

MINUTES OF 36th MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 20-21 OCTOBER, 2022 THROUGH VIDEO CONFERENCE.

Confirmation of the Minutes of 35th Meeting of the EAC (Coal) held on 26-27 September, 2022:

The minutes of the 35th Meeting of the EAC (Coal) held on 26-27 September, 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 35th Meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 26-27 September, 2022 through video conferencing with support NIC team due to Covid-19 lockdown. The EAC considered proposals as per agenda adopted for the meeting. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 36.1

Cluster XI group of mines (5.08 MTPA with a peak capacity of 6.604 MTPA) in a combined Mine Lease area of 3447.14 ha (3527.58 ha-80.44 ha of forest land), Moonidih Washery (1.6 MTPA peak capacity) and additional washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand) – For Amendment in Terms of Reference – reg.

[Online Proposal No. IA/JH/CMIN/291943/2022; File No. J-11015/77/2011-IA-II (M)]

36.1.1 The proposal is for amendment in Terms of Reference granted by MoEF&CC Vide letter no. IA-J-11015/77/2011-IA-II (M) dated 01st January, 2021 for Cluster XI group of mines (5.08 MTPA with a peak capacity of 6.604 MTPA) in a combined Mine Lease area of 3447.14 ha (3527.58 ha-80.44 ha of forest land), Moonidih Washery (1.6 MTPA peak capacity) and additional washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand).

36.1.2 The Committee during deliberations noted the following:

- The ToR was granted vide letter no. IA-J-11015/77/2011-IA-II (M) dated 01st January, 2021 for Cluster XI group of mines (5.08 MTPA with a peak capacity of 6.604 MTPA) in a combined Mine Lease area of 3447.14 ha (3527.58 ha-80.44 ha of forest land), Moonidih Washery (1.6 MTPA peak capacity) and additional washery of 2.5 MTPA of M/s Bharat Coking Coal Limited.

- The PP has submitted that the plot details are revised after finalization of Design for the transportation of coal through pipe conveyor from Moonidih UG and washed coal through railway.
- The project proponent has submitted the details related to the representative plots of 18 ha land of BCCL as below:

Form I based on which ToR granted	Revised Form I
Representative plots shown in original Form I	
235, 240, 241, 349, 350, 358, 370, 375, 376, 389, 391, 406	Same
407p, 408p, 409p	left out
Other plots of Gopinathpur	
Plot with no Change in area	
187, 191, 192, 193, 194, 195, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 236, 237, 238, 239, 242, 243, 244, 245, 246, 251, 252, 253, 254, 255, 256, 257, 258, 263, 264, 266, 349, 350, 351, 352, 353, 358, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405	Same
Plot with Increase in area	
188 P, 190 P, 196 P, 247 P, 250 P, 390 P 197P 273 P, 280 P, 281 P, 282 P,	188, 190, 196, 247, 250, 390, 197p.273p, 280p, 281p, 282p
Plot with Decrease in area	
186, 189, 259, 260, 262	186p, 189p, 259p, 260p, 262p
Plot left out	
288, 291 P, 292 P, 293 P, 294, 295	--
Plot included in revised Form	

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36.1.3 *The EAC, after deliberations observed that proposal is for amendment of ToR conditions. The instant washery is proposed in leasehold of Moonidih UG under Cluster XI for which EC was earlier granted by Ministry. The additional capacity of washery shall be used for washing coal extracted from Moonidih Underground coal mine. It was also observed that there are no changes in mine lease area of Moonidih UG and overall mine lease area of Cluster XI.*

However, on examination of record, it could not be clear which condition and provision of TOR/Form-1 to be amended and being requested by PP. It was observed that PP intends to change the plot/survey/Khasra no. of Moonidih UG and coal washery which was stated to be submitted earlier. PP also stated that the change in layout of coal washery after finalization of design for the transportation of coal through pipe conveyor from Moonidih UG and washed coal through railway. However, while granting ToR, PP did not submit the detailed plot/survey/Khasra number, which is now being informed to Committee. The committee noted it as misinformation after verification of records from earlier Form-1 as proposed plot area does not exist in original form-1.

In view of above, it was observed that the proposal is not clear and PP did not submit the full detail. However, the requisite changes have been noted and the proposal is returned.

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

Agenda No. 36.2

Barsingsar Opencast Lignite Mine of capacity 2.1 MTPA in Mine Lease area of 971 ha by M/s Neyveli Lignite Corporation Limited located at village Barsingsar, District Bikaner (Rajasthan) – For Amendment in Terms of Reference as per SOP dated 7th July, 2021 regarding violation cases – reg.

[Online Proposal No. IA/RJ/MIN/291550/2022; File No. IA-J-11015/28/2020-IA-II (M)]

36.2.1 *The proposal is for amendment in Terms of Reference granted by MoEF&CC vide letter No. IA-J-11015/23/97-IA-II (M) dated 9th June, 2022 for Barsingsar Opencast Lignite Mine of capacity 2.1 MTPA in Mine Lease area of 971 ha by M/s Neyveli Lignite Corporation Limited located at village Barsingsar, District Bikaner (Rajasthan).*

36.2.2 *The EAC during deliberations noted the following:*

- The project proponent has applied for amendment in Terms of Reference as per the MOEF&CC OM dated 16.02.2021 and requested for exemption in Public Hearing (PH) since it has already conducted on 03.07.1997 for grant of EC under EIA Notifications, 1994. Further there is no change in mine lease area and also production capacity has not been exceeded beyond the stipulated EC capacity.
- Also, the project proponent did not change the mining namely mining method, mining plan, mineral transportation, water requirement, and reclamation plan involved in the project.
- The project proponent did not discontinue operations till date and also not exceeded the production capacity as granted in EC.
- PP informed that as per the OM dated 16.02.2021, It is mentioned that “*In reference to the Notification number S.O. 1530 (E) dated 06.04.2018, whose EC was granted under EIA notification 1994 (valid for 5 years) has to apply for EC under EIA Notification, 2006. In such case public hearing has already been conducted earlier (at the time of grant of EC under EIA notification 1994).*”

In such cases fresh public hearing, to decide whether mining activity could be undertaken at that place and for that quantity, may not be warranted since these are legacy cases. Nevertheless, the views of the public are required to be obtained in such cases through other modes of public consultation process stipulated in the EIA Notification, 2006.”

36.2.3 *The EAC, after deliberations noted that instant project is for amendment in Terms of reference specifically for relaxation /exemption of conduct of Public Hearing since the project has not exceeded the production capacity and project activity has been within the same mine lease since beginning. The project has conducted public hearing in 1997 during grant of EC under the provisions of EIA Notification 1994. Further, it was observed that project has been defined violation since it did not apply within 6 months time window period for revalidation as per Ministry’s Notification dated 6th April, 2018*

The committee, after deliberation observed that in context of Ministry’s OM dated 16th February, 2021 regarding the public consultation in respect of mining projects under the provisions of S.O. 1530(E) dated 6th April, 2018, the project proponent did not change the mining namely mining method, mining plan, mineral transportation, water requirement and reclamation plan involved in the project. The committee, therefore, recommended to invite the suggestions/objections as part of public consultations for the project, instead of public hearing under the EIA Notification, 2006 and its amendments.

*The EAC after deliberation, **recommended** for exemption of public hearing to Barsingsar Opencast Lignite Mine of capacity 2.1 MTPA in Mine Lease area of 971 ha of M/s Neyveli Lignite Corporation Limited located at village Barsingsar, District Bikaner (Rajasthan) under the provisions of EIA Notification, 2006 and its amendments therein.*

Agenda No. 36.3

Expansion of Gayatri Underground Coal Mining Project from 0.30 to 0.88 MTPA with increase in Mine Lease area from 507.472 ha to 616.957 ha of M/s South Eastern Coalfields Limited located at village Getra, Tehsil Ambikapur, District Surguja (Chhattisgarh) — For Terms of Reference-reg.

[Online Proposal No. IA/CG/CMIN/258275/2022; File No. J-11015/26/2000-IA. II (M)]

36.3.1 The proposal for Terms of Reference for expansion of Gayatri Underground Coal Mining Project from 0.30 to 0.88 MTPA with increase in Mine Lease area from 507.472 ha to 616.957 ha of M/s South Eastern Coalfields Limited located at village Getra, Tehsil Ambikapur, District Surguja (Chhattisgarh).

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

- i. The project area is covered under Survey of India Topo Sheet No 64 – I/16 (1:50000) and is bounded by the geographical coordinates ranging from latitude 23⁰05'15" to 23⁰07'30" N and longitude 82⁰53'32" to 82⁰56'53" E
- ii. Coal linkage of the project is proposed for various power/non power customers based mainly in Chhattisgarh, Madhya Pradesh, Odisha, Uttar Pradesh and some other states.
- iii. No Joint venture cartel has been formed.
- iv. Project does not fall in the Critically Polluted Area (CPA), where MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- v. 19 Nos. of employment has already been generated against acquisition of land for surface infrastructure. Present project manpower is 675. Approx. 300 Nos. of indirect employment is likely to be generated due to proposed expansion.
- vi. The project is reported to be beneficial in terms of fulfilling the demand nation's electricity and other coal-based industries, apart from earning revenue for the government. Opportunity of employment for the project affected villagers and allied industries.
- vii. The EC to the project was obtained under EIA Notification, 1994 vide Ministry's letter No. J-11015/26/2000-IA.II (M) dated 27.11.2002 for 0.30 MTPA for an area of 507.472 ha and subsequently EC revalidated as per MoEF&CC Notification S.O. 1530(E) dated 06.04.2018 on 28.09.2022.
- viii. Total mining lease area of 616.957 ha (including 7.45 ha for mine infrastructure and 8.55 ha for colony is outside mining area). Revised mining Plan for 0.30 MTPA approved by SECL Board on 16.04.1999, Scheme for introduction of Continuous Miner (0.42 MTPA) approved by Board vide letter No. SECL/BSP/CAD/244 BM EXT /16-17/14 dated 11.04.2016. Scheme for introduction of Continuous Miner (0.36 MTPA) approved by CoFD vide letter No. SECL/BSP/CAD/604 FD/Extracts/16-17/442 Dt. 14.12.2016. Progressive Mine Closure Plan for area of 507.472 ha has been approved by the SECL Board vide letter no. SECL/BSP/CAD/221 BM EXT/13-14/650 dated 01.02.2014. Progressive Mine Closure Plan has been updated and approved by competent authority on 12.09.2022 (for 0.88 MTPA coal production in MCP area admeasuring 608.407 ha).

ix. The land usage pattern of the project is as follows:

a) Pre-Mining land use details

S. No.	Land Use	Within ML Area (Ha.)	Outside ML Area (Ha.)	Total (Ha.)
1	Agriculture Land	168.551	0	168.551
2	Forest Land	310.268	0	310.268
3	Waste land	0	0	0
4	Grazing Land	0	0	0
5	Surface Water Bodies	0.60	0	0.60
6	Settlements	66.618	0	66.618
7	Others (Govt. Land)	54.92	0	54.92
	Old Excavation Area (East Quarry)	0	0	0
	Old Excavation Area (West Quarry)	0	0	0
	Old OB Dumps	0	0	0
	Roads & Mine Infrastructure	7.45	0	7.45
	R&R Colony	0	0	0
	Staff Colony	0	8.55	8.55
	Green Belt	0	0	0
	Balance Area	0	0	0
	Total Project Area=	608.407	8.55	616.957

b) Post mining:

S. No.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1.	External OB dumps	0	0	0	0	0
2.	Top Soil Dump	0	0	0	0	0
3.	Excavation	0	0	0	0	0
4.	Roads	0	0	7.45	0	7.45
5.	Built Up Area (Colony/Office)	0	0	8.55	0	8.55
6.	Green Belt	0	0	0	0	0

7	Undisturbed Area				600.957	600.957
8	Safety Zone/Rationalization Area	0	0	0	0	0
9	Diversion /Below River/ Nala / Canal	0	0	0	0	0
10	Water Body	0	0	0	0	0
11	Staff Colony	0	0	0	0	0
	Total Area=616.957 Ha.	0	0	16	600.957	616.957
<p>As this is an underground mine and only a very small portion of surface area of the land has been disturbed for its use in infrastructure and township development. The post mining land use for this surface land is in plantation at least in 40% area and remaining will be cultivable and built up area, which will be utilized by nearest project of SECL.</p>						

- x. Total geological reserve reported in the mine lease area is 36.407 MT with 15.494 MT mineable reserve as on 01.04.2016 (as per approved scheme and PFR). Out of total mineable reserve of 15.494 MT, 14.143 MT are available for extraction (as on 01.04.2022) . Percent of extraction is 80%.
- xi. 02 seams with thickness ranging from 2 m to 3.0 m (prevalent) are workable. Grade of coal is G-5 (Seam 1-Comb), stripping ratio is NA, while gradient is 1 in 20.
- xii. Method of mining operations envisages by Underground mining - Bord & Pillar system, Conveyor belt and LHD/SDL & Continuous Miner Package
- xiii. Life of mine is 19 years (as on 01.04.2021) as per approved PFR
- xiv. Transportation of coal from underground to Bunkers (located on surface) will be done through series of conveyor belts.
- xv. The transportation of coal form stock yard/bunker to Kumda siding by tarpaulin trucks/tippers. Coal from Kumda railway siding will be loaded into railway wagons by mechanical means (i.e. pay loaders) to local consumers by tarpaulin covered trucks/ tippers
- xvi. 310.268 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 547.012 ha (for both Rehar and Gayatri UG Mine) of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No. 8-90/99-FC dated 27.09.2000.
- xvii. No National Park, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- xviii. No schedule – I species found hence Wildlife conservation plan is not applicable.
- xix. The ground water level has been reported to be varying between 4.45 m to 7.66 m during pre-

monsoon and between 1.88 m to 7.94 m during post-monsoon. Total water requirement for the project is 800 KLD.

- xx. Application for obtaining the approval of the Central Ground Water Authority for 4919 cubic meter/ day has been submitted vide application no. 21-4/7412/CT/MIN/2022 on 12th October, 2022.
- xxi. Consent to Operate for the existing capacity was obtained from the State PCB on 23.11.2007 and was subsequently renewed vide 4131/TS/CECB/2021 Nava Raipur Atal Nagar, Dated 07/09/2021 is valid till 28.11.2022.
- xxii. Jobga nallah is flowing along western and southern mine boundary. The nallah will not be diverted.
- xxiii. Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to State PCB 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.
- xxiv. No court cases, violation cases are pending against the project of the PP.
- xxv. 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 2003-04 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

S.No.	Year	Sanctioned Capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the sanctioned EC capacity
1	2003-04	0.30	0.010	0
2	2004-05	0.30	0.049	0
3	2005-06	0.30	0.081	0
4	2006-07	0.30	0.084	0
5	2007-08	0.30	0.106	0
6	2008-09	0.30	0.107	0
7	2009-10	0.30	0.230	0
8	2010-11	0.30	0.282	0
9	2011-12	0.30	0.245	0
10	2012-13	0.30	0.229	0
11	2013-14	0.30	0.226	0
12	2014-15	0.30	0.219	0
13	2015-16	0.30	0.226	0
14	2016-17	0.30	0.297	0
15	2017-18	0.30	0.238	0
16	2018-19	0.30	0.250	0
17	2019-20	0.30	0.250	0
18	2020-21	0.30	0.193	0

19	2021-22	0.30	0.123	0
20	2022-23 Till 15.10.2022	0.30	0.074	0

xxvi. Total cost of the project is Rs.150.27 Crores. Cost of production is Rs. 555.81/ tonne (at 100% production level) as per approved Revised project report. CSR cost is 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.00 per ton of coal, whichever is higher.

36.3.3 The EAC during deliberations noted the following:

- i. The project proponent has obtained the EC vide Ministry's letter No. J-11015/26/2000-IA.II (M) dated 27.11.2002 under EIA Notification, 1994 and subsequently EC was issued on 28.09.2022 as per MoEF&CC Notification S.O. 1530(E) dated 6.04.2018.
- ii. The forest land of 310.268 ha has been involved in the project. The forest Clearance for the diversion of 547.012 ha (for both Rehar and Gayatri UG Mine) has been obtained vide MoEF&CC letter No. F.No. 8-90/99-FC dated 27.09.2000 under the Forest (Conservation) Act, 1980.
- iii. The project proponent has submitted that no National Park, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- iv. The project proponent has submitted that the Jobga nallah flowing along western and southern mine boundary. The nallah will not be diverted.
- v. The project proponent has submitted the Certified EC Compliance Report of IRO, MoEF&CC, Raipur, submitted to MoEF&CC, New Delhi vide his F. No. 3-12/2002 (Env)/775 dated 15.06.2022.

36.3.4 *The EAC, after deliberations observed that instant project is brown field project wherein both project area and production capacity are being increased. As per Ministry's OM dated 6th May, 2022 regarding Mechanism for handling ToR applications for issuing Standard Terms of Reference (ToRs) or referring to EAC/SEAC through PARIVESH Portal. The committee observed that due to underground mining activity the forest area is still undisturbed. As per the Forest Clearance vide dated 27.09.2000, the project proponent has to protect the 547.012 ha of forest area by erecting a stonewall fencing on the surface and carry out the gap plantation wherever required in consultation with the forest department. The committee emphasized that new subsidence study should be conducted from any of the authorized organization for the involved forest area of 310.268 ha in the Gayatri underground Coal Mining project.*

*The EAC after deliberation, **recommended** for grant of Terms of Reference for Gayatri Underground Coal Mining Project from 0.30 to 0.88 MTPA with increase in Mine Lease area from 507.472 ha to 616.957 ha of M/s South Eastern Coalfields Limited located at village Getra, Tehsil Ambikapur, District Surguja (Chhattisgarh), under the provisions of EIA Notification, 2006 and its amendments therein along with public consultation with specific conditions mentioned below:*

- i. *Public Consultation, including public hearing, shall be conducted through concerned SPCB in the concerned districts as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.*
- ii. *PP shall conduct detailed new subsidence study, its impact due to mining activity and propose mitigation/management measures. The report shall include the present status to the damage of forest after grant of Forest Clearance.*
- iii. *PP shall prepare a plan and submit the steps to protect the Cracks created on the Forest surface due to mining activity.*
- iv. *PP shall submit the plan for installation of continuous air quality monitoring station at appropriate location in consultation with SPCB.*
- v. *PP shall submit certified compliance report of two EC conditions from Ministry's IRO. IRO shall certify that PP has complied 75% of conditions mentioned in earlier ECs vide Ministry's letter No. J-11015/26/2000-IA. II (M) dated 27.11.2002 and 28.09.2022.*
- vi. *PP shall ensure that the proposal of EC only be submitted after completion of about 75% compliance of existing EC conditions stipulated in earlier two ECs dated 27.11.2002 and 28.09.2022.*
- vii. *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 streams.*
- viii. *PP shall submit Mechanism for utilization of extracted mine water and its distribution network*
- ix. *PP shall not plan any non-essential infrastructure of mining operation on the forest area.*
- x. *Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. 12 nos of Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- xi. *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- xii. *PP shall provide the details of mining technology/methodology proposed to be adopted for coal mining operations and its associated environmental benefits of using from Climate Change perspective.*
- xiii. *Detailed Social Impact Assessment shall be prepared in villages for Rehabilitation and Re-settlement. R & R Activity shall be proposed with timeline and allotted fund with the approval of District Commissioner/collector. A need based sample survey, family-wise, should be undertaken to assess their requirements, and action programs prepared and submitted accordingly, integrating the sectoral programs of line departments of the State Government.*
- xiv. *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA) only for mining activity.*
- xv. *Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.*
- xvi. *PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.*

- xvii. *PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal.*
- xviii. *PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any Eco-sensitive zone and areas and further is no corridor of Elephants & Tigers. The list of species identified during primary survey/secondary data shall be vetted by concerned District Forest Officer.*
- xix. *Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted*

Agenda No. 36.4

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 OM dated 28.01.2022 -Violation category)

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

36.4.1 The proposal 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).

36.4.2 The Committee during the EAC meeting noted that the project proponent vide email dated 20th October, 2022 informed to the Ministry that company’s Board Meeting scheduled on the same day of the EAC meeting i.e. 20th October, 2022. Therefore, the project proponent requested to defer the proposal.

In view of the above, the Committee **deferred** the proposal as PP is absent.

Agenda No. 36.5

Kulda Opencast Coal Mine Project with production capacity from 19.6 MTPA to 21 MTPA in Mine Lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) - For Amendment in Environmental Clearance – reg.

[Online Proposal No. IA/OR/CMIN/276156/2022; File No. J-11015/10/1995-IA. II (M)]

36.5.1 The proposal for Amendment in Environmental Clearance for Kulda Opencast Coal Mine Project with production capacity from 19.6 MTPA to 21 MTPA in Mine Lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha).

36.5.2 The EAC during deliberations noted the following:

- The PP has requested to amend the following specific condition of EC letter dated 14-02-2022 & 24-05-2022 and the same is produced below along-with the submissions:

Sr. No.	Amendment required in EC conditions	Submissions of Project Proponent
Specific Condition (v)	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.	<p>In proposed project all the coal has been planned to be dispatched through belt after commissioning of Barpalli loop in Dec 2025, which has been confirmed vide letter from South Eastern Railways dated 19.05.2022.</p> <p>➤ However, till commissioning of Barpalli loop as an intermediate arrangement, presently Coal is being transported through dedicated Coal corridor of 7 Km towards Sardega Siding out of which 2 Kms of transportation will be done by upcoming Rapid Loading System + Conveyor belt System by Oct 2023.</p> <p>➤ The details of progress of upcoming RLS at Sardega and Barapalli loop was shown during the meeting.</p> <p>Preparedness regarding Barpali Bulb and other Infrastructure: Arrangement consists of 4 RLS (50 Mty) and 3 SILOs (40 MTPA) with a total dispatch arrangement of 90 MTPA. Completion of construction with allied activities is expected on 31.12.2025</p> <p>Therefore, permission for Road transportation from mine to RLS/Sardega Siding may be given till</p>

		the commencement of Barpali Bulb. The specific condition may please be changed accordingly.
Specific Condition (ix)	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.	<p>coal transportation is being undertaken by MCL by dedicated coal corridors bypassing all the villages within its command area.</p> <p>➤ However, Coal consumers who are fetching coal through e-auction / FSA which is beyond the control of MCL to monitor for its route of transportation beyond its mine premises</p> <p>The above EC condition is under consideration by the Hon'ble NGT vide order dated 15.07.2022 which is being monitored by the Joint Committee recommendations constituted under the Hon'ble NGT.</p> <p>➤ As per NGT recommendation, the issues were discussed in the Joint committee meeting presided by Chief Secretary Odisha and Chattisgarh held on 16.08.2022.</p> <p>➤ The above activities are being monitored by the District Magistrate with representative from SPCB</p>
Specific Condition (xvi)	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).	<p>The existing contracts operating under Kulda OCP have a requirement for deployment of tipper having capacity of 16-28 Tonnes, and there are 15 contracts, and 335 nos. of tippers are running under Kulda OCP for coal transportation from pit to coal stock and stock to siding</p> <p>There are total 12 ESM contracts and 3 PAP's contracts. The ESM companies are sponsored by Director General of Resettlement, Ministry of Defence, Govt. of India, New Delhi and most of the tippers are owned by</p>

		<p>ESM/widow/Dependent, for which most of them have financial liabilities to pay back.</p> <p>➤ The PAP's have deployed nos. of tippers running which again provides a benefit of employment by this contract to 53 nos. of PAP's and to own these tippers most of them have financial liabilities to pay back.</p> <p>➤ For ESMs, the tenure of each agreement is for 5 years and provision of extension up to 4 years from the date of completion of existing agreement while for PAPs the tenure of each agreement is 5 years only.</p> <p>Deployment of 40-50T trailer trucks may not be possible as higher capacity trailer-trucks may not be allowed by DGMS within the mine due to higher gradient.</p> <p>➤ Also, these compact tippers have better maneuverability in the small limited size of surface miner coal faces and from safety point of view it is very important</p>
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36.5.3 The committed noted the project with following observations

- 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 22nd March, 2018 from 10 to 14 MTPA with Public Hearing. Extension in validity of EC was granted on 28th March, 2019, 10th January, 2020.
 - b) EC vide letter dated 02.03.2021 for the expansion of the Kulda OC mining project from 14 MTPA to 16.80 MTPA in the MLA of 634.205 ha under the provisions of OM dated 15.09.2017 (20% increase- stage-1).
 - c) EC vide letter dated 14.02.2022 for the expansion of the Kulda OC mining project from 16.8 MTPA to 19.6 MTPA in the MLA of 634.205 ha under the provisions of OM dated 15.09.2017 (from 20 to 40% (stage-2).

d) EC vide letter dated 24.05.2022 for the expansion of the Kulda OC mining project from 19.6 MTPA to 21 MTPA in the MLA of 634.205 ha from 40% to 50% of original EC in compliance of Ministry's OM dated 07.05.2022 under clause 7(ii) of EIA Notification 2006. This was stage-3 expansion.

- The life of mine is for 3 years from 2021-2022.
- The project proponent informed that 227.89 ha of forest land involved in the project however Stage II FC vide letter no. F.No.8-176/1997-FC dated 08.08.2007 has been obtained for 123.22 ha of forest area.

36.5.4 *The Committee, after deliberations observed that Ministry had been issuing the Environmental Clearance to Kulda Project under the special provision of OMs (exemption of public hearing & with addendum EIA-EMP report) by giving staged expansion. So far PP has availed total 50% expansion under OM dated 15.09.2017 and 07.05.2022. As per the normal procedure of EIA-EMP along with public hearing, PP was granted with EC for production capacity from 10 MTPA to 14 MTPA on 10.01.2020. Subsequently, PP had obtained ECs under said OMs and first expansion under the OM dated 15.09.2017 was obtained vide letter dated 02.03.2021 for production capacity from 14 MTPA to 16.8 MTPA (Increase in 20% production capacity). Second ECs under OM dated 15.09.2017 vide letter dated 14.02.2022 for production capacity from 16.8 MTPA to 19.6 MTPA (Further increase in 20% production capacity or total 40% increment from base value) and third ECs vide letter dated 24.05.2022 for production capacity from 19.6 MTPA to 21 MTPA (Increase in extra 10% production capacity beyond the 40% as per the O.M. dated 07.05.2022).*

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 stage-2 expansion (i.e 40% 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 till 2023 by setting aside previous commitment /condition.

Finally, the Committee noted that the project proponent has not made serious efforts to comply the specific conditions no. (v), (ix) and (xvi) after gaining the advantage of said OM. In addition, the Ministry had issued another EC vide letter dated 24.05.2022 for production capacity from 19.6 MTPA to 21 MTPA with specific condition that “PP shall submit Certified Compliance Report of the EC vide F. No. J-11015/10/1995-IA-II (M) dated 14th February, 2022 granted for total 40% expansion, along with ELA/EMP report, prepared based on standard ToRs for the additional capacity of 10% on PARIVESH portal within six months of enhancement of production beyond 40%.” As per this specific condition, PP should submit the proposal for validation of existing EC within six months of enhancement of production beyond 40%. However, PP has so far not submitted the proposal.

The Committee expressed displeasure for not making sincere effort for complying the EC conditions. The committee emphasized to submit the complete compliance of all ECs in order to protect the environment, being fall in IB valley (SPA zone). 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 inappropriate when the mine life is stated to be 3-4 years as informed in meeting and also PP, on other hand, has submitted another proposal (on Parivesh) of EC of this mine by increasing land area, making mine life upto 2043. Hence, PP misinformed the Committee. Given these facts, it was emphasized that PP must take efforts to implement the condition of in-pit belt conveyor without any delay and submit the concrete plan of its implementation in next 6 months. 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 windows/defense personal with number of trucks and its tonnage and also information of trucks being used by other private players of low capacity. With regard to specific condition (ix), regarding passing the vehicle through village road, the committee did not agree to compromise to this condition as coal road transportation nuisance already highlighted by the locals. 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 rework and submit timeline not more than 6 months for implementation of specific condition (v) with undertaking on legal affidavit since it compliance already delayed.*
- (ii) 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.*
- (iii) PP to submit the proposal with EIA-EMP report as per condition stipulated while taking EC vide letter dated 24.05.2022 for production capacity from 19.6 MTPA to 21 MTPA (Increase in extra 10% production capacity beyond the 40%) as per the O.M. dated 07.05.2022*

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

Agenda No. 36.6

Pachwara South Opencast Coal mine project of 9 MTPA (Normative & Peak) in Mine Lease area of 715 ha by M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, District Dumka (Jharkhand) – For Environmental Clearance –reg.

[Online Proposal No. IA/JH/CMIN/168045/2020; File No. J-11015/18/2020-IA. II(M)]

36.6.1 The proposal is for Environmental Clearance for Pachwara South Coal mine project of 9 MTPA/ 13.50 MTPA (Normative/ Peak) in Mine Lease area of 715 ha by M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, District Dumka (Jharkhand).

36.6.2 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 G45V6 & G45V7 and is bounded by the geographical coordinates ranging from Latitude 24°29'57.404"N to. - 24°31'46.956"N and Longitude 87°27'22.010"E to 87°29'S6.150"E.
- ii. Coal Mined from this project will be utilized in Ghatampur Thermal Power Plant (Neyvelli Uttar Pradesh Power Limited), a Coal based Thermal Power Plant with a capacity of 1980 MW (3 X 660 MW) at Ghatampur Tehsil in Kanpur Nagar District. Uttar Pradesh.
- iii. Joint venture cartel has been formed on 09.11.2012.
- iv. Project does not fall in the Critically Polluted Area (CPA), as per MoEF &CC's OM dated 13th January, 2010.
- v. Employment generation: Direct-1288 and indirect employment generation shall be more than 3000.
- vi. The project is reported to be beneficial in terms of employment to local people directly and indirectly. Indirect employment will be in the form of service provides, shopkeepers, mechanic, drivers, transporters etc. The lessee will be responsible for providing better social infrastructure benefits such as drinking water, health care measures, educational facilities, promotion of culture and religious activities in surroundings as part of their CER activities. The proposed mine will bring economic benefits to the state by the way of Royalty and other statutory payments. The linked power plant of 1980 MW will produce of 14743.08 MU of power which will help the state of Uttar Pradesh state to meet out the shortfall in power requirements.
- vii. Terms of Reference granted on 5th November 2020 for a production capacity of 9 MTPA (Normative) and 13,50 MTPA (Peak rated) by Vide letter no. IA-J-1 1015/18/2020-1A- II(M) dated 5th November, 2020.
- viii. Total mining lease area as per block allotment is 715 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Ministry of Coal (MoC) on 11th Nov'2020, vide letter no, 3401 1/2/2020-MPS.
- 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	136.40	-	136.40
2	Forest Land	397.39	-	397.39
3	Wasteland	-	-	-

4	Grazing land	12.20	-	12.20
5	Surface water bodies	10.32	-	10.32
6	Settlements	139.13	-	139.13
7	Others (Specify)	12.2653	-	12.2653
8	Old Excavation Area (East)	-	-	-
9	Old Excavation Area (West)	-	-	-
10	Old OB Dumps			
11	Roads & Mine Infrastructure	7.15	-	7.15
12	R & R Colony	-	-	-
13	Staff Colony	-	-	-
14	Green Belt	-	-	-
15	Balance Area	-	-	-
	Total Project Area =	714.8553		714.8553

Post Mining (Area in Ha)

S. No.	Land Use	Land use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1	External OB Dump					
2	Top Soil Dump					6.53
3	Excavation					643.76
4	Roads					18.47
5	Built-up Area					
6	Green Belt					3.06
7	Undisturbed area					3.2653

8	Safety Zone / Rationalization Area					10.84
9	Diversion / Below River / Nala / Canal			3.31		3.31
10	Water Body					
11	Staff Colony					
12	Others					25.62
	Total Area =					714.8553

- x. Total gross geological reserve reported in the mine lease area is 415.02 MT with 269.58 MT mineable reserve. Out of total mineable reserve of 269.58 MT, 262.84 MT are available for extraction Percent of extraction is 70.37%.
- xi. 31 seams (including splits) with thickness ranging from 0.5 m 19.43 m are workable. Grade of coal is G10 (GCV 4300 to 4600), stripping ratio 3.25, while gradient is 1:19.
- xii. Method of mining operations envisages by Mechanized opencast mining method.
- xiii. Life of mine is 38 years including two years of pre mining activity.
- xiv. The project has one external OB dump initially in an area of 197.79 ha. with 60 m height with 80.63 MCum of OB. One internal dump in an area of 523.62 ha. with 853.27 MCum of OB is envisaged in the project. The re-handling of entire surface dump (80.63 MCum) will commence from 7th year of production commencement and completed by 19th year from production commencement and there would not be any external dump.
- xv. Proposed quarry area is 643.76 ha out of which backfilling will be done in 523.62ha while final mine void will be created in an area of 120.14 ha with a depth of 320m. Backfilled quarry area of 122.29ha shall be reclaimed with plantation. Final mine void of 120.14 ha will be converted into water body.
- xvi. Transportation of coal has been proposed by front head loader dumper combination in mine pit head (however, as the mine goes to depth, a steep angle conveyor system will be installed from mine face to temporary coal stock yard at later stage), from surface to siding coal will be transported through conveyor system, However, in the initial few years, till the conveyor laying is completed, coal will be transported through road. At sidings RLS and Bunkers will be installed for coal loading onto wagons.
- xvii. Out of 715 ha. of project area, an area of 643.76 ha. will be excavated. Out of total 643.76 ha. of excavated area, an area of about 523.62 ha. will be backfilled and 120.14 ha of land will remain as a mined-out void which will be converted as water body.
- xviii. 397.39 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 397.39ha of forest land for non-forestry purposes will be obtained.
- xix. National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.

Forest	Distance (KM)	Direction
PF	0	-
PF near Alubera	1.5	N
PF near Chirudih	4.2	N
PF near Pachwara	1.3	N
PF near Kundanaatia	8.9	N
Garpara PF	9.5	N
Houlton PF	14	N
PF near Nunpara	14	NE
PF near Chota taldih	6.5	NE
PF near Bardahaar	3.5	NE
PF near Pachwara	2.5	E
PF near Jaraki	4	E
PF near Kundlabari	7.2	E
PF near Gumapahar	5	SE
PF near Chhota	12.5	SE
PF near Puranakora	5.5	SSE
PF near Jora Simul	6.6	SSE
PF near Dharampur	10	SSE
PF near Dumuria	14	SSE
PF near Danro	13.5	W
PF near Tamki	6.03	E
PF near Rampur	6.63	SE
PF near Pipra	6.97	SE
PF near Dundhapara	5.21	E

WATERBODIES	Distance (KM)	Direction
Bansloi	Adjacent	
Danra Nadi	11	W
Chapli Nadi	10.5	NW
Gurjor Nadi	14	NW
Ikrijor Nala	2.7	NE
Kanda Nala	14	E
Nala near Narayanpur	10	ESE
Surjudi Nadi	12	SE
Tripita Nadi	9	S
Guma Nadi	11	SW
Banjhi Amba Nadi	7.5	SW
Makar Kandi nala	2.3	SE
Balidih nala	10	SW
baro sorand nala	2.03	N

- xx. Wildlife conservation plan for schedule - I has been submitted to the Principal & Chief Conservator of Forest, Doranda, Ranchi, Jharkhand on 6th October. 2022.
- xxi. The ground water level has been reported to be varying between 4.5 m to 11.0 m during pre-monsoon and between 2.25 m to 9.1 m during post-monsoon.
Total water requirement for the project is 1660KLD including domestic and industrial
- xxii. Application for obtaining the approval from Central Ground Water Authority has been submitted and a provisional No Objection Certificate for Groundwater Abstraction has been granted by vide letter no-CGWA/NOC/MIN/ORIG/2022/14905 dated 25.03.2022.
- xxiii. Public hearing for the project of production capacity of 9 MTPA (Normative) and 13.50 MTPA (Peak rated) in an area of 715 ha was conducted on 28th of December, 2021 at 11.30am in village Rangamison on Dumka-Pakur main road under the Chairmanship of Additional Collector. Major issues raised in the public hearing include social-developmental activities, pollution control due to mining. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are as under:
- xxiv. Consent to Operate will be obtained from the concerned authority as per prevailing norms.

- xxv. No perennial river is passing through the block and diversion of such Streams/ Nala's are thus not envisaged.
- xxvi. Regular monitoring of Ambient Air quality will be carried out as per the guideline of MOEF & CC. Monitoring report will be submitted along with half yearly EC compliance report.
- xxvii. No court cases, violation cases are pending against the project of the PP.
- xxviii. The project does not involve violation of the EIA notification 2006, coal production will be started after obtaining necessary statutory approval from concern authorities.
- xxix. The project involves 541 project affected families. R&R of the PAPs will be done as per the statute. At present, detailed SIA study is ongoing on under the guidance of District Administration. More precise numbers of PAF's and PAP's along with estimated R&R cost will be informed after completion of the SIA study.
- xxx. Total cost of the project is Rs. 1795.01 crores. Cost of production is Rs. 1071 per tonne, estimated CER cost for Pachwara South Coal block is coming around Rs.8.97 cores. Environment Management cost: Capital Investment - Rs 185 lakh, Recurring Cost-118 lakh.

36.6.3 The EAC during deliberations observed the following:

- Terms of Reference was issued vide letter no. IA-J-11015/18/2020-1A-II (M) dated 05.11.2020 for production capacity of 9 MTPA (Normative) and 13.50 MTPA (Peak).
- Mine plan including Mine Closure Plan is prepared for Peak production capacity as per latest guidelines of Ministry of Coal. Mine plan along with Mine closure plan is also approved by the Ministry of Coal (MoC) on 11th November 2020 vide letter 34011/2/2020-MPS.
- Project involves forest area of 397.39 ha required for non-forestry activity and approval of Stage-I Forest Clearance is still awaited.
- The Public hearing was conducted on 28.12.2021 at village Rangamison for the production capacity of 9 MTPA (Normative) and 13.50 MTPA (Peak) in the ML area of 715 ha. During the public hearing, major issues raised were related to social-developmental activities, Pollution control during mining activity, construction of R& R colony with all basic amenities and adequate compensation for the "Van Patta" and other land, construction of schools for children, employment to the villagers, filling the mined out land and to be made flat, irrigation well and distribution network shall be installed, occurrence of seepage of ground water and leaching from overburden material
- Base line study for Environmental Impact Assessment has been carried out during December, 2020 to February, 2021.
- The project proponent has submitted that the Wildlife conservation plan for schedule I to the Principal & Chief Conservator of Forest, Doranda, Ranchi, Jharkhand on 06.10.2022.
- Clarification from Divisional Forest Officer, Dumka is obtained vide letter no- 2509 dated 07.12.2020 that the mine does not fall under corridors of any National Park and Wildlife Sanctuary. Since, the Buffer Zone is also covering part of Pakur District, clarification from Divisional Forest Officer, Pakur is also obtained vide letter no- 227 dated 02.01.2021 that the buffer zone doesn't form a part of any National Park and Wildlife Sanctuary.

- List of Flora and Fauna has been authenticated by DFO, Pakur for buffer zone vide letter no. 127 on dated 18th January, 2022. List of Flora and Fauna has been authenticated by DFO, Dumka for core zone vide letter no. 572 on dated 07.03. 2022.

36.6.4 *The EAC, after deliberations noted that instant proposal is a green field project for which ToR was issued vide letter dated 05.11.2020. The Committee observed that the forest land of 398.3243 ha is involved in Mine lease area of 714.8553 ha. Though, the project proponent has submitted the application on 20.11.2020 but the Stage-I FC clearance under Forest (Conservation) Act, 1980 is yet to be obtained. During course of discussion, the Committee noted that the mining plan and mine closure plan has been prepared for production for 9 MTPA only as mentioned in calendar plan; therefore, EAC opined that EC shall only be considered by 9 MTPA (Normative) instead of 13.50 MTPA (Peak) capacity and subject matter shall be modified accordingly.*

As per the Kml file, it has been observed that the Bansloi river is flowing adjacent to the Mine lease area; therefore, committee emphasized to restrict mining activity atleast 100m away from the embankment of the Bansloi river to the protect the natural flow of river. Also the Committee emphasized that the overburden should not be dump near to the River. It was submitted by PP that a detailed scientific study for construction of embankment has been conducted by Kharagpur-IIT. However, EAC desired that PP must keep 100 mts distance from proposed embankment of the river. On enquiry about the land acquisition, PP submitted that Letter of Intent is not required from the State Government since the mine has been allocated under Coal Bearing Acquisition Act by Ministry of Coal. EAC desired that Ministry's IA Division may request Forest Conservation (FC) Division to see the diversion of forest land for non-forestry activity regarding using forest land for overburden dump.

Regarding, transportation of coal, PP informed that railway siding shall be constructed towards other side of river bank. This railway siding shall be used for all 2-3 coal mines presently functioning in the area. EAC desired that PP shall submit the timeline for construction of railway siding in commensurate with timeline of inpit belt conveyor system alongwith silo loading system. It was further noted that Social Impact Assessment study is under progress in consultation with District Administration and also the application of Stage-I is still at the level of State Government.

EAC emphasized that PP must develop fool-proof drainage pattern all around the Mine lease area and treat it though ETP. In any case no acidic/untreated water from mine should be allowed discharge from mine lease area into the water bodies including river. On discussion on EMP budget, EAC found inadequate budget for environment protection measures and advised to revise the EMP budget by including the cost of sprinkler, Water and Air quality monitoring device, ETP and other devices/infrastructure used for the environment protection and prevention.

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

- (i) PP shall submit the plan for the protection of Bansloi river flowing adjacent to the Mine lease area with the safe distance of at least 100m from the embankment of the Bansloi river to the protect the natural flow of the river stream.
- (ii) PP shall submit the revised EMP budget including the cost of sprinkler, Water and Air quality monitoring device, ETP, garland construction and other devices used for the environment protection and prevention by excluding fund allocated for R&R and CSR Activity.
- (iii) PP shall submit the timeline for construction of railway siding and inpit conveyor system with silo loading system.
- (iv) PP shall submit the Stage-I FC for the forest land of 398.3243 ha involved in the Mine lease area of 714.8553 ha, under Forest (Conservation) Act, 1980.
- (v) PP shall revise the budget allocated for addressing the issues of Public Hearing.
- (vi) PP shall prepare and submit the wildlife conservation plan for the Schedule-I species.
- (vii) PP shall prepare a plan for implementation of the sand-segregation (to be recovered from Overburden)
- (viii) PP shall submit the plan for water requirement in the mine lease area and no ground water to be used for drinking purpose.
- (ix) PP shall conduct Bio-assay test of the river water and presence of aquatic species in the river.
- (x) PP shall not dump any Overburden material on forest land and justify the same as discussed during the meeting.
- (xi) PP shall submit the approved Social Impact Assessment study as being done by District Administration.
- (xii) PP shall submit alternative land for using surface water bodies of area 12.20 ha and also inform the nature/type of these water bodies.
- (xiii) PP shall submit signed Corporate Environment Policy as approved by the Board of the company.

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

Agenda No. 36.7

Expansion of the North Urimari Opencast project from 3.6 to 4.2 MTPA (Stage II expansion) in Mine Lease area of 535.82 ha of M/s Central Coalfield limited located in village Urimari, Tehsil Barkagaon, District Hazaribagh (Jharkhand) - For Environmental Clearance under Ministry's OM dated 11.04.2022 – reg.

[Online Proposal Number: IA/JH/CMIN/272627/2022; File No. J-11015/307/2005-IA. II(M)]

36.7.1 The proposal is for Environmental Clearance under Ministry's OM dated 11.04.2022 for expansion of the North Urimari Opencast project from 3.6 to 4.2 MTPA (Stage II expansion of 40%) in Mine Lease area of 535.82 ha of M/s Central Coalfield limited located in village Urimari, Tehsil Barkagaon, District Hazaribagh (Jharkhand).

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

- i. The project is covered in Survey of India toposheet no. 73E/6 and is bounded by latitudes 23° 42' 04" N to 23° 43' 20"N and longitudes 85°16' 06" E to 85° 19' 36" E.
- ii. Coal linkage of the washery is proposed through basket linkage & e-auction.
- iii. No Joint venture cartel has been formed for the project.
- iv. Project does not fall in Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed moratorium on grant of environment clearance. But presently fall under Severely Polluted Area (SPA)
- v. Employment generation, project is source to direct employment of about 1000 persons.
- vi. The project is reported to be beneficial in terms of employment opportunities both for skilled and semi-skilled persons in the area. Business opportunity in secondary & Tertiary sectors will increase. The proposed project will also bring about enhanced socio-economic benefits to local population due to expenditure in CSR activities, post-mining enhancement of green cover, contribution to exchequer etc.
- vii. Earlier, the environment clearance to the project was obtained under EIA Notification-1994 vide Ministry's letter No: J-11015/307/2005-IA.II(M) Dated: 08.02.2006 for 3 MTPA. The EC was revalidated on 07.11.2019, under EIA-2006, for a capacity of 3 MTPA in an area of 516.90 Ha (Total area: 535.82 Ha).
Later, the project was granted environmental clearance for a capacity of 3.6 MTPA within the project area of 523.06 Ha vide letter no: J-11015/307/2005-IA.II(M) Dated: 18.02.2022 (EC Identification No.-EC22A042JH131082) under clause 7(ii) of EIA notification 2006 and as per MoEF&CC OM No.J-11015/224/2015-IA.II(M) Dt. 15.09.2017 for one time expansion. EC granted was for 20% expansion from original 3 MTPA to 3.6 MTPA.
- viii. Total mining lease area as per block allotment is 650 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved in the 467th CCL Board meeting on 19.12.2018.
- ix. The land use of the project is as follows:

Pre-mining Land Use:

Description	Forest in Ha	GMK JJ in Ha	Non Forest (Tenancy+ GMK) Ha	Total Area in Ha.
Quarry	43.95	75.34	135.11	254.4
External OB dump	12.47	72.56	83.91	168.95
Safety Zone	0.95	13.60	29.74	44.28
Haul road		2.8	1.70	4.5
Nalla diversion and garland drain	0.31	-	10.28	10.59
Industrial construction	-	4.53	16.89	21.42
Total Project Area	-	-	-	504.14
Colony area	-	-	18.92	18.92
Total Land	57.68	168.83	296.55	523.06

Post-Mining Land Use:

Description	Plantation	Water body	Public Use	Un-disturbed	Total Area in Ha.
Quarry	182.40	72	0	0	254.4
External OB dump	168.95	0	0	0	168.95
Safety Zone	44.28	0	0	0	44.28
Haul road	4.5	0	0	0	4.5
Nalla diversion and garland drain	0	10.59	0	0	10.59
Industrial construction	0	0	21.42	0	21.42
Total project area	400.13	82.59	21.42	0	504.14
Colony area	0	0	18.92	0	18.92
Total Area	400.13	82.59	40.34	0	523.06

- x. As per the approved Mining Plan, total geological reserve reported in the mine lease area is 139.38 MT with 80.81 MT mineable reserve. Out of the total mineable reserve of 80.81 MT, 80.81 MT are available for extraction. Percent of extraction is 100 %.
- xi. 15 seams with thickness ranging from 0.27 meter to 22.60 meter are workable. Grade of coal is G-8. Stripping ratio is 1.69 while gradient is 8 degree to 35 degree.
- xii. Method of mining operation is by open-cast mining using shovel dumper mining system and surface miner.
- xiii. Life of mine is 22 years
- xiv. The project has 1 external OB dumps in an area of 168.95 ha with 90 m height and 59.60 Mm³ of OB. 1 internal OB in an area of 182.40 ha with 77 Mm³ of OB is envisaged in the project.
- xv. Total quarry area is 254.40 ha out of which backfilling will be done in 182.40 Ha area. Final mine void will be created in an area of 72 Ha with depth of 60-140 m. Backfilled quarry area of 182.40 Ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- xvi. Transportation of coal has been proposed by tipping trucks from mine pit head, from surface to siding at present by covered tipping trucks and at sidings by payloaders. A proposal for the construction of 'North Urimari Railway siding' is under process. RITES has started the work of Railway Siding. The coal shall be transported from the said siding after its completion.
- xvii. Reclamation Plan in an area of 400.13 Ha comprising of 182.40 Ha of internal dump, 168.95 Ha of external dump and 44.28 Ha of green belt and safety zone. In addition to this, an area of 4.5 ha, included for Haul Road, has also been proposed for green belt development.
- xviii. 226.51 ha of forest land has been reported to be involved in the project. Total Forest land involved in project area, 226.51 Ha. has been diverted (Stage II) vide letter no: F. No. 8-54/2008-FC Dt. 03.08.2011.
- xix. No 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 to DFO Hazaribagh (W)

- xxi. The ground water level has been reported to be varying between 5.3-9.6 m (Pre monsoon) and 2.18-7.44m (Post monsoon). Total water requirement for the project is 1009 KLD.
- xxii. NOC of the Central Ground Water Authority has been issued vide no: CGWA/NOC/MIN/ORIG/2021/14192 Dated: 30.12.2021.
- xxiii. Public hearing for the project of 3 MTPA capacity was conducted on 08.10.2004 at Guest House, Urimari Project, Post- Sayal D, District- Hazaribagh. Major issues raised in the public hearing include impact due to Possible water and air pollution and compensation to the affected PAPs etc. Appropriate action to address the issues raised in the Public Hearing have been taken.
- xxiv. Consent to Operate for the existing capacity was obtained from the Jharkhand State PCB on 15.03.2022 and is valid upto 31.12.2022.
- xxv. Damodar River is flowing in the south of the block. There are two seasonal tributaries flows near the Norh Urimari project i.e. Potanga stream and Tiliya stream. The opencast project was divided in two quarries by Potanga stream flowing across the project from north to south. Whereas, Tiliya stream flows from north to south in the west of the project and discharge its load into Damodar river. The stream will be diverted in consultation with the Water Resource Department of the State Government.
- xxvi. Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB & MOEF&C with six monthly 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.
- xxvii. No court cases, violation cases are pending against the project of the PP.
- xxviii. The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. 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 past years, is as under:

Year	Production in Mte (3 MTPA EC Capacity)
2011-12	0.339
2012-13	0.372
2013-14	0.154
2014-15	0.503
2015-16	0.78
2016-17	0.813
2017-18	1.727
2018-19	2.967
2019-20	2.823
2020-21	2.651
2021-22	3.59
2022-23 (Till 10.10.2022)	2.025

- xxix. The project involves 515 project affected families. R&R of the PAPs will be done as Per as per R&R Policy of CIL.
- xxx. Total cost of the project is Rs. 232.90 Crores. Cost of production is Rs. 1007/Tonne. The fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediately preceding financial years. Environment Management cost is Rs. 48.92 Crores (Capital).

36.7.3 The EAC, during deliberations noted the following:-

- The Project proponent has obtained the following environmental clearance vide letter no. J-11015/10/1995-IA. II (M):
 - a) The EC issued vide letter dated 08.02.2006 for production capacity of 3 MTPA in the Mine Lease area of 516.90 ha under EIA Notification, 1994.
 - b) The EC was revalidated vide letter dated 07.11.2019 for the production capacity of 3 MTPA in the Mine lease area of 516.90 ha (Total area: 535.82 Ha). under EIA Notification, 2006.
 - c) The EC issued vide letter dated 18.02.2022 for increase in production capacity from 3 to 3.6 MTPA (i.e. increase in 20% production capacity) in the MLA of 535.82 ha under clause 7(ii) of EIA notification 2006 as per OM dated 15.09.2017.
- The stage II Forest Clearance has been obtained vide letter no. F. No. 8-54/2008-FC dated 03.08.2011 for the forest land of 226.51 ha out of the total mine lease area of 535.82 ha.
- The Wildlife conservation plan for schedule - I species has been submitted to DFO Hazaribagh (W).
- The project proponent has obtained the NOC from the Central Ground Water Authority vide no. CGWA/NOC/MIN/ORIG/2021/14192 dated 30.12.2021.
- The project proponent conducted the Public hearing on 08.10.2004 for production capacity of 3 MTPA. The major issues were raised during the public hearing include water and air pollution due to mining and compensation to the affected persons.
- The Consent to operate for the existing capacity has been obtained from the Jharkhand State PCB on 15.03.2022 and same is valid upto 31.12.2022.

36.7.4 *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 40% capacity (stage II expansion) under para 7(ii) of EIA Notification, 2006. EAC in length deliberated the certified compliance report of existing EC and observed that the specific conditions mentioned in the EC letter dated 18.02.2022 have not completely complied as per the Compliance report submitted vide letter dated 12.09.2022. Major conditions such as implementation of inpit conveyor system and silo loading system, plantation over OB Dump, implementation of fog cannons, construction of STP in colonies, installation of wind sheets at Saunda B Railway Siding have not been implemented and also PP is yet to implement the site specific wildlife conservation plan. Finally, EAC construed that criteria of OM, particularly implementation of inpit belt conveyor with silo loading as main condition based on which PP had obtained 20% expansion, have not been complied; rather this is still in implementation stage. EAC accordingly advised PP to*

complete the work as early as possible and adhere to EC condition. Due to major non-compliance observed in the proposal, EAC desired compliance on the following points:

- (i) PP should complete work of North Urimari Railway siding and Belt conveyor system with CHP and Silo loading system till December, 2022 and accordingly seek the next level of expansion.
- (ii) Apart from above mandatory condition, PP also to comply other conditions i.e plantation over OB Dump, implementation of fog cannons, construction of STP in colonies, installation of wind sheets at Saunda B Railway and the PP should obtain 5-star rating from Ministry of Coal for overall sustainable management of mines.
- (iii) PP to submit the clarification from SPCB for the project area falls under Severally polluted area (SPA) and also submit the action with respect to the SPA.

In view of above, the proposal has been **returned**.

Agenda No. 36.8

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 931.53 ha (676.53 + 255.00) to 1296.42 ha (1294.42ha + 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)]

36.8.1 The proposal for Environmental Clearance for 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 931.53 ha (676.53 + 255.00) to 1296.42 ha (1294.42 + 5) of M/s Western Coalfields Limited located at Villages Gauri & Pauni, Taluka Rajura, District Chandrapur, (Maharashtra).

36.8.2 The EAC during deliberations noted the following:

Earlier, the project was considered and deliberated by EAC in its 34th meeting held on 23rd August, 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 20.09.2022 and accordingly is being considered by EAC in its 36th meeting held during 20 – 21 October, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

Sr. No.	Observation of EAC	Reply of Project Proponent
1	PP shall submit revise the minutes with clarification from Authority, which	The Project Proponent has submitted the revised Public Hearing minutes/proceedings with

	have conducted public hearing without answers of the objection/concerns of public raised in the meeting along with the videography /recording. A proper minute shall be submitted as per the provisions of EIA, Notification, 2006	clarification from Maharashtra Pollution Control Board. MPCB vide its letter dated 20th September, 2022 has stated that PP has submitted answers to each and every objection/concern raised during public hearing with facts and figures in its letter addressed to Board dated 08/09/2022. The said addendum to the minutes of meeting is approved by the Chairman of the Public Hearing committee.
2	After revising the minutes, PP to submit the time bound action plan to address the public hearing issues with budgetary provision.	The Project Proponent has submitted the detailed point-wise action plan vide letter dated 20.09.2022. The project proponent has submitted the Summary of compliance of issues raised during public hearing along with budgetary provision and timeline.
3	PP shall submit the revised mining plan in case the proposal for Gauri-Pauni opencast mine is revised on merger of two ECs. Separately, amendment of third EC shall also be required	The project proponent has submitted the Mining Plan vide letter no. WCL/Office of CS/BM-345/2022-23/454 dated 20.09.2022 for merger of two ECs namely Gauri I & II (A) OC Expansion and Expansion of Pauni OC has been prepared for the Mine lease area of 1296.42 ha (1291.42 ha Mining lease + 5.00 ha) including the additional land for rehabilitation of Pauni Village with the production capacity of 3.50 MTPA.
4	PP needs to submit the detail of authenticated past production of ECs from the base year	The project proponent has submitted the authenticated production details of the Gauri I & II (A) OC expansion since 2009-10 and production details of the expansion of Pauni OC mines since 2014-15.
5	PP needs to submit the compliance report of all Environmental Clearance from the Integrated regional office.	<ul style="list-style-type: none"> • Field visit for ascertaining status of compliance of EC conditions was made from IRO, MoEF&CC, Nagpur on 19-20.05.2022. • Certified Compliance Report for existing Environmental Clearance of Gauri I&II OC was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. 3-38/2014(ENV)/9752 dated 30.05.2022

		<ul style="list-style-type: none"> • Certified Compliance Report for existing Environmental Clearance of Expansion of Pauni OC was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. 3-7/2015(ENV)/9753 dated 30.05.2022.
6	PP to clarify whether the proposed addition area of 380 ha is under CBA Act, wherein Mining Lease is not required.	<p>The project submitted the information regarding additional land of 380 ha wherein 375.31 ha of land is within the mining lease / project area which will be used for mining & allied activities and remaining 5 ha land is outside mining lease/ project area which is provisioned for rehabilitation of Pauni village.</p> <p>As per the Gazette Notification pertaining to acquisition of this land under CB Act' 1957 has been published vide S.O. 3064 (E) dated 05-07-2022 which comes to 373.62 ha as per the acquisition of plots. The copy of notification is submitted.</p> <p>The remaining land of 5.00 ha for rehabilitation of Pauni village which is outside mining lease / project area will be acquired under LA Act in due course.</p>

Following observations are noted: -

- Earlier EC granted to Pauni OC was having ~ 255 ha for 0.90 MTPA peak capacity however, PP is merging the area of about 239 ha leaving 15 ha aside which has not been acquired by PP.
- On examination of public hearing issues, it has been emerged that villagers have expressed their concerns about the nallas acquired by PP were connected to Gobi nallah and leading to flooding in the villages and agricultural field. Loni village were submerged due to excess silt in Gobi Nallah and further diverting Lendi Nalla will completely destroy Gowari village. Due to transportation of coal without tarpaulin and over burdended, there is no production in the agricultural field.
- Further, it can be observed that the instant project lies in Chandrapur district which comes under Critically Polluted Areas (CPA) and has CEPI Score of 76.41. As per order of Hon'ble NGT in OA No. 1038/2018 dated 10th July, 2019, it is mentioned as:

- *These PIAs were ranked as ‘critically polluted area’ (CPA), ‘severely polluted area’ (SPA) and ‘other polluted areas’ (OPAs), depending upon the CEPI scores of each of these industrial areas. Where the CEPI score crossed 70, the areas are designated as CPAs, where the index was between 60-70, they are designated as SPAs and those below 60 as OPAs.*

36.8.3 *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. The project falls under critically polluted area of Chandrapur having CEPI Score of 76.41. 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 EAI, Notification, 2006. Therefore, EAC advised 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 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.*

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. 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. 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.

*In view of above, the project was **deferred** for further compliances.*

Agenda No. 36.9

Expansion of Pauni II Opencast Mine for increase in production from 3.25 to 3.9 MTPA in Mine Lease area of 1095.52 Ha located in the Village Sakhri, Tehsil Rajura, District Chandrapur (Maharashtra) – For Environmental Clearance under O.M. dated 11.04.2022 (Stage I expansion) – reg.

[Online Proposal No. IA/MH/CMIN/291051/2022; File No. J-11015/80/2016-IA. II(M)]

36.9.1 *The proposal is for Environmental Clearance under O.M. dated 11.04.2022 (Stage-I expansion) for Expansion of Pauni II Opencast Mine for increase in production from 3.25 to 3.9 MTPA in Mine Lease area of 1095.52 Ha located in the Village Sakhri, Tehsil Rajura, District Chandrapur (Maharashtra).*

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

- The instant case is for Stage-I expansion i.e. 20 % expansion of existing EC of 3.25 MTPA to 3.90 MTPA based on the OM dated 11-04-2022 & 30-05-2022.*

- ii. The project area is covered under Survey of India Topo Sheet No 56 M/1 & 56 M/5 and is bounded by the geographical coordinates ranging from 19°48'19" N to 19°49'27" N and longitudes 79°13'48" E and 79°16'13" E.
- iii. Coal linkage of the project is proposed for thermal use for MAHAGENCO & various consumers
- iv. There is no Joint venture
- v. Employment generation, Permanent employment to 242 persons is provided in the project. In addition, approximately 700 Nos. of employment shall be generated directly and indirectly with proposed expansion.
- vi. The project is reported to be beneficial in terms of
 - Environmental: Conservation of Coal with this leads to positive environmental impact like increase in green cover, mine water utilization etc.
 - Social: Project will continue to lead to development of roads, infrastructure, improvement in social and living standards.
 - Financial: Substantial employment is dependent upon direct and indirectly on mining. This would also be beneficial to state exchequer for increased royalties with increase in coal production.
- vii. Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/80/2016-IA-II (M) dated 28.03.2019, (EC) 13.03.2020 (Extension of validity) & 01.12.2020 (Amendment of EC conditions) for 3.25 MTPA in mine lease area of 1095.52 ha. This EC was based on the Mining plan of 1095.52 ha approved vide dated 26.12.2018.
- viii. Now, the proposed expansion Project has been applied under 7(ii) of EIA Notification with EIA/EMP prepared based on Standard ToR in line with the requirement under OMs dated 11.04.2022 & 30.05.2022. This application is based on Mining plan (Including Mine closures plan) of 1095.52 ha approved vide dated on 24.06.2022.
- ix. No forest land is involved in Phase-I.
- x. The land usage pattern of the project is as follows:

Pre Mining

Sl. No.	Particulars	Acquired Land (Ha) for Phase-I	Additional Land to be Acquired (Ha) for Phase-I	Total land (Ha) for Phase-I
1	Tenancy Land	996.84	38.15	1034.99
2	Govt. Land	60.53	0.00	60.53
3	Forest Land	0.00	0.00	0.00
Total		1057.37	38.15	1095.52

During Mining

Sl. No.	Particulars	Phase-I (in ha)
1	Quarry Area	273.79

2	External OB dump	244.90
3	External Temporary Top Soil Dumps	58.93
4	Infrastructure	10.00
5	Area needed for rationalization	307.90
6	Area needed for blasting zone	200.00
	Total Land	1095.52

Post Mining

S.N.	Post Mining Land use	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	214.57	0	0	0	214.57
2	Top Soil Dump	35.4	0	0	0	35.4
3	Excavation	107	188.35	0	0.00	295.35
4	Embankment / Road	0.50	0	8.5	29.5	38.5
5	Infrastructure	3.00	0	7	0	10
6	Blasting Zone	200.00	0	0	0	200
7	Rationalization	208.93	0	0	149.910	358.84
	Total	769.40	188.35	15.5	179.41	1152.66

- xi. Land has been acquired under CBA (A&D) Act 1957 vide Govt. of India Gazette nos. 2276, 3293, 2372.
- xii. Total geological reserve reported in the mine lease area is 42.487 MT with 22.16 MT mineable reserve. Out of total mineable reserve of 22.16 MT, 21.05 MT (as on 01.04.2022) are available for extraction. Percent of extraction is 95%.
- xiii. 5 seams with thickness ranging from 13.27 m – 15.25m (top seams + bottom seams) are workable. Grade of coal is G9 stripping ratio 1:6.80, while gradient is 1 in 6 to 1 in 7.
- xiv. Method of mining operations is by opencast with shovel dumper combination and will continue with the same.
- xv. Life of mine is 5 years.
- xvi. The project has 3 external OB dumps in an area of 249.97 ha with 90m height and 111.67 Mm³ of OB. 1 internal OB in an area of 107 ha with 80.73 Mm³ of OB is envisaged in the project.
- xvii. Total quarry area is 273.79 ha (in Phase – I) out of which backfilling will be done in 107 ha while final mine void will be created in an area of 188.35 ha with a depth of 200 m. Backfilled quarry area of 107 ha shall be reclaimed with plantation. Final mine void will be converted to water body.
- xviii. Transportation of coal has been proposed by dumpers in mine pit head, from surface to siding by trucks and at sidings by railways.

- xix. Reclamation Plan in an area of 769.40 ha, comprising of 249.97 ha of external dump, 107 ha of internal dump. In addition to this, an area of 412.43 ha, included in the safety zone/rationalization area, has also been proposed for green belt development.
- xx. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- xxi. There is no schedule – I species has been reported in study area.
- xxii. The ground water level has been reported to be varying between 3.0 m to 11.65 m during pre-monsoon and between 1.20 m to 7.60 m during post-monsoon. Total water requirement for the project is 988 KLD.
- xxiii. NOC for ground water abstraction has been granted vide CGWA/NOC/MIN/ORIG/2019/6229 valid upto 29.09.2021. Application for renewal of NOC from Central Ground Water Authority has been submitted and is in the advance stage of process.
- xxiv. Public hearing for the project of 3.25 MTPA capacity in an area of 1152.66 ha was conducted on 01.12.2018 at Manoranjan Kendra, Sasti Tehsil Rajura under the Chairmanship of ADM. Major issues raised in the public hearing include Employment, CSR land acquisition etc. Appropriate action to address the issues raised in the Public Hearing have already been taken.
- xxv. Consent to Operate for the existing capacity was obtained from the State PCB vide Format1.0/CAC/UAN No. MPCB CONSENT-0000109222/CR/2202001271 dated 20/02/2022 valid upto 31.03.2022. Renewal application submitted and CTO has been approved with validity upto 31.03.2023.
- xxvi. Lendi and Sakhri nalla is flowing within the lease area. The nallah will be diverted after taking approved design from CDO, Nashik and thereafter permission of Maharashtra State Irrigation Deptt.
- xxvii. Baseline monitoring of environmental parameters including flora & fauna carried out during April'2022 to June'2022. Ambient air quality & noise level was monitored in 8 nos. of stations and surface & ground water monitored at 6 & 4 locations respectively. All the parameters are found to be within the permissible standards.
- xxviii. Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to MPCB 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.
- xxix. There is one online CAAQMS in operation.
- xxx. No court cases, violation cases are pending against the project of the PP.
- xxxi. The Certified Compliance Report was issued by the Integrated Regional Office of MoEF&CC, Nagpur vide letter no. EC-1035/RON/2019-NGP/10034 dated 14.07.2022 and letter no. EC-1035/RON/2019-NGP/10162 dated 08.08.2022 for the ECs. There are no “Non-Compliance” recorded. The ATR in respect of the aforesaid CCRs for the partially complied conditions have also been submitted to IRO, MoEF & CC, Nagpur.
- xxxii. Third party audit for verification of compliance of EC conditions have also been carried out through CSIR-NEERI.

- xxxiii. The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year 2016-2017 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 start of the mining operations onwards, is as under:

Year	EC capacity (MTPA)	Coal Production (MTPA)	OB Generation (Mm ³)
2016-17	0.60	0.51	2.57
2017-18	0.60	0.306	1.51
2018-19	0.60	0.599	2.779
2019-20	3.25	2.105	6.468
2020-21	3.25	2.80	15.565
2021-22	3.25	3.25	18.041

- xxxiv. Project does not involve resettlement of the any villages
- xxxv. Total cost of the project is Rs. 483.6948 Crores. Cost of production is Rs -1018.90 /- per tonne, CSR cost is Rs. 2 per tonne, R&R cost is Rs 318.58 crores. Environment Management Cost is Rs crores; Capital 97.09 Lakh & Recurring cost is ₹6/tonne of coal production.

36.9.3 The EAC during deliberations noted the following:

- i. The proposal is for expansion in production capacity for Stage-I expansion i.e. 20 % expansion of existing EC of 3.25 MTPA to 3.90 MTPA as per the OM dated 11-04-2022 & 30-05-2022 under para 7(ii) of EIA Notification, 2006.
- ii. Earlier, Environment clearance was issued by the Ministry's vide letter No J-11015/80/2016-IA-II (M) for production capacity from 0.6 to 3.25 MTPA in the ML area of 1095.52 ha.
 - a) Revalidation of EC issued vide letter dated 28.03.2019 which was valid for 1 year.
 - b) Further, Revalidation of EC issued vide letter dated 13.03.2020.
 - c) Amendment of EC issued vide letter dated 01.12.2020.
- iii. The production enhancement has been envisaged within the existing mine lease area. There is no change in Mining System.
- iv. The project proponent has acquired the Land under CBA (A&D) Act 1957 vide Govt. of India Gazette nos. 2276, 3293, 2372.
- v. As per OM dated 11th April, 2022 read with 30th May, 2022, PP has prepared EIA report based on Standard ToR. The EIA – EMP report for 50% enhancement in production capacity i.e. 4.875 MTPA has been prepared with fresh baseline data w.r.t. Air, Water, Noise and Soil Quality generated from April 2022 to June 2022 and Baseline data for Flora – Fauna & Socio-Economic generated during June 2022.

Sr.	Criteria as in OM dated 44.04.2022	Remarks

1.	The Project should have gone through the public hearing process, at least once, for its existing EC capacity on which the expansion is being sought, except those category of projects which have been exempted as per para 7 III (i) EIA Notification, 2006 and its amendments.	The Project have gone through the public hearing process once for its existing EC capacity of 3.25 MTPA on which the expansion is being sought. The last public hearing was conducted on 01.12.2018 for a production capacity 3.25 MTPA.
2.	There should not be change in Category of the project from 'B2' to 'B1' or 'A' due to proposed modernization or expansion.	There is no change in the category of the project because of proposed expansion.
3.	There is no additional land acquisition or forest land diversion involved in 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.	There is no additional land acquisition or forest land diversion involved in 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.
4.	The proposed expansion shall not be more than 50 % of production capacity as mentioned in the prior EC, issued on the basis of public hearing held and the same shall be allowed in minimum three phases.	The present proposal envisages expansion upto 50 % (i.e. upto 4.875 MTPA) increase from existing capacity (3.25 MTPA) as mentioned in existing EC, issued on the basis of public hearing held on 01.12.2018. The instant case is for Stage – I expansion i.e. 20% of existing EC from 3.25 MTPA to 3.90 MTPA
5.	Predicted environmental quality parameters arising out of proposed modernization/ Expansion shall be within the prescribed norms and the same shall be maintained as per prescribed norms.	Baseline Ambient Air, Water, Soil and Noise Quality data has been collected for Pauni-II Expansion OC mine from April 2022 to June, 2022 for impact prediction. Environmental quality parameters arising out of proposed expansion are predicted to be within the prescribed norms and control measures will continue to be operated and augmented to maintain environmental quality parameters as per prescribed norms. Prediction of fugitive dust level in the surrounding is carried out (for 24 hours average) with the help of AERMOD

		Software (v16216r of USEPA), based on Gaussian Plume equation.
6.	The proposed expansion shall not result in reduction in greenbelt area as stipulated in the earlier EC, or if the existing ratio of green belt is more than 33%, after expansion it should not reduce below 33%.	<p>The proposed expansion will not result in reduction in greenbelt area as stipulated in the earlier EC. It can be mentioned here that in proposed expansion, final land use will remain same as given in the existing EC.</p> <p>It is submitted that approximately, 76000 nos of plants on 29.90 Ha land has been planted till 2021-22. Out of total 1152.66 ha land, 769.40 ha is proposed to be biologically reclaimed in post mining scenario, which is 66% of the total project area. Thus proposed expansion shall not result in reduction in green belt area as well as remain higher than stipulated 33%.</p>
7.	The project proponent should have satisfactorily complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/consultation proceedings and also 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.	For assessing the compliance of the existing EC conditions, field visit by IRO, MoEF&CC has been done on 02.07.2022. Certified Compliance Report of existing EC has been secured vide EC-1035/RON/2019-NGP/10034 dated 14.07.2022 & 08.08.2022. No Non-compliance has been observed and one conditions have been partially complied. Action taken report (ATR) has been submitted for partially complied conditions. W.r.t commitment made during earlier public hearing; it is submitted that public hearing was completed on 01.12.2018 for 3.25 MTPA. Major issues raised during public hearing included
8	Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	Continuous Ambient Air Quality Monitoring Station (CAAQMS) as specified in the existing EC, have been installed with expenditure of ₹69.05 Lakh. Further as mentioned in Existing EC regular environmental monitoring is also being carried out for ambient air quality and effluent monitoring.

Other Statutory Approvals required as per OM are:

- Consent to Operate (CTO) : Consent to Operate for the existing capacity was obtained from the State PCB vide dated 20/02/2022 and the same was valid upto 31.03.2022. Further, CTO has been approved with validity upto 31.03.2023. As of now, no CTO has not been issued by Maharashtra Pollution Control Board.
- Ground water clearance: Project proponent has obtained the NOC for ground water abstraction vide CGWA/NOC/MIN/ORIG/2019/6229 valid upto 29.09.2021 and the Application for renewal of NOC from Central Ground Water Authority has been submitted.
- Mining Plan : The Mining Plan for Pauni – II Expansion OC (Phase – I) has been approved by competent authority (i.e. WCL Board) for expansion in production capacity from 3.25 MTPA to 4.875 MTPA within 1095.52 ha area in its 343rd meeting held on 13/14.06.2022 and communicated vide resolution no. WCL/Office of CS/BM-343/2022-23/242 dated 24.06.2022. Mine Closure Plan is in built in the mining plan and has been approved along with it.
- PP has submitted that no Forest Land is involved in the project area.
- Mine Closure Status report, approval of DGMS, as applicable have not been provided by Project Proponent in compliance of statutory approvals of OM dated 11th April, 2022.
- With regard to compliance status of existing EC conditions, it has been observed that major condition regarding implementing off pit belt conveyor and silo loading has not yet been initiated.
- Further, it can be observed that the instant project lies in Chandrapur district which comes under Critically Polluted Areas (CPA) and has CEPI Score of 76.41. As per order of Hon'ble NGT in OA No. 1038/2018 dated 10th July, 2019, it is mentioned as: *These PIAs were ranked as 'critically polluted area' (CPA), 'severely polluted area' (SPA) and 'other polluted areas' (OPAs), depending upon the CEPI scores of each of these industrial areas. Where the CEPI score crossed 70, the areas are designated as CPAs, where the index was between 60-70, they are designated as SPAs and those below 60 as OPAs.*

36.9.4 *The EAC, after deliberation observed that instant proposal of expansion in capacity from brown field opencast coal mining project falling under critically polluted area i.e. Chandrapur having CEPI Score of 76.41. The Committee noted that Pauni II Opencast Mine consist of two Quarries namely Quarry I & Quarry II and committee found past production within EC capacity. The criteria of OM and submissions of PP are noted above in detail. On enquiry about the location of mine within CPA, PP informed that site location does not fall under CPA (Chandrapur). In this regard, it was advised to take clarification from SPCB about the inclusion of mine in CPA with authenticated map.*

While discussing the compliance of existing EC conditions with stipulation of said OM, it was observed that PP is lacking to meet the conditions as such as plantation, installation of belt conveyer system with silo loading, non-availability of NOC from CGWA since its validity expired in 2021, approved CTO. It was noted that compliance to major conditions are not met even taking subsequent amendment of EC. It was further observed that the project proponent has accepted the delay in the implementation of mechanized transportation system and also for the changes in the place of SILO.

During discussion, it was submitted that PP is proposing to install conveyor system and silo loading system in Sasti OCP, which is not related to current project. The committee found this as non-compliance of EC condition and changing the priority in the situation when location of project fall in critically polluted area. The present proposal also attracts the provision of this Ministry's OM dated 12th June, 2019. Wherein activities falling under CPA shall have to mandatorily install the mechanized transportation system. However, PP neither initiated this work nor committed to start it. The Committee advised to quickly initiate the mechanized system as per the area specific requirement to meet the EC condition.

Further, it was observed that PP has diverted one nallah/stream without informing to Ministry though it was stipulated in EC dated 13th March, 2020 at condition no. (xii) i.e. PP shall not divert proposed nallah till it justifies the reason of diversion. However, it was informed that PP has obtained NOC from CDO Nagpur and already diverted. The same may be considered as the Violation of the condition of the EC letter dated 13.03.2020.

In view of the above, the project proponent shall submit the following details for further compliance: -

- i. PP shall comply the conditions regarding implementation of offpit conveyor system till silo loading system and come with significance progress on the ground before seeking expansion.*
- ii. PP to clarify whether the area fall within CPA from the authencated documents from SPCB*
- iii. PP shall comply the stipulation of OM dated 11.04.2022 regarding taking necessary approvals.*
- iv. The project proponent shall detailed plan for protection of river after taking permission for diversion of Stream in the Mine lease area and submit the mitigation measures to avoid the siltation and flooding. PP to take the amendment of conditions in this regard.*
- v. The project proponent shall submit the authenticated past production detail for each Quarry separately (i.e. Quarry I & Quarry II).*

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

Agenda No. 36.10

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 m³ 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)]

36.10.1 The proposal is 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 m³ per annum (0.42 MTPA-peak).

PP had requested for amendment in existing EC regarding inclusion for manufacturing of crushed stone sand (M-sand) of 0.42 MTPA(peak) to be segregated from overburden dump from operating lignite open cast mine from 3 MTPA to 7 MTPA in the mine lease area of 2005.8 ha.

PP mentioned that the M-sand will help the growth of glass, ceramic, refractory industries and construction industries. The utilization of sand extracted from OB will supplement the existing river sand.

36.10.2 The EAC during deliberations noted the following:

Earlier, the project was deliberated on 17th EAC meeting held during 9-10 August, 2021 for grant of 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. The proposal was deferred for want of additional information. The compliance was submitted by project proponent on 17.09.2022 and was considered by EAC in its 36th meeting held during 20-21 October, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

Sr. No.	Observation of EAC	Reply of Project Proponent
1	Approved Mine Plan (including Mine Closure Plan) from Ministry of Coal for the proposed changes. nearby river and nallah shall be desilted.	The Project Proponent has informed that Revised Mining Plan and Mine Closure plan of Lignite Mine-IA incorporating the details about the proposal for Manufacturing of Crushed Stone Sand (M-sand) from loose OB Dump and Extraction of minor minerals like Silica Sand, M-sand and Fire Clay from Overburden benches was submitted to MoC on 10.03.2022. MoC has accorded approval for the Revised Mining Plan and Mine Closure Plan on 16.09.2022.
2	PP shall explore total potential of extracting sand from OB Dump based on further geological survey and from already OB dump.	The Project Proponent has informed that NLCIL awarded the work for conducting the feasibility study of Crushed stone sand (M-sand) plant to CDE Asia Limited. After extensive field samplings and laboratory analysis, considering the availability of huge source loose OB sand materials and large scale demand, CDE Asia limited suggested for implementation of 5.0 MTPA Crushed stone sand (M-sand) plant in Mine-IA. Extracts of the CDE Asia report is submitted. Accordingly, the proposal for EC Amendment is proposed to modify for an increased peak capacity of 5.0 MTPA for M-sand.

		Based on the CDE Asia report, total potential realized for extracting M-sand from OB Dump for the life of the mine is 123.84 MT. A copy of year-wise production schedule of M-sand approved by MoC was submitted.
3	PP shall provide the expenditure incurred till now on wildlife conservation plan till date and future expenditure as per approved Wildlife Conservation Plan.	The Project Proponent has informed that there is no forest land involved in the project area. As there is no National Parks, Wildlife sanctuaries, Wildlife corridors, Tiger reserves, Elephant reserves and Biosphere Reserves exist within 15-km radius from the ML boundary, wild life conservation plan is not applicable.
4	Action plan for mine closure activity to be furnished for manufacturing of Crushed Stone Sand (M-Sand) of 0.262 Million m ³ per annum (0.42 MTPA) from operating Lignite Open Cast Mine-IA (7.0 MTPA) in a total project area of 2005.8 ha	<p>The Project Proponent has informed that action plan for mine closure activity for manufacturing of Crushed Stone Sand (M-Sand) of 3.125 Million m³ per annum (5.00 MTPA) from operating Lignite Open Cast Mine-IA was submitted.</p> <p>There is no change in backfilled OB quantity even after extraction of associated minerals which is balanced by the addition of M-sand rejects. Hence no change in void.</p> <p>At end of mine life Crushed Stone Sand (M-sand) plant will be dismantled and area will be biologically reclaimed</p>
5	Action plan for prevention and mitigation of air quality control measures to be adopted at various source of emission.	<p>The Project Proponent has informed that the adequate control measures are being taken during the existing mining operation, transportation and loading operations. In addition to the existing control measures, Action plan for prevention and Mitigation of air quality control measures at various sources of emission in the proposed for OB to M-Sand plant is as follows:</p> <p>a) All M-sand carrying trucks will be properly covered by Tarpaulin to minimize the fugitive dust emission.</p>

		<p>b) Dust suppression at haulage road and installation of sufficient numbers of fog canon at sand washing plants.</p> <p>c) Mobile water tankers will be deployed for the water spraying to achieve the effective dust suppression on transportation roads, haul road & near stock yard.</p> <p>d) Fixed sprinklers will be installed over the conveyor belt, hopper, weighbridge, stockyard and along the sand transportation road.</p> <p>e) The M-sand extraction from overburden uses a wet process with recycling water. It is a dust free process system.</p> <p>f) The rainwater/storm water collected in lignite mined out area (sumps) will be utilized for sand extraction plant. The sand extraction process recycles most of the process water. The processed residue water will be coursed to pass through series of settling pits to allow the particles to settle down and finally clear water will be recycled for extraction process.</p> <p>g) The processing plant recovers & recirculates 95% of the water through thickener unit. The clear water will be diverted to mine sumps. Therefore, no water pollution is envisaged.</p> <p>h) At the end of life of operation, the plant area will be biologically reclaimed and densely planted.</p> <p>i) Hence the complete processing is a wet process, there will not be any adverse impact on environment in this region.</p>
6	<p>PP should also clarify about the end users of the sand and where they will store the sand extracted until it is sold (on-site and off-site), also what measure will be taken for duct suppression.</p>	<p>The Project Proponent has informed that the Geographical co-ordinates of storage / stock yard:</p> <ul style="list-style-type: none"> i. 11⁰33.042' N to 79⁰30.844' E ii. 11⁰33.043' N to 79⁰30.924' E iii. 11⁰32.974' N to 79⁰30.928' E iv. 11⁰32.972' N to 79⁰30.848' E

End Users of Crushed Stone Sand (M sand):

River Sand mining is restricted in Tamil Nadu since 2013 to curb excessive mining of river beds in the state, which resulted in fall in underground water levels at an alarming rate. Also, the use of natural sand is now limited only to individual house constructions, and smaller contractors, who despite the high price continue to prefer the same.

Majority of construction players, real estate contractors & RMC players have shifted to M-sand as an alternative, given its consistent supply and lower prices. Due to the higher awareness among contractors and government regulations, preference for washed M sand is high in Tamil Nadu compared to other states.

Storage of Crushed Stone Sand (M-sand):

The processed end product i.e. M-sand is planned to be stored in a separate stockyard located within the respective plant area. Radial-type product stockpile conveyor capable of making multiple stockpiles, with total capacity of 7000 tons will be installed.

Measures for Dust suppression:

- Adequate moisture will be maintained in handling area to ensure that dust is not getting air borne. Regular sprinkling will be carried out in the open area to arrest fugitive dust. Further, greenbelt/ green cover will be provided with native species.
- Dust suppression at haulage road and installation of sufficient numbers of fog canon at sand washing plant.
- Fixed sprinklers will be installed over the conveyor belt, hopper, weighbridge, M-sand stockyard and along the sand transportation road
- All Crushed Stone sand carrying trucks will be properly covered by Tarpaulin to minimize the fugitive dust emission.

PP submitted that source of water is Seepage and storm water collected in Mine. About 260 KLD of water within allocated water quantity from mine sump seepage / rain water for M-sand. No additional water is required for Mining of associated minerals like silica, Ball clay & Fire clay, as it is sold in raw form.

Further, it can be observed that the instant project lies in Cuddalore district which comes under Severely Polluted Areas (SPA) and has CEPI Score of 62.56. As per order of Hon'ble NGT in OA No. 1038/2018 dated 10th July, 2019, it is mentioned as:

These PIAs were ranked as 'critically polluted area' (CPA), 'severely polluted area' (SPA) and 'other polluted areas' (OPAs), depending upon the CEPI scores of each of these industrial areas. Where the CEPI score crossed 70, the areas are designated as CPAs, where the index was between 60-70, they are designated as SPAs and those below 60 as OPAs.

36.10.4 *The EAC after deliberation noted that the instant project is for extraction of mineral from Overburden material. The EAC appreciated the project for set up the M-sand plant from the crushed stone which will reduce dependency on river sand. Compliance of its earlier observation was deliberated and further commitment towards Environment Management Plan was sought from PP. Accordingly, after deliberation in EAC, PP vide its letter no. letter no. 118/NLCIL/Mine-IA/EC Amendment dated 22nd October, 2022 submitted the enhanced Environment Management Budget from Rs. 200 lakhs to Rs. 1400 lakhs. A detailed list of activities and control measures are also annexed in the letter such installation of fixed sprinklers along transportation route, black topping of road, plantation, truck washing and CAAQMS etc.*

Also, since the project lies in SPAs of Cuddalore, it was observed that specific conditions as per Ministry's OM dated 5th July, 2022 regarding Lifting of abeyance on Ministry's OM, in pursuance to the Order dated 25/02/2022 of Hon'ble Supreme court in Civil Appeals Nos. 2218-2219 of 2020 in the matter of Chamber of Small Industry Associations Vs Central Pollution Control Board & Others with Civil Appeal Nos. 2220-2221/2020, 2434/2020, 3319-3321/2020 & 1656-4658 of 2022 and thus other specific conditions shall be included.

*Based on the above, EAC **recommended** the proposal for amendment in Environment Clearance to 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 m³ per annum (0.42 MTPA-peak) under the provisions of Environment Impact Assessment Notifications, 2006 and its amendments therein with following specific conditions*

- (i) PP shall implement all the control measures as submitted towards EMP vide its letter no. 118/NLCIL/Mine-IA/EC Amendment dated 22nd October, 2022 to Ministry.*
- (ii) PP shall construct at least 6 mts height metal sheet barricading and 4mt height above the stock peak level along the periphery of sand segregation plant.*
- (iii) PP shall develop the green belt by planting the tree in the periphery as submitted vide its letter dated 22nd October, 2022 and also plant the tree in OB land.*

- (iv) *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.*
- (v) *PP shall obtain Certified Compliance Report of EC and current proposal from Ministry's IRO after implementation of this project i.e. within 1 year.*
- (vi) *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.*
- (vii) *PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.*
- (viii) *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.*
- (ix) *PP to install solar lights within 1 year from the grant of this letter along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year*
- (x) *PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size.*
- (xi) *PP shall use only mine water for processing in the Sand segregation plant and have follow zero liquid discharge system.*

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

- (i) *PP to explore the transportation of materials by rail/conveyor belt as feasible in the project.*
- (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.*
- (xiii) *Fund allocation for Corporate Environment Responsibility (CER) which is atleast 1.5 times as per OM of 1st May, 2018 may now be considered as 1.5 times of fund allocated on commitment made*

during public consultation process for incorporating in EIA-EMP for deliberation of EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. (modified after Ministry's OM dated 30th September, 2020).

Agenda No. 36.11

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-IA-II (M)]

36.11.1 The proposal is for amendment in Environmental Clearance for Lignite Mine-1 of production capacity 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).

PP had requested for amendment in existing EC regarding inclusion for manufacturing of crushed stone sand (M-sand) to be segregated from overburden dump from operating lignite open cast mine in the mine lease area of 3635.4 ha.

PP mentioned that the M-sand will help the growth of glass, ceramic, refractory industries and construction industries. The utilization of sand extracted from OB will supplement the existing river sand.

36.11.2 The EAC during deliberations noted the following:

The project was granted Environment Clearance by Ministry vide its letter dated 2nd September, 2015 for Lignite Mine-1 for 10.5 MTPA in mine lease area 3635.4 ha M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu).

Earlier, the project was deliberated on 12th EAC meeting held on 4th May, 2021, 20th meeting held on 13th October, 2021 and 35th meeting held on 26-27 September, 2022 for amendment in Environmental Clearance for Lignite Mine-1 of M/s Neyveli Lignite Corporation Limited. The proposal was deferred for want of additional information. The compliance was submitted by project proponent on 12.10.2022 and accordingly was considered by EAC in its 36th meeting held during 20-21 October, 2022. EAC noted the submission of project proponent as detailed below:

Sr. No.	Observation of EAC	Reply of Project Proponent
1	PP shall submit the complete comparative water balance chart with detailed information	The Project Proponent has submitted the Comparative water balance chart - Source

	on the source of water, uses for different purposes including amount of water to be recycled through treatment process.	of water, Uses from different purposes i.e use of recycled water. Make up water / Water requirement for M-Sand plant is about 260 KLD which will be met from the seepage/storm water accumulated in mine pit. No additional water will be required for extraction of Silica sand, Fire clay & Ball clay.
2	PP shall submit the unit wise (Ball clay, Fire Clay and Silica) dust mitigation measures including wastewater treatment facility and include it in EMP plan	The Project Proponent has submitted the details of Dust mitigation measures, Wastewater treatment facility and EMP plan with budget (Minor minerals and M-Sand).
3	Regarding handling of sand, PP to identify and demarcate the land where material will be stored and finally sent for commercial use. Thus, PP to provide a proper sand evacuation plan with effective transportation system.	The Project Proponent has submitted the details of Sand handling plant demarcation area and storage area and Sand evacuation plan. Geographical co-ordinates of storage / stock yard: i. 11 ⁰ 34.474' N to 79 ⁰ 30.485' E ii. 11 ⁰ 34.546' N to 79 ⁰ 30.502' E iii. 11 ⁰ 34.525' N to 79 ⁰ 30.630' E iv. 11 ⁰ 34.452' N to 79 ⁰ 30.611' E Raw material for the plant is proposed to be extracted from Dump in combination with 35 T dumper for transportation upto the plant <ul style="list-style-type: none"> • M-Sand will be stored 300m away from the plant. • Four days stocks about 55000 Tons will be stored. • Through E-Auction, the M-sand will be sold to customer. • Two lane blacktop road will be formed for 3 km within Mine to reach Neyveli – Cuddalore NH 532 road. • M-sand demand is expected from the surrounding cities like Chennai,

		Tiruchirappalli, Salem & Pondicherry and in enroute towns. The cities are connected with Neyveli through two lane / four national Highways.
4	PP to provide the detailed plan to combat the dust emission due to traffic movement including fleet size, its number. PP to explore for use of green fuel trucks as appropriate.	The Project Proponent has submitted the detailed plan to combat to dust emission due to traffic movement. The entire modelling iterations have been re-worked by using the 35 tonner truck instead of 24 Ton truck for external transportation route of M-Sand and associated minor minerals – Silica sand, Ball Clay and Fire clay

Further, it can be observed that the instant project lies in Cuddalore district which comes under Severely Polluted Areas (SPA) and has CEPI Score of 62.56. As per order of Hon'ble NGT in OA No. 1038/2018 dated 10th July, 2019, it is mentioned as:

These PIAs were ranked as 'critically polluted area' (CPA), 'severely polluted area' (SPA) and 'other polluted areas' (OPAs), depending upon the CEPI scores of each of these industrial areas. Where the CEPI score crossed 70, the areas are designated as CPAs, where the index was between 60-70, they are designated as SPAs and those below 60 as OPAs.

36.11.3 *The EAC after deliberation noted that the instant project is for extraction of mineral from Overburden material. The EAC appreciated the intent of project to set up the M-sand plant from the crushed stone which will reduce dependency on river sand. Compliance of its earlier observation was deliberated and further commitment towards Environment Management Plan was sought from PP. Accordingly, after deliberation in EAC, PP vide its letter no. 117/NLCIL/Mine-I/EC Amendment dated 22nd October, 2022 submitted the enhanced Environment Management Budget from Rs. 600 lakhs to Rs. 1300 lakhs. PP provided detailed list of activities and control measures such installation of fixed sprinklers along transportation route, black topping of road, plantation, truck washing and CAAQMS etc.*

Also, since the project lies in SPAs of Cuddalore, it was observed that specific conditions as per Ministry's OM dated 5th July, 2022 regarding Lifting of abeyance on Ministry's OM, in pursuance to the Order dated 25/02/2022 of Hon'ble Supreme court in Civil Appeals Nos. 2218-2219 of 2020 in the matter of Chamber of Small Industry Associations Vs Central Pollution Control Board & Others with Civil Appeal Nos. 2220-2221/2020, 2434/2020, 3319-3321/2020 & 1656-4658 of 2022 are applicable with other specific conditions.

Based on the above, EAC **recommended** the proposal 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), under the provisions of Environment Impact Assessment Notifications, 2006 and its amendments therein with following specific conditions;

- (i) PP shall implement all the control measures as submitted towards EMP vide its letter no. 117/NLCIL/Mine-I/EC Amendment dated 22nd October, 2022 to Ministry.
- (ii) PP shall construct at least 6 mts height metal sheet barricading and 4mt height above the stock peak level along the periphery of sand segregation plant.
- (iii) PP shall construct Two lane blacktop road for 3 km within Mine to reach Neyveli – Cuddalore NH 532 road before commissioning of the project
- (iv) PP shall develop the green belt by planting the tree in the periphery as submitted vide its letter dated 22nd October, 2022 and also plant the tree in OB land.
- (v) As proposed, water consumption for the project shall not exceed to 240 KLD and permission shall be obtained. Wastewater shall be recycled by adopting advance treatment process. CTO shall be obtained from SPCB.
- (vi) 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.
- (vii) 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.
- (viii) PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.
- (ix) 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.
- (x) PP to install solar lights within 1 year from the grant of this letter along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year
- (xi) PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size.
- (xii) PP shall use only mine water for processing in the Sand segregation plant and have follow zero liquid discharge system.

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

- (i) PP to explore the transportation of materials by rail/conveyor belt as feasible in the project.
- (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.*
- (xiii) *Fund allocation for Corporate Environment Responsibility (CER) which is atleast 1.5 times as per OM of 1st May, 2018 may now be considered as 1.5 times of fund allocated on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. (modified after Ministry's OM dated 30th September, 2020).*

The meeting with vote of thanks

Annexure-I

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

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

(a) Statutory compliance

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

(b) Air quality monitoring and preservation

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to

ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid 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 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
- (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and

constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

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

water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.

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

(d) Noise and Vibration monitoring and prevention

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

(e) Mining Plan

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

(f) Land reclamation

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be

- submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land shall be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
 - (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/“post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
 - (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
 - (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The 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 runoff. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
 - (vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.
 - (g) Green Belt**
 - (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

- (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed allalong 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 submittedto this ministry & it's RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% ofthe 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 OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the miningprojects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (i) Corporate Environment Responsibility**
- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approveby the Board of Directors. The environmental policy should prescribe for standard operating proceduresto have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.

- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- (j) Miscellaneous**
- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM10, SO₂, NO_x(ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended

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

Annexure-II

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

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

I. Statutory compliance:

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

II. Air quality monitoring and preservation

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

SPCB

- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/ mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- iv. Major approach roads shall be black topped and properly maintained.
- v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.
- vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- viii. Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and

constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- vi. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.
- vii. Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial 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 reversion/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A reversion /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

IV. Noise and Vibration monitoring and prevention

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

V. Mining Plan

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

VI. Land reclamation

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote

Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
- v. A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.
- vi. Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.
- vii. Native tree species shall be selected and planted over areas affected by subsidence.
- viii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Green Belt

- i. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. Action plan, in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- ii. Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall

be developed all along the mine lease area in a phased manner. The greenbelt comprising of a mix of native species shall be developed all along the major approach roads/ coal transportation roads.

VIII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
- ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.
- iii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iv. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
- v. Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
- vi. Implementation of Action Plan on the issues raised during the Public 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 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. Corporate Environment Responsibility

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

- reporting infringements / deviation/ violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
 - iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
 - v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

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

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

Annexure-III

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

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

- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board
- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery up to the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.
- vi. Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.
- vii. Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.
- viii. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- ix. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- x. The temporary reject sites should be appropriately planned and designed to avoid air and water pollution from such sites.

III. Water quality monitoring and preservation

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

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

IV. Noise and Vibration monitoring and prevention

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

V. Coal beneficiation

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

VI. Green Belt

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

VII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis. The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any. as amended time to time.
- ii. Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iii. Implementation of the action plan on the issues raised during the public hearing

shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

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

VIII. Corporate Environment Responsibility

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

- project proponent's website permanently.
- iii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
 - iv. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
 - v. The project proponent shall monitor the criteria pollutants level namely; PM10, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
 - vi. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
 - vii. The project proponent shall submit the environmental statement for each financial year in form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - viii. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
 - ix. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - x. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - xi. No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC) with such conditions mentioned therein. No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made
 - xii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xiii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xiv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer

- (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xvi. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

ANNEXURE-IV

Generic ToR for coal washery

- i. Siting of washery is critical considering 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 should 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 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
 - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
 - Characteristics and quantum of coal after washing.
 - Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the

Board of Directors.

- b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
 - xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
 - xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
 - xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channeling of the water courses, etc., approach roads, major haul roads, etc should be indicated.

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

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_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats,

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

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

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

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

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

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

* As a representative example

(xxxi) Conceptual Final Mine Closure Plan and post mining land use and

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

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

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

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

with the schedule of the implementation of the R&R Plan should be given.

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

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

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

		If more than, provide details of each FC			
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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, etc should be furnished.

- (v) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (vii) Original land use (agricultural land/forestland/grazing land/wasteland/waterbodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

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

Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the

study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

- (ix) Details of mineral reserves, geological status of the study area and the seams

to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.

- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.

- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.

- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be

provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

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

reclamation should be furnished.

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

should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
 (xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept.(if req.), etc. wherever applicable.

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

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

ANNEXURE-VII

GENERIC TORs FOR AN OPENCAST-CUM UNDERGROUND COAL MINE PROJECT

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

**LIST OF PARTICIPANTS OF EAC (COAL) IN 36th MEETING HELD
DURING 20-21 October, 2022 THROUGH VIDEO CONFERENCING**

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