

MINUTES OF 45th MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD ON 31st May, 2023 THROUGH VIDEO CONFERENCE.

Confirmation of the Minutes of 44th Meeting of the EAC (Coal): The minutes of the 44th Meeting of the EAC (Coal) held on 9th May, 2023 has been confirmed by the Chairman.

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

Consideration of Proposals: The 45th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 31st May, 2023 through Video Conferencing. 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. 45.1

Dhirauli Coal Mining Project of Open cast cum Underground of 6.5 MTPA (5 MTPA Open Cast & 1.5 MTPA Underground) in Mine Lease Area of 2672 ha by M/s Stratatech Mineral Resources Private Limited (SMRPL) located at villages Dhirauli, Phatpani, Sirswah, Amdand, Jhalari, Amraikhoh, Bansibridha, and Belwar, Tehsil Sarai, District Singrauli, (Madhya Pradesh) – For Environmental Clearance reg.

[Online Proposal No. IA/MP/CMIN/427946/2023; File No. J-11015/49/2021-IA. II (M)]

45.1.1 The proposal is for Environmental Clearance for Dhirauli Coal Mining Project of Open cast cum Underground of 6.5 MTPA (5 MTPA Open Cast & 1.5 MTPA Underground) in Mine Lease Area of 2672 ha by M/s Stratatech Mineral Resources Private Limited (SMRPL) located at villages Dhirauli, Phatpani, Sirswah, Amdand, Jhalari, Amraikhoh, Bansibridha, and Belwar, Tehsil Sarai, District Singrauli, (Madhya Pradesh).

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

- (i) The project area is covered under Survey of India Topo Sheet No. 63 L/8 and is bounded by the geographical coordinates ranging from Latitude 23°56'07" N to 24°03'04" N Longitude 82°19'04" E to 82°24'21" E.
- (ii) Coal linkage of the project is not applicable as the mine is commercial coal mine.
- (iii) Joint venture cartel has been formed - Not Applicable

- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation- Project will generate employment for about 970 persons.
- (vi) The project is reported to be beneficial in terms of energy security for the development of country. Also following benefits will be there:
- Improvement in physical infrastructure like Road Transport facilities, Housing facilities, Water supply and sanitation, Power, Medical facilities, Community development etc. Improvement in social infrastructure like Trade and Commerce etc.
 - Other tangible benefits like indirect employment opportunities to local people in contractual works like housing construction, transportation, sanitation, for supply of goods and services to the project and other community services.
- (vii) Terms of References (ToR) granted vide letter J-11015/49/2021-IA.II (M) dated: 03.08.2021. Amendment to Terms of References (ToR) granted vide letter J-11015/49/2021-IA.II (M) dated 09.01.2023.
- (viii) Total mining lease area as per block allotment is 2672 ha. Mining plan & Mine Closure Plan was approved vide letter No. MPS-34011/4/2021-MPS dated 04th May 2021.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details

(Area in Ha)

Ownership	Type of Land	Area, (Ha)
Tenancy Land	Agricultural	553.54
	Township	
Sub Total		553.54
Govt Non-Forest Land	Grazing	720.92
	Barren (Road)	
	Water bodies	
	Other	
Sub Total		720.92
Forest Land	Protected Forest land	1335.35
	Revenue Forest	62.19
Free hold		
Sub Total		1397.54
Grand Total		2672.00

Post Mining land use details (Area in ha)

Mining Activity	Land Use Area (End of Life)	Agriculture Land	Plantation	Water Body	Public Use	Forest land (Returned)	Undisturbed
Excavation Area	2,096.59	-	1,843.03		-	1843.03	-
Backfilled Area	1,796.23	-	1,843.03	-	-	1843.03	-
(in Excavation Area							
Excavated Void (in Excavation Area)	300.36	-	-	253.56	-	-	-
Topsoil Dump	35.34	-	-	-	-	-	-
	(Upto 5 th Year)						
External Dump	387.55	-	387.55	-	-	387	-
Safety Zone	19.73	-	19.73	-	-	19.73	-
Haul Road	-	-	-	-	-	-	-
Between quarries							
Road diversion	4.13	-	-	-	4.13	-	-
Settling pond	2.20	-	-	2.20	-	-	-
Road &	20.80	-	20.80	-	-	20.80	-
Infrastructure area							
CHP & Washery	8.10	-	8.10	-	-	8.10	-
Coal Evacuation	1.15	-	1.15	-	-	1.15	-
Route & Approach Road							
Garland drains	5.34	-	5.34	-	-	5.34	-

Embankment	7.50	-	7.50	-	-	7.50	-
Green Belt	46.80	-	46.80	-	-	46.80	-
Water Reservoir	-	-	-	-	-	-	-
Rationalization	72.11	-	72.11	-	-	72.11	-

area

Total (exclude back filled void & Topsoil area) **2672.00** - **2412.11** **255.76** **4.13** **2412.11** -

- (x) Total Geological Reserve reported in the mine lease area is 558.011 MT (Opencast Mine – 260.263 MT, Underground Mine – 297.748 MT). Total Mineable Reserve are 313.79 MT of which 195.74 MT are by open cast method mining & 118.05 MT are by underground mining. Extractable Reserves are 298.12 MT (Opencast Mine – 186.06 MT Underground Mine – 112.07 MT) are available for extraction. Percent of extraction is 53.43% (Opencast Mine – 71.49 %, Underground Mine – 37.64 %).
- (xi) Thickness of seams to be worked on:
Tabular Form for seam thickness is attached for reference:

Type	Seam	Thickness Range (m)
Open Cast	VIII- Top	0.55 - 3.16
	VIII-Comb	1.37 - 4.47
	VII- Top	0.83 - 8.48
	VII-Bottom	0.32-1.52
	VII-Comb	1.27 - 9.08
Under Ground	VI	0.58 - 2.47
	IV	0.55 - 3.9
	III- Top	1.6 - 7.6
	II	0.4 - 4.55

Grade of coal: G8 (Overall)

Stripping ratio: 10.55 m³/t

Category of gaseousness: Not Applicable

Average gradient: 2⁰ - 4⁰

- Maximum thickness of seams: Thickness of Seam VII-COMB varies from 1.27 to 9.08 and thickness of Seam VII-TOP varies from 0.83 to 8.48.
- (xii) Method of mining operations envisaged: Coal (OC) - Surface miner-FEL-Dumper, Overburden (OC) - Shovel Dumper, UG mine - Continuous Miner
 - (xiii) Life of Mine is 87 years
 - (xiv) The project has one external OB dump in an area of 387.55 ha with 90 m height and 259.01 M.cum of OB. One internal dump in an area of 1796.23 ha with 1704.54 M.cum of material is envisaged in the project.
 - (xv) Total quarry area is 2,096.59 ha out of which backfilling will be done in 1843.03 ha. Remaining 253.56 ha mine void will be converted into water body at post closure stage. Backfilled quarry area of 1843.03 ha shall be reclaimed with plantation. Final mine void will be converted into water body.
 - (xvi) Transportation of Coal:
 - **In pit:** Dumpers for initial five years & In-pit conveyor after five years
 - **Surface to siding:** Dumpers for initial five years & In-pit conveyor after five years
 - **Siding to loading:** Transportation of mineral for initially 5 years will be done by the trucks after that in-pit conveyor belt with silo loading will be installed for transportation of coal till railway siding.
 - (xvii) Reclamation has been planned in an area of 387.55 Ha & 1843.03 Ha, comprising of OB Waste Dump and Backfilled Area respectively and 19.73 Ha & 46.80 Ha in the safety zone & green belt respectively.
 - (xviii) Forest Diversion proposal has been applied vide Proposal No. FP/MP/MIN/142344/2021 dated 08.06.2021, the proposal is under process.
 - (xix) **Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.** - There are no National Park, Eco-Sensitive Zones, Wildlife Sanctuaries in 10km radius of the project for which NOC has been obtained by CCF, Sanjay Tiger Reserve, Sidhi vide letter no. kramank/machi/2022/5404 dated 17.08.2022.
 - (xx) **Wildlife conservation plan for Schedule – I Species has been submitted** – Site Specific Wildlife Conservation Plan has been prepared and has been approved by the PCCF(WL) vide letter kramank/v.pra/machi/2022/MINE-140/8522 on 24.11.2022.
 - (xxi) The ground water level has been reported to be varying between 5 to 13 m bgl, during pre-monsoon and between 3 to 8 m bgl during post-monsoon. Total water requirement for the project is 1936 m³/day.
 - (xxii) NOC for ground water withdrawal has been approved by the Central Ground Water Authority (CGWA) vide NOC no. CGWA/NOC/MIN/ORIG/2022/15765 on 15/06/2022.
 - (xxiii) Public Hearing for the project was conducted on 04.05.2022 Place: Senior Secondary School Village - Basi Bardah at 11:00 AM Dist: Singrauli, Madhya Pradesh under the Chairmanship of Shree D.P. Barman, ADM, Singrauli.
 - (xxiv) Major issues raised in the public hearing & appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are given in the action plan

- prepared and mentioned in Chapter 7 in EIA/EMP report and enclosed as annexure A
- (xxv) Hearing have already been taken/ proposed to be taken are as under: hearing done on 4th May 2022 at Senior Secondary School Village- Basi Bardah.
- (xxvi) .Consent to operate for the proposed capacity to be submitted after environment clearance to State Pollution Control Board - Will be obtained after grant of EC.
- (xxvii) Hurdul nallah is flowing through the mine lease. The Nallah will be diverted in consultation with Water Resources Department of the State Government.
- (xxviii) 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) .No court cases, violation cases are pending against the project of the PP.
- (xxx) 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 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under: **Not Applicable since it is a Greenfield project.**
- (xxxi) . The project involves 3037 PAF. R&R of the PAPs will be done as per prevailing laws.
- (xxxii) Total cost of the project is Rs. 2800 Crore. Cost of production is Rs 1402 per tonne., CSR cost will be 2% profit of last three years. R&R cost 390 Crore. Environment Management Cost is: 1832 Lakh, Capital Rs 1550 Lakh; & Recurring Rs. 282 Lakh.
- (xxxiii) Consent to operate (CTO) was obtained from the State Pollution Control Board: Not Applicable.
- (xxxiv) Past Production details comparison with existing EC- Not Applicable.
- (xxxv). Base line monitoring status:
- a) Mention the Period/ Season of baseline study carried out - March to May 2021 (Pre-Monsoon)
 - b) Whether the Laboratory has been accredited by the NABL/ MoEF&CC certification involved in analysis of water, air, noise & soil quality data, also providing its respective lab reports – Yes
 - c) Detail of Air quality and surface water quality

Air quality: Number of sampling location monitored: 10 Location (Pre-monsoon). Baseline ambient air monitoring result indicates that the maximum and minimum values of PM₁₀ are in the range of 26.50 µg/m³ to 61.30 µg/m³, whereas the PM_{2.5} is in the range of 15.8 to 40.2 µg/m³. The SO₂ concentrations within the study area are in the range of 12.5 to 25.1 and the NO_x are in the range of 16.4 to 34.2 µg/m³. The concentrations of CO were found between 0.3 to 0.4 mg/m³.

The incremental increase in the values were projected to be 23.68 µg/m³ for PM₁₀, 14.41 µg/m³ for PM_{2.5}, 0.00 µg/m³ for SO₂, 0.00 µg/m³ for NO_x, and for CO 0.00 mg/m³. The value of

Total GLC is 75.98 $\mu\text{g}/\text{m}^3$ for PM_{10} , 44.71 $\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$, 25.10 $\mu\text{g}/\text{m}^3$ for SO_2 , and 34.20 $\mu\text{g}/\text{m}^3$ for NO_x , and 0.49 mg/m^3 for CO are predicted during March to May 2021. The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be within the permissible limit.

Surface water quality: Monitoring was done at 5 Location during March - May 2021. All the Parameters like pH varies from 7.34 to 7.67, total Hardness varies from 48.1 to 93.1 mg/L , Total Dissolved Solids varies from 97 to 152 mg/L , Dissolved Oxygen – 5.1 mg/l to 5.7 mg/l etc. which are found within the permissible limits.

Interpretation of Surface Water Quality

March - May 2021
pH ranges in between 7.34 to 7.67. Maximum pH of 7.67 was observed at Rampa River near Rampa (D/S) (SW4) and minimum pH of 7.34 was observed at pond near Hurdul Nala near Majholipath (U/S) (SW1).
Conductivity lies between 160 $\mu\text{S}/\text{cm}$ to 260 $\mu\text{S}/\text{cm}$. Maximum value 260 $\mu\text{S}/\text{cm}$ was observed at Biniao Nala near Kamai (U/S) (SW5) and minimum value 160 $\mu\text{S}/\text{cm}$ was found in Hurdul Nala near Digwah (D/S) (SW2).
Total Dissolved Solids (TDS) is between 97 to 152 mg/l , maximum concentration 152 mg/l was observed at Biniao Nala near Kamai (U/S) (SW5) and minimum concentration 97 mg/l of TDS was found in Hurdul Nala near Digwah (D/S) (SW2).
Total Hardness is ranging from 48.1 to 93.1 mg/l , the maximum concentration 93.1 mg/l was observed at Biniao Nala near Kamai (U/S) (SW5) and minimum concentration 48.1 mg/l of was observed at Hurdul Nala near Digwah (D/S) (SW2).
Chlorides is in range of 7.8 to 23.1 mg/l , maximum concentration 23.1 mg/l was observed at Biniao Nala near Kamai (U/S) (SW5), and where as the minimum concentration 7.8 mg/l was observed at Rampa River near Rampa (D/S) (SW4).
Sulphates is in range of 3.4 mg/l to 9.8 mg/l , maximum concentration 9.8 mg/l was observed at Confluence of Biniao Nala near Kamai (U/S) (SW5), and where as the minimum concentration 3.4 mg/l was observed at Hurdul Nala near Digwah (D/S) (SW2).
Dissolved Oxygen is in the range of 5.1 mg/l to 5.7 mg/l , maximum concentration 5.7 mg/l was observed at Rampa River near Badhaura (U/S) (SW3), and where as the minimum concentration 5.1 mg/l was observed at Biniao Nala near Kamai (U/S) (SW5).
Total Coliform count is measured from 1030 to 1340 MPN/100ml

(b) Ground water quality: 8 Location

All the Parameters like pH varies from 6.61 to 7.54, Total Hardness varies from 77.9 to 263.4 mg/L, Total Dissolved Solids varies from 162 to 389 mg/L, Chloride varies from – 27.4 mg/l to 66.4 mg/l etc. are found within the permissible limits.

Interpretation of Ground Water Quality

March - May 2021
pH ranges in between 6.61 to 7.54. Maximum pH of 7.54 was observed at ML Area near Suliari (GW6) and minimum pH of 6.61 was observed at Bhalyatola village (GW2).
Total Dissolved Solids (TDS) concentrations is in between 162 to 389 mg/l, maximum concentration 389 mg/l of was observed at Near Khairahi village (GW3), minimum concentration 162 mg/l of was observed at Bhalyatola village (GW2).
Total Hardness is from 77.9 to 263.4 mg/l. Maximum hardness is 263.4 mg/l was recorded at Khairahi (GW3) and the minimum is 77.9 mg/l was recorded at Bhalyatola (GW2) respectively.
Alkalinity of the samples lies between 65 mg/l to 265 mg/l. The maximum value 265 mg/l was at Khairahi (GW3) and the minimum value 65 mg/l was found at Bhalyatola village (GW2).
Chlorides is in range of 27.4 to 66.4 mg/L, maximum concentration is 66.4 mg/l was observed at ML Area near Suliari (GW6), and minimum concentration is 27.4 mg/l was observed at M.L. Area – Dhirauli South (GW1) respectively.
Sulphates is in range of 8.7 mg/l to 32.6 mg/l. The maximum value is 32.6 mg/l observed at ML Area near Suliari (GW6), whereas the minimum value is 8.7 mg/l was observed at ML Area - Berdaha (GW4).
Bacteriological studies revealed the absence of Total coliform.
In study area, water quality has been observed to vary considerably between the sampling locations. Mostly the parameters of groundwater quality fall within the permissible limits of drinking water standards.

(c) Soil quality analysis was done at

(d) 10 Location. All the Parameters like pH varies from 4.89 to 7.06, Organic matter varies from 0.43% to 1.34%, Available Nitrogen varies from 53.9 to 155.3 kg/ha etc. are found within the permissible limits.

Interpretation of Soil Quality

March -May 2021

The pH of the soil samples ranged from 4.89 to 7.06 indicating the slightly acidic in nature.

The electrical conductance of the soil samples varied from 51 $\mu\text{S}/\text{cm}$ to 130 $\mu\text{S}/\text{cm}$ Bulk densities of the soil samples varied from 1.1 to 1.3 gm/cc.

Available nitrogen in the soil samples varied from 53.9 Kg/ha to 155.3 Kg/ha. Available phosphorus in the region varied from 63.7 kg/ha to 109.1 kg/ha.

Available potassium levels in the samples ranged from 120.3 Kg/ha to 378.1 Kg/ha.

Soluble chlorides in the region varied from 85.0 mg/l to 148.9 mg/kg. Organic matter concentrations ranged from 0.43% to 1.34%.

Based on the results obtained, it is evident that the soil samples are predominantly Silty clay type.

(e) Ambient Noise Monitoring was done at 8 Location. Leq value for day and night time was observed to be 64.6 and 69.1 dB (A).

Interpretation of Noise results

March - May 2021

Out of all 8 locations measured for noise levels, the noise level sample collected at Khairahi (N4) was found on slightly higher side.

The Leq values at this location for day and night time was observed to be 64.6 and 69.1 dB (A) respectively, which can be attributed to local prevailing environment (Mining, industrial, Railway siding and Highway). However, the recorded noise levels were found within the limits of Industrial Noise (75 dB (A)).

45.1.3 The Committee observed the following points based on PP submission:

- (i) Terms of References (ToR) obtained vide letter No. J-11015/49/2021-IA. II (M) dated 03.08.2021. Further, Amendment of ToR was granted vide letter J-11015/49/2021-IA. II (M) dated 09.01.2023.
- (ii) Mining plan & Mine Closure Plan was approved as per the letter No. MPS-34011/4/2021-MPS dated 04th May 2021. In mine lease area of 2672 Ha, total 1397.54 Ha of Forest land (1335.35 Ha Reserve Forest land + 62.19 Ha Revenue Forest Land) involved.
- (iii) Life of mine is 87 years.
- (iv) Public hearing conducted on 04.05.2022 under Chairmanship of ADM, Singrauli for Dhirauli Coal Mine project. PP submitted the activities- wise public hearing budget of Rs. 653 Lakh
- (v) PP has collected the Baseline data for period from March to May 2021 and October to

December 2021.

- (vi) NOC for 1936 m3/day (Fresh Water 50 m3/day & dewatering 1886 m3/day) obtained from CGWA which is valid up to 14.06.2024 vide NOC No. CGWA/NOC/MIN/ORIG/2022/15765.
- (vii) Hurdul Nala flowing within Mine Lease area. The Nala Diversion study has been carried out and also approved by Chief Engineer Ganga Basin Rewa.
- (viii) PP has submitted NOC from Principal Chief Conservator of Forest Madhya Pradesh vide letter no KRAMANK/MACHI. /2022/5404 dated 17.08.2022, stating that there is No Eco-sensitive zone within the 10 KM radius.
- (ix) The PP has submitted the total environmental management cost of Rs.1550 lakhs as a Capital Cost and Rs.282 lakhs as Recurring Expenditure.
- (x) The PP vide letter dated 02.06.2023 submitted the following:
 - a) Dhirauli Coal block at an aerial distance of about 30 km from the Severely Polluted area of Singrauli District. PP later submitted a letter from Member Secretary, MPPCB vide no 1335/TS/HQ/Mine 2063 dated 06.06.2023 wherein it is reported that said mine location is away from 114 sq km area of Singrauli, designated as CEPI.
 - b) PP later also confirmed that the grazing area in the R&R colony will be increased from 4 ha to 10 ha. An undertaking has been enclosed.
 - c) The public hearing budget has been increased from Rs. 6.53 crores to Rs. 10.73 crores. To improve education, an English medium school will be built with modern amenities like a library, laboratories, sports facilities etc., which will also ensure that free education, books, uniform, etc., would be provided for all children. Also, free drinking water will be supplied to nearby villages through pipelines, tankers, etc. Revised public hearing action plan mentioned below:

Activity-wise Phasing of Public Hearing Commitments Scheme:

S. No.	Proposed Activities under public hearing commitment scheme		Phasing of Allocated proposed PH commitment Budget, Rs. Lakh					
			FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	Total
1	Health Facility at village Dhirauli Jhalari, Amdand Belwar and rehabilitation colony	Providing infrastructure facilities such as beds, medical instruments in medical centers	25	50	50	75	75	275

		24x7 Ambulance to be made available to Basi bardah, Jhalari						
2	Educational Facilities (Dhirauli Village Basi bardah, Jhalari Amdand Belwar and rehabilitation colony and rehabilitation colony)	English medium school with modern amenities like library, laboratories, sports facilities, virtual learning, etc. Free education, books, uniform, etc.	200	200	20	-	-	420
		Construction of Toilets in the schools	0	0	10	0	10	20
		Construction of Laboratory in the schools	0	0	0	10	10	20
3	Rural infrastructure development	Construction of Pucca roads, Waiting Shed,	0	0	50	0	50	100
		Construction of Overhead tanks, piping,	15	15	15	15	20	80

		drainages & internal roads						
		Renovation of Temples (religious places)	0	0	2	3	3	8
4	Employment Generation	Skill Development Training for operators, fitters, electricians	10	10	10	10	10	50
		Training centers for Ladies (stitching, Embroidery, tailoring etc.)	10	10	10	10	10	50
5	Livelihood Development & farmers productivity	Farmer's training in recent crop specific training on cultivation, harvesting and marketing.	5	10	0	10	25	50
Total			265	295	167	133	213	1073

d) The budget for Hurdul Nala diversion has been separated from the EMP. The revised EMP budget has been mentioned below:

Sl. No.	Environmental Protection Measures	Capital Cost	Recurring Cost
		(Rs. In lakhs)	(Rs. In lakhs/year)

1.	Air Pollution Control Measures (Dry fog Dust Suppression Systems at CHP, and Loading Point)	100	60
2.	Water Pollution Control Measures (Construction of Garland drain, Construction of Garland drain around the OB dump, Toe wall around the dump)	118	50
3.	Noise Pollution Control Measures	15	10
4.	Greenbelt/ Nursery Development	37	50
5.	Rainwater Harvesting	80	10
6.	Fire Fighting and Safety measures	100	10
7	Installation of Online Ambient Air Quality Monitoring System & Online Monitoring ETP	200	10
8	Budget/ Scheme for the Public Hearing Commitments	1073	0
Total EMP Budget*		1723	200
* The EMP capex budget shall be utilized within 5 years from the date of operation.			

- e) Committee noted that approx 90% of the coal from Dhirauli Coal Mine will be utilized in the Thermal Power Plant of M/s Mahan Energen Ltd. A five-kilometer pipe conveyor system has been planned for transportation of coal from Mine to Power Plant, which is likely to be implemented in 3.5 years, from the start date of planned coal production as per allocation order/ CBDPA with MOC, Govt. of India.

The remaining coal will be supplied through rail/road in the open market since it is a commercial coal mine. However, road transportation may be allowed for an initial 3.5 years of coal production for supply to thermal power plant. A commitment and undertaking in this regard has been enclosed.

- f) The CO₂ emissions from mining activity and loss of CO₂ sequestration due to deforestation have been estimated with CO₂ sequestration due to compensatory afforestation. A report has been submitted in this regard, which mentions that total number of 16,80,000 trees will be planted in 1400 Ha of land area under compensatory Afforestation (maintaining tree density of 1200 trees/ha). The CO₂ sequestration starts right after the plantation is done. Total amount of CO₂ that will be sequestered in 2nd year and that in 10th year of plantation will be 377,081.4 and 5,706,152.90 tons of CO₂ annually.

45.1.4 *The EAC after deliberation noted that the instant proposal is green field opencast cum underground project. PP obtained the ToR on 03.082021 and later its amendment vide letter dated 09.01.2023 regarding diversion of stream which is flowing middle of mine. The Committee noted*

that PP has to obtain forest clearance for 1397.54 ha of forest land.

The Committee during discussions highlighted concerns on impact related to catchment of the Hurdul stream and advise the PP to take all possible precautions with proper design of channel to maintain the natural flow of water along the periphery of mine without loss within catchment area alongwith maintaining natural biodiversity at downstream. The same time, PP was advised not to divert north eastern stream (Bardiya/Jharia Stream) and leave safe distance on both sides with embankment alongwith dense plantation. The Committee opined that IRO shall monitor the implementation of Report on Hydrology prepared by Srushti Seva Private Limited for diversion of Hurdul Stream so that the natural flow of water will be maintained at the exit of the Mine lease area. The diverted route of nallah also needs to be protected with dense plantation. Water flow meter and Ground water piezometer should be installed at the various location for measuring surface as well as ground water level.

While discussing the coal evacuation plan, the Committee emphasized to put in place a dedicated mechanized coal transportation system by inpit belt conveyor with silo loading and railway siding for rail transportation for at least 90% of total coal capacity to thermal power plant within three and half year. Meanwhile PP could utilize the road for transportation.

Regarding public hearing issues, as noted from the proceeding of meeting held on the project, PP admitted to enhance the budget, subsequently, which has been increased from Rs. 6.53 crores to Rs. 10.73 crores to improve education. A dedicated modern facility school was advised to be built on the priority basis considering school capacity as per children's available within the 5 km of the project area. Later, PP proposed for English medium school to be equipped with modern amenities like library, laboratories, sports facilities, virtual learning, Free education, books, uniform, etc. and Rs. 420 lakh to be spent on the Educational Facilities wherein expenditure related to the salary of staff, education to be provided free and recurring cost of school to be met under CSR budget so that no burden to be imposed on fee structure. Besides, drinking water facility to nearby villages through pipelines, tankers, etc shall be ensured. Also the recurring cost related to the other public hearing activities was advised to be covered under CSR budget after completing the task.

As committed, the Capital EMP budget of Rs. 1723 lakh and annual recurring cost of Rs. 200 lakh was advised to be properly spent for pollution control measures only. The Committee also emphasized that 20% of the mine energy requirement should be met through clean fuel source alongwith shifting 80% vehicles to clean fuel within mine from commencement of the mining activity. As committed in report, PP shall start sequestration of CO₂ in 2nd year of operation and IRO will review the progress of CO₂ sequestration.

The Committee noted that there is no national Park/Wildlife Sanctuary, tiger and Biosphere within 10 km of mine lease area. However, Project area consists of Schedule I species

for which a comprehensive Wildlife Conservation Plan has been prepared and approved by PCCF on 24.11.2022. The committee also noted that as per CCF, Sidhi, MP vide letter no. KRAMANK/MACHI/2022/3494 dated 20.05.2022, the Elephant corridor is passing through the project as per work plan of the Forest Division. Therefore, EAC proposed while considering this project, it would be appropriate to take opinion of WL-division /Project Elephant of MoEF&CC in this regard.

Based on the above, EAC recommended the proposal for grant of Environmental Clearance for Dhirauli Coal Mining Project of Open cast cum Underground of 6.5 MTPA (5 MTPA Open Cast & 1.5 MTPA Underground) in Mine Lease Area of 2672 ha by M/s Stratatech Mineral Resources Private Limited (SMRPL) located at villages Dhirauli, Phatpani, Sirswah, Amdand, Jhalari, Amraikhoh, Bansibridha, and Belwar, Tehsil Sarai, District Singrauli, (Madhya Pradesh) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

- i. PP shall submit Stage-I Forest Clearance for forest land of 1397.54 ha required for non-forestry activity prior to grant of Environmental Clearance. PP shall not be allowed to use forest land for purpose of any type of infrastructural development except coal mine production.*
- ii. PP shall obtain CTE/CTO from State Pollution Control Board for 6.5 MTPA (5 MTPA – Opencast Mine & 1.5 MTPA - Underground Mine).*
- iii. PP shall take all possible precautions in order to catch natural flow of water along with maintaining natural biodiversity of stream flowing through Mine lease area.*
- iv. PP shall not divert north eastern stream (Bardiya/Jharia Stream) and to maintain safe distance of 100 mts on both sides for the safety embankment with dense plantation.*
- v. PP shall submit six monthly reports to IRO after monitoring implementation of Report on Hydrology prepared by Srushti Seva Private Limited for diversion of Hurdul Stream. The diverted route of Nallah to be protected with dense plantation.*
- vi. PP shall install Water flow meter and Ground water piezometer near to the nallah flowing through Mine lease area at various location for measuring surface as well as ground water level.*
- vii. PP shall install dedicated mechanized system for transportation of 90% of coal through close pipe conveyor system and only 10% by road. As proposed PP to construct 5 km pipe conveyor system from mine pit/face to Power Plant (M/s Mahan Energen Ltd) within 3 and half year, which should be designed upto peak capacity of mine production. SPCB to grant the CTO accordingly.*
- viii. PP shall reduce the carbon footprint after sequestration of CO₂ and 377,081.4 tons of CO₂ to be sequestered in the 2nd year of mining. IRO shall review the progress of CO₂ sequestration. The process of sequestration of CO₂ will include the planting trees, by “Developing carbon capture and storage (CCS) technologies” and implementation of renewable energy mechanism.*

- ix. *PP shall address public hearing issues with the allocated Budget of Rs. 1073 Lakhs/- and activities to be monitored by through dedicated online monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing which will be part of CSR budget.*
- x. *As proposed, PP shall implement the public hearing budget on the items given above in the Minutes of Meeting of EAC at 45.1.3 (xiii) (c) and EMP budget on the items given above at 45.1.3 (xiii) (d).*
- xi. *As committed, PP shall construct dedicated modern facility school on the priority basis considering school capacity as per children's available within the 5 km of the project area. As per the demand, English medium school to be equipped with modern amenities like library, laboratories, sports facilities, virtual learning with free education (or with nominal cost), books, uniform, etc. Total Rs. 420 lakh to be spent on the Educational Facilities only wherein expenditure related to the salary of staff, education fee and other expenditure to be covered as recurring cost under CSR budget so that no burden to be imposed on local public children. .*
- xii. *PP shall create a **"Public Grievance Redressal and Monitoring System"** for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A log book to be maintained by PP on **"Public Grievance Redressal and Monitoring System."***
- xiii. *PP shall implement EMP activities with allocated capital budget of Rs. 1723 lakh and recurring cost of Rs. 200 lakhs for compliance with the environmental protection and mitigation.*
- xiv. *PP shall make use of advanced computer simulation techniques for design and execution of blasting operation in the mine. PP shall make use of Electronic Delay Detonators for optimal blasting in coal and OB rock to minimize the environmental impacts of blasting such as ground vibration, fly rocks and excessive dust generation.*
- xv. *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.*
- xvi. *No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.*
- xvii. *PP to develop 5 ha of nursery particularly for Sal Trees and plantation to be carried out in reclaimed area focusing on the development of Sal Forest.*
- xviii. *PP shall ensure the employment for the Project Affected Families (PAF) on permanent basis as per qualification and provide the free transportation to the work site.*
- xix. *PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.*

- xx. *PP shall construct a pucca road to maintain the safety of people residing nearby along the transportation route with plantation on either side of the road.*
- xxi. *PP shall install fixed fog cannon (mist spayer) and fixed sprinkler all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 20 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.*
- xxii. *PP shall deploy only 35-40 tonnes covered trucks/dumper to reduce fleet size till closed conveyor pipe loading system is put in place and also to implement surface miner and conveyor belt system from pit head to CHP, as feasible.*
- xxiii. *PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.*
- xxiv. *The status of mine closure activities must be included in every six months' compliance report submitted to the state pollution control board and IRO.*
- xxv. *PP to maintain the topped haul road properly to minimized the dust emission. PP to also develop pucca roads by seeking consent from the panchayat with widening of roads especially roads inter linking the villages within the study area of 10 km radius buffer zone.*
- xxvi. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xxvii. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xxviii. *Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- xxix. *PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*
- xxx. *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.*
- xxxi. *PP to implement the recommendation of land subsidence study carried out for underground mine and report shall be submitted to IRO in every six monthly report.*
- xxxii. *PP to obtain the star rating as per the guidelines of Ministry of Coal.*
- xxxiii. *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders*

shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.

Agenda No. 45.2

Tawa III Underground Mine for a production capacity of 0.48 MTPA/ 0.60 MTPA (N/P) in land area of 207.47 by M/s Western Coalfields Limited located at Gandhigram village, Tehsil Ghoradongri, District Betul (Madhya Pradesh) – Reconsideration for Environmental Clearance –reg.

[Online proposal No. IA/MP/CMIN/84545/2018; File No. J-11015/163/2018- IA-II (M)]

45.2.1 The proposal is for Environmental Clearance for Tawa III Underground Mine for a production capacity of 0.48 MTPA/ 0.60 MTPA in land area of 207.47 ha by M/s Western Coalfields Limited located at Gandhigram village, Tehsil Ghoradongri, District Betul (Madhya Pradesh).

45.2.2 The EAC during deliberations noted the following:

Earlier, the proposal was considered in the 27th EAC meeting held on 3-4 March, 2023 wherein the committee deferred the proposal for the submission of the desired information. Further the PP has submitted the pointwise reply vide letter dated 15.05.2023 as follows:

S. No.	Observation of 27th EAC	Status of Compliance
1.	PP shall conduct one season base line data again and submit the draft EIA report to SPCB for issuance of Public notice in local and national newspaper informing the earlier information was not as per provisions of EIA Notification, 2006 and further seek comments from public and includes the	One season baseline data has been generated from April 2022 to June 2022 and draft EIA –EMP report has been prepared and submitted to Madhya Pradesh Pollution Control Board for issuance of Public Notice. Public Notice in local and national newspapers (namely Dainik Bhaskar, Dainik Jagarn & Navbharat) to seek comments from public has been issued on 01.01.2023. As per the letter from RO. MPPCB, no comments have been received up to 09.02.2023 (Attached as Annexure –XVII of Revised EIA-EMP).