.

**37.14.2** *EAC after deliberations observed the submissions of Project Proponent and accordingly recommended to issue the corrigendum in its earlier Minutes of meeting. Accordingly, EAC recommended for amendment in EC Expansion of Opencast coal mine -1A from 3 MTPA to 7 MTPA in Mine Lease area of 2005.8 ha by M/s Neyveli Lignite Corp Ltd located in district Cuddalore (Tamil Nadu) for inclusion of the associated Minerals of Silica Sand of 2.13 MTPA, Ball Clay of 1.28 MTPA, Fire Clay of 0.98 MTPA and for Crushed stone sand (M-sand) of 5.0 MTPA along with existing Lignite Mining (7.0 MTPA) for Lignite Mine-1A in Mine Lease Area of 2005.8 Ha. Further conditions based on Severely Polluted Areas (SPA) shall be excluded as the instant mine is far away from SIPCOT Industrial Area of Cuddalore (SPA as per documents of CPCB). All other conditions recommended except that of SPA are recommended to be included.*

**37.15 Lignite Mine-1 of 10.5 MTPA in Mine Lease area of 3635.4 ha and extraction of Minerals like Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA of M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu) – For Amendment in Environment Clearance – reg.**

**[Online Proposal No. IA/TN/CMIN/206615/2021; File no. J-11015/01/2012-1A-II (M)]**

**37.15.1** The proposal for amendment in Environmental Clearance for Lignite Mine-1 of 10.5 MTPA in Mine Lease area of 3635.4 ha and extraction of Minerals like Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA of M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu) was considered, deliberated and recommended by EAC in its 36<sup>th</sup> meeting held on 20-21 October, 2022 subject to certain terms and conditions therein.

EAC has recommended for inclusion of Minerals like Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA for amendment in EC.

However, after uploading of MoM on PARIVESH Portal, PP vide its Lr.No. 121/NLCIL/Mine-I/EC Amendment dated 4<sup>th</sup> November, 2022 communicated to Ministry that NLCIL submitted reply for Additional Details Sought by MOEF&CC in PARIVESH portal on 21.08.2022 for EC amendment extraction of **Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA and**

**for Crushed stone sand (M-sand) of 5.0 MTPA from overburden in Mine-I.** But in EAC minutes published on dated 04.11.2022, it is mentioned that EC amendment is recommended for Minerals of Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA. But due to typographical error, recommendation for EC amendment for Crushed Stone sand (M-Sand) (5.0 MTPA) is missing.

Also, EAC noted that additional minerals with change in capacities were added by Project Proponent during reply of observation of EAC to Ministry on PARIVESH Portal and after approval of its Mine Plan. The same was presented and deliberated during 36<sup>th</sup> EAC meeting but inadvertently it did not come into the recommendation in Minutes of Meeting.

Further, PP has submitted that Neyveli Mining project area is 30 Kms away from the Severely Polluted Area (SPA) of Cuddalore SIPCOT complex as per CPCB website link [https://cpcb.nic.in/industrial\\_pollution/New\\_Action\\_Plans/CEPI\\_Action%20Plan\\_CUDDLORE.pdf](https://cpcb.nic.in/industrial_pollution/New_Action_Plans/CEPI_Action%20Plan_CUDDLORE.pdf). However, no such letter or communication from State Pollution Control Board has been submitted that mine is away from SPA.

*37.15.2 EAC after deliberations observed the submissions of Project Proponent and accordingly agreed to issue the corrigendum in its earlier Minutes of meeting. Accordingly, EAC **recommended** for amendment in EC to Lignite Mine-1 of 10.5 MTPA in Mine Lease area of 3635.4 ha and extraction of Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA and for Crushed stone sand (M-sand) of 5.0 MTPA of M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu). Further conditions based on Severely Polluted Areas (SPA) shall be excluded as the instant mine is far away from SIPCOT Industrial Area of Cuddalore (SPA as per documents of CPCB). All other conditions recommended except that of SPA are recommended to be included.*

## Approval of site visit report

**Site Visit report in reference of proposal of Environmental Clearance to Basundhara (West) Extension OCP of 8.75 MTPA capacity in a mine lease area of 323.92 ha by M/s Mahanadi Coalfields Limited located in village(s) Gopalpur (Part) and Ratansara in Tehsil Hemgir, District Sundergarh (Odisha)**

### **I Background of the project**

Terms of Reference was granted by Ministry on 2<sup>nd</sup> February, 2018 to Project titled “Basundhara (West) Extension Opencast Project of 8.75 MTPA capacity of M/s Mahanadi Coalfields Limited in mine lease area of 323.92 ha (Total Project Area of 369.77 Ha) located in village(s) Gopalpur (Telendih) and Ratansara in Tehsil Hemgir, District Sundergarh (Odisha)”.

The proposal for Environmental Clearance was submitted by Project Proponent (PP) for consideration of sectoral Expert Appraisal Committee during its 52<sup>nd</sup> meeting held on 24<sup>th</sup> January, 2020. The Committee observed that there are various deficiencies in the project and it decided to form a sub-committee to conduct the site visit for taking a view on the project for compliance of EAC observation.

However due to Covid-19, the site visit could not be completed. Later, PP submitted the compliance to observations of EAC in 26<sup>th</sup> meeting held on 18<sup>th</sup> February, 2022. During the deliberation of project, it was found that PP had submitted incomplete information without compliance to EAC observation and decided to conduct site visit by the sub-committee to see the overall environmental scenario of this area. The area includes Kulda OCP, Garjanbahal OCP, Siarmal OCP (greenfield), Basundhara East OCP, which have total capacity of about 100 MTPA. The instant project lies near to has Basundhara River and Telendra stream in the north and another Chattarjhor stream in the East.

### **II Details of Forest Clearance and other permissions:**

- Total Forest land involved in proposed project is 227.62 Ha. Form A part I application has been submitted on 22.07.2016. The DGPS survey of CA land has been completed. The PP has not obtained Stage-I Forest Clearance for diversion for non-forestry activity.
- Permission of extraction of ground water from Central Ground Water Authority has been received by PP vide letter no. CGWA/NOC/MIN/ORIG/2020/9349 dated 15.12.2020.
- The Mining Plan and Mine Closure Plan of Basundhara (West) Extension OCP (8.75 Mty) has been approved by MoC vide Letter No. 4012/(04)/2011-CPAM dated 22-03-2017

### **III Composition of Committee**

In compliance of observation of sectoral Expert Appraisal Committee in its 26<sup>th</sup> meeting held on 18<sup>th</sup> February, 2022 to conduct site visit by EAC’s subcommittee before grant of EC proposal in the area, Ministry constituted a sub-committee comprising of following members, which carried out site

inspection to assess impact on rivers and streams, impact due to blasting activities, compliance of EC condition, feasibility of evacuation of extracted coal etc.

- (i) Chairman (EAC)-Shri G. P Kundargi
- (ii) Shri S. Vora (Member)
- (iii) Prof. Umesh Kahelekar (Member)
- (iv) Representatives of MoEF&CC. (Shri. Lalit Bokolia, Director and Sh. M.K. Shah, Joint Director)

The Sub-committee had carried out a site inspection during 5-6<sup>th</sup> May, 2022

#### **IV Observations the sub-committee**

At onset of meeting, PP gave and continued the layout and drainage pattern of the coal block. It was informed that buffer zone of the project consists of Basundhara (West) OC, Kulda OC and Garjanbahal OCP are located in buffer zone. Basundhara river flows adjacent to mine and Telendra nala is 94 m away. The reserve forests falling in the buffer zone are Kalatpani RF, Jamkani RF, Garjanpahar RF, Garjanjor RF, Burhapaharh RF, Banjhikachhar RF, Garhaghat RF, Kurumkel RF, Aradlungri RF. PP informed that life of the mine is 12 years based on current rated production capacity.

The following villages are likely to be affected due to mining & its related activities (Gopalpur P and Ratansara) in core zone and 58 villages in buffer zone

- As per EIA/Report, total catchment of the Basundhara Nala is about at 608 sq/km. It is observed from the catchment characteristic of the Basundhara Nala basin, that the drainage network of the area is favourable for long extended discharge than to generate sudden peak discharge. Besides these, there are some small ponds and dug wells available within the block and used for irrigation and drinking purposes.
- The total land required for mining operations in proposed project i.e. core zone will be around 323.92 ha involving 227.62 ha of forest land. Basundhara River is the boundary of Siarmal-Basundhara block and Basundhara-Chaturdhara blocks. The proposed mine lies to the west of Basundhara (West) OC Expn. Project on the western side of Basundhara River. Basundhara (West) Extension OCP will replace production of Basundhara (West) OC Expn. It was noted the core area covers partly and/or fully the land from two (2) villages namely, Gopalpur(Telendih) and Ratansara and are proposed to rehabilitated in due course of time before the mining activity.
- It has been proposed to transport the entire coal produced i.e. from coal face to new constructed Sardega siding (adjacent to mine lease) by trucks/dumpers. It was desired that PP must implement inpit conveyer system to avoid transportation emission.
- As per EIA report, surface boundary is fixed after leaving surface barrier of 60 m against Chaturdhara stream. The Telendra stream flows at a distance of 94 meters south of the block.



Barhajharia stream, Bhaina jhor and Ichcha Nadi flows 230 meter west, 3.4 kms north east and 8.65 km north east respectively. However, PP did not inform the whereabouts of this nalla.

## V Site Visit

- Initially, EAC team visited to Basundhara River site, adjacent to already existing Basundhara Exp. OCP coal mine. PP has left about 60-70 mts of suitable distance between quarry of Basundhara Exp. OCP coal mine & bank of Basundhara River.
- Old coal mine of Basundhara Exp. OCP has been left abandoned and the mine void of depth around 100-150 mts has been left. Mine void was filled with little water as can be seen from the top of quarry. The barren benches of mine void were seen. It was observed that no mine closure activity was conducted by project proponent. It was desired that PP must undertake the fencing and follow the activity listed in mine closure plan. PP informed that the overburden removed from this instant project shall be used from the first two years and partly from the third year over the existing quarry void on 36 ha patch at its eastern end (upto ground level) and remaining area will be left as water harvesting facility. Overburden of this mine was not found to be reclaimed properly and slopes were also not covered with plantation.
- It was observed that during the time of visit, no flow in the Basundhara river was visible. PP also showed the area wherein width of the river was less and said to retain coal reserve beneath the river. However, in order to protect/conserves the river, PP has not proposed any diversion of river. Later the team visited the stream joining Basundhara river and separates Basundhara OCP and Siarmal OCP (greenfield 50MTPA project). The stream is also not proposed to be diverted. It was also informed that that M/s MCL coal mines covers about 20-25 km along the bank of Basundhara river. Locals were using the bed of the river for passing from one side of river to another and available water were used for washing of vehicles by nearby villagers.
- After this, the team visited the under construction Rapid Loading Silo (RLS) system near to Sardega siding wherein PP is proposing to transport of 20 MTPA through this site. The construction was in progress and it was submitted the implementation of project has been delayed by 6 months due to covid-19 and other reason and is likely to be completed by December, 2022. Though PP informed that the RLS system would be operational within six months; however, by virtue of stage of construction, it may take another year.
- PP informed that 33.0 Km long Jharsuguda – Barpalli - Sardega rail link & doubling of Jharsuguda - Barpalli Rail link at an estimated cost of Rs. 2431.00 Cr. is under progress; Single line construction has been completed.
- Further to this, four lane road construction between Bankibahal to Bedabahas village i.e. 30 km, the same road will be used for coal transportation of kulda Garjanbahal and upcoming Siarmal. Also, it was noted that sprinklers were installed and operating during the visit from Bankibahal chowk to Basundhara West OCP Exit gate.
- It was also noted that transportation route from coal mine to the main highway was having heavy traffic with movement of coal laden trucks and due to this and re-entrainment dust, the area was

full of dust. Also, the instant consist of other manufacturing plants and washeries while use this highway. It was observed that the road transport is causing pollution in the area and Project proponent has to strictly work on expediting the implementation of railway line and RLS system to stop road transportation.

- While visiting the coal storage yard, it was observed that high emission of fugitive dust was being generated during loading of coal in trucks and emission from surface of stored coal hip were polluting the ambient air. Further, the movement of trucks in area was one of the reason of air pollution. It was observed that one-two fog sprinklers with 50-60 throw length were operating but were inadequate to suppress the dust emission.
- EAC sub-committee also visited the nearby overburden (OB) dump of Kulda OCP wherein PP has planted 5 ha of tree plantation on top of OB dump; however, it was noted that slopes of Kulda OCP has been left barren and dust emission is being generated. Also, OB dump of Garjanbahal OCP was also visible from there and the slope was looked barren. It was communicated that there is lack of green belt and plantation, which is causing emission and leading to dust pollution in ambient air.
- It was informed that at the end of mine life the proposed land use area will be same as pre-mining land use. Post mining land use will consist of reclamation area, water body, dip side slope, plantation area, built-up area, undisturbed area, etc.
- Project proponent has developed sal nursery in the premises of its office at Basundhara Area, of which sub-committee appreciated the initiatives and further desired that PP must increase the area of sal nursery and do the actual plantation of sal trees in the mine area for the development of this reason. It was highlighted that transportation through villages on the way to the mine, visible forest areas were mainly of Sal trees.
- Sub-committee show the Continuous Ambient Air Quality Monitoring Station (CAAQMS) and its operation during the visit. Further, the calibrations charts of the instruments were checked. It was observed that necessary parameters were working during the time of visit and under the norms. Also, it was communicated the PP has chosen the cleaner location for monitoring i.e. near the temple and insisted on monitoring in other areas to get the clear picture of ambient air quality.

## **VI Recommendation of the committee**

The EAC subcommittee was of view that instant project of greenfield coal mine is premature thought by Project Proponent since the area dominated by coal mines, coal mines, coal washery wherein transportation by road is causing huge impact on air pollution of the area. Evacuation of coal from mine after grant of EC will be performed by road ways though existing road infrastructure is inadequate. It was desired that PP must focus on expediting the implementation of Rail Silo Loading System proposed as Barpalli loop. The carrying capacity needs to be revisit. EAC should thoroughly examine and accordingly environmental mitigation measures needs to be proposed in context of transportation of coal.

(ii) Further, Ministry has granted EC to time to time under OM's of Ministry. However, PP is not making serious efforts for compliance of EC conditions. There is leak of plantation and no slopes of OB dump were reclaimed except some on the top of OB Dump. PP needs to comply EC conditions in time bound manner of EC granted for Kulda OCP, Garjanbahal OCP, Siarmal OCP and Basundhara West OCP and other mines (if any) of the M/s MCL. In order to increase in production capacity, there is requirement of focussing more on compliance of earlier EC conditions

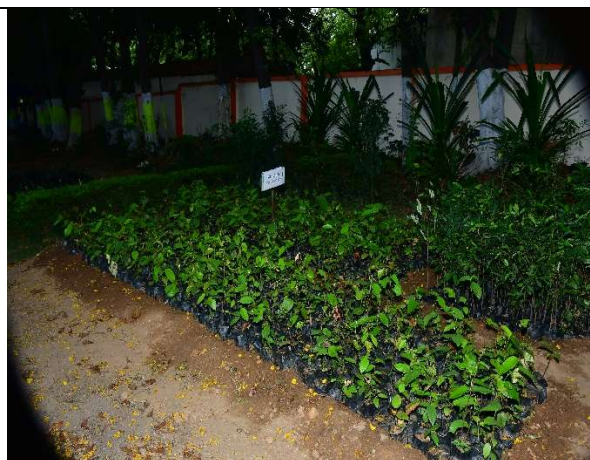
Further, sub-committee observed the following points to be complied along with ADS points raised by EAC:

- PP needs to prepare a proper and detailed Comprehensive River Conservation Plan of Basundhara River and other streams nearby in consultation with State Government for the entire stretch covering all the mines and mining activities along the banks of Basundhara River. Action plan along with fund and timeline should be submitted and shall be monitored from M/s MCL's Corporate office.
- PP shall relook the study of carrying capacity of the region carried out by CMPDI and further check the assimilative capacity with control measures at different villages.
- PP shall first commission the Barpalli loop before starting the operation of this instant mine since there is already burden on road transportation due to existing production of about 100 MTPA in the area. Full scale mechanized system shall be planned to restrict road transportation and haul road transportation.
- Epidemiology study shall be conducted to see the health impact of air pollution on the villagers/habitation living in the area.
- PP shall conduct fresh baseline data since earlier the data was collected in 2017-2018 and impact assessment shall be considered based on peak production of all the mine nearby
- PP shall conduct massive plantation with strict timeline on surface and slopes on operational as well as closed OB dump of all the mines in the area and submit the plan of biological reclamation.
- PP shall comply 75% of all EC conditions of Kulda OCP, Garjanbahal OCP and Siarmal OCP and submit the certified compliance report to Ministry during appraisal of this project.
- Detailed report on comparison of diesel consumption and CO2 emission by using conventional shovel dumper method and surface miner cum shovel dumper (for OB) shall be prepared and submitted.
- PP shall provide enclosures with sprinkler system around the coal unloading facility in hopper of conveyor system.
- PP shall submit plan of R & R involved in the project and detailed Social Impact Assessment for proposed project.
- PP shall submit action plan for using and developing Renewable Energy for its consumption in its utilities/machinery/equipment's instead of using electricity from Grid/generated from Thermal Power Plants.

**Some of the photographs during site visit are given below:**







**The meeting with vote of thanks**

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## 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
  - (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution

Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of 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 air borne dust. Drills shall be wet operated or fitted with dust extractors.
  - (vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.
- (c) Water quality monitoring and preservation**
- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution Control Board.
  - (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27<sup>th</sup> May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
  - (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon,



monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

- (iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
- (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement(standards).
- (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
- (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose. 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 surfacewater 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 27<sup>th</sup> August, 2009 and subsequent amendments.

- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/“post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3<sup>rd</sup> November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, 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 top soil 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) Green belt 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 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

**(i) Corporate Environment Responsibility**

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly 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; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>(ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC

regarding commencement of mining operations.

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

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## **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, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB
- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

- iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/ mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- iv. Major approach roads shall be black topped and properly maintained.
- v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.
- vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid 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 purposive. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- ix. Industrial waste water from coal handling plant and mine water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste water.
- x. Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xi. The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.

- xii. The project proponent shall take all precautionary measures to ensure reverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A reverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

#### **IV. Noise and Vibration monitoring and prevention**

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

#### **V. Mining Plan**

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

#### **VI. Land reclamation**

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the

Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3<sup>rd</sup> November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, 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 Hearing shall be ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees shall be compensated as per the norms laid out R&R Policy of the Company/ or the National R&R Policy/ R&R Policy of the State Government, as applicable
- vii. The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

#### **IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior

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

#### **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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### **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 addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules,2016.
- (vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

## **II. Air quality monitoring and preservation**

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.
- ii. Continuous ambient air quality monitoring stations as prescribed in the statute established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board
- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by

- covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery 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 river front side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.
- v. Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- vi. The rejects should preferably be utilized in FBC power plant or disposed off



through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.

- vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m<sup>3</sup>/tonne of raw coal.
- xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- xii. The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government

#### **IV. Noise and Vibration monitoring and prevention**

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

## **V. Coal beneficiation**

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

## **VI. Green Belt**

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

## **VII. Public hearing and Human health issues**

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

## **VIII. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly 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.

## **IX. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated 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, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the

- projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- 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.

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## **ANNEXURE-IV**

### **Generic ToR for coal washery**

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washer preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant 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-11013/25/2014-IA.I dated 11<sup>th</sup> August, 2014 to be followed with regard to CSR activities.
  - xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
  - xvi. Analysis of samples indicating the following be submitted:
    - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
    - Characteristics and quantum of coal after washing.
    - Characteristics and quantum of coal rejects.
  - xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
  - xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
  - xix. Corporate Environment Responsibility:
    - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
    - b) The Environment Policy must prescribe for standard operating

process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
  - xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
  - xxii. Wastewater /effluent should 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.

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**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.

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats,

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

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

- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxvi) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxviii) Efforts be made for 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 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> Year (end of mine life)*
1.	Backfilled Area Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area(brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	<b>TOTAL</b>					

\* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

\* As a representative example

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

A Plan for the ecological restoration of the mined out area and post mining landuse should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

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

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

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

given.

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

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

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

**GENERIC TORs FOR AN UNDERGROUND COALMINE  
PROJECT**

- (i) An EIA-EMP Report shall be prepared for MTPA rated capacity in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification,2006.
- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts  
and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA  
of coal production based on approved project/Mining Plan for MTPA.  
Baseline data collection can be for any season (three months) except monsoon.
- (iii) A Study area map of the core zone (project area) and 10 km area of the bufferzone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as BiosphereReserves/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 inthe 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, etcshould be furnished.
- (v) A contour map showing the area drainage of the core zone and 25 km of thestudy area (where the water courses of the core zone ultimately join the



major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.

- (vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (vii) Original land use (agricultural land/forestland/grazing land/wasteland/waterbodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

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

#### Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the

appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

- (ix) Details of mineral reserves, geological status of the study area and the seams  
to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The breakup of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population

- in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
- (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
  - (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
  - (xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
  - (xxviii) Corporate Environment Responsibility:
    - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
    - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
    - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
    - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
  - (xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
  - (xxx) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
  - (xxxi) Status of any litigations/ court cases filed/pending on the project should be provided.
  - (xxxii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.

(xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept.(if req.), etc. wherever applicable.

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

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

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## **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 an ML/project area of ha for OC and .... MTPA for UG in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification 2006.

- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum underground mining.



**LIST OF PARTICIPANTS OF EAC (COAL) IN 37<sup>th</sup> MEETING HELD DURING  
17-18 NOVEMBER, 2022 THROUGH VIDEO CONFERENCING**

1.	<b>Shri G.P Kundargi</b>			<b>2- DAYS</b>
		-	Chairman	P
2.	Dr. N. P. Shukla	-	Member	P
3.	Shri Suramya Dolarray Vora, IFS (Retd)	-	Member	A
4.	Dr. Umesh Jagannathrao Kahalekar	-	Member	P
5.	Shri K.B. Biswas	-	Member	P
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	A
10.	Dr. Santosh Kumar Hampannavar	-	Member	A
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