

# EC Conditions Six Monthly Compliance Report

(by Project Proponent)



**Proposal No :** IA/WB/CMIN/210433/2021

## 1. Name of the Entity / Corporate Office :

File No. :	IA-J-11015/27/2021-IA-II(M)	Proposal Name :	Jaganathpur-B Coal Mine (mine lease area 856.68 ha)
Date Of EC. :	01 Sep 2022	EC Letter :	
Name of the Entity / Corporate Office :	POWERPLUS TRADERS PRIVATE LIMITED	Email Address :	powerplustrade@gmail.com
Address :	39, SHAKESPEARE SARANI	Mobile No :	7603036325

## 2. Proponent Details :

Proponent Name :	BIKASH	Designation :	SENIOR MANAGER
Telephone No :	033-42554266	Mobile No :	+91 7603036325
Fax No :	033-22894254	Email Address :	powerplustrade@gmail.com
Website :		Pin Code :	700017
State :	West Bengal	District :	Kolkata
Village/Town :			

## 3. Compliance Letter/Report (Proponent):

Compliance Period :	2023 / 01 Jun (01 Oct - 31 March)	Compliance Submission Date :	30 May 2023 11:12:46:453
Remarks :			
Site Visit Report :	N/A	Site Visit Date :	N/A
ATR Report :	N/A	ATR Date :	N/A
Additional Attachment (If Any) :		Additional Remarks (If Any) :	

## 4. Summary Status of Compliance :




Total Condition :	296		
Complied :	19	Being Complied :	15
Not Complied :	92	Partially Complied :	3
Agreed to Comply :	167		


## 5. Details of Production and Project Area :

Date of Commencement of Project/Activity :	07 Jan 2023	Project Area as Per EC Granted (In Case of Mine Lease):	856.68
Actual Project Area(In Case of Mine Lease):	856.68		
PRODUCTION CAPACITY :			


S.No	Name of the Product	Units	As per EC granted	Production during last financial year
1	Coal	Tons per Annum (TPA)	1200000	Production not started yet
2	Coal	Tons per Annum (TPA)	1200000	Production not started yet



## 6. Specific Conditions (Proponent):

S.No	Condition	Self Declaration	Remarks / Reason	Supporting Documents	Observation of IRO
1	PP to obtain the CTO for 0.8/1.20 MTPA capacity after grant of EC.	Partially Complied	Consent to Establish has been obtained from West Bengal Pollution Control Board (WBPCB) vide its memo no.525-2N-11/2022(E) dated 18 October, 2022. We will obtain CTO before starting of production		
2	PP shall obtain No Objection Certificate from Central Ground Water Authority for extraction of ground water within six months and submitted to IRO, Ranchi	Complied	No Objection Certificate has been taken from State Water Investigation Department, West Bengal (SWID) for extraction of ground water vide their permit no. P2209008004920000 dated 30-11-2021.		
3	PP to obtain the CTO for 0.8/1.20 MTPA capacity after grant of EC.	Partially Complied	CTE has been obtained from West Bengal Pollution Control Board (WBPCB) vide NOC No-172012 dated 18.10.2022 issued vide memo no. 525-2N-11/2022(E). We will obtain CTO before starting of production	N/A	
4	PP shall obtain No Objection Certificate from Central Ground Water Authority for extraction of ground water within six months and submitted to IRO, Ranchi	Complied	No Objection Certificate has been taken from State Water Investigation Department, West Bengal (SWID) for extraction of ground water vide their permit no. P2209008004920000 dated 30-11-2021.		
5	PP to complete the estimated allocated budgetary expenditure for EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 per year as per its letter no PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. Further capital cost	Agreed to Comply	Agree to Comply in a time bound manner in parallel with implementation of the project.	N/A	

	for environmental monitoring is Rs. 300 Lakhs and recurring cost is Rs. 157.00 Lakhs/year Capital EMP budget shall be completed within strict timeline.				
6	PP shall develop 2 nos. of rain water harvesting pond (100 m, width will be 10 m and the depth will be 3 m) as proposed by PP near the villages in consultation with Gram Panchayat within 1 year. Also, Indicator aquatic species shall be planted in this water bodies to see the environmental quality. PP shall own water bodies/pond currently present in project area, maintain and regularly monitor the quality for its long term protection.	Agreed to Comply	Will be complied	N/A	
7	PP shall to implement Water distribution system in Binodpur, Sashipur, Rajhat, Jot Balrampur villages with an estimate Cost of Rs. 185.7065 Lakhs as in Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. A proper water distribution network shall be devised to meet the demands of formers related to irrigation and recharging of ponds, wherever required.	Agreed to Comply	Water distribution system will be implemented in parallel of operation of mine.	N/A	
8	PP shall explore the use of Ukhra Railway siding or Durgapur Railway siding for coal transportation in future and coal transportation through road shall be stopped accordingly. A report in this regard to be submitted to IRO within 1 year to justify the adequacy.	Agreed to Comply	Durgapur railway siding will be used for transportation of coal. Coal transported via road from mine site to railway siding will be through covered vehicles.	N/A	
9	PP shall install ~191 water sprinklers for dedicated road from mining to Deul and 100 number along the separate transportation route as per Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. In addition, 5 nos of fog cannons of atleast 40 mtrs throw shall be installed at coal storage yard and in nearby villages.	Agreed to Comply	Water sprinklers and fog canons will be installed in parallel with operation of mine to reduce the fugitive dust emission.	N/A	
10	PP shall transport the coal by trucks of fleet size 35-40 tons and no village road shall be used for transportation of coal.	Agreed to Comply	Transportation of coal will be done by trucks of fleet size 35-40 tons and no village road will be used for transportation of coal during coal production phase.	N/A	
11	PP shall maintain atleast 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard.	Agreed to Comply	Greenbelt will be developed in parallel with construction/develop of the project.		
12	PP to plant additional 1,00,000 plants with three tier plantation along the transportation route, if not completed, and identified	Agreed to Comply	Agreed and will be complied with consultation with gram panchayat.	N/A	

	areas with consent to the gram panchayat within two year and plant for remaining within 2 years for their proper growth in additional already committed to plant to plantation in 8.49 ha project area.				
13	PP shall follow the recommendation of subsidence study and monitor the degree of subsidence regularly and shall be submitted to IRO-Ranchi.	Agreed to Comply	Agreed, we will follow the recommendation of subsidence study and monitor the degree of subsidence regularly and same will be informed to IRO Kolkata.	N/A	
14	PP must explore innovative technology to recover methane from gases extracted from underground mine while venting.	Agreed to Comply	Noted and the condition will be explored in future for its feasibility.	N/A	
15	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.	Agreed to Comply	We will install solar lights along the road and in rural areas identified as per Need based assessment & SIA in various villages i.e. Nababpur, Shrikrishnapur, Amdahi, Sandipur, Baidyanathpur.	N/A	
16	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check - ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/ preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall	Agreed to Comply	Occupational Health Specialist for medical examination and health check-ups will be appointed and record of same will be maintained and will be furnished to component authority.	N/A	
17	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.	Agreed to Comply	Training on livelihood and skill development to nearby villagers employable will be given during development and operation phase under CER/ CSR scheme.	N/A	
18	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from	Agreed to Comply	Agreed the noise levels well at project site will be kept within the prescribed limits for day light/ night hours by taking various mitigative measures. Please refer attached EC compliance report	N/A	



	the villagers and keeping the noise levels well within the prescribe				
19	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. 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 be comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water	Agreed to Comply	A dedicated team to oversee environment management is being setup for monitoring of air, water quality parameters on routine basis. Any non-compliance or infringement should be reported to concern auth.	N/A	
20	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.	Not Complied	Not applicable	N/A	
21	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.	Not Complied	Not applicable	N/A	
22	PP to accomplish the recruitment of a full - fledged qualified manpower with Environmental Engineer/ Environment Science degree background in Environment Management Cell etc within six months and same shall be reported to IRO, MOEF&CC.	Agreed to Comply	Full - fledged qualified manpower with Environmental Engineer degree background in Environment Management Cell is already recruited. Organizational structure for environment management is attached.		
23	PP to fulfil all the commitment made to address the public hearing (Total amount of Rs. 473 lakhs to be completed within three years as in EIA) issued in time bound manner as committed in EIA EMP report and a progressive report to be furnished to IRO with every six monthly compliance report.	Agreed to Comply	all the commitment made to address the public hearing will be completed in time bound manner and the same will be furnished in the progressive report with every six monthly compliance report.	N/A	
24	PP shall implement Effluent Treatment Plant for wastewater generated from workshop and	Agreed to Comply	we will implement water treatment plant for	N/A	

	Sewage Treatment Plan (of MBR technology as proposed) for its colony. No untreated water shall be discharged from mine boundaries to ponds / nallah / river.		wastewater generated from workshop and domestic sewage. No untreated water will be discharged from mine boundaries to ponds / nallah / river.		
25	PP to maintain the transportation road properly to minimize the dust emission. PP to also develop pucca/concrete 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.	Agreed to Comply	Water sprinkler will be installed along road to reduce fugitive dust emission. Widening of roads & development of pucca/concrete roads in consultation with GP will be carried out in time bound manner.	N/A	
26	PP to monitor the water quality of the ground water and surface water body located within the core zone and 5 km radius from the periphery of the mine boundary as per procedure laid down by CPCB.	Being Complied	The monitoring of ground and surface water quality has been carried out by the NABL accredited environmental laboratory. All the parameters are found within the prescribed limit.		
27	PP to install 1 continuous ambient air quality monitoring stations at suitable locations preferably village side with consultation of SPCB. The real time data so generated shall be uploaded on company website and linked it with website of CPCB & SPCB. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.	Agreed to Comply	Continuous Ambient Air Quality Monitoring stations will be installed in parallel with operation of mine. A separate budget of ₹50 lac is proposed for CAAQMS. Please refer attached EC compliance report	N/A	
28	PP to obtain the CTO for 0.8/1.20 MTPA capacity after grant of EC.	Partially Complied	CTE has been obtained from West Bengal Pollution Control Board (WBPCB) vide NOC No-172012 dated 18.10.2022 issued vide memo no. 525-2N-11/2022(E). We will obtain CTO before starting of production	N/A	
29	PP shall obtain No Objection Certificate from Central Ground Water Authority for extraction of ground water within six months and submitted to IRO, Ranchi	Complied	In the state of West Bengal, ground water extraction is not being regulated by CGWA as per notification of "Ministry of Jal Shakti" Gazette notification vide S.O. No. 3289(E) dated 24th Sept., 2020	N/A	
30	PP to complete the estimated allocated budgetary	Agreed to Comply	Agree and will be Complied in a time		

	expenditure for EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 per year as per its letter no PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. Further capital cost for environmental monitoring is Rs. 300 Lakhs and recurring cost is Rs. 157.00 Lakhs/year Capital EMP budget shall be completed within strict timeline.		bound manner in parallel with implementation of the project. Environmental Monitoring has been done by the NABL/WBPCB/MoEFC Accredited Laboratory.		
31	PP shall develop 2 nos. of rain water harvesting pond (100 m, width will be 10 m and the depth will be 3 m) as proposed by PP near the villages in consultation with Gram Panchayat within 1 year. Also, Indicator aquatic species shall be planted in this water bodies to see the environmental quality. PP shall own water bodies/pond currently present in project area, maintain and regularly monitor the quality for its long term protection.	Agreed to Comply	Agreed and will be complied.	N/A	
32	PP shall to implement Water distribution system in Binodpur, Sashipur, Rajhat, Jot Balrampur villages with an estimate Cost of Rs. 185.7065 Lakhs as in Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. A proper water distribution network shall be devised to meet the demands of formers related to irrigation and recharging of ponds, wherever required.	Agreed to Comply	Agreed and will be complied Water distribution system will be implemented in parallel with implementation of the project.	N/A	
33	PP shall explore the use of Ukhra Railway siding or Durgapur Railway siding for coal transportation in future and coal transportation through road shall be stopped accordingly. A report in this regard to be submitted to IRO within 1 year to justify the adequacy.	Agreed to Comply	Durgapur railway siding will be used for transportation of coal. Coal transported via road from mine site to railway siding will be through covered vehicles.	N/A	
34	PP shall install ~191 water sprinklers for dedicated road from mining to Deul and 100 number along the separate transportation route as per Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. In addition, 5 nos of fog cannons of atleast 40 mtrs throw shall be installed at coal storage yard and in nearby villages.	Agreed to Comply	Water sprinklers and fog canons will be installed in parallel with operation of mine to reduce the fugitive dust emission.	N/A	
35	PP shall transport the coal by trucks of fleet size 35-40 tons and no village road shall be used for transportation of coal.	Agreed to Comply	Transportation of coal will be done by trucks of fleet size 35-40 tons and no village road will be used for transportation of coal during coal production phase	N/A	
36	PP shall maintain atleast 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10	Agreed to Comply	Greenbelt being developed in parallel with construction/developo of the project.	N/A	

	mts height along the boundary of coal storage yard.		Greenbelt plan is already submitted to competent authority in EC compliance (Dec-2022)		
37	PP to plant additional 1,00,000 plants with three tier plantation along the transportation route, if not completed, and identified areas with consent to the gram panchayat within two year and plant for remaining within 2 years for their proper growth in additional already committed to plant to plantation in 8.49 ha project area.	Being Complied	1000 nos. of saplings of native species already planted till March, 2023. We are regularly planting trees, status of the same will be given in next compliance period.	N/A	
38	PP shall follow the recommendation of subsidence study and monitor the degree of subsidence regularly and shall be submitted to IRO-Ranchi.	Agreed to Comply	we will follow the recommendation of subsidence study and monitor the degree of subsidence regularly and same will be informed to IRO Kolkata.	N/A	
39	PP to accomplish the recruitment of a full - fledged qualified manpower with Environmental Engineer/ Environment Science degree background in Environment Management Cell etc within six months and same shall be reported to IRO, MOEF&CC.	Agreed to Comply	Full - fledged qualified manpower with Environmental Engineer degree background in Environment Management Cell is already recruited.	N/A	
40	PP to fulfil all the commitment made to address the public hearing (Total amount of Rs. 473 lakhs to be completed within three years as in EIA) issued in time bound manner as committed in EIA EMP report and a progressive report to be furnished to IRO with every six monthly compliance report.	Agreed to Comply	Agreed, all the commitment made to address the public hearing will be completed in time bound manner and the same will be furnished in the progressive report with every six monthly compliance report.	N/A	
41	PP shall implement Effluent Treatment Plant for wastewater generated from workshop and Sewage Treatment Plan (of MBR technology as proposed) for its colony. No untreated water shall be discharged from mine boundaries to ponds / nallah / river.	Agreed to Comply	Agreed, water treatment plant for wastewater generated from workshop and domestic sewage will be constructed. No untreated water will be discharged from mine boundaries to ponds / nallah / river.	N/A	
42	PP to maintain the transportation road properly to minimize the dust emission. PP to also develop pucca/concrete 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.	Agreed to Comply	Water sprinklers will be installed along the road to reduce fugitive dust emission. Widening of roads and development of pucca/concrete roads in consultation with gram panchayat will be carried out	N/A	



43	PP to monitor the water quality of the ground water and surface water body located within the core zone and 5 km radius from the periphery of the mine boundary as per procedure laid down by CPCB.	Being Complied	The monitoring of ground and surface water quality has been carried out by the NABL accredited environmental laboratory. All the parameters are found within the prescribed limit.		
44	PP to install 1 continuous ambient air quality monitoring stations at suitable locations preferably village side with consultation of SPCB. The real time data so generated shall be uploaded on company website and linked it with website of CPCB & SPCB. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.	Agreed to Comply	Continuous Ambient Air Quality Monitoring stations will be installed in parallel with operation of mine. Order for 01 no. CAAQMS is at final approval stage.	N/A	
45	PP must explore innovative technology to recover methane from gases extracted from underground mine while venting.	Agreed to Comply	Noted and the condition will be explored in future for its feasibility.	N/A	
46	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.	Agreed to Comply	We will install solar lights along the road and in rural areas identified as per Need based assessment & SIA in various villages i.e. Nababpur, Shrikishnapur, Amdahi, Sandipur, Baidyanathpur.	N/A	
47	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check - ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/ preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall	Agreed to Comply	Agreed and will be considered, Occupational Health Specialist for medical examination & health check-ups will be appointed and record of same will be maintained and will be furnished to component aut	N/A	
48	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.	Agreed to Comply	Training on livelihood and skill development to nearby villagers employable will be given during development and operation phase under CER/ CSR scheme.	N/A	
49	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to	Agreed to Comply	Agreed the noise level at project site is within the prescribed limits for day light/ night hours by taking		

	mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribe		various mitigative measures.		
50	PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extant rules or norms. 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 be comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water	Agreed to Comply	A dedicated team to oversee environment management is being set up for monitoring of air, water quality parameters on routine basis. Any noncompliance or infringement will be reported to concerned auth.	N/A	
51	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.	Not Complied	Not applicable	N/A	
52	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.	Not Complied	Not applicable	N/A	




## 7. General Conditions (Proponent) :

S.No	Condition	Self Declaration	Remarks / Reason	Supporting Documents	Observation of IRO
1	Mining Plan Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there - under as applicable.	Agreed to Comply	Agreed and will be complied with	N/A	
2	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).	Agreed to Comply	Noted and agreed	N/A	
3	Mining shall be carried out as per the approved mining plan	Agreed to Comply	Mining will be done as per approved	N/A	

	(including mine closure plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).		mining plan, and during operation all relevant coal mining laws and circulars of DGMS will be followed.		
4	Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.	Agreed to Comply	We've proposed to install one mechanical Ventilator of high capacity on surface through evacuee. The exhaust fan will have provision of variable pitch of blades to improve the quantity of air required	N/A	
5	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.	Complied	No forest land is involved.	N/A	
6	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Agreed to Comply	Solar panels, electric vehicles for conveyance will be deployed to reduce energy and fuel consumption. Please refer attached EC compliance report.	N/A	
7	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).	Agreed to Comply	Digital Survey will be carried out at least once in three years for monitoring land use pattern from recognised consultant. Please refer attached EC compliance report	N/A	
8	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.	Agreed to Comply	After post mining the land will be rendered as per the approved mine closure plan.	N/A	
9	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	Agreed to Comply	Regular detailed monitoring of subsidence movement will be carried out. Please refer attached EC compliance report	N/A	

	life and materials. Cracks should be effectively plugged in with ballast and clay soil / suitabl				
10	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, alongwith fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of Mo	Agreed to Comply	Approved mine closure plan will be followed	N/A	
11	A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.	Agreed to Comply	We'll prepare a separate team for subsidence monitoring and implementation of mitigation measures. In detailed refer attached Half Yearly EC compliance report.	N/A	
12	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.	Agreed to Comply	During the mining operation in underground, regular monitoring of surface will be carried out by a monitoring team to prevent inrush of water in the mine.	N/A	
13	Native tree species shall be selected and planted over areas affected by subsidence.	Agreed to Comply	Native tree species will be selected and planted for fast growing over area affected by subsidence.	N/A	
14	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.	Agreed to Comply	Noted.	N/A	
15	Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall be developed all along the mine lease area in a phased manner. The green belt comprising of a mix of native species shall be developed all along the major approach roads / coal transportation roads.	Agreed to Comply	<ul style="list-style-type: none"> <li>• 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard. Please refer attached EC compliance report</li> </ul>	N/A	
16	Adequate illumination shall be ensured in all mine locations (as	Agreed to Comply	Lighting facilities in night will be	N/A	

	per DGMS standards) and monitored.		setup at all places of mine site wherever is required.		
17	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.	Agreed to Comply	Free medical facilities will be provided to all employees under Employees' State Insurance Scheme. For detailed refer attached Half Yearly EC compliance report.	N/A	
18	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.	Agreed to Comply	The Personal Protective Equipment (PPE's) will be provided to the dusty areas working personnel and regular training and information will be provided for safety and health aspects.	N/A	
19	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.	Agreed to Comply	Safety officer will be hired for providing skill training as per safety norms specified by DGMS to all workers including the outsourcing employees to ensure high safety standards at mine site	N/A	
20	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.	Agreed to Comply	Adequate drinking water facilities will be provided to all the persons employed during construction & operation phase.	N/A	
21	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.	Agreed to Comply	A time bound action plan has been prepared for addressing all the issues raised during the Public Hearing and will be implemented within the time frame.	N/A	
22	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	Agreed to Comply	We'll follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II(M) dated 29th October, 2014.	N/A	

	part of mine lease areas or habitations and villages are surrounded by the mine lease area.				
23	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or share	Complied	Company has well laid down environmental policy duly approve by the Board of Directors.		
24	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.	Complied	A separate Environmental cell both at project and company head quarter is in place.	N/A	
25	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.	Agreed to Comply	Appropriate fund is allocated under the head of EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 per year. Please refer attached EC compliance report	N/A	
26	Self Environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Agreed to Comply	Noted	N/A	
27	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.	Complied	Public notice for grant of Environmental Clearance has been given in to local newspaper named "AJKAL" in vernacular language and "THE ECHO OF INDIA" in English language on dated 2nd September, 2022.		
28	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	Complied	The copies of the environmental clearance has been submitted. For detailed please refer attached Half Yearly EC compliance report.		

	for 30 days from the date of receipt.				
29	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.	Agreed to Comply	The environmental clearance and status of compliance of the stipulated environment clearance conditions, including results of monitored data will be uploaded on the website of the company.	N/A	
30	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (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.	Agreed to Comply	The criteria pollutants level namely; PM10, PM2.5, SO2, NOx (ambient levels) will be monitored by third party monitoring agency. Please refer attached EC compliance report	N/A	
31	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.	Agreed to Comply	In compliance to this point, this report is being submitted.	N/A	
32	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".	Agreed to Comply	We'll follow the mitigation measures stated in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014	N/A	
33	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.	Agreed to Comply	We'll submit the environmental statement for each financial year in Form-V to the WBPCB as prescribed under the Environment (Protection) Rules, 1986 post operation of the mine.	N/A	
34	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Agreed to Comply	The project is in development/ construction stage. CTE and other statutory clearance are obtained from competent authority. Please refer attached EC compliance report	N/A	
35	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Agreed to Comply	All relevant stipulations made by the WBPCB & the State Government will	N/A	

			be complied. In this connection CTE and other statutory clearance are obtained from competent authority		
36	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.	Agreed to Comply	Noted and will be complied in a time bound manner.	N/A	
37	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	Agreed to Comply	Agreed	N/A	
38	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.	Agreed to Comply	Noted	N/A	
39	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed to Comply	Noted & Agreed	N/A	
40	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed to Comply	Agreed & Noted.	N/A	
41	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.	Agreed to Comply	Agreed & Noted.	N/A	
42	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 La	Agreed to Comply	Agreed & Noted.	N/A	
43	The proponent shall abide by all the commitments and recommendations made in the EIA / EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public	Agreed to Comply	we'll abide all the commitments and recommendations made in the EIA/EMP report, commitment made during Public	N/A	



	hearing shall also be implemented in letter and spirit.		Hearing and also that during their presentation to the Expert Appraisal Committee.		
44	The proponent shall obtain all necessary clearances / approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed to Comply	Agreed & Noted.	N/A	
45	Any appeal against this environmental clearance 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.	Agreed to Comply	Noted	N/A	
46	The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No. 114/2014 in the matter of 'Common Cause Vs Union of India & others.	Agreed to Comply	Agreed & Noted.	N/A	
47	The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgement of Hon'ble Supreme Court.	Agreed to Comply	Agreed & Noted.	N/A	
48	This Environmental Clearance shall not be operational till such time the project proponent complies with the above said judgement of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Agreed to Comply	Agreed	N/A	
49	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.	Agreed to Comply	Noise level survey will be carried out from NABL/ WBPCB/ MoEF accredited laboratory will be carried out in a time bound manner and report will be submitted to competent authority.	N/A	
50	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	Being Complied	No endangered flora / fauna is found during collection of baseline data. For detailed please refer attached EC compliance report	N/A	

	consultation with the State Forest and Wildlife Department.				
51	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.	Not Complied	Not applicable	N/A	
52	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.	Not Complied	Not applicable	N/A	
53	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.	Not Complied	Not applicable	N/A	
54	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.	Not Complied	Not applicable	N/A	
55	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z- 11013/57/2014-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'.	Not Complied	Not applicable	N/A	
56	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.	Not Complied	Not applicable, as coal washery project is not proposed.	N/A	
57	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not Complied	Not applicable	N/A	
58	The project proponent shall prepare a Site - Specific	Not Complied	Not applicable	N/A	




	<p>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).</p>				
59	<p>The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention &amp; Control of Pollution) Act, 1981 and the Water (Prevention &amp; Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.</p>	Not Complied	Not applicable	N/A	
60	<p>The project proponent shall obtain the necessary permission from the Central Ground Water Authority.</p>	Not Complied	Not applicable	N/A	
61	<p>Solid waste / hazardous waste generated in the washery needs to addressed in accordance to the Solid Waste Management Rules, 2016/ Hazardous &amp; Other Waste Management Rules, 2016.</p>	Not Complied	Not applicable	N/A	
62	<p>Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.</p>	Not Complied	Not applicable	N/A	
63	<p>Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.</p>	Not Complied	Not applicable	N/A	
64	<p>Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring</p>	Not Complied	Not applicable	N/A	

	stations may also be installed in addition to th				
65	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	Not Complied	Not applicable	N/A	
66	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.	Not Complied	Not applicable	N/A	
67	Covered trucks shall be engaged for mineral transportation outside the washery upto the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.	Not Complied	Not applicable	N/A	
68	Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.	Not Complied	Not applicable	N/A	
69	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.	Not Complied	Not applicable	N/A	
70	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.	Not Complied	Not applicable	N/A	
71	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.	Not Complied	Not applicable	N/A	
72	The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.	Not Complied	Not applicable	N/A	
73	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under	Agreed to Comply	Water treatment plant of adequate capacity will be installed to treat	N/A	

	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.		mine water. No untreated water will be discharged from mine boundaries to pond/nallah/river. Please refer attached compl report		
74	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.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.	Not Complied	Not applicable	N/A	
75	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.	Not Complied	Not applicable	N/A	
76	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.	Not Complied	Not applicable	N/A	
77	Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.	Not Complied	Not applicable	N/A	
78	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.	Not Complied	Not applicable	N/A	
79	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.	Not Complied	Not applicable	N/A	
80	Waste Water shall be effectively treated and recycled completely either for washery	Not Complied	Not applicable	N/A	

	operations or maintenance of green belt around the plant.				
81	Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.	Not Complied	Not applicable	N/A	
82	No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make - up water requirement of washery should not exceed 1.5 m <sup>3</sup> / tonne of raw coal.	Not Complied	Not applicable	N/A	
83	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.	Not Complied	Not applicable	N/A	
84	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.	Not Complied	Not applicable	N/A	
85	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.	Not Complied	Not applicable	N/A	
86	Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.	Not Complied	Not applicable	N/A	
87	Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.	Not Complied	Not applicable	N/A	
88	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	Being Complied	Not applicable	N/A	

	along vacant areas, storage yards, loading / transfer points and also along internal roads/ main approach roads.				
89	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 direction of Hon'ble Supreme Court with regard to acquiring grazing land.	Not Complied	Not applicable	N/A	
90	Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65 /2017-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC.	Not Complied	Not applicable	N/A	
91	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any Infringements / deviation / violation of the environmental forest wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareho	Not Complied	Not applicable	N/A	
92	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.	Not Complied	Not applicable	N/A	
93	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.	Not Complied	Not applicable	N/A	
94	Self - environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Not Complied	Not applicable	N/A	

95	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.	Agreed to Comply	Agreed & Noted	N/A	
96	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.	Complied	No forest land is involved. A certificate mentioned no forest land involved also issued by Divisional Forest Officer, Durgapur and Burdwan. Please refer attached EC compliance report		
97	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Complied	The Wild Life (Protection) Act, 1972 is not applicable for this project. The project does not falls in and any ESZ of NP, WLS, Conservator Reserve, etc. Please refer attached EC compliance report		
98	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-1 species in the study area).	Not Complied	Not applicable	N/A	
99	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.	Being Complied	CTE under the provisions of Air (Prevention & Control of Pollution) Act, 1981 & the Water (Prevention & Control of Pollution) Act, 1974 has been obtained from WBPCB. Refer attached EC compliance report		
100	The project proponent shall obtain the necessary permission from the Central Ground Water Authority	Complied	Reply to the subject condition is already made in point no-ii of specific condition.	N/A	
101	Solid waste / hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.	Agreed to Comply	Sludge generated from treatment plant&STP will be used for gardening and greenbelt development. Balanc sludge will be send	N/A	



			to CHWTSDF as per HZW Rules, 2016.		
102	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO <sub>2</sub> , and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months.	Agreed to Comply	CAAQMS will be installed in parallel with operation of mine after getting site approval from WBPCB. A separate budget of ₹50 lac is proposed for CAAQMS. Please refer attached EC compliance report	N/A	
103	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.	Agreed to Comply	Effective measures will be implemented to ensure AAQ parameters be within as per Coal Industry Standards notified vide GSR 742(E) dtd 25.9.2000 Please refer attached EC compliance report.	N/A	
104	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 qu	Agreed to Comply	Effective control measures will be implemented in critical areas prone to air pollution and will be ensured. Please refer attached EC compliance report.	N/A	
105	Major approach roads shall be black topped and properly maintained.	Agreed to Comply	As per approved mining plan we've proposed a metalled approachable road from deul more to mine infrastructure area of a distance of 6.5km length. Proper maintenance will be taken cares.	N/A	
106	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	Agreed to Comply	Coal will be transported by only the route as mentioned and proposed in approved mining plan.	N/A	

	sound, dust and accidents could be appropriately mitigated.				
107	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.	Agreed to Comply	PUC certified vehicles will be engaged in mining and allied activities. Regular maintenance of engaged vehicles will be carried out.	N/A	
108	Coal stock pile / crusher / feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	Agreed to Comply	Adequate dust suppression system will be installed in critical areas prone to air pollution.	N/A	
109	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.	Agreed to Comply	Adequate measures like regular water sprinkling / rain gun, use of movable water tanker, vacuum sweeper machine, fog mist water canon system etc. will be adopted. Please refer attached EC compliance	N/A	
110	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.	Agreed to Comply	Water treatment plant of adequate capacity will be installed to treat runoff water. No untreated water shall be discharged from mine boundaries to ponds / nallah / river Refer attached EC compliance	N/A	
111	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	Agreed to Comply	Agreed and Noted Data will be displayed at entry and exit gate of mine lease area for public display. Also Six monthly EC compliance will be uploaded on company website.	N/A	
112	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 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.	Agreed to Comply	The monitoring of ground water levels shall be carried out by NABL/ WBPCB/ MoEF accredited laboratory four times year. Please refer attached EC compliance report	N/A	

113	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.	Agreed to Comply	Agreed and will be complied from next cycle.	N/A	
114	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.	Agreed to Comply	No ground water will be extracted during the mining operation excluding mine water. Rainwater harvesting structure also to be constructed to conserve and reuse of rain water.	N/A	
115	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.	Agreed to Comply	No alteration will be carried out.	N/A	
116	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.	Agreed to Comply	Garland drains will be constructed as or wherever required at the mine site keeping at least 50% safety margin over and above the peak sudden rainfall. Please refer attached EC compliance report	N/A	
117	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz, watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Agreed to Comply	A WTP for pump out mine water. After treatment the water will be utilized for various purposes.	N/A	
118	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.	Agreed to Comply	Water, effluent and sewage treatment plant of adequate capacity is proposed to be installed for generated waste polluted water.	N/A	

119	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.	Agreed to Comply	RWH structure will be constructed, rainwater reuse for industrial purpose. Treated mine water will be used for industrial. Please refer attached EC compliance report	N/A	
120	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	Agreed to Comply	Renovation of pond will be carried out with consultation with concern gram panchayat. Please refer attached EC compliance report	N/A	
121	The project proponent shall take all precautionary measures to ensure reverian / riparian ecosystem in and around the coal mine upto a distance of 5 km. A revarian / riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	Agreed to Comply	Bio indicator species will be planted all along project area up to a distance of 5 km. Though all types of sensitive species can be used in monitoring pollution. Please refer attached EC compliance.	N/A	
122	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.	Agreed to Comply	Regular maintenance, oil and greasing of machineries will be carried out. Usage of PPE's kit will be made compulsory inside the mine and will be monitored. Please refer attached EC compliance report	N/A	
123	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.	Not Complied	Not applicable, as coal washery project is not proposed.	N/A	
124	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not Complied	Not applicable	N/A	
125	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	Not Complied	Not applicable	N/A	

	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).				
126	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.	Not Complied	Not applicable	N/A	
127	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	Not Complied	Not applicable	N/A	
128	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.	Not Complied	Not applicable	N/A	
129	Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.	Not Complied	Not applicable	N/A	
130	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO <sub>2</sub> and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.	Not Complied	Not applicable	N/A	
131	Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to th	Not Complied	Not applicable	N/A	
132	Transportation of coal by road shall be carried out by covered trucks/conveyors. The	Not Complied	Not applicable	N/A	

	<p>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</p>				
133	<p>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.</p>	Not Complied	Not applicable	N/A	
134	<p>Covered trucks shall be engaged for mineral transportation outside the washery upto the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.</p>	Not Complied	Not applicable	N/A	
135	<p>Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.</p>	Not Complied	Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.	N/A	
136	<p>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.</p>	Not Complied	Not applicable	N/A	
137	<p>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.</p>	Not Complied	Not applicable	N/A	
138	<p>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.</p>	Not Complied	Not applicable	N/A	
139	<p>The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.</p>	Not Complied	Not applicable	N/A	
140	<p>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</p>	Not Complied	Not applicable	N/A	

	amended from time to time by the Central Pollution Control Board.				
141	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.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.	Not Complied	Not applicable	N/A	
142	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.	Not Complied	Not applicable	N/A	
143	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.	Not Complied	Not applicable	N/A	
144	Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.	Not Complied	Not applicable	N/A	
145	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.	Not Complied	Not applicable	N/A	
146	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.	Not Complied	Not applicable	N/A	
147	Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.	Not Complied	Not applicable	N/A	
148	Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground	Not Complied	Not applicable	N/A	


	water resources in consultation with Central Ground Water Board.				
149	No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make - up water requirement of washery should not exceed 1.5 m <sup>3</sup> / tonne of raw coal.	Not Complied	Not applicable	N/A	
150	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.	Not Complied	Not applicable	N/A	
151	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.	Not Complied	Not applicable	N/A	
152	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.	Not Complied	Not applicable	N/A	
153	Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.	Not Complied	Not applicable	N/A	
154	Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.	Not Complied	Not applicable	N/A	
155	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.	Not Complied	Not applicable	N/A	
156	The project proponent shall make necessary alternative	Not Complied	Not applicable	N/A	





	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 direction of Hon'ble Supreme Court with regard to acquiring grazing land.				
157	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.	Not Complied	Not applicable	N/A	
158	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.	Not Complied	Not applicable	N/A	
159	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.	Not Complied	Not applicable	N/A	
160	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.	Not Complied	Not applicable	N/A	
161	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z- 11013/57/2014-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'.	Not Complied	Not applicable	N/A	
162	Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65 /2017-IA.III dated 30th September	Not Complied	Not applicable	N/A	


	2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC.				
163	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any Infringements / deviation / violation of the environmental forest wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareho	Not Complied	Not applicable	N/A	
164	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.	Not Complied	Not applicable	N/A	
165	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.	Not Complied	Not applicable	N/A	
166	Self - environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Not Complied	Not applicable	N/A	
167	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.	Agreed to Comply	Agreed & Noted	N/A	
168	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.	Complied	No forest land is involved. A certificate mentioned "no forest land involved" also issued by Divisional Forest Officer, Durgapur and Burdwan Division separately vide their memo no. 3359 dated 01/11/21	N/A	

169	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Complied	The Wild Life (Protection) Act, 1972 is not applicable for this project. The project does not falls in and any Eco Sensitive Zone (ESZ) of National Park, Wild Life Sanctuary, Conservator Reserve, etc.	N/A	
170	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-1 species in the study area).	Not Complied	Not applicable	N/A	
171	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.	Being Complied	CTE under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 has been obtained from WBPCB vide NOC No- 172012 dtd 18.10.22	N/A	
172	The project proponent shall obtain the necessary permission from the Central Ground Water Authority	Complied	Reply to the subject condition is already made in point no-ii of specific condition.	N/A	
173	Solid waste / hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.	Agreed to Comply	The sludge generated from water treatment plant and STP will be used for gardening and green belt development.	N/A	
174	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO <sub>2</sub> , and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months.	Being Complied	Continuous Ambient Air Quality Monitoring stations will be installed in parallel with operation of mine after getting site approval from WBPCB. Please refer attached compliance report	N/A	

175	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.	Being Complied	Effective measures will be implemented to ensure Ambient Air Quality parameters be within as per Coal Industry Standards notified vide GSR 742(E) dtd 25.9.2000.Please refer attached compliance report.		
176	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 qu	Agreed to Comply	Effective control measures will be implemented in critical areas prone to air pollution and will be ensured emission parameter to be in norms prescribed by CPCB/SPCB.Please refer attached compl report	N/A	
177	Major approach roads shall be black topped and properly maintained.	Agreed to Comply	As per approved mining plan we've proposed a metalled approachable road from deul more to mine infrastructure area of a distance of 6.5 km length. Please refer attached compliance report	N/A	
178	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.	Agreed to Comply	Coal will be transported only by the route as mentioned and proposed in approved mining plan.	N/A	
179	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.	Agreed to Comply	Only PUC certified vehicles will be engaged in mining and allied activities. Regular maintenance of engaged vehicles will be carried out.	N/A	
180	Coal stock pile / crusher / feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	Agreed to Comply	Adequate dust suppression system will be installed in critical areas prone to air pollution.	N/A	

181	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.	Agreed to Comply	Adequate measures like regular water sprinkling / rain gun, use of movable water tanker, vacuum sweeper machine, fog mist waster canon system etc. will be adopted to control fugitive dust emission	N/A	
182	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.	Agreed to Comply	Water treatment plant of adequate capacity will be installed to treat mine water. No untreated water will be discharged from mine boundaries to pond/nallah/river. Please refer attached compl report	N/A	
183	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	Being Complied	Data will be displayed at entry and exit gate of mine lease area for public display. Also Six monthly EC compliance is being uploaded on company's website <a href="http://www.powerp">http://www.powerp</a>	N/A	
184	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 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.	Being Complied	The monitoring of ground water levels will be carried out by NABL/ WBPCB/ MoEF accredited laboratory four times year i.e. pre - monsoon, monsoon, post-monsoon& winter.Please refer attached compl.rep.		
185	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.	Being Complied	The monitoring of water quality upstream and downstream of water bodies has been done by the NABL accredited environmental laboratory. Please refer attached compliance report		
186	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.	Agreed to Comply	No ground water will be extracted during the mining operation excluding mine water. 02 nos. Rainwater harvesting structure to be constructed to conserve and reuse of rain water.	N/A	

187	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.	Agreed to Comply	No alteration will be carried out.	N/A	
188	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.	Agreed to Comply	Garland drains will be constructed as or wherever required at the mine site keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in area adjoining mine site	N/A	
189	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz, watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Agreed to Comply	A Water Treatment Plant is proposed for pump out mine water. After treatment the water will be utilized for various industrial purposes. Please refer attached compliance report	N/A	
190	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.	Agreed to Comply	Water, effluent and sewage treatment plant with integrated oil and grease tarp of adequate capacity is proposed to be installed for treatment of generated polluted waste water.	N/A	
191	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.	Agreed to Comply	RWH structure will be constructed, rainwater will reuse for industrial purpose. Treated mine water will be used for industrial purpose. Please refer attached compliance report	N/A	
192	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	Agreed to Comply	Renovation of pond will be carried outwith consultation with concern gram panchayat, in the following villages: Dhabani, Par Banagram, Sahapur &	N/A	

	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		refer attached compl.		
193	The project proponent shall take all precautionary measures to ensure reverian / riparian ecosystem in and around the coal mine upto a distance of 5 km. A revarian / riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	Agreed to Comply	Bio indicator species will be planted all along project area up to a distance of 5 km. Please refer attached compliance report	N/A	
194	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.	Agreed to Comply	Regular maintenance, oil and greasing of machineries will be carried out during production of coal. Please refer attached compliance report	N/A	
195	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.	Being Complied	Noise level survey is being carried out by NABL accredited laboratory and found the noise level within the prescribed limit.		
196	Mining Plan Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there - under as applicable.	Agreed to Comply	Agreed and Noted	N/A	
197	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).	Agreed to Comply	Mining will be done as per approved mining plan, and during operation all relevant coal mining laws and circulars of DGMS will be followed.	N/A	
198	Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.	Agreed to Comply	We've proposed to install 1 mechanical Ventilator of high capacity on surface through evacuee. The exhaust fan will have provision of variable pitch of blades to improve quantity of air req. in future	N/A	

199	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.	Complied	No forest land is involved.	N/A	
200	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Agreed to Comply	Solar panels, electric vehicles for conveyance will be deployed to reduce energy and fuel consumption. Please refer attached compliance report	N/A	
201	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).	Agreed to Comply	Digital Survey will be carried out at least once in three years for monitoring land use pattern from recognised consultant. Please refer attached compliance report	N/A	
202	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.	Agreed to Comply	After post mining the land will be rendered as per the approved mine closure plan.	N/A	
203	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 / suitabl	Agreed to Comply	Regular detailed monitoring of subsidence movement will be carried out. Please refer attached compliance report	N/A	
204	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, alongwith fly ash for external dump of overburden,	Agreed to Comply	Approved mine closure plan will be followed.	N/A	



	backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of Mo				
205	A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.	Agreed to Comply	We'll prepare a separate team for subsidence monitoring and implementation of mitigation measures. Please refer attached compliance report	N/A	
206	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.	Agreed to Comply	During the mining operation in underground, regular monitoring of surface will be carried out by a monitoring team to prevent inrush of water in the mine.	N/A	
207	Native tree species shall be selected and planted over areas affected by subsidence.	Agreed to Comply	Native tree species along with pollution indicative species/ bio indicator species will be selected and planted for fast growing over area affected by subsidence.	N/A	
208	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.	Agreed to Comply	Noted.	N/A	
209	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.	Agreed to Comply	No endangered flora/fauna/Schedule I is found during collection of baseline data. Even then we'll take all precautionary measures during mining operation for conservation & protection of native flora	N/A	
210	Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall be developed all along the mine lease area in a phased manner. The green belt comprising of a mix of native species shall be developed all along the major approach roads / coal transportation roads.	Agreed to Comply	• 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard. Please refer attached compliance report	N/A	
211	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.	Agreed to Comply	Lighting facilities in night will be setup at all places of mine site	N/A	

			wherever is required.		
212	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.	Agreed to Comply	Free medical facilities will be provided to all employees under Employees' State Insurance Scheme. Please refer attached compliance report	N/A	
213	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.	Agreed to Comply	The Personal Protective Equipment(PPE's) will be provided to the workers working in dusty areas and will be regularly monitored. Training and information will be provided for safety& health aspects	N/A	
214	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.	Agreed to Comply	Safety officer will be hired for providing skill training as per safety norms specified by DGMS to all workers including the outsourcing employees to ensure high safety standards at mine site.	N/A	
215	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.	Agreed to Comply	Adequate drinking water facilities will be provided to all the persons employed during construction & operation phase.	N/A	
216	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.	Agreed to Comply	A time bound action plan has been prepared for addressing all the issues raised during the Public Hearing and will be implemented within the time frame.	N/A	
217	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	Agreed to Comply	We'll follow the mitigation measures stated in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014.	N/A	

	habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area.				
218	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or share	Complied	Company has well laid down environmental policy duly approve by the Board of Directors. Please refer attached compliance report	N/A	
219	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.	Complied	A separate Environmental cell both at project and company head quarter is in place.	N/A	
220	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.	Agreed to Comply	Appropriate fund is allocated under the head of EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 per year as per. Please refer attached compliance report	N/A	
221	Self Environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Agreed to Comply	Agreed & Noted.	N/A	
222	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.	Complied	Public notice for grant of Environmental Clearance has been given in to local newspaper that are widely circulated in the region. Please refer attached compliance report	N/A	
223	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	Complied	The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayat and Municipal	N/A	

	in turn has to display the same for 30 days from the date of receipt.		Bodies and to the relevant offices. Please refer attached compliance report		
224	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.	Being Complied	The EC and status of compliance of the stipulated EC conditions, including results of monitored data is/ will be uploaded on the website of the company <a href="http://www.powerp">http://www.powerp</a>	N/A	
225	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (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.	Agreed to Comply	The criteria pollutants level namely; PM10, PM2.5, SO2, NOx (ambient levels) is being and will be monitored by third party monitoring agency which is NABL accredited laboratory.	N/A	
226	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.	Being Complied	In compliance to this point, this report is being submitted. The last compliance report for the period April, 2022 to September, 2022 has been submitted. Please refer attached compliance report.	N/A	
227	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".	Agreed to Comply	We'll follow the mitigation measures stated in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014	N/A	
228	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.	Agreed to Comply	We'll submit the environmental statement for each financial year in Form-V to the WBPCB as prescribed under the Environment (Protection) Rules, 1986 post operation of the mine.	N/A	
229	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Agreed to Comply	The project is in development/ construction stage. CTE and other statutory clearance are obtained from competent authority. We'll inform to RO of MOEFCC before	N/A	

			starting of mining operations.		
230	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Agreed to Comply	All the relevant stipulations made by the West Bengal Pollution Control Board and the State Government will be complied. Please refer attached compliance report	N/A	
231	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.	Agreed to Comply	Noted and will be complied in a time bound manner.	N/A	
232	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	Agreed to Comply	Agreed	N/A	
233	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.	Agreed to Comply	Noted	N/A	
234	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed to Comply	Noted & Agreed	N/A	
235	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed to Comply	Agreed & Noted.	N/A	
236	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.	Agreed to Comply	Agreed & Noted.	N/A	
237	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 La	Agreed to Comply	Agreed & Noted.	N/A	

238	The proponent shall abide by all the commitments and recommendations made in the EIA / EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.	Agreed to Comply	Agreed, we'll abide 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.	N/A	
239	The proponent shall obtain all necessary clearances / approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed to Comply	Agreed & Noted.	N/A	
240	Any appeal against this environmental clearance 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.	Agreed to Comply	Noted	N/A	
241	The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No. 114/2014 in the matter of 'Common Cause Vs Union of India & others.	Agreed to Comply	Agreed & Noted.	N/A	
242	The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgement of Hon'ble Supreme Court.	Agreed to Comply	Agreed & Noted.	N/A	
243	This Environmental Clearance shall not be operational till such time the project proponent complies with the above said judgement of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Agreed to Comply	Agreed & Noted.	N/A	
244	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).	Agreed to Comply	Noted and agreed	N/A	

I ' POWERPLUS TRADERS PRIVATE LIMITED ' hereby give undertaking that the specific / general condition is entered by me is correct.

**E-Sign**

**POWERPLUS TRADERS PRIVATE LIMITED**

**Date : 30 May 2023 11:12:46:453**

**\*\*Note : N/A - Not Available**

**PRINT**

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**Six Monthly (JUNE-2023) Environment Clearance Compliance Report (Period: October 2022 to March 2023) for “Jaganathpur-B Underground Coal Mine” by “Powerplus Traders Private Limited”.**

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powerplus trader &lt;powerplustrade@gmail.com&gt;

Tue, May 30, 2023 at 11:32 AM

To: iro.kolkata-mefcc@gov.in, ms@wbpcb.gov.in, ms.wbpcb-wb@bangla.gov.in

Bcc: bijayen.srivastava@rashmigroup.com, rajat.solanki@rashmigroup.com, Kodumuru Srinivasa Rao

&lt;srinivasarao.k@rashmigroup.com&gt;, Lal Chourasia &lt;lbc@rashmigroup.com&gt;, bikash.meharia@rashmigroup.com

To,  
**Integrated Regional Office,  
Ministry of Environment, Forests & Climate Change  
Kolkata IB – 198, Sector-III, Salt Lake City– 700106  
West Bengal**

**Ref.:** Environmental Clearance Identification No. EC22A042WB110977 dated 01/09/2022 issued vide File No. IA-J-11015/27/2021-IA-II(M)

Dear Sir,

With reference to the above subject we would like to inform you that we have obtained Environment Clearance vide Environmental Clearance Identification No. EC22A042WB110977 issued vide File No. IA-J-11015/27/2021-IA-II(M) dated 01/09/2022 for “Jaganathpur-B Underground Coal Mine” having production capacity of 0.8MTPA/1.2MTPA (Normative/Peak) and mine lease area of 856.68 ha, located at JL No- 4 to 11, 13 of PS: Kanksa, J.L. No.-7 to 9, 25 to 27 of P.S.: Faridpur-Durgapur, in villages Sandipur, Basudevpur, Binodpur, Rajhat, Sashipur, Dubrajpur, Majhidanga, Dandeswarpur, Ranipur, Shyamsunderpur, Jot Balarampur, Shrikrishnapur, Amdahi, Jagannathpur, Kalinagar, Tehsil: Faridpur-Durgapur and Kanksa, in Paschim Bardhaman District of West Bengal State.

We are hereby submitting the six-monthly compliance reports for period from (October 2022 to March 2023). We assure that we will comply all the conditions laid down in the consent letter and also abide to follow all the Rules & Regulations.

Hope you will find the same in order.

Thanking You

Your Sincerely

**Powerplus Traders Private Limited**

**EC Compliance Report\_June 2023\_Powerplus Traders Pvt Ltd.pdf**

12182K



# POWERPLUS TRADERS PRIVATE LIMITED

(Joint Venture of Orissa Metaliks Pvt Ltd, Rashmi Cement Ltd & Shyam Steel Manufacturing Ltd)

**CORPORATE OFFICE:** PREMLATA BUILDING, 39 SHAKESPEARE SARANI, 6<sup>TH</sup> FLOOR, KOLKATA-700017, INDIA

TEL: +91-33 2289 4255 /4266, FAX NO.: +91 33 2289-4254,

E-mail: [powerplustrade@gmail.com](mailto:powerplustrade@gmail.com)

**CIN: U10100WB2012PTC183435**

Letter No. PTPL/JAG-B/EC-Com.Rep/June 2023

Date: 30/5/2023

To,  
**Integrated Regional Office,**  
**Ministry of Environment, Forests & Climate Change**  
Kolkata IB – 198, Sector-III, Salt Lake City– 700106  
West Bengal

**Subject: Six Monthly (June-2023) Compliance Report (Period: October 2022 to March 2023)**  
for “Jaganathpur-B Underground Coal Mine” by “Powerplus Traders Private Limited”.

**Ref.:** Environmental Clearance Identification No. EC22A042WB110977 dated 01/09/2022 issued  
vide File No. IA-J-11015/27/2021-IA-II(M)

Dear Sir,

With reference to the above subject we would like to inform you that we have obtained Environment Clearance vide Environmental Clearance Identification No. EC22A042WB110977 issued vide File No. IA-J-11015/27/2021-IA-II(M) dated 01/09/2022 for “Jaganathpur-B Underground Coal Mine” having production capacity of 0.8MTPA/1.2MTPA (Normative/Peak) and mine lease area of 856.68 ha, located at JL No- 4 to 11, 13 of PS: Kanksa, J.L. No.-7 to 9, 25 to 27 of P.S.: Faridpur-Durgapur, in villages Sandipur, Basudevpur, Binodpur, Rajhat, Sashipur, Dubrajpur, Majhidanga, Dandeswarpur, Ranipur, Shyamsunderpur, Jot Balarampur, Shrikrishnapur, Amdahi, Jagannathpur, Kalinagar, Tehsil: Faridpur-Durgapur and Kanksa, in Paschim Bardhaman District of West Bengal State.

We are hereby submitting the six-monthly compliance reports for period from (October 2022 to March 2023). We assure that we will comply all the conditions laid down in the consent letter and also abide to follow all the Rules & Regulations.

Hope you will find the same in order.

Thanking You

Your Sincerely

For **Powerplus Traders Private Limited**





Authorized Signatory

**C.C:- The Member Secretary, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block – LA, Sector – III, Kolkata, West Bengal**

**Encl:-**

1. Half Yearly Environmental Clearance Compliance Report
2. Environmental Monitoring Reports (Air, Water, Soil, Noise & Vehicular Emission) is attached as **Annexure-1**.

# COMPLIANCE REPORT

(Compliance Period: October, 2022 to March, 2023)

Of

## ENVIRONMENTAL CLEARANCE

Granted by Ministry of Environment Forest & Climate Change (MoEF&CC)

vide EC identification no. EC22A042WB110977 dated 01/09/2022

issued vide File No-IA-J-11015/27/2021-IA-I II (M)

FOR

## JAGANATHPUR-B UNDERGROUND COAL MINE

Located at

JL No- 4 to 11, 13 of PS: Kanksa,  
J.L. No.-7 to 9, 25 to 27 of P.S.: Faridpur-Durgapur,  
in Villages Sandipur, Basudevpur, Binodpur, Rajhat, Sashipur,  
Dubrajpur, Majhidanga, Dandeswarpur, Ranipur,  
Shyamsunderpur, Jot Balarampur, Shrikrishnapur, Amdahi,  
Jagannathpur, Kalinagar, Tehsil: Faridpur-Durgapur and  
Kanksa, District: Paschim Bardhaman  
State: West Bengal

**Production Capacity: 0.8 MTPA/ 1.2 MTPA (Normative/Peak)**

**Mine Lease Area: 856.68 ha**

### Name of Project Proponent

**M/S POWERPLUS TRADERS PVT. LTD.**

Registered Office: Premlata Building, 39 Shakespeare

Sarani, 6<sup>th</sup> Floor, Kolkata-700017





**Pointwise compliance report of Environmental Clearance for Jagannathpur-B Underground Coal Mine are as:**

<b>Specific Condition:</b>		
<b>Sr. No.</b>	<b>Condition</b>	<b>Reply</b>
i.	PP to obtain the CTO for 0.8/1.20 MTPA capacity after grant of EC.	<p>Agreed &amp; will be complied</p> <p>Consent to Establish (CTE) has been obtained from West Bengal Pollution Control Board (WBPCB) vide NOC No-172012 dated 18.10.2022 issued vide memo no. 525-2N-11/2022(E). We will obtain Consent to Operate before starting of the coal production.</p> <p>Copy of the CTE is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.</p>
ii.	PP shall obtain No Objection Certificate from Central Ground Water Authority for extraction of ground water within six months and submitted to IRO, Ranchi.	<p>Complied</p> <p>In the state of West Bengal, ground water extraction is not being regulated by Central Ground Water Authority (CGWA) as per notification of “Ministry of Jal Shakti” Gazette notification vide S.O. No. 3289(E) dated 24<sup>th</sup> Sept.,2020.</p> <p>The No Objection Certificate has been taken from component authority i.e. “State Water Investigation Department, West Bengal (SWID)” for extractions of ground water vide their permit no. P2209008004920000001TSE dated 30-11-2021.</p> <p>Copy of GWA NOC from SWID is already submitted to competent authority in EC compliance (Dec-2022) vide letter no-PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.</p>
iii.	PP to complete the estimated allocated budgetary expenditure for EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 Cr per year as per its letter no PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. Further capital cost for environmental monitoring is Rs. 300 Lakhs and recurring cost is Rs. 157.00 Lakhs/year Capital EMP budget shall be completed within strict timeline.	<p>Agree and will be Complied in a time bound manner in parallel with implementation of the project.</p> <p>Environmental Monitoring has been done by the NABL/WBPCB/MoEFCC Accredited Laboratory. The monitoring reports of Air, Water, Soil, Noise and Vehicular Emission are attached as</p>



		<b>Annexure-1.</b>
iv.	PP shall develop 2 nos. of rain water harvesting pond (100 m, width will be 10 m and the depth will be 3 m) as proposed by PP near the villages in consultation with Gram Panchayat within 1 year. Also, Indicator aquatic species shall be planted in this water bodies to see the environmental quality. PP shall own water bodies/pond currently present in project area, maintain and regularly monitor the quality for its long term protection.	Agreed and will be complied.
v.	PP shall to implement Water distribution system in Binodpur, Sashipur, Rajhat, Jot Balrampur villages with an estimate Cost of Rs. 185.7065 Lakhs as in Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. A proper water distribution network shall be devised to meet the demands of formers related to irrigation and recharging of ponds, wherever required.	Agreed and will be complied Water distribution system will be implemented in parallel with implementation of the project
vi.	PP shall explore the use of Ukhra Railway siding or Durgapur Railway siding for coal transportation in future and coal transportation through road shall be stopped accordingly. A report in this regard to be submitted to IRO within 1 year to justify the adequacy.	Agreed Durgapur railway siding will be used for transportation of coal. Coal transported via road from mine site to railway siding will be through covered vehicles.
vii.	PP shall install ~191 water sprinklers for dedicated road from mining to Deul and 100 number along the separate transportation route as per Letter no. PTPL/JAG-B/EC-Delhi/03/22-23 dated 26.07.2022. In addition, 5 nos of fog cannons of at least 40 mtrs throw shall be installed at coal storage yard and in nearby villages.	Agreed Water sprinklers and fog canons will be installed in parallel with operation of mine to reduce the fugitive dust emission.
viii.	PP shall transport the coal by trucks of fleet size 35-40 tons and no village road shall be used for transportation of coal.	Agreed Transportation of coal will be done by trucks of fleet size 35-40 tons and no village road will be used for transportation of coal during coal production phase.
ix.	PP shall maintain at least 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard.	Agreed Greenbelt being developed in parallel with construction/development of the project.  Greenbelt plan is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.



x.	PP to plant additional 1,00,000 plants with three tier plantation along the transportation route, if not completed, and identified areas with consent to the gram panchayat within two year and plant for remaining within 2 years for their proper growth in additional already committed to plant to plantation in 8.49 ha project area.	<p>Being complied with 1000 nos. of saplings of native species already planted till March, 2023. We are regularly planting trees, status of the same will be given in next compliance period.</p>  
xi.	PP shall follow the recommendation of subsidence study and monitor the degree of subsidence regularly and shall be submitted to IRO-Ranchi.	Agreed, we will follow the recommendation of subsidence study and monitor the degree of subsidence regularly and same will be informed to IRO Kolkata.
xii.	PP to accomplish the recruitment of a full - fledged qualified manpower with Environmental Engineer/ Environment Science degree background in Environment Management Cell etc. within six months and same shall be reported to IRO, MOEF&CC.	<p>Agreed</p> <p>Full - fledged qualified manpower with Environmental Engineer degree background in Environment Management Cell is already recruited.</p> <p>Organizational structure for environment management is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.</p>
xiii.	PP to fulfil all the commitment made to address the public hearing (Total amount of Rs. 473 lakhs to be completed within three years as in EIA) issued in time bound manner as committed in EIA EMP report and a progressive report to be furnished to IRO with every six monthly compliance report.	Agreed, all the commitment made to address the public hearing will be completed in time bound manner and the same will be furnished in the progressive report with every six monthly compliance report.
xiv.	PP shall implement Effluent Treatment Plant for wastewater generated from workshop and	Agreed, water treatment plant for wastewater generated from workshop and



	Sewage Treatment Plan (of MBR technology as proposed) for its colony. No untreated water shall be discharged from mine boundaries to ponds / nallah / river.	domestic sewage will be constructed. No untreated water will be discharged from mine boundaries to ponds / nallah / river.
xv.	PP to maintain the transportation road properly to minimize the dust emission. PP to also develop pucca/concrete 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.	Agreed Water sprinklers will be installed along the road to reduce fugitive dust emission.  Widening of roads and development of pucca/concrete roads in consultation with gram panchayat will be carried out in a time bound manner, if required.
xvi.	PP to monitor the water quality of the ground water and surface water body located within the core zone and 5 km radius from the periphery of the mine boundary as per procedure laid down by CPCB.	Being Complied The monitoring of ground and surface water quality has been carried out by the NABL accredited environmental laboratory. All the parameters are found within the prescribed limit. The report of the same is attached as <b>Annexure-1</b> .
xvii.	PP to install 1 continuous ambient air quality monitoring stations at suitable locations preferably village side with consultation of SPCB. The real time data so generated shall be uploaded on company website and linked it with website of CPCB & SPCB. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.	Agreed to comply Continuous Ambient Air Quality Monitoring stations will be installed in parallel with operation of mine. Order for 01 no. CAAQMS is at final approval stage.  Also data will be displayed digitally at entry and exit gate of mine lease area for public display.
xviii.	PP must explore innovative technology to recover methane from gases extracted from underground mine while venting.	Noted and the condition will be explored in future for its feasibility.
xix.	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.	Agreed We will install solar lights along the road and in rural areas identified as per Need based assessment & SIA in various villages i.e. Nababpur, Shrikrishnapur, Amdahi, Sandipur, Baidyanathpur.
xx.	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/ preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented. The prevention	Agreed and will be considered Occupational Health Specialist for medical examination and health check-ups will be appointed and record of same will be maintained and will be furnished to component authority.



	measure for burns, malaria and provision of anti- snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.	
xxi.	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.	Agreed Training on livelihood and skill development to nearby villagers employable will be given during development and operation phase under CER/ CSR scheme.
xxii.	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/ night hours.	Agreed the noise level at project site is within the prescribed limits for day light/ night hours by taking various mitigative measures.  In order to ensure the effectiveness of mitigative measures the monitoring of noise level has been done by NABL Accredited Laboratory and found the noise level within the prescribed limit. The report of the same is attached as <b>Annexure-1</b> .
xxiii.	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. 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 be 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.	Agreed A dedicated team to oversee environment management is being set up for monitoring of air, water quality parameters on routine basis. Any non-compliance or infringement will be reported to the concerned authority.

**STATUTORY COMPLIANCE-STANDARD EC CONDITION APPLICABLE FOR COAL WASHERY**

**(a) Statutory Compliance:**

<b>Sr. No.</b>	<b>Conditions</b>	<b>Reply</b>
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.	Not applicable, as coal washery project is not proposed.
ii.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not 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).	Not applicable
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.	Not applicable
v.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	Not applicable
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.	Not applicable
vii.	Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.	Not applicable
<b>(b) Air quality monitoring and preservation:</b>		
i.	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO <sub>2</sub> and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.	Not applicable
ii.	Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the	Not applicable





	buffer zone for monitoring of pollutants, namely PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months.	
iii.	Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads , belt conveyors , loading / unloading and transfer points . Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central / State Pollution Control Board.	Not applicable
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.	Not applicable
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.	Not applicable
vi.	Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.	Not applicable
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	Not applicable



	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.	Not applicable
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.	Not applicable
x.	The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.	Not applicable
<b>(c) Water quality monitoring and preservation</b>		
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.	Not applicable
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.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.	Not applicable
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.	Not applicable
iv.	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side stabilised with plantation so as to	Not applicable



	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.	Not applicable
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.	Not applicable
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.	Not applicable
viii.	Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.	Not applicable
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.	Not applicable
x.	No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make - up water requirement of washery should not exceed 1.5 m <sup>3</sup> / tonne of raw coal.	Not applicable
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.	Not applicable
xii.	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment,	Not applicable



	Forest and Climate Change / Regional Office.	
xiii.	The project proponent shall take all precautionary measures to ensure riverine / riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine / riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation/ water resource department in the state government.	Not applicable
<b>(d) Noise and Vibration Monitoring and Prevention</b>		
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.	Not applicable
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.	Not applicable
<b>(e) Coal Beneficiation</b>		
i.	Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.	Not applicable
ii.	Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.	Not applicable
<b>(f) Green Belt</b>		
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.	Not applicable
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	Not applicable



	direction of Hon'ble Supreme Court with regard to acquiring grazing land.	
<b>(g) Public Hearing and Human Health Issues</b>		
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.	Not applicable
ii.	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check - up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any. as amended time to time.	Not applicable
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.	Not applicable
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.	Not applicable
v.	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z- 11013/57/2014-IA.II(M) dated 29 <sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations- issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	Not applicable
<b>(h) Corporate Environment Responsibility</b>		
a)	Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65 /2017-IA.III dated 30 <sup>th</sup> September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for	Not applicable



	deliberation of EAC.	
b)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any Infringements / deviation / violation of the environmental forest wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Not applicable
c)	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.	Not applicable
d)	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.	Not applicable
e)	Self - environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Not applicable
<b>Grant of EC Is Further Subject To Compliance of The Standard EC Conditions As Under:</b>		
a)	<b>Statutory Compliance</b>	
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.	Agreed & Noted
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.	No forest land is involved. A certificate mentioned "no forest land involved" also issued by Divisional Forest Officer, Durgapur and Burdwan Division separately vide their memo no. 3359 dated 01/11/2021 and 2010/8 dated 24/08/2021.  Copy of the same is already submitted to



		competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.
iii.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	The Wild Life (Protection) Act, 1972 is not applicable for this project. The project does not falls in and any Eco Sensitive Zone (ESZ) of National Park, Wild Life Sanctuary, Conservator Reserve, etc. A certificate also issued in this regards by The Principal Chief Conservator of Forest, WL & CWLW, West Bengal vide their memo no. 2729/WL/2W-167/2016 dated 13/09/2022.  Copy of the same is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.
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-1 species in the study area).	Not applicable
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.	Consent to Establish (CTE) under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 has been obtained from West Bengal Pollution Control Board (WBPCB) vide NOC No- 172012 dated 18.10.2022 issued vide memo no. 525-2N-11/2022(E). We will obtain Consent to Operate before starting of coal production.  Copy of NOC is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.
vi.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	Reply to the subject condition is already made in <b><i>point no-ii of specific condition.</i></b>
vii.	Solid waste / hazardous waste generated in the	The sludge generated from water treatment



	mines needs to addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.	plant and STP will be used for gardening and green belt development. The sludge generated from ETP will be send to Common Hazardous Waste Treatment, Storage and Disposal Facility (CHWTSDF) as per HZW Rules, 2016.
<b>b)</b>	<b>Air Quality Monitoring and Preservation</b>	
i.	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO <sub>2</sub> , and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station / stations may also be installed in addition to the regular air monitoring stations as per the requirement and/ or in consultation with the SPCB.	Being complied with Continuous Ambient Air Quality Monitoring stations will be installed in parallel with operation of mine after getting site approval from WBPCB. A provision has been made of ₹50 lac for installation of CAAQMS.  In order to ensure the effectiveness of mitigation method adopted third party monitoring from NABL accredited laboratory has been done. The report of the same is attached as <i>Annexure-1</i> .
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.	Being complied with Effective measures will be implemented to ensure Ambient Air Quality parameters be within as per Coal Industry Standards notified vide GSR 742(E) dated 25.9.2000.  In order to ensure the effectiveness of mitigation method adopted third party monitoring from NABL accredited laboratory has been done. The report of the same is attached as <i>Annexure-1</i> .
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.	Agreed Effective control measures will be implemented in critical areas prone to air pollution and will be ensured emission parameter to be in norms prescribed by CPCB/SPCB. The steps to be adopted are:  a) Covered trucks/conveyors will be used for transportation of the material. b) Installing ~191 water sprinklers for dedicated road from mining to Deul and 100 numbers along the separate transportation route. c) 05 nos of fog cannons of at least 40 mtrs throw shall be installed at coal storage yard and in nearby villages. d) 10 mtrs width tree plantation of broad





		leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard.
iv.	Major approach roads shall be black topped and properly maintained.	Agreed. As per approved mining plan we've proposed a metalled approachable road from deul more to mine infrastructure area of a distance of 6.5 km length. Proper maintenance will be taken cares. Also water sprinklers at fixed interval will be installed to supress dust emission during movement of vehicles.
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.	Agreed Coal will be transported only by the route as mentioned and proposed in approved mining plan.
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.	Agreed Only PUC certified vehicles will be engaged in mining and allied activities. Regular maintenance of engaged vehicles will be carried out.
vii.	Coal stock pile / crusher / feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	Agreed. Adequate dust suppression system will be installed in critical areas prone to air pollution.
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.	Agreed Adequate measures like regular water sprinkling / rain gun, use of movable water tanker, vacuum sweeper machine, fog mist waster canon system etc. will be adopted to control fugitive dust emission, which will be environmental friendly.
<b>c)</b>	<b>Water Quality Monitoring and Preservation</b>	
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.	Agreed. Water treatment plant of adequate capacity will be installed to treat mine water. No untreated water will be discharged from mine boundaries to pond / nallah / river.  In order to ensure the efficiency of treatment plant monitoring of inlet & outlet



		water from NABL/ WBPCB/ MoEF accredited laboratory will be carried out in a time bound manner and report will be submitted to competent authority.
ii.	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	Agreed and Noted. Data will be displayed at entry and exit gate of mine lease area for public display.  Also Six monthly EC compliance is being uploaded on company's website <a href="http://www.powerplustraders.com/EHS.php">http://www.powerplustraders.com/EHS.php</a>
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 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.	Being complied with The monitoring of ground water levels will be carried out by NABL/ WBPCB/ MoEF accredited laboratory four times year i.e. pre – monsoon, monsoon, post – monsoon and winter. The monitoring of ground water quality has been done by the NABL accredited environmental laboratory. All the parameters are found within the prescribed limit. The report of the same is attached as <b>Annexure-1.</b>
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.	Being complied with The monitoring of water quality upstream and downstream of water bodies has been done by the NABL accredited environmental laboratory. All the parameters are found within the prescribed limit. The report of the same is attached as <b>Annexure-1.</b>
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.	Agreed No ground water will be extracted during the mining operation excluding mine water. 02 nos. Rainwater harvesting structure to be constructed to conserve and reuse of rain water.
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.	Agreed.  No alteration will be carried out.
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	Agreed Garland drains will be constructed as or wherever required at the mine site 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.	at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites.
viii.	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz, watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Agreed A Water Treatment Plant is proposed for pump out mine water. After treatment the water will be utilized for various industrial purposes i.e. construction and maintenance of roads, green belt development, dust suppression, irrigation purpose for villagers, etc.
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.	Agreed Water, effluent and sewage treatment plant with integrated oil and grease tarp of adequate capacity is proposed to be installed for treatment of generated polluted 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.	Agreed RWH structure will be constructed, rainwater will reuse for industrial purpose. Treated mine water will be used for industrial purpose and provided to the nearby villagers for irrigation and recharging of ponds, wherever required. We will fulfil 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.	Agreed Renovation of pond will be carried out with consultation with concern gram panchayat, in the following villages: Dhabani, Parulia, Jamgara, Laudoha, Banagram, Sahapur & Jaganathpur.  There is no proposal for any diversion of natural water courses and in this regard no approval is required from concerned State / GoI Authority.



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.	<p style="text-align: center;">Agreed &amp; Noted.</p> <p>Bio indicator species will be planted all along project area up to a distance of 5 km.</p> <p>Though all types of sensitive species can be used in monitoring pollution, most useful and commonly used plants include sensitive species of lichens, mosses, plankton algae, aquatic ferns and angiosperms, other ferns, conifers oaks and many crop plants. Examples of some common types of plants useful as pollution monitors are <i>Sphagnum acutifolia</i>, <i>Fontinalis antipyretica</i>, <i>F. squamosa</i>, <i>Microcystis</i>, <i>Scenedesmus</i>, <i>Chlorella</i>, <i>Hydrodictyon</i>, <i>Cladophora</i>, <i>Stigeoclonium</i>, <i>Diatoms</i> <i>Azolla</i>, <i>Salvinia</i>.</p> <p>Some of the parameters which will be studied in post EC monitoring of the ponds and aquatic bodies found in the study area are decrease in the densities of sensitive species and increase in the density of tolerant species, absence of highly sensitive species, changes in the species composition of vegetation and distribution pattern of populations in the area. Such studies indicate the type and concentration of pollutant(s) as well as the spread of the pollution problem in the area.</p>
<b>d) Noise and Vibration Monitoring and Prevention</b>		
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.	<p style="text-align: center;">Agreed</p> <p>Regular maintenance, oil and greasing of machineries will be carried out during production of coal. Usage of PPE's kit will be made compulsory inside the mine and will be monitored. Appropriate PPE's kit like ear plugs / muffs in conformity with the prescribed norms / guidelines will be provided during mining operation.</p>
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.	<p style="text-align: center;">Being complied with</p> <p>Noise level survey is being carried out by NABL accredited laboratory and found the noise level within the prescribed limit. The report of the same is attached as <b>Annexure-I</b>.</p>
<b>e) Mining Plan</b>		
i.	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952	<p style="text-align: center;">Agreed and Noted</p>



	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).	Noted and agreed
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).	Agreed Mining will be done as per approved mining plan, and during operation all relevant coal mining laws and circulars of DGMS will be followed.
iv.	Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.	Agreed We've proposed to install one mechanical Ventilator of high capacity on surface through evacuee. The exhaust fan will have the provision of variable pitch of blades to improve the quantity of air required in future.
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.	No forest land is involved.
vi.	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Agreed a. Solar panels, electric vehicles for conveyance will be deployed to reduce energy and fuel consumption. b. Solar panels will be installed for surface infrastructure and workshop, and electric vehicles will be preferred instead of petrol/diesel for conveyance of staff/mine workers. c. If possible in future, electric heavy vehicles will be preferred for transportation of coal.
<b>f)</b>	<b>Land Reclamation</b>	
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).	Agreed Digital Survey will be carried out at least once in three years for monitoring land use pattern from recognised consultant and report in 1 : 50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) will be submitted to MOEF&CC/RO.
ii.	Post-mining land be rendered usable for agricultural / forestry purposes and shall be	Agreed After post mining the land will be rendered



	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 27 <sup>th</sup> August, 2009 and subsequent amendments.	as per the approved mine closure plan.
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.	Agreed. Regular detailed monitoring of subsidence movement will be carried out.  In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil / suitable material.
iv.	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3 <sup>rd</sup> November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	Approved mine closure plan will be followed.
v.	A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.	Agreed. We'll prepare a separate team for subsidence monitoring and implementation of mitigation measures. The following subsidence aspects and remedial measures are proposed for the safety of surface structures and mining operation:  1) There are number of villages and surface structures within the coal block. Hence, AoD of 22° was taken into account for design of all proposed panels to err on the side of the safety. The influence of subsidence would not affect any surface structure.  2) Maximum anticipated subsidence of 4098 mm would affect the surface topography after mining. Suitable drainage should be made to avoid any water logging in the centre of subsidence troughs.



		<p>3) The cumulative predicted maximum compressive strain and tensile strain at the surface of 10.0 mm/m and 9.1 mm/m respectively would lead to development of cracks with crevices of 60 to 100 mm at the surface. The surface cracks formed during extraction should immediately be filled in with soil/mitti to prevent breathing of air and inflow of water to the underground workings.</p> <p>4) Embankment with an elevation above HFL is advisable be erected on the west side of the Ajay river subject to actual ground topography. This exercise will be conducted within a span of 10 years.</p>
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.	<p>Agreed</p> <p>During the mining operation in underground, regular monitoring of surface will be carried out by a monitoring team to prevent inrush of water in the mine.</p>
vii.	Native tree species shall be selected and planted over areas affected by subsidence.	<p>Agreed</p> <p>Native tree species along with pollution indicative species/ bio indicator species will be selected and planted for fast growing over area affected by subsidence.</p>
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.	<p>Noted.</p>
<b>g) Green Belt</b>		
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.	<p>Agreed</p> <p>No endangered flora / fauna/ Schedule -I is found during collection of baseline data. Even then we'll take all precautionary measures during mining operation for conservation and protection of native flora / fauna.</p>
ii.	Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall be developed all along the mine lease area in a phased manner. The green belt comprising of a mix of native species shall be developed all along the major approach roads / coal	<p>Agreed</p> <ul style="list-style-type: none"> <li>• 10 mtrs width tree plantation of broad leaves and wind break/green-shield of about 10 mts height along the boundary of coal storage yard.</li> <li>• Additional 1,00,000 plants with three</li> </ul>



	transportation roads.	tier plantation along the transportation route, if not completed, and identified areas with consent to the gram panchayat within two year and plant for remaining within 2 years for their proper growth in additional already committed to plant to plantation in 8.49 ha project area.
<b>h) Public Hearing and Human Health Issues</b>		
i.	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.	Agreed. Lighting facilities in night will be setup at all places of mine site wherever is required.
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.	Agreed Free medical facilities will be provided to all employees under Employees' State Insurance Scheme.  Occupational health of staff and workers will be initially carried out at pre-entry level and later on regular medical check-up in this respect will be continuously extended on an annual basis to detect early incidence of diseases and for prompt remedial medical interventions in this respect. Necessary personal data cards in this respect will be maintained for effective monitoring and application of medical services required in the matter. All occupational health and safety activities will be done as per DGMS guidelines.  Safety matters will be reviewed once in 15 days by safety officer regularly so as to take urgent and effective measures to prevent unsafe operations and practices with a view to prevent accidents, injuries, etc.
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.	Agreed The Personal Protective Equipment (PPE's) will be provided to the workers working in the dusty areas and will be regularly monitored. Training and information will be provided for 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.	Agreed Safety officer will be hired for providing skill training as per safety norms specified by DGMS to all workers including the outsourcing employees to ensure high safety standards at mine site.
v.	Effective arrangement shall be made to provide	Agreed





	and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.	Adequate drinking water facilities will be provided to all the persons employed during construction & operation phase.
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.	Agreed A time bound action plan has been prepared for addressing all the issues raised during the Public Hearing and will be implemented within the time frame.
vii.	The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II(M) dated 29 <sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations - issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area.	Agreed We'll follow the mitigation measures stated in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29 <sup>th</sup> October, 2014.
<b>i) Corporate Environment Responsibility</b>		
i.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six - monthly report.	Complied Company has well laid down environmental policy duly approve by the Board of Directors.  Copy of Environmental Policy is already submitted to competent authority in EC compliance (Dec-2022) vide letter no-PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.  The environment policy is dully approved by the board of the company. Copy of the board resolution is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.
ii.	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.	Complied. A separate Environmental cell both at project and company head quarter is in place.
iii.	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	Agreed. Appropriate fund is allocated under the head of EMP capital cost of Rs. 41.52 Cr & Recurring cost of Rs. 9.26 per year as per. Further capital cost for environmental monitoring is Rs. 300 Lakhs and recurring



	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.	cost is Rs. 157.00 Lakhs/year.  The fund so allocated under the head of EMP will not be diverted for any other purpose.
iv.	Self Environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Agreed & Noted.
<b>j) Miscellaneous</b>		
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.	Complied Public notice for grant of Environmental Clearance has been given in to local newspaper that are widely circulated in the region are: <ul style="list-style-type: none"><li>• “AJKAL” in vernacular language (Bengali) dated 02.09.2022 and</li><li>• “THE ECHO OF INDIA” in English language on dated 02.09.2022</li></ul> Copy of both the newspaper advertisement is already submitted to competent authority in EC compliance (Dec-2022) vide letter no- PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.
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.	The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayat and Municipal Bodies and to the relevant offices. The details area as: <ol style="list-style-type: none"><li>1. DM, Paschim Bardhaman, vide Letter No.: PTPL/JAG-B/ODM/WB/01/22-23 dated 02-09-2022.</li><li>2. ADM, Paschim Bardhaman, vide Letter No.: PTPL/JAG-B/ODM/WB/02/22-23 dated 02-09-2022.</li><li>3. Sub-Divisional Officer, Durgapur Sub-Division, vide Letter No.: PTPL/JAG-B/OSDO/WB/01/22-23 dated 05-09-2022.</li><li>4. BDO, Durgapur-Faridpur Block, vide Letter No.: PTPL/JAG-B/OBDO-DFB/WB/01/22-23 dated 05-09-2022.</li><li>5. BDO, Kanksa Block, vide Letter No.: PTPL/JAG-B/OBDO-KB/WB/01/22-23 dated 05-09-2022.</li><li>6. GM, D.I.C., Paschim Bardhaman, vide Letter No.: PTPL/JAG-B/DIC/WB/01/22-23 dated 05-09-2022.</li><li>7. Sabhadhipati, Paschim Bardhaman Zila Parishad, vide Letter No.: PTPL/JAG-B/ZP/WB/01/22-23 dated 02-09-2022.</li><li>8. Sabhapati, Durgapur-Faridpur Panchayat Samity, vide Letter No.: PTPL/JAG-B/ODFPS/WB/01/22-23 dated 05-09-2022.</li></ol>



		<p>9. Kanksa Panchayat Samity, vide Letter No.: PTPL/JAG-B/OKPS/WB/01/22-23 dated 05-09-2022.</p> <p>10. Gour Bazar Gram Panchayat, vide Letter No.: PTPL/JAG-B/OGBGP/WB/01/22-23 dated 05-09-2022.</p> <p>11. Bidbehar Bazar Gram Panchayat, vide Letter No.: PTPL/JAG-B/OBBGP/WB/01/22-23 dated 05-09-2022.</p> <p>12. Pratappur Bazar Gram Panchayat, vide Letter No.: PTPL/JAG-B/OPBGP/WB/01/22-23 dated 05-09-2022.</p> <p>Copy of the intimation letter is already submitted to competent authority in EC compliance (Dec-2022) vide letter no-PTPL/JAG-B/EC-Com.Rep/Dec 2022 dated 24.11.2022.</p>
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.	<p>Being complied with</p> <p>The environmental clearance and status of compliance of the stipulated environment clearance conditions, including results of monitored data is/ will be uploaded on the website of the company <a href="http://www.powerplustraders.com/EHS.php">http://www.powerplustraders.com/EHS.php</a></p>
iv.	The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	<p>Agreed.</p> <p>The criteria pollutants level namely; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) is being and will be monitored by third party monitoring agency which is NABL accredited laboratory. Value of pollutants is displayed on board as per CPCB format at entry and exit gate of mine lease area for disclosure to the public and also uploaded on the website of the company <a href="http://www.powerplustraders.com/EHS.php">http://www.powerplustraders.com/EHS.php</a></p>
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.	<p>Being Complied</p> <p>In compliance to this point, this report is being submitted.</p> <p>The last compliance report for the period April, 2022 to September, 2022 has been submitted to ministry vide letter no. PTPL/JAG-B/EC-Com.Rep/Dec2022 dated 24-11-2022 and also uploaded on the website of the MoEF&amp;CC at environment clearance portal.</p>
vi.	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II(M) dated 29 <sup>th</sup> October, 2014, titled "Impact of mining activities on habitations-issues related to the mining projects wherein habitations and	<p>Agreed</p> <p>We'll follow the mitigation measures stated in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> October, 2014</p>



	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.	Agreed We'll submit the environmental statement for each financial year in Form-V to the WBPCB as prescribed under the Environment (Protection) Rules, 1986 post operation of the mine.
viii.	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Agreed The project is in development/ construction stage. CTE and other statutory clearance are obtained from competent authority.  We'll inform to the Regional Office of the MOEFCC before starting of mining operations.
ix.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted All the relevant stipulations made by the West Bengal Pollution Control Board and the State Government will be complied.  In this connection CTE and other statutory clearance are obtained from competent authority.
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.	Noted and will be complied in a time bound manner.
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.	Agreed
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.	Noted
xiii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted & Agreed
xiv.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed & Noted.
xv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should	Agreed & Noted.



	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.	Agreed & Noted.
5	The proponent shall abide by all the commitments and recommendations made in the EIA / EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.	Agreed, we'll abide 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.
6	The proponent shall obtain all necessary clearances / approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed & Noted.
7	Any appeal against this environmental clearance 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.	Noted.
8	The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2 <sup>nd</sup> August, 2017 of Hon'ble Supreme Court in WP (Civil) No. 114/2014 in the matter of 'Common Cause Vs Union of India & others.	Agreed & Noted.
9	The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgement of Hon'ble Supreme Court.	Agreed & Noted.



<b>10</b>	This Environmental Clearance shall not be operational till such time the project proponent complies with the above said judgement of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Agreed & Noted.
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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No. : QLS/P-107/22-23/C/01
Name of Project: Jaganathpur-B Underground Coal Mine	Date : 15.02.2023
	Sample No. : QLS/P-107/22-23/01
	Sample Description : Ambient Air
	Date of Performance : 08.02.2023-15.02.2023
	Ref No. Date : PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result

Location : Gopedanga (AAQ2)		Date of sampling : 07.02.2023-08.02.2023		
Sampling Done by: S.Ghosh		Sampling done as per : CPCB Guidelines (Volume-1)		
Longitude & Latitude : 23° 37' 56.80"N, 87° 22' 6.54"E				
Sl. No.	POLLUTANT	RESULT	LIMIT	METHOD OF TEST REFERENCE
1	Particulate matter (<10µm) in µg/m <sup>3</sup>	70.1	100	IS: 5182 (Part-23)- (RA-2017)
2	Particulate matter (<2.5µm) in µg/m <sup>3</sup>	31.2	60	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide (SO <sub>2</sub> ) in µg/m <sup>3</sup>	8.2	80	IS: 5182 (Part-2)-2001, (RA-2017)
4	Nitrogen dioxide (NO <sub>2</sub> ) in µg/m <sup>3</sup>	12.6	80	IS: 5182 (Part- 6)- (RA-2017)
5	Carbon Monoxide (CO) in µg/m <sup>3</sup>	938	2000	IS: 5182 (Part- 10)- (RA-2017)
6	Ammonia (NH <sub>3</sub> ) in µg/m <sup>3</sup>	21.5	400	Air Sampling , 3 <sup>rd</sup> Edn -Method-401
7	Ozone (O <sub>3</sub> ) in µg/m <sup>3</sup>	35.1	180	Air Sampling , 3 <sup>rd</sup> Edn -Method-411
8	Lead (Pb) in µg/m <sup>3</sup>	0.13	1	EPA IO-3.2 & 5.0
9	Nickel (Ni) in ng/m <sup>3</sup>	<4.0	20	EPA IO-3.2
10	Arsenic (As) in ng/m <sup>3</sup>	<1.0	6	Air Sampling , 3 <sup>rd</sup> Edn.Method 402 and APHA 23 <sup>rd</sup> Edition-2017 Part 3114B
11	Benzene (C <sub>6</sub> H <sub>6</sub> ) in µg/m <sup>3</sup>	<2.08	5	IS: 5182 (Part- 11)
12	Benzo (a) pyrene in ng/m <sup>3</sup>	<0.4	1	IS: 5182 (Part- 12)
13	Mercury (Hg) in ng/ m <sup>3</sup>	<2.0	--	USEPA IO-5.0. June:1999
14	Cadmium (Cd) in µg/m <sup>3</sup>	<0.02	--	USEPA IO-3.2, June:1999
15	Chromium (Cr) in µg/m <sup>3</sup>	<0.05	--	USEPA IO-3.2, June:1999

NOTE : Limit as per CPCB Notification, New Delhi, 18th November 2009, for Ambient Air Quality.

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By



Benimadhab Gorai, Chemist  
(Authorized Signatory)

-----End of the Report-----

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# Qualissure Laboratory Services

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TC-6271

DOC NO : QLS/SAMP/08-A/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6th Floor, Kolkata- 700017	Report No. : QLS/P-107/22-23/C/02
Name of Project: Jaganathpur-B Underground Coal Mine	Date : 15.02.2023
	Sample No. : QLS/P-107/22-23/02
	Sample Description : Ambient Air
	Date of Performance : 08.02.2023-15.02.2023
	Ref No. Date : PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result

Location : Kotagram (AAQ3)		Date of sampling : 06.02.2023-07.02.2023		
Sampling Done by: S.Ghosh		Sampling done as per : CPCB Guidelines (Volume-1)		
Longitude & Latitude : 23° 42' 12.76"N, 87° 24' 41.07"E				
Sl. No.	POLLUTANT	RESULT	LIMIT	METHOD OF TEST REFERENCE
1	Particulate matter (<10µm) in µg/m <sup>3</sup>	72.1	100	IS: 5182 (Part-23)- (RA-2017)
2	Particulate matter (<2.5µm) in µg/m <sup>3</sup>	31.3	60	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide (SO <sub>2</sub> ) in µg/m <sup>3</sup>	8.7	80	IS: 5182 (Part-2)-2001, (RA-2017)
4	Nitrogen dioxide (NO <sub>2</sub> ) in µg/m <sup>3</sup>	20.2	80	IS: 5182 (Part- 6)- (RA-2017)
5	Carbon Monoxide (CO) in µg/m <sup>3</sup>	869	2000	IS: 5182 (Part- 10)- (RA-2017)
6	Ammonia (NH <sub>3</sub> ) in µg/m <sup>3</sup>	24.4	400	Air Sampling , 3 <sup>rd</sup> Edn -Method-401
7	Ozone (O <sub>3</sub> ) in µg/m <sup>3</sup>	40.4	180	Air Sampling , 3 <sup>rd</sup> Edn -Method-411
8	Lead (Pb) in µg/m <sup>3</sup>	0.06	1	EPA IO-3.2 & 5.0
9	Nickel (Ni) in ng/m <sup>3</sup>	<4.0	20	EPA IO-3.2
10	Arsenic (As) in ng/m <sup>3</sup>	<1.0	6	Air Sampling , 3 <sup>rd</sup> Edn.Method 402 and APHA 23 <sup>rd</sup> Edition-2017 Part 3114B
11	Benzene (C <sub>6</sub> H <sub>6</sub> ) in µg/m <sup>3</sup>	<2.08	5	IS: 5182 (Part- 11)
12	Benzo (a) pyrene in ng/m <sup>3</sup>	<0.4	1	IS: 5182 (Part- 12)
13	Mercury (Hg) in ng/ m <sup>3</sup>	<2.0	--	USEPA IO-5.0. June:1999
14	Cadmium (Cd) in µg/m <sup>3</sup>	<0.02	--	USEPA IO-3.2, June:1999
15	Chromium (Cr) in µg/m <sup>3</sup>	<0.05	--	USEPA IO-3.2, June:1999
<b>NOTE :</b> Limit as per CPCB Notification, New Delhi, 18th November 2009, for Ambient Air Quality.				

Report Prepared By:

for Qualissure Laboratory Services

Reviewed & Authorized By



Benimadhab Gorai, Chemist  
(Authorized Signatory)

-----End of the Report-----

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DOC NO : QLS/SAMP/08-A/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/03
	Date	: 15.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/P-107/22-23/03
	Sample Description	: Ambient Air
	Date of Performance	: 08.02.2023-15.02.2023
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result

Location : Tarapur (AAQ4)		Date of sampling : 06.02.2023-07.02.2023		
Sampling Done by: S.Ghosh		Sampling done as per : CPCB Guidelines (Volume-1)		
Longitude & Latitude : 23° 41' 6.91"N, 87° 26' 55.79"E				
Sl. No.	POLLUTANT	RESULT	LIMIT	METHOD OF TEST REFERENCE
1	Particulate matter (<10µm) in µg/m <sup>3</sup>	69.1	100	IS: 5182 (Part-23)- (RA-2017)
2	Particulate matter (<2.5µm) in µg/m <sup>3</sup>	34.2	60	USEPA CFR-40,Part-50, Appendix-I
3	Sulphur dioxide (SO <sub>2</sub> ) in µg/m <sup>3</sup>	7.0	80	IS: 5182 (Part-2)-2001, (RA-2017)
4	Nitrogen dioxide (NO <sub>2</sub> ) in µg/m <sup>3</sup>	24.8	80	IS: 5182 (Part- 6)- (RA-2017)
5	Carbon Monoxide (CO) in µg/m <sup>3</sup>	812	2000	IS: 5182 (Part- 10)- (RA-2017)
6	Ammonia (NH <sub>3</sub> ) in µg/m <sup>3</sup>	19.6	400	Air Sampling , 3 <sup>rd</sup> Edn -Method-401
7	Ozone (O <sub>3</sub> ) in µg/m <sup>3</sup>	34.1	180	Air Sampling , 3 <sup>rd</sup> Edn -Method-411
8	Lead (Pb) in µg/m <sup>3</sup>	0.02	1	EPA IO-3.2 & 5.0
9	Nickel (Ni) in ng/m <sup>3</sup>	<4.0	20	EPA IO-3.2
10	Arsenic (As) in ng/m <sup>3</sup>	<1.0	6	Air Sampling , 3rd Edn.Method 402 and APHA 23 <sup>rd</sup> Edition-2017 Part 3114B
11	Benzene (C <sub>6</sub> H <sub>6</sub> ) in µg/m <sup>3</sup>	<2.08	5	IS: 5182 (Part- 11)
12	Benzo (a) pyrene in ng/m <sup>3</sup>	<0.4	1	IS: 5182 (Part- 12)
13	Mercury (Hg) in ng/ m <sup>3</sup>	<2.0	--	USEPA IO-5.0. June:1999
14	Cadmium (Cd) in µg/m <sup>3</sup>	<0.02	--	USEPA IO-3.2, June:1999
15	Chromium (Cr) in µg/m <sup>3</sup>	<0.05	--	USEPA IO-3.2, June:1999
<b>NOTE</b> : Limit as per CPCB Notification, New Delhi, 18th November 2009, for Ambient Air Quality.				

Report Prepared By:

for Qualissure Laboratory Services

Reviewed & Authorized By



Benimadhab Gorai, Chemist  
(Authorized Signatory)

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DOC NO : QLS/SAMP/08-A/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/04
	Date	: 15.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/P-107/22-23/04
	Sample Description	: Ambient Air
	Date of Performance	: 08.02.2023-15.02.2023
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result

Location : Basudevpur		Date of sampling : 07.02.2023-08.02.2023		
Sampling Done by: S.Ghosh		Sampling done as per : CPCB Guidelines (Volume-1)		
Longitude & Latitude : 23° 40' 4.97"N, 87° 23' 26.86"E				
Sl. No.	POLLUTANT	RESULT	LIMIT	METHOD OF TEST REFERENCE
1	Particulate matter (<10µm) in µg/m <sup>3</sup>	73.6	100	IS: 5182 (Part-23)- (RA-2017)
2	Particulate matter (<2.5µm) in µg/m <sup>3</sup>	32.9	60	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide (SO <sub>2</sub> ) in µg/m <sup>3</sup>	7.6	80	IS: 5182 (Part-2)-2001, (RA-2017)
4	Nitrogen dioxide (NO <sub>2</sub> ) in µg/m <sup>3</sup>	23.7	80	IS: 5182 (Part- 6)- (RA-2017)
5	Carbon Monoxide (CO) in µg/m <sup>3</sup>	881	2000	IS: 5182 (Part- 10)- (RA-2017)
6	Ammonia (NH <sub>3</sub> ) in µg/m <sup>3</sup>	20.8	400	Air Sampling , 3 <sup>rd</sup> Edn -Method-401
7	Ozone (O <sub>3</sub> ) in µg/m <sup>3</sup>	32.6	180	Air Sampling , 3 <sup>rd</sup> Edn -Method-411
8	Lead (Pb) in µg/m <sup>3</sup>	<0.02	1	EPA IO-3.2 & 5.0
9	Nickel (Ni) in ng/m <sup>3</sup>	<4.0	20	EPA IO-3.2
10	Arsenic (As) in ng/m <sup>3</sup>	<1.0	6	Air Sampling , 3rd Edn.Method 402 and APHA 23 <sup>rd</sup> Edition-2017 Part 3114B
11	Benzene (C <sub>6</sub> H <sub>6</sub> ) in µg/m <sup>3</sup>	<2.08	5	IS: 5182 (Part- 11)
12	Benzo (a) pyrene in ng/m <sup>3</sup>	<0.4	1	IS: 5182 (Part- 12)
13	Mercury (Hg) in ng/ m <sup>3</sup>	<2.0	--	USEPA IO-5.0. June:1999
14	Cadmium (Cd) in µg/m <sup>3</sup>	<0.02	--	USEPA IO-3.2, June:1999
15	Chromium (Cr) in µg/m <sup>3</sup>	<0.05	--	USEPA IO-3.2, June:1999
<b>NOTE :</b> Limit as per CPCB Notification, New Delhi, 18th November 2009, for Ambient Air Quality.				

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By

Benimadhab Gorai, Chemist  
(Authorized Signatory)

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DOC NO : QLS/SAMP/08-D/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	ULR No.	: TC627123000000283F
	Report No.	: QLS/P-107/22-23/C/06
Name of Project: Jaganathpur-B Underground Coal Mine	Date	: 15.02.2023
	Sample No.	: QLS/ P-107/22-23/06
	Sample Description	: Ground Water (GW2)
	Sample Location	: Srikrishnapur Bore well
	GPS Coordinates	: 23°40'2.03"N, 87°21'33.94"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 06.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

### (A) Microbiological Analysis

Sl. No.	Characteristic	Limit as Per IS 10500 :2012 (RA-2018) Amd. 2	Test Method	Result
1.	E.coli/100ml	Not Detectable	IS 15185-2016	Not Detected
2.	Total Coliform Bacteria/100ml	Not Detectable	IS 15185-2016	Not Detected

Report Prepared By: *CAW*

for Qualissure Laboratory Services  
Reviewed & Authorized By  
*S. Chakraborty*  
Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

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# Qualissure Laboratory Services



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TC-6271

Report No.	QLS/P-107/22-23/C/06
Date	15.02.2023

## (B) Chemical Analysis

Sl. No	Test Parameter	Test Method	Limit As Per IS 10500 :2012 (RA-2018) Amd. 1 & 2		Result
			Acceptable Limit	Permissible Limit	
1.	Odour	IS 3025 (Part 5)-1983; RA:2012	Agreeable	Agreeable	Agreeable
2.	pH Value at 25°C	IS 3025 (Part 11)-1984; RA: 2012	6.5-8.5	No Relaxation	7.23
3.	Turbidity in NTU	IS 3025 (Part 10)-1984; RA: 2012	1	5	<1.0
4.	Total Dissolved Solids (as TDS) in mg/l	IS 3025(Part 16)-1984; RA: 2012	500	2000	242
5.	Aluminium (as Al) in mg/l	IS 15302: 2003 (RA 2013)	0.03	0.2	<0.01
6.	Ammonia (as total ammonia – N) in mg/l	IS 3025 (Part 34): 1988;RA:2014	0.5	No Relaxation	<0.1
7.	Anionic Detergents(as MBAS) in mg/l	IS 13428(Annex K)-2005	0.2	1.0	<0.02
8.	Boron(as B) in mg/l	IS 13428– 2005,Annex H	0.5	2.4	<0.5
9.	Calcium(as Ca) in mg/l	IS 3025 (Part 40)-1991, RA: 2014	75	200	35.9
10.	Chloride(as Cl) in mg/l	IS 3025 (Part 32)-1988, RA: 2014	250	1000	55.9
11.	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992 ; RA 2014	0.05	1.5	<0.02
12.	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.0	1.5	0.18
13.	Free Residual Chlorine in mg/l	IS 3025 PART(26) 1986 RA: 2014	0.2	1.0	<0.1
14.	Iron (as Fe) in mg/l	IS 3025(Part 53)-1988 RA: 2014	1.0	No Relaxation	0.33
15.	Magnesium(as Mg) in mg/l	IS 3025 (Part 46)-1994 RA: 2014	30	100	9.8
16.	Manganese (as Mn) in mg/l	IS 3025 (Part 59): 2006 RA 2014	0.1	0.3	<0.02
17.	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34)-1986 RA: 2014	45	No Relaxation	<0.5
18.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025 (Part 43)-1992 RA: 2014	0.001	0.002	<0.001
19.	Selenium(as Se) in mg/l	IS 15303-2003; RA : 2013	0.01	No Relaxation	<0.005
20.	Sulphate (as SO <sub>4</sub> ) in mg/l	IS 3025 (Part 24)-1986, RA: 2014	200	400	25.7
21.	Sulphide (as H <sub>2</sub> S) in mg/l	IS 3025 (Part 29): 1991; RA 2014	0.05	No Relaxation	<0.01
22.	Alkalinity(as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 23)- 1986, RA: 2014	200	600	149.6
23.	Total Hardness (as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 21)-1983, RA: 2014	200	600	130.6
24.	Cadmium(as Cd) in mg/l	IS 3025(Part 41)-1992; RA: 2014	0.003	No Relaxation	<0.002
25.	Cyanide(as CN) in mg/l	IS 3025(Part 27)-1986; RA: 2014	0.05	No Relaxation	<0.02
26.	Lead(as Pb) in mg/l	IS 3025(Part 47)-1994; RA: 2014	0.01	No Relaxation	<0.01
27.	Mercury(as Hg) in mg/l	IS 3025(Part 48)-1994; RA: 2014	0.001	No Relaxation	<0.001
28.	Arsenic(as As) in mg/l	IS 3025 (Part 37)-1988, RA- 2014	0.01	No Relaxation	<0.01
29.	Zinc(as Zn) in mg/l	IS 3025(Part 49)-1994; RA: 2014	5	15	<0.02
30.	Total Chromium (as Cr) in mg/l	IS 3025 (Part 52): 2014	0.05	No Relaxation	<0.05

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

Page 2 of 2

-----End of the Report-----

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	ULR No.	: TC627123000000284F
	Report No.	: QLS/P-107/22-23/C/07
Name of Project: Jaganathpur-B Underground Coal Mine	Date	: 15.02.2023
	Sample No.	: QLS/ P-107/22-23/07
	Sample Description	: Ground Water (GW1)
	Sample Location	: Sashipur Bore well (in MLA)
	GPS Coordinates	: 23°39'36.59"N, 87°23'36.48"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 06.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

### (A) Microbiological Analysis

Sl. No.	Characteristic	Limit as Per IS 10500 :2012 (RA-2018) Amd. 2	Test Method	Result
1.	E.coli/100ml	Not Detectable	IS 15185-2016	Not Detected
2.	Total Coliform Bacteria/100ml	Not Detectable	IS 15185-2016	Not Detected

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By



Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

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# Qualissure Laboratory Services

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TC-6271

Report No.	QLS/P-107/22-23/C/07
Date	15.02.2023

## (B) Chemical Analysis

Sl. No	Test Parameter	Test Method	Limit As Per IS 10500 :2012 (RA-2018) Amd. 1 & 2		Result
			Acceptable Limit	Permissible Limit	
1.	Odour	IS 3025 (Part 5)-1983; RA:2012	Agreeable	Agreeable	Agreeable
2.	pH Value at 25°C	IS 3025 (Part 11)-1984; RA: 2012	6.5-8.5	No Relaxation	6.97
3.	Turbidity in NTU	IS 3025 (Part 10)-1984; RA: 2012	1	5	<1.0
4.	Total Dissolved Solids (as TDS) in mg/l	IS 3025(Part 16)-1984; RA: 2012	500	2000	284
5.	Aluminium (as Al) in mg/l	IS 15302: 2003 (RA 2013)	0.03	0.2	<0.01
6.	Ammonia (as total ammonia – N) in mg/l	IS 3025 (Part 34): 1988;RA:2014	0.5	No Relaxation	<0.1
7.	Anionic Detergents(as MBAS) in mg/l	IS 13428(Annex K)-2005	0.2	1.0	<0.02
8.	Boron(as B) in mg/l	IS 13428– 2005,Annex H	0.5	2.4	<0.5
9.	Calcium(as Ca) in mg/l	IS 3025 (Part 40)-1991, RA: 2014	75	200	34.3
10.	Chloride(as Cl) in mg/l	IS 3025 (Part 32)-1988, RA: 2014	250	1000	73.3
11.	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992 ; RA 2014	0.05	1.5	<0.02
12.	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.0	1.5	0.24
13.	Free Residual Chlorine in mg/l	IS 3025 PART(26) 1986 RA: 2014	0.2	1.0	<0.1
14.	Iron (as Fe) in mg/l	IS 3025(Part 53)-1988 RA: 2014	1.0	No Relaxation	0.39
15.	Magnesium(as Mg) in mg/l	IS 3025 (Part 46)-1994 RA: 2014	30	100	11.8
16.	Manganese (as Mn) in mg/l	IS 3025 (Part 59): 2006 RA 2014	0.1	0.3	<0.02
17.	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34)-1986 RA: 2014	45	No Relaxation	0.76
18.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025 (Part 43)-1992 RA: 2014	0.001	0.002	<0.001
19.	Selenium(as Se) in mg/l	IS 15303-2003; RA : 2013	0.01	No Relaxation	<0.005
20.	Sulphate (as SO <sub>4</sub> ) in mg/l	IS 3025 (Part 24)-1986, RA: 2014	200	400	31.2
21.	Sulphide (as H <sub>2</sub> S) in mg/l	IS 3025 (Part 29): 1991; RA 2014	0.05	No Relaxation	<0.01
22.	Alkalinity(as CaCO <sub>3</sub> )in mg/l	IS 3025 (Part 23)- 1986, RA: 2014	200	600	167.2
23.	Total Hardness (as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 21)-1983, RA: 2014	200	600	134.6
24.	Cadmium(as Cd) in mg/l	IS 3025(Part 41)-1992; RA: 2014	0.003	No Relaxation	<0.002
25.	Cyanide(as CN) in mg/l	IS 3025(Part 27)-1986; RA: 2014	0.05	No Relaxation	<0.02
26.	Lead(as Pb) in mg/l	IS 3025(Part 47)-1994; RA: 2014	0.01	No Relaxation	<0.01
27.	Mercury(as Hg) in mg/l	IS 3025(Part 48)-1994; RA: 2014	0.001	No Relaxation	<0.001
28.	Arsenic(as As) in mg/l	IS 3025 (Part 37)-1988, RA- 2014	0.01	No Relaxation	<0.01
29.	Zinc(as Zn) in mg/l	IS 3025(Part 49)-1994; RA: 2014	5	15	<0.02
30.	Total Chromium (as Cr) in mg/l	IS 3025 (Part 52): 2014	0.05	No Relaxation	<0.05

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By

Bishnu Priya Banerjee, Chemist  
(Authorized Signatory)

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DOC NO : QLS/SAMP/08-D/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	ULR No.	: TC627123000000285F
	Report No.	: QLS/P-107/22-23/C/08
Name of Project: Jaganathpur-B Underground Coal Mine	Date	: 15.02.2023
	Sample No.	: QLS/ P-107/22-23/08
	Sample Description	: Ground Water (GW4)
	Sample Location	: Sahapur Bore well
	GPS Coordinates	: 23°39'47.31"N, 87°27'13.36"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 06.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

### (A) Microbiological Analysis

Sl. No.	Characteristic	Limit as Per IS 10500 :2012 (RA-2018) Amd. 2	Test Method	Result
1.	E.coli/100ml	Not Detectable	IS 15185-2016	Not Detected
2.	Total Coliform Bacteria/100ml	Not Detectable	IS 15185-2016	Not Detected

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

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# Qualissure Laboratory Services

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Email : qualissure@gmail.com; info@qualissure.com ; Mob.No. 98312 87086 ; 9830093976



Report No.	QLS/P-107/22-23/C/08
Date	15.02.2023

## (B) Chemical Analysis

Sl. No	Test Parameter	Test Method	Limit As Per IS 10500 :2012 (RA-2018) Amd. 1 & 2		Result
			Acceptable Limit	Permissible Limit	
1.	Odour	IS 3025 (Part 5)-1983; RA:2012	Agreeable	Agreeable	Agreeable
2.	pH Value at 25°C	IS 3025 (Part 11)-1984; RA: 2012	6.5-8.5	No Relaxation	7.17
3.	Turbidity in NTU	IS 3025 (Part 10)-1984; RA: 2012	1	5	<1.0
4.	Total Dissolved Solids (as TDS) in mg/l	IS 3025(Part 16)-1984; RA: 2012	500	2000	292
5.	Aluminium (as Al) in mg/l	IS 15302: 2003 (RA 2013)	0.03	0.2	<0.01
6.	Ammonia (as total ammonia – N) in mg/l	IS 3025 (Part 34): 1988;RA:2014	0.5	No Relaxation	<0.1
7.	Anionic Detergents(as MBAS) in mg/l	IS 13428(Annex K)-2005	0.2	1.0	<0.02
8.	Boron(as B) in mg/l	IS 13428– 2005,Annex H	0.5	2.4	<0.5
9.	Calcium(as Ca) in mg/l	IS 3025 (Part 40)-1991, RA: 2014	75	200	37.5
10.	Chloride(as Cl) in mg/l	IS 3025 (Part 32)-1988, RA: 2014	250	1000	59.8
11.	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992 ; RA 2014	0.05	1.5	<0.02
12.	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.0	1.5	0.15
13.	Free Residual Chlorine in mg/l	IS 3025 PART(26) 1986 RA: 2014	0.2	1.0	<0.1
14.	Iron (as Fe) in mg/l	IS 3025(Part 53)-1988 RA: 2014	1.0	No Relaxation	0.24
15.	Magnesium(as Mg) in mg/l	IS 3025 (Part 46)-1994 RA: 2014	30	100	11.8
16.	Manganese (as Mn) in mg/l	IS 3025 (Part 59): 2006 RA 2014	0.1	0.3	<0.02
17.	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34)-1986 RA: 2014	45	No Relaxation	0.58
18.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025 (Part 43)-1992 RA: 2014	0.001	0.002	<0.001
19.	Selenium(as Se) in mg/l	IS 15303-2003; RA : 2013	0.01	No Relaxation	<0.005
20.	Sulphate (as SO <sub>4</sub> ) in mg/l	IS 3025 (Part 24)-1986, RA: 2014	200	400	37.4
21.	Sulphide (as H <sub>2</sub> S) in mg/l	IS 3025 (Part 29): 1991; RA 2014	0.05	No Relaxation	<0.01
22.	Alkalinity(as CaCO <sub>3</sub> )in mg/l	IS 3025 (Part 23)- 1986, RA: 2014	200	600	171.6
23.	Total Hardness (as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 21)-1983, RA: 2014	200	600	142.8
24.	Cadmium(as Cd) in mg/l	IS 3025(Part 41)-1992; RA: 2014	0.003	No Relaxation	<0.002
25.	Cyanide(as CN) in mg/l	IS 3025(Part 27)-1986; RA: 2014	0.05	No Relaxation	<0.02
26.	Lead(as Pb) in mg/l	IS 3025(Part 47)-1994; RA: 2014	0.01	No Relaxation	<0.01
27.	Mercury(as Hg) in mg/l	IS 3025(Part 48)-1994; RA: 2014	0.001	No Relaxation	<0.001
28.	Arsenic(as As) in mg/l	IS 3025 (Part 37)-1988, RA- 2014	0.01	No Relaxation	<0.01
29.	Zinc(as Zn) in mg/l	IS 3025(Part 49)-1994; RA: 2014	5	15	<0.02
30.	Total Chromium (as Cr) in mg/l	IS 3025 (Part 52): 2014	0.05	No Relaxation	<0.05

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By

Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

Page 2 of 2

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DOC NO : QLS/SAMP/08-D/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	ULR No.	: TC627123000000286F
	Report No.	: QLS/P-107/22-23/C/09
Name of Project: Jaganathpur-B Underground Coal Mine	Date	: 15.02.2023
	Sample No.	: QLS/ P-107/22-23/09
	Sample Description	: Ground Water (GW3)
	Sample Location	: Gour Bazar Bore well
	GPS Coordinates	: 23°41'28.81"N, 87°22'46.3"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

### (A) Microbiological Analysis

Sl. No.	Characteristic	Limit as Per IS 10500 :2012 (RA-2018) Amd. 2	Test Method	Result
1.	E.coli/100ml	Not Detectable	IS 15185-2016	Not Detected
2.	Total Coliform Bacteria/100ml	Not Detectable	IS 15185-2016	Not Detected

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

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# Qualissure Laboratory Services

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Report No.	QLS/P-107/22-23/C/09
Date	15.02.2023

## (B) Chemical Analysis

Sl. No	Test Parameter	Test Method	Limit As Per IS 10500 :2012 (RA-2018) Amd. 1 & 2		Result
			Acceptable Limit	Permissible Limit	
1.	Odour	IS 3025 (Part 5)-1983; RA:2012	Agreeable	Agreeable	Agreeable
2.	pH Value at 25°C	IS 3025 (Part 11)-1984; RA: 2012	6.5-8.5	No Relaxation	7.39
3.	Turbidity in NTU	IS 3025 (Part 10)-1984; RA: 2012	1	5	<1.0
4.	Total Dissolved Solids (as TDS) in mg/l	IS 3025(Part 16)-1984; RA: 2012	500	2000	316
5.	Aluminium (as Al) in mg/l	IS 15302: 2003 (RA 2013)	0.03	0.2	<0.01
6.	Ammonia (as total ammonia – N) in mg/l	IS 3025 (Part 34): 1988;RA:2014	0.5	No Relaxation	<0.1
7.	Anionic Detergents(as MBAS) in mg/l	IS 13428(Annex K)-2005	0.2	1.0	<0.02
8.	Boron(as B) in mg/l	IS 13428– 2005,Annex H	0.5	2.4	<0.5
9.	Calcium(as Ca) in mg/l	IS 3025 (Part 40)-1991, RA: 2014	75	200	32.6
10.	Chloride(as Cl) in mg/l	IS 3025 (Part 32)-1988, RA: 2014	250	1000	75.2
11.	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992 ; RA 2014	0.05	1.5	<0.02
12.	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.0	1.5	0.34
13.	Free Residual Chlorine in mg/l	IS 3025 PART(26) 1986 RA: 2014	0.2	1.0	<0.1
14.	Iron (as Fe) in mg/l	IS 3025(Part 53)-1988 RA: 2014	1.0	No Relaxation	0.47
15.	Magnesium(as Mg) in mg/l	IS 3025 (Part 46)-1994 RA: 2014	30	100	5.9
16.	Manganese (as Mn) in mg/l	IS 3025 (Part 59): 2006 RA 2014	0.1	0.3	<0.02
17.	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34)-1986 RA: 2014	45	No Relaxation	0.98
18.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025 (Part 43)-1992 RA: 2014	0.001	0.002	<0.001
19.	Selenium(as Se) in mg/l	IS 15303-2003; RA : 2013	0.01	No Relaxation	<0.005
20.	Sulphate (as SO <sub>4</sub> ) in mg/l	IS 3025 (Part 24)-1986, RA: 2014	200	400	38.6
21.	Sulphide (as H <sub>2</sub> S) in mg/l	IS 3025 (Part 29): 1991; RA 2014	0.05	No Relaxation	<0.01
22.	Alkalinity(as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 23)- 1986, RA: 2014	200	600	189.2
23.	Total Hardness (as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 21)-1983, RA: 2014	200	600	106.1
24.	Cadmium(as Cd) in mg/l	IS 3025(Part 41)-1992; RA: 2014	0.003	No Relaxation	<0.002
25.	Cyanide(as CN) in mg/l	IS 3025(Part 27)-1986; RA: 2014	0.05	No Relaxation	<0.02
26.	Lead(as Pb) in mg/l	IS 3025(Part 47)-1994; RA: 2014	0.01	No Relaxation	<0.01
27.	Mercury(as Hg) in mg/l	IS 3025(Part 48)-1994; RA: 2014	0.001	No Relaxation	<0.001
28.	Arsenic(as As) in mg/l	IS 3025 (Part 37)-1988, RA- 2014	0.01	No Relaxation	<0.01
29.	Zinc(as Zn) in mg/l	IS 3025(Part 49)-1994; RA: 2014	5	15	<0.02
30.	Total Chromium (as Cr) in mg/l	IS 3025 (Part 52): 2014	0.05	No Relaxation	<0.05

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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Page 2 of 2

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/10
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/10
	Sample Description	: Surface Water
	Sample Location	: Ajay River Down Stream (WQ3)
	GPS Coordinates	: 23°41'55.79"N, 87°23'4.18"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: WQ-3

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	120

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H*	6.5-8.5	7.21
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	5
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	174
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	<1.4
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	6.1
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	<2
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	19.3
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.5	0.18
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.26
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	<0.5
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	18.2
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	0.11
19	Hexavalent Chromium (as Cr <sup>+6</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By

Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

for Qualissure Laboratory Services  
Reviewed & Authorized By

Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/11
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/11
	Sample Description	: Surface Water
	Sample Location	: Ajay River Up Stream (WQ2)
	GPS Coordinates	: 23°38'16.77"N, 87°25'37.07"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 06.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: WQ-2

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	170

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H*	6.5-8.5	7.67
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	5
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	170
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	<1.4
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	5.9
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	2.3
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	21.2
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.5	0.24
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.29
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	<0.5
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	21.1
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	0.07
19	Hexavalent Chromium (as Cr <sup>6</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Soumy Chakraborty, Microbiologist  
 (Authorized Signatory)

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Bishnupriya Banerjee, Chemist  
 (Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/12
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/12
	Sample Description	: Surface Water
	Sample Location	: Tumni Nala (WQ1)
	GPS Coordinates	: 23°39'1.32"N, 87°22'49.23"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: WQ-1

### (A) Microbiological Analysis

Sl.No:	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	140

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H <sup>+</sup>	6.5-8.5	7.06
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	5
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	182
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	<1.4
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	6.4
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	<2
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	25.1
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.5	0.21
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.54
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	<0.5
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	19.7
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	0.23
19	Hexavalent Chromium (as Cr <sup>6+</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Soumy Chakraborty, Microbiologist  
 (Authorized Signatory)

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Bishnupriya Banerjee, Chemist  
 (Authorized Signatory)

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Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/14
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/14
	Sample Description	: Surface Water
	Sample Location	: Pond Near Jamgara (SW3)
	GPS Coordinates	: 23°38'29.06"N, 87°20'3.59"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 06.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: SW-3

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	26

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H*	6.5-8.5	7.11
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	15
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	224
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	3.4
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	5.4
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	<2
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	50.1
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23rd Edition 2017, 4500 F D	1.5	0.51
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.31
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	0.82
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	17.9
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	<0.02
19	Hexavalent Chromium (as Cr <sup>6+</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By



Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

for Qualissure Laboratory Services  
Reviewed & Authorized By



Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/15
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/15
	Sample Description	: Surface Water
	Sample Location	: Pond Near Shibpur (SW4)
	GPS Coordinates	: 23°37'46.85"N, 87°25'31.8"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: SW-4

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	33

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H <sup>+</sup>	6.5-8.5	7.61
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	10
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	119
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	<1.4
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	5.2
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	2.7
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	34.7
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 F D	1.5	0.34
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.27
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	<0.5
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	24.7
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	<0.02
19	Hexavalent Chromium (as Cr <sup>+6</sup> ) in mg/l	IS 3025 (Part 52): 2014 (RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Soumy Chakraborty, Microbiologist  
 (Authorized Signatory)

for Qualissure Laboratory Services  
 Reviewed & Authorized By  
  
 Bishnupriya Banerjee, Chemist  
 (Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/16
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/16
	Sample Description	: Surface Water
	Sample Location	: Pond Near Gour Bazar (SW2)
	GPS Coordinates	: 23°41'27.84"N, 87°22'22.25"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: SW- 2

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	50

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H <sup>+</sup>	6.5-8.5	7.41
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	20
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	262
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	1.9
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	5.8
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	<2
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	38.6
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 F D	1.5	0.18
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.44
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	0.71
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	20.2
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	0.12
19	Hexavalent Chromium (as Cr <sup>+6</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

for Qualissure Laboratory Services  
Reviewed & Authorized By  
  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/13
	Date	: 17.02.2023
Name of Project: Jaganathpur-B Underground Coal Mine	Sample No.	: QLS/ P-107/22-23/13
	Sample Description	: Surface Water
	Sample Location	: Pond Near Infrastructure Area in MLA (SW1)
	GPS Coordinates	: 23°40'7.60"N, 87°23'15.28"E
	Date of Performance	: 08.02.2023 - 14.02.2023
	Sample Drawn On	: 07.02.2023
	Sampling Method	: IS 1622: 1981 (RA 2019) IS 3025(Part 1): 1987 (RA 2019)
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: SW-1

### (A) Microbiological Analysis

Sl.No.	Characteristic	Test Method	Surface water quality criteria as per IS : 2296-1982 for Class B	Result
1.	Total Coliform Organisms in MPN/100ml	APHA 23 <sup>rd</sup> Edition: 2017, 9222B	500	60

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	Tolerance Limits For Inland Surface Waters, Class B (IS: 2296-1982)	Result
2	pH Value at 25°C	APHA 23 <sup>rd</sup> Edition-2017, 4500 H*	6.5-8.5	7.74
3	Colour in Hazen Units	IS 3025 (Part 4): 1983 (RA 2012)	300	20
4	Total Dissolved Solids (as TDS) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 B	---	276
5	Oil & Grease in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 5520A	---	2.1
6	Dissolved Oxygen in mg/l	APHA 23 <sup>rd</sup> Edition-2017, 4500-O-C	5.0 (Min)	5.3
7	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2014	3.0*	<2
8	Anionic Detergents(as MBAS) in mg/l	IS 13428-2005(Annex K)	1.0	<0.02
9	Chloride(as Cl) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 Cl	---	42.4
10	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2014)	---	<0.02
11	Fluoride(as F) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 F D	1.5	0.61
12	Iron (as Fe) in mg/l	IS 3025 (Part 53): 1988(RA 2014)	---	0.42
13	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2014)	---	0.76
14	Sulphate (as SO <sub>4</sub> ) in mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 SO <sub>4</sub> E	---	19.3
15	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 1992(RA 2014)	---	<0.002
16	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2014)	---	<0.01
17	Arsenic(as As) in mg/l	IS 3025 (Part 37): 1988 (RA 2014)	0.2	<0.01
18	Zinc(as Zn) in mg/l	IS 3025 (Part 49): 1994 (RA 2014)	---	0.05
19	Hexavalent Chromium (as Cr <sup>6+</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2014)	1.0	<0.05
20	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025(Part 43)-1992;Rffm:2009	0.005	<0.001

\* For 5 Day's BOD at 20°C

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By

Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

for Qualissure Laboratory Services  
Reviewed & Authorized By

Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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TC-6271

DOC NO : QLS/SAMP/08-E/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No.	: QLS/P-107/22-23/C/17
	Date	: 17.02.2023
Name of Project: Jagānathpur-B Underground Coal Mine	Sample No.	: QLS/P-107/22-23/17
	Sample Description	: Soil
	Sample Location	: Benodpur (in MLA)
	Period Of Analysis	: 08.02.2023-17.02.2023
	GPS Co-ordinates	: 23° 40' 5.99" N, 87° 23' 6.64" E
	Sample Drawn On	: 07.02.2023
	Ref No. Date	: PTPL/QLS/001/2022-23, Dated-31.01.2023

## Analysis Result: SQ-1

Sl.No.	Test Parameter	Test Method	Result
1.	pH at 25 °C	IS 2720 (Part 26): 1987(RA 2011)	7.2
2.	Electrical Conductivity, $\mu\text{S}/\text{cm}$ at 25 °C	IS 14767 :2000, RA 2016	316
3.	Organic Carbon, %	Soil Analysis (Soil Science society for America) Part II	0.80
4.	Texture	SOP No. TPM/QLS/E/S/MA Soil & Plant Analysis, C.S.Piper	Clay Loam
	a) Sand, %		37
	b) Silt, %		29
	c) Clay, %		34
5.	Zinc (as Zn), in mg/kg	EPA 3050 B: December, 1996, EPA 7000 B: February 2007	39.2
6.	Lead (as Pb), in mg/kg	EPA 3050 B- December, 1996, EPA 7000 B- February, 2007	4.77
7.	Cadmium (as Cd), in mg/kg	EPA 3050 B- December, 1996, EPA 7000 B- February, 2007	0.29
8.	Total Chromium (as Cr), in mg/kg	EPA 3050 B: December, 1996, EPA 7000 B: February 2007	11.2
9.	Potassium (as K), in mg/kg	Soil Analysis (Soil Science society for America) Part II	137
10.	Phosphorus (as P), in mg/kg	Soil Analysis (Soil Science society for America) Part II	42.7
11.	Available Sulphur (as S), mg/kg	IS 2720(Part-27): 1977 (RA 2015)	17.4
12.	Calcium (as Ca) in %	Methods of Soil Analysis (Soil Science society for America) Part II	0.28
13.	Magnesium (as Mg) in %	Methods of Soil Analysis (Soil Science society for America) Part II	0.03
14.	Arsenic (as As), in mg/kg	EPA 3050 B - December, 1996, VGA	<0.25
15.	Fluoride (as F), in mg/kg	Soil Analysis (Soil Science society for America) Part II	3.7
16.	Nickel (as Ni), in mg/kg	EPA 3050 B- December, 1996, EPA 7000 B- February, 2007	5.09
17.	Mercury (as Hg), in mg/kg	USEPA 245.5 – 1974	<0.1
18.	Available Boron (as B), in mg/kg	Soil Analysis (Soil Science society for America) Part II	1.34

Report Prepared By:

For Qualissure Laboratory Services  
Reviewed & Authorized by

Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

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# Qualissure Laboratory Services



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TC-6271

DOC NO : QLS/SAMP/08-C/00

## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No. : QLS/P-107/22-23/C/05 Date : 15.02.2023 Sample No. : QLS/P-107/22-23/05 Date Of Performance : 08.02.2023-15.02.2023 Sample Description : Noise Monitoring Ref No. Date : PTPL/QLS/001/2022-23, Dated-31.01.2023
Name of Project: Jaganathpur-B Underground Coal Mine	

## Monitoring Result of Noise

Sampling Done By: S.Ghosh			
Sampling Guideline : As per IS: 9876: 1981 (RA-2001)			
Location : Near Project Area in MLA (NQ1)			
Date of Monitoring : 07.02.2023-08.02.2023			
Time	Lmax dB (A)	Lmin dB (A)	Avg. dB (A)
11.00-12.00	50.2	47.6	48.9
12.00-13.00	53.2	50.2	51.7
13.00-14.00	55.6	53.3	54.4
14.00-15.00	59.2	56	57.6
15.00-16.00	60.5	59.1	59.8
16.00-17.00	64.2	61.2	62.7
17.00-18.00	67.1	63.5	65.3
18.00-19.00	65.6	62.6	64.1
19.00-20.00	64.2	61.5	62.8
20.00-21.00	63.2	60.2	61.7
21.00-22.00	61.7	54.1	57.9
22.00-22.00	60.5	58.2	59.3
23.00-0.00	59.6	57.2	58.4
0.00-1.00	58.5	56.3	57.4
1.00-2.00	57.6	55.3	56.4
2.00-3.00	56.5	54.2	55.3
3.00-4.00	55.2	53.2	54.2
4.00-5.00	54.2	52.5	53.3
5.00-6.00	53.2	51.6	52.4
6.00-7.00	52.5	50.6	51.5
7.00-8.00	51.6	49.5	50.5
8.00-9.00	50.7	48.6	49.6
9.00-10.00	49.6	47.2	48.4
10.00-11.00	48.5	45.2	46.8

Report Prepared By:

for Qualissure Laboratory Services  
Reviewed & Authorized By



Benimadhab Gorai, Chemist  
(Authorized Signatory)

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## TEST REPORT

Name & Address of the Customer: <b>M/S Powerplus Traders Private Limited</b> Premlata Building, 39 Shakespeare Sarani 6 <sup>th</sup> Floor, Kolkata- 700017	Report No. : QLS/P-107/22-23/C/19 Date : 15.02.2023 Sample No. : QLS/P-107/22-23/19 Sample Description : Vehicular Emission Date of Performance : 08.02.2023-15.02.2023 Sample Mark : Bolero Ref No. Date : PTPL/QLS/001/2022-23, Dated-31.01.2023
Name of Project: Jaganathpur-B Underground Coal Mine	

### Vehicular Emission Analysis Result

Sl. No.	Date of Sampling	Location	CO <sub>2</sub> % (v/v)	CO % (v/v)	O <sub>2</sub> (%)
1	07.02.2023	Bolero (WB 39C 2075)	3.2	<0.2	17.0

Remark : 1) Sample was collected from Exhausted point of Bolero.

Report Prepared By :

for Qualissure Laboratory Services  
Reviewed & Authorized by  
  
(Benimadhab Gorai, Chemist)  
Authorized Signatory

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