BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE, KOLKATA

ORIGINAL APPLICATION NO. 222/2024

IN THE MATTER OF:

News Item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024

...Applicant(s)

NOTARY S. Chaudhuri Bidhnanagar Court Kolkata Regd. No.:6584 Exp. Dt.:21-08-2026 GOVT. OF INDIA

INDEX

S. No.	PARTICULARS	PAGE NO.
1.	Counter Affidavit on Behalf of Respondent no.3, Ministry Of Environment, Forest & Climate Change	1-4
2.	Annexure-1 Copy of the EC dated 17.05.2007	5-8
3.	Annexure-2 Copy of the transfer EC dated 20.12.2018	9-10
4.	Annexure-3 Copy of the transfer EC dated 27.12.2022	11-23
5.	Annexure-4 Copy of the transfer EC dated 12.10.2023	24-43
6.	Annexure-5 Copy of the Office Memorandum dated 25.11.2022	44-46
7.	Annexure-6 Copy of the letter dated 07.02.2025	47-48
8.	Annexure-7 Copy of the CCR dated 15.04.2025	49-224
9.	Annexure-8 Copies of the SCN dated 10.06.2025 and SCN response dated 13.06.2025	225-485
10.	Annexure-9 Copy of the letter dated 19.06.2025	486-487

Place: Kolkata

Dated: 10th July, 2025

Respondent No.3

Apurba Ghosh

10 JUL 2025

SL. NO. 264 /20 25 294

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE, KOLKATA

ORIGINAL APPLICATION NO. 222/2024

NOTARY S. Chaudhuri Bidhnanagar Court Kolkata Regd. No.-6584 Exp. DL-21-08-2028 GOVT. OF INDIA

BEFORE THE NOTARY PUBLIC AT BIDHANNAGAR DIST-NORTH 24 PARGANAS

IN THE MATTER OF:

News Item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024

...Applicant(s)

REPLY AFFIDAVIT ON BEHALF OF RESPONDENT NO. 3, MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE.

I, Dr. Shahida Parvin Quazi, daughter of Late Quazi Sirazul Haque, aged about 47 years, presently working as 'Scientist – E' at the Sub Office Kolkata, Regional Office Bhubaneswar under the Ministry of Environment, Forest and Climate Change, having its office at IB-198, Sector- III, Salt Lake City, Kolkata – 700 106, do hereby, in my official capacity, solemnly affirm and state on oath as under-

1. That, I am acquainted with the facts and circumstances of this Original Application and duly competent to swear the present affidavit on behalf of Respondent No.5 i.e., the Ministry of Environment, Forest & Climate Change based the official records maintained therein.

2. It is humbly submitted that all the averments made in the instant application are denied except those which are specifically admitted herein in this Reply Affidavit.

3. It is humbly submitted that the present matter has been registered suo moto on the basis of a news item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024" published in The Hindu dated 12.05.2024.The news item relates to a blast at a coal mine by M/s The West Bengal Power Development Corporation Limited in the Birbhum district of West Bengal, resulting in the deaths of six individuals and several others getting injured.

4. It is humbly submitted that the Answering Respondent has granted four (04) ECs for which are as under:

10 JUL 2025

-X-

(i) EC for the project titled '*Integrated Gangaramchak Gangaramchak - Badulia Block Opencast Coal Mine Project (1 MTPA) of M/s Bengal Emta Coal Mines Ltd., located in village Bastabpur, Tehsil Khoyrasole, District Birbhum, West Bengal*' vide letter no. J-11015/375/2006-IA.II (M) dated 17.05.2007. A copy of the EC dated 17.05.2007 has been annexed herewith as **Annexure-1.**

(ii) Transfer of EC from M/s Bengal Emta Coal Mines Ltd. to M/s The West Bengal Power Development Corporation Limited (hereinafter referred to as "WBPDCL") for the project titled '*Integrated Ganaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of 1 MTPA in mine lease area of 150 ha located in village Basantpur, Tehsil Khoyrasole District Birbhum (West Bengal)*' vide letter no.J-11015/375/2006-IA-II.(M) dated 20.12.2018. A copy of the transfer EC dated 20.12.2018 has been annexed herewith as **Annexure-2.**

(iii) Expansion EC vide letter no. J-11015/375/2006-IA-II(M) dated 27.12.2022. A copy of the transfer EC dated 27.12.2022 has been annexed herewith as **Annexure-3.**

(iv) Expansion EC vide letter no. J-11015/375/2006-IA-II(M) dated 12.10.2023. A copy of the transfer EC dated 12.10.2023 has been annexed herewith as **Annexure-4.**

NOTARY S. Chaudhuri Bidhnanagar Court Kolkata regd. No.-6584 Exp. DL-21-08-2026 GOVT. OF INDIA

5. It is humbly submitted that the Answering Respondent has established a Standard Operating Procedure (hereinafter referred to as "SoP") for Post Environmental Clearance Monitoring and compliance of the projects *vide* Office Memorandum dated 25.11.2022. A copy of the Office Memorandum dated 25.11.2022 is annexed herewith as **Annexure-5**.

6. It is humbly submitted that in line of the above mentioned SoP, the Answering Respondent vide letter dated 07.02.2025 requested the Sub-Office (hereinafter referred to as "SO") of the Ministry at Kolkata to furnish a factual status report concerning the issues raised in the instant matter, along with an EC condition-wise compliance status report (s) for all the ECs associated with the project. In response, the SO Kolkata had submitted a Certified Compliance Report (hereinafter referred to as "CCR") vide letterno. 102-132/05/EPE/133 dated 15.04.2025. Copies of the letter dated 07.02.2025 and CCR dated 15.04.2025 have been annexed herewith as **Annexure-6** and **Annexure-7**, respectively.

10 JUL 2025

7. It is humbly submitted that in pursuance to the Ministry's letterdated 07.02.2025, a site inspection was carried out on11.03.2025 by SO, Kolkata in the presence of the official from WBPDCL (hereinafter referred to as "Project Proponent") and the Mine Developer-cum-Operator (MDO). During the inspection, the SO Kolkata observed that the mine was operational at the time of inspection and the accident site was also active, with movement of dumpers noted. It was further submitted by the SO that a'Preliminary Fact-Finding Report' prepared by the Internal Safety Organization of WBPDCL was submitted during the visit. As per the said report, an enquiry is being carried out by the Directorate General of Mines Safety (DGMS) to ascertain the root cause ofthe accident. It was further informed that conclusion could be drawn by DGMS only after receiving and analysing the test results of explosives and detonators from the same batch thatwas used on the day of the accident, which will also be shared with the Answering Respondent.

NOTARY
S. Chaudhuri
Bidhnanagar Court
Kolkata
Regd. No.-6584
Exp. Dt.-21-08-2028
GOVT. OF INDIA

8. It is humbly submitted that, with respect to the status of compliance with the conditions of the Environmental Clearance (EC), several non-compliances were observed, which *inter alia* include: incomplete development of the coal transportation road and inadequate plantation along the route; frequent exceedance in PM_{10} and $PM_{2.5}$ concentrations as per data from the Continuous Ambient Air Quality Monitoring Station (CAAQMS); and the absence of permanent sprinklers and fixed fog cannonson haul roads and coal handling areas. Additionally, garland drains, check dams, and mine water management structures were found to be either inadequate or still under development.The project also lacks an in-house environmental laboratory, and no third-party environmental audits have been undertaken. Further, critical documents such as the digital land-use survey, mine closure activity updates, and the riparian ecosystem management plan are yet to be submitted. Several CSR activities, public hearing commitments, and EMP-related expenditures have not been supported with detailed reporting ordocumentation. Moreover, mandatory disclosures, including uploading of EC conditions, compliance reports, and environmental statements on the company's website and the EC portal, have not been fully complied with.

9. It is humbly submitted that based on the observed non-compliance, the Answering Respondent vide letter no. IA-L-11011/5/2025-IA-I dated 10.06.2025 issued a Show Cause Notice to

10 JUL 2025

the Project Proponent. In response, the Project Proponent submitted a response vide letter no. WBPDCL/Director (Mining)/2129 dated 13.06.2025. Copies of the SCN dated 10.06.2025 and SCN response dated 13.06.2025 have been annexed herewith as **Annexure-8.**

10. It is humbly submitted that in accordance with the SoP dated 25.11.2022, the response to the SCN submitted by the Project Proponent was forwarded to the Sub-Office, Kolkata vide letter dated 19.06.2025, requesting them to verify the inputs submitted by the Project Proponent in reference to their earlier observationson the issue of non-compliance. The SCN Review Report iscurrently awaited. A copy of the letter dated 19.06.2025 has been annexed herewith as **Annexure-9**.

11. It is humbly submitted that the present Reply Affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s)/ direction(s) as deemed fit and proper under the facts and circumstances of the present case.

12. It is humbly submitted that the Answering Respondent seeks leave to make additional submissions, if required, during the course of the proceedings.

NOTARY S. Chaudhuri Bidhannagar Court Kolkata Regd. No.-6584 Exp. Dt.-21-08-2028 GOVT. OF INDIA

S. Shahida Parvin

DEPONENT

VERIFICATION

I, the above-named Deponent, do hereby verify that the contents of the above affidavit are true and correct to my knowledge as per the records of the answering respondents. No part of it is false and nothing material has been concealed there from. Verified at Kolkata on this 10th day of July 2025.

S. Shahida Parvin

DEPONENT

S. CHAUDHURI ★NOTARY★ GOVT. OF INDIA Regd. No.-6584/08 Bidhannagar Court Dist.-North 24 Pgs.

10 JUL 2025

No.J-11015/375/2006-IA.II(M)
Government of India
Ministry of Environment & Forests

ANNEXURE-1

Paryavaran Bhawan,
C.G.O.Complex, Lodi Road,
New Delhi -110003.

Dated: 17th May 2007

To
Shri B.N.Datta,
Director,
M/s Bengal Emta Coal Mines Ltd.,
G.T. Road (East), Murgasol,
Asansol – 713 303.
WEST BENGAL.

Sub: Integrated Gangaramchak Gangaramchak-Badulia Block Opencast Coal Mine Project (1 MTPA) of M/s Bengal Emta Coal Mines Ltd., located in village Bastabpur, Tehsil Khoyrasole, District Birbhum, West Bengal - Environmental Clearance – reg.

Sir,

This has reference to letter No. BECL/MoEF/Ganga/2006/226 dated 14.10.2006 along with your application and your letter dated 28.03.2007 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for **opening a new coal mine - Integrated Gangaramchak Gangaramchak-Badulia Block Opencast Coal Mine Project at a production capacity of 1 MTPA over a project area of 187 ha which includes a mining lease area of 150 ha.** Of the total mining lease area, 18.42 ha is agricultural land, 101.19 ha is forestland, 28.74 ha is wasteland and 1.65 ha is others (including roads, nalla/river). Forestry clearance has been applied for. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Site clearance was obtained on 01.09.2005. The Hingla River flows at a distance of 1 to 1.5 km from the lease boundary and the Hingla Canal flows adjacent to the southern boundary and at a distance of 100-300m from the mine lease boundary on the western side. It is proposed modify the natural drainage by constructing an embankment between Hingla river and the mine on either sides. The project does not involve R&R. The entire mining lease area of 150 ha is quarry area. The balance 37 ha of the project area (outside the lease) consists of external OB dumps (17 ha), topsoil dump (10 ha), infrastructure (3 ha), colony (4 ha), facilities for the transporters (1 .25 ha) and safety zone (1.75 ha). Mining will be opencast by mechanised method and involves drilling and blasting. Mineral processing is not envisaged. The r**ated capacity of the mine is from 1 million tonnes per annum (MTPA).** Mineral transportation of 3000 TPD of coal from mine (pithead) to railway siding will be by road covering a distance of 5 km involving about 475 dumpers and from there to Power plant at a distance of 30 km by rail.. Ultimate working depth of the mine is 68m below ground level (bgl). Water table is in the study area is 2.90-7.30m bgl. Water table will be intersected. Peak water requirement is 400 m3/d and will be met from mine sump water and for drinking (20 m3/d) from wells. An estimated 46.58 Mm3 of OB will be generated over the life of mine, of which 5.80 Mm3 will be stored in one external OB dump of a max. height of 45m consisting of 3 benches of 15m each.(presentation material 28) and the balance(40.78 Mm3) will be backfilled. Backfilling will begin from 3rd year. Life of mine at the rated capacity of 1 MTPA is 12 years. Public Hearing was held on 24.07.2006. Mining Plan has been approved by Ministry of Coal on 27.06.2005. **Capital cost of the project is Rs. 76.67 crores.**

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Integrated Gangaramchak Gangaramchak-Badulia Block Opencast Coal Mine Project** of **M/s Bengal Emta Coal Mines Ltd., for production of coal at 1 MTPA rated capacity in a total project area of 187 ha which includes a lease area of 150 ha** under the provisions of Section 12 of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

No mining operations shall be undertaken in the forestland until forestry clearance has been obtained under the provisions of FC Act, 1980.

(ii) Mining shall be carried out as per statuette at a safe distance from the Hingula River flowing adjacent to the lease boundary.

An embankment being constructed between Hingula river and the quarry/working pits shall have a minimum height of 3 m. The slope of the embankment shall at least 2:1 towards the ML. The height of the embankment shall be at least 5 m higher than the HFL.

(iv) Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.

OB should be stacked at earmarked two external OB dumpsites and shall be a maximum height of 45m only and consist of benches of 15m each. The ultimate slope of the dump shall not exceed 28^{o}. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneshwar on an yearly basis.

Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material..

Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.

High efficiency bag filters/water sprinkling system should be provided to check fugitive emissions, from conveyor system, haulage roads, transfer points, etc.

No ancillary operations such as mineral beneficiation shall be taken up at the mine site without the prior approval of this Ministry.

(x) The dedicated road to railway siding and approach roads to mine site shall be metal topped. Mineral transportation by trucks which are optimally loaded and covered by tarpaulin. Green belt shall be developed on both sides of the roads.

(xi) Drills should be wet operated only.

(xii) Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.

The total area that shall be brought under afforestation at the time of mine closure shall be 144 ha which includes external OB dump (27ha) and backfilled area (105 ha), along ML boundary, unworked area (12 ha), green belt and includes safety zone, along roads and infrastructure and in township outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha..

Compensatory afforestation shall be undertaken in an area of at least 100 acres of degraded forestland to be identified in consultation with the State Forest Department.

A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 105 ha which shall be backfilled from the 3^{rd} year of mining operation and afforested by planting native plant species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per ha.

(xvi) No groundwater shall be used for project activities. Prior approval of the CGWB/CGWA shall be obtained for use of groundwater, if required.

Regular monitoring of groundwater level and quality should be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and tot eh Central Pollution Control Board quarterly within one month of monitoring.

(xviii) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to

dewatering of mine.

Sewage treatment plant should be installed in the colony. ETP should also be provided for workshop and for treating excess mine water to prescribed standards before discharge outside the lease.

(xx) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.

(xxi) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

(xxii) Consent to Operate shall be obtained before expanding mining operations.

B. General Conditions

(i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.

(ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.

(iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.

(iv) Data on ambient air quality (SPM, RPM, SO2 and NOx) should be regularly submitted to the Ministry including its Regional Office at Bhubaneshwar and to the State Pollution Control Board and the Central Pollution Control Board once in six months.

(v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.

(vi) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs.

(vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.

(viii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.

(ix) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.

(x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.

(xi) A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.

(xii) The funds earmarked for environmental protection measures should e kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhubaneshwar.

(xiii) A copy of the environmental clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.

(xiv) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.

(xv) The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.

3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

5. The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of West Bengal, Secretariat, Kolkatta.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarpur, Bhubaneshwar – 751023.
4. Chairman, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A, Block LA, Sector-III, Salt Lake City, Kolkatta – 700098.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Birbhum , Government of West Bengal.
8. Monitoring File 9. Guard File 10. Record File

(Dr.T.Chandini)
Director

ANNEXURE-2

No.J-11015/375/2006-IA-II.(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA-II Division

Indira Paryavaran Bhawan
Jor Bagh, New Delhi-3
Dated: 20th December, 2018

To

M/s The West Bengal Power Development Corporation Limited
Bidyut Unnayan Bhaban;
Plot No. 3/C, LA-Block, Sector-III,
Salt Lake, Kolkata - 700 098 (West Bengal)
Email: wbpdcl@wbpdcl.co.in

Sub: Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of 1 MTPA in mine lease area of 150 ha located in village Basantpur, Tehsil Khoyrasole District Birbhum (West Bengal) - Transfer of Environmental Clearance from M/s Bengal Emta Coal Mines Ltd to M/s The West Bengal Power Development Corporation Limited - reg.

WHEREAS the Ministry of Environment, Forest and Climate Change (MoEF&CC), in accordance with the Environmental Impact Assessment (EIA) Notification, 2006 and subsequent amendment thereto had accorded Environmental Clearance to Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of capacity 1 MTPA in mine lease area of 150 ha located at village Basantpur, Tehsil Khoyrasole, District Birbhum (West Bengal) to M/s Bengal Emta Coal Mines Ltd vide letter dated 17th May, 2007, subject to compliance of certain terms and conditions.

AND WHEREAS Hon'ble Supreme Court of India vide judgment dated 25th August, 2014, read with order dated 24th September, 2014 cancelled allocation of 204 coal blocks and issued directions with regard to such coal blocks wherein the Central Government in pursuance of the said directions has to take immediate action to implement the said order.

AND WHEREAS in pursuance of the judgment and order of Hon'ble Supreme Court, the Nominated Authority in the Ministry of Coal, in accordance with the provisions of the Coal Mines (Special Provisions) Second Ordinance, 2014 and the Coal Mines (Special Provisions) Rules 2014, has conducted auction of coal mines.

AND WHEREAS Ministry of Coal vide Allotment Order No.103/8/2015/NA dated 31st March, 2015 under clause (c) of sub-rule (2) of rule 7 and sub-rule (1) of rule 13 has allotted the Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of 1 MTPA in mine lease area of 150 ha located in village Basantpur, Tehsil Khoyrasole District Birbhum West Bengal to M/s The West Bengal Power Development Corporation Limited.

AND WHEREAS vide Gazette Notification S.O.811(E) Notification dated 23rd March, 2015, MOEF&CC has made amendment in paragraph 11 of the Gazette Notification S.O.1533 (E) dated 14th September, 2006. The said Notification quotes

'where an allocation of coal block is cancelled in any legal proceeding; or by the Government in accordance with law, the environmental clearance granted in respect of such coal block may be transferred, subject to the same validity period as was initially granted, to any legal person to whom such block is subsequently allocated, and in such case, obtaining of "no

objection" from either the holder of environment clearance or from the regulatory authority concerned shall not be necessary and no reference shall be made to the Expert Appraisal Committee or the State Level Expert Appraisal Committee concerned.

AND WHEREAS Stage-I forest clearance for diversion of 101.77 ha of forest land for its non-forestry use has been obtained under the Forest (Conservation) Act, 1980 vide letter No.8-45/2018-FC dated 29th October, 2018.

AND WHEREAS pursuant to the MOC Allotment Order No.103/8/2015/NA dated 31st March, 2015 and MoEF&CC Gazette Notification S.O.811(E) Notification dated 23rd March, 2015, the environmental clearance granted by the Ministry in favour of M/s Bengal Emta Coal Mines Ltd vide letter dated 17th May, 2007 to Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of 1 MTPA in mine lease area of 150 ha located in village Basantpur, Tehsil Khoyrasole, District Birbhum (West Bengal), is hereby transferred to M/s The West Bengal Power Development Corporation Limited subject to the following conditions:-

(i) Any change in scope of work will attract the provisions of the Environment (Protection) Act, 1986, and the EIA Notification, 2006 read with subsequent amendments therein.
(ii) All conditions stipulated in the EC dated 17th May, 2007 shall remain unchanged.
(iii) The allottee/project proponent shall be liable, if any, for any act of violation of the Environment (Protection) Act, 1986 and the EIA Notification, 2006 read with subsequent amendments therein, which it has inherited during transfer of the said environmental clearance.
(iv) The allottee/project proponent shall be liable for compliance of all court directions, if any.

SKS
20/12/2018

(S. K. Srivastava)
Scientist E

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. The Additional PCCF (Central), Regional office (EZ), MoEF&CC, A-31, Chandrashekarpur, Bhubaneswar - 751023
3. The Secretary, Department of Environment & Forests, Government of West Bengal, Secretariat, Kolkata
4. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 32
5. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
6. The Member Secretary, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A, Block LA, Sector-III, Salt Lake City, Kolkata - 700098
7. The District Collector, Birbhum, Government of West Bengal.
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board.

SKS
20/12/2018

(S. K. Srivastava)
Scientist E

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environment Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Director (Mining)

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

WBPDCL
BIDYUT UNAYAN BHAVAN
SALTLAKE
SECTOR - III
LA BLOCK,,Birbhum,West Bengal-700106

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/WB/CMIN/400339/2022 dated 16 Sep 2022. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22A001WB110929**
2.	**File No.**	J-11015/375/2006-IA-II(M)
3.	**Project Type**	Expansion
4.	**Category**	A
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	GANGARAMCHAK & GANGARAMCHAK -BHADULIA COAL MINE
7.	**Name of Company/Organization**	THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
8.	**Location of Project**	West Bengal
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 27/12/2022

(e-signed)
Lalit Bokolia
Scientist F
IA - (Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

This is a computer generated cover page.

File No. J-11015/375/2006-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)
*****

Indira ParyavaranBhawan,
Jorbagh Road, N Delhi – 3
Email: lk.bokolia@nic.in; Tel: 011-20819417

Dated: 27th December, 2022

To,

M/s The West Bengal Power Development Corporation Limited
Plot 3/c, Bidyut Unnaykan Bhaban,
Block, Sector III, Bidhannagar
District - Kolkata - 700098 (West Bengal)
Email: c.goswami@wbpdcl.co.in

Sub: Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA (20%) with total project area of 186.42 ha (Mine Lease Area is 150 ha) by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) - For Environmental Clearance (As per O.M. dated 11.04.2022-Stage I) reg.

Sir,

This has reference to your online proposal No. IA/WB/CMIN/400339/2022 dated 16th September, 2022 for grant of Environmental Clearance to the above project.

2. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance to Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal)

The project/activity is covered under category 'A' of item1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006 since General Conditions is applicable.

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 35th EAC Meeting on 26-27 September, 2022 and 37th meeting held during 17 – 18 November, 2022. through Video Conferencing. The details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meetings, are given as under:

(i) The project area is covered under Survey of India Topo Sheet No 73M/1 and is bounded by the geographical coordinates ranging from latitudes 23°48'20.812"N to 23°49'28.016"N and longitudes 87°12'20.292"E to 87°13'52.172"E.

(ii) Coal linkage of the project is proposed for STPS, Santaldih, Purulia district, KTPS, Mecheda, Purba Medinipur district, BKTPP, Bakreswar, Birbhum district, BTPS, Tribeni, Hoogly

district, SgTPP, Manigram, Murshidabad district will be use to meet various demand of power for development of the core segment such as Steel and Aluminum sector.

(iii) Joint venture cartel has been formed: NA

(iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF & CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.

(v) Employment generation: Employment to 300 persons will be provided from the project.

(vi) The project is reported to be beneficial as it will help in overcome the power demand of the country, India needs several power projects to be implemented. Till date, India's 60% power demand is fulfilled through thermal power generation. The growing demand of power for development of the other core segment such as Steel and Aluminum sector need for implementation of new power plants are inevitable. There is huge demand of coal in West Bengal for Power generation and other utility. Thus, wining of coal at the rate of 1.50 MTPA from this project is highly essential.

(vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 14th September, 2006 and its amendments vide Ministry's letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 and Transfer of EC vide letter dated 20th December, 2018 for 1.0 MTPA in mine lease area of 150 ha.

(viii) As per Office Memorandum F No lA3-22/l0/2022-IA.1 1l (E177258) dt. 07.05.2022, the application is exempted from public hearing and EIA report has been prepared and being submitted as per standard TOR.

(ix) Total mining lease area as per block allotment is 150 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Ministry of Coal on 26.09.2019.

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

Pre-mining land use details **(Area in Ha)**

S. No.	Land Use	Within ML Area(ha)	Outside ML Area (ha)	Total
1	Agricultural Land	-	--	18.42
2	Forest land			101.77
3	Waste land			64.58
4	Grazing land			-
5	Surface Water bodies			1.65
6	Settlements			
7	Other (Specify)			

Post Mining

S. No.	Type	Total area	Reclaimed Area	Un-reclaimed Area
1	External/ Quarry Area :	-		0
	(a) Backfilled Areas (b) Excavated Void	84.93 49.60	84.93 49.60	0
3	External Dump	12.78	12.78	0
4	Safety Zone	8.01	0	0
5	Road and Infrastructure	6.80	0	0
6	Garland Drains	2.29	0	0

7	Embankment	0.54	0	0
8	Others	21.47	3.13	18.34

(xi) Total geological reserve reported in the mine lease area is 10.5801 MT with 9.15 MT mineable reserves. Out of total mineable reserve of 9.15 MT, 9.15 MT are available for extraction. Percent of extraction is 45 %.

(xii) 1 seam with thickness 4.58 m are workable. Grade of coal is G8 – G12, stripping ratio 1:5 while gradient is 4 to 6 degree.

(xiii) Method of mining operations envisages by opencast mechanized method.

(xiv) Life of mine is 04 years.

(xv) The project has 1 external OB dumps in an area of 12.78 ha with 30 m height and 3.86 Mm^3 of OB. 2 internal OB in an area of 86.73 ha with 43.08 Mm^3 of OB is envisaged in the project.

(xvi) Total quarry area is 134.53 ha out of which backfilling will be done in 84.93 ha while final mine void will be created in an area of 49.60 ha with a depth of 73 m. Backfilled quarry area of 8.87 ha shall be reclaimed with plantation. Final mine void will be converted 49.60 ha.

(xvii) Transportation of coal has been proposed by in mine pit head, from surface to siding by Road and at sidings by Road and Rail.

(xviii) Reclamation Plan in an area of 134.53 ha, comprising of 12.78 ha of external dump, 84.93 ha of internal dump and 31.53 ha of green belt.

(xix) 101.77 ha of forest land have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 101.77 ha of forest land for a non-forestry purpose has been obtained vide MoEF&CC letter no 8-45/2018-FC, dated 10th April 2019.

(xx) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project. : Not Appliable

(xxi) Wildlife conservation plan for schedule – I species has been submitted to: No Schedule- I species have been found.

(xxii) The ground water level has been reported to be varying between 3.90 m BGL to 17.75m BGL during pre-monsoon and between 2.90 m BGL to 15.50 m BGL during post-monsoon. Total water requirement for the project is 80 KL.

(xxiii) Application for obtaining the approval of the Central Ground Water Authority for Ground Water Clearance has been submitted on 07.11.2006.

(xxiv) According to the Office Memorandum File no-IA3-22/10/2022-IA.III dated 11th April 2022 of MoEF&CC, Public hearing/Public consultation is exempted for the expansion project (up to 50% expansion) and F No IA3-22/10/2022-IA.III (E177258) dt. 07.05.2022 where no additional land acquisition or forest land diversion are involved. Thus, submission of draft EIA/EMP report at State Pollution Control Board is not required. Hence present EIA report is does not attract the provisions of the Public Consultation.

(xxv) Hinghloo canal is passing at a distance of 0.77 km in west direction from project site. The canal will be/not be diverted in consultation with the Water Resource Department of the State Government.

(xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to Regional office of State pollution control Board and also to regional office of MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.

(xxvii) No court cases, violation cases are pending against the project of the PP.

(xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 2007 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.

(xxix) No R & R is applicable for this proposal.

(xxx) Total cost of the project is Rs. 76.67 crores. Cost of production is Rs 76.67 crores /-, CSR cost is Rs. 15.5 Lakhs, R&R cost is not applicable. Environment Management Cost is Rs 297.72 Lakhs; Capital Rs. 88.62 Lakhs Recurring Rs. 209.10 Lakhs of all years.

(xxxi) Consent to operate (CTO) was obtained from the State Pollution Control Board on 01.08.2021 and is valid till 31.07.2026.

4. The Expert Appraisal Committee in its 37th EAC meeting held on 17-18 November, 2022 through Video Conferencing has recommended the project for grant of Environment Clearance (EC). Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for Environment Clearance (EC) to **Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA with total project area of 186.42 ha (Mine Lease Area – 150 ha) by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal)**, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions in addition to the standard environmental conditions notified by the Ministry as under :-

(i) PP to obtain the CTO for production of 1.2 MTPA production capacity from SPCB.

(ii) PP shall complete the work of ETP within 4 months and obtain the CTO by April 2023 with submission of performance report to IRO.

(iii) PP shall comply all the conditions stipulated by Ministry's EC vide its letter no. J-11015/375/2006-IA.II (M) dated 17th May 2007 and complete the non-compliance within 3 months.

(iv) Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road. No road transportation shall be conducted.

(v) PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.

(vi) PP shall install fixed fog cannon (mist sprayer) all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.

(vii) PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.

(viii) PP to obtain its pending groundwater clearance within 3 months from Ground Water Board/CGWA.

(ix) PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.

(x) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.

(xi) Progressive backfilling of mine and progressive reclamation of OB dump shall be done.

(xii) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

4.1 The grant of environmental clearance is further subject to compliance of the Standard EC conditions applicable coal washery as under

(a) Statutory compliance

(i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

(ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

(iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).

(iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

(v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.

(vi) Solid/hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

(b) Air quality monitoring and preservation

(i) Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM_{10}, $PM_{2.5}$, SO_2 and NO_x. Location of the stations shall be decided based on the meteorological data, topographical

features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

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

(iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of $PM_{10}/PM_{2.5}$) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

(v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

(vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid 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.

(vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

(c) Water quality monitoring and preservation

(i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year

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

(iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

(vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).

(viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.

(ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

(x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.

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

(d) Noise and Vibration monitoring and prevention

(i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of

HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

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

(e) Mining Plan

(i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

(ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.

(iv) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

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

(ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

(iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

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

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

(g) Green Belt

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.

(ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.

(iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

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

(v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on

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

(i) Corporate Environment Responsibility

(i) The 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.

(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.

(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 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.

(iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, 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.

(v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.

(ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

(x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

(xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

(xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

(xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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.

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.

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.

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 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.

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 judgment of Hon'ble Supreme Court.

10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

11. All other conditions stipulated in the Environment Clearance to the project under EIA Notification, 2006 Ministry's letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 and Transfer of EC vide letter dated 20th December, 2018 for 1.0 MTPA in mine lease area of 150 ha (Project Area – 186.42 ha) shall be complied

This issues with the approval of the competent Authority

(Munna Kumar Shah)
Scientist-'E'

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of West Bengal, Secretariat, Kolkata.
3. The Principal Chief Conservator of Forests, Government of West Bengal Aranya Bhawan Block No. LA-10A Sector III, Salt Lake City Kolkata, West Bengal-700098
4. The Chairman, State Pollution Control Board, Paribesh Bhavan Canteen, 10A, Broadway Rd, LA Block, Sector III, Bidhannagar, Kolkata, West Bengal 700106
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
7. The District Collector, Birbhum (West Bengal), Government of (West Bengal)
8. Monitoring File/Guard File/Record File. 9. PARIVESH Portal

(Munna Kumar Shah)
Scientist-'E'

Signature Not Verified
Digitally signed by Lalit Bokolia
Scientist F
Date: 12/27/2022 4:32:00 PM

सत्यमेव जयते

File No.: J-11015/375/2006-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **12/10/2023**

To,

CHANCHAL GOSWAMI
THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
WBPDCL BIDYUT UNAYAN BHAVAN SALTLAKE SECTOR - III LA BLOCK, Kolkata,
KOLKATA, WEST BENGAL, 700106
sudeepwbpdcl@gmail.com

Subject: **Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) – For Environmental Clearance – reg.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/WB/CMIN/433704/2023 dated 04/07/2023 for grant of prior Environmental Clearance (EC) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23A0101WB5676217N
(ii) File No.	J-11015/375/2006-IA-II(M)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vi) Sector	Coal Mining
(vii) Name of Project	GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINE
(ix) Location of Project (District, State)	BIRBHUM, WEST BENGAL
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	No

3. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance to Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of

186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum(West Bengal).
The project/activity is covered under category 'A' of item1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006 due to its location fall within 5 km from interstate boundary of West-Bengal and Jharkhand.

4. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 47th meeting held during 21-22 July 2023 and 49th meeting held on 29th August, 2023 through Video Conferencing The details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meetings, are given as under:

1. The project area is covered under Survey of India Topo Sheet No.73M/1 and is bounded by the geographical coordinates ranging from 23° 48' 20.812" N to 23° 49' 28.016" N and longitudes 87° 12' 20.292" E to 87° 13' 52.172" E.
2. Coal linkage of the project is proposed for coal use for various thermal power plants.
3. Joint venture cartel has not been formed.
4. Project does not fall in the Critically Polluted Area (CPA), where the MoEF & CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
5. Employment generation, direct employment to 380 Persons will be provided from the project.
6. The project is reported to be beneficial in terms of economical benefits to the state by the way of Royalty from minerals and to the local people by way of direct and secondary employment opportunities.
7. Earlier, Environment Clearance Integrated Gangaramchak Gangaramchak-Badulia Coal Mine Project (1.0 MTPA) located at village Bastabpur, Tehsil Khoyrasole, District Birbhum, West Bengal was granted vide letter dated 17.05.2007. Later, the said EC was transferred to M/s The West Bengal Power Development Corporation Limited (WBPDCL) vide letter dated 20.12.2018 for 1.00 MTPA in ML area of 186.42 ha. EC for expansion in Capacity under Ministry's OM dated 11.04.2022 was subsequently granted on 27.12.2022 from 1 MTPA to 1.2 MTPA in mine lease area of 186.42 ha.
8. Terms of Reference granted on 29.11.2022 vide letter no.- J-11015/375/2006-IA-II(M) and amended on 01.06.2023 (for EC proposals)
9. Total mining lease area as per block allotment is 186.42ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Coal Controller Organization, Ministry of Coal, Govt. of India on 16th Nov, 2022.
10. Total geological reserve reported in the mine lease area is 10.58 MT with 9.15 MT mineable reserves. Out of total mineable reserve of 9.15 MT, 9.15 MT are available for extraction. Percent of extraction is 86.48 %.
11. One seam with thickness ranging from 0.95 - 8.90 m is workable. Grade of coal is G11, stripping ratio is 5.2297 (in m3 /te), while gradient is 426 Degree.
12. Method of mining operations envisages by opencast mining method.
13. Life of mine is 3 years.
14. The project has one external OB dumps in an area of 12.78 ha.
15. Total quarry area is 141.92 Ha out of which backfilling will be done in 127.92ha while final mine void will be created in an area of 14.0 ha with a depth of 90m. Backfilled quarry area of 127.9 ha shall be reclaimed with plantation. Final mine void will be converted water body.
16. Transportation of coal has been proposed by in mine pit head, from surface to siding by road and at sidings by rail.
17. Reclamation Plan in an area of 186.42 ha, comprising of 12.78 ha of external dump, 5.8Ha of top soil dump and 14.0ha of excavated void. In addition to this, an area of 8.01ha, included in the safety zone/rationalization area, has also been proposed for green belt development.

18. 101.77 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 101.77ha of forest land for non-forestry purposes has been obtained vide MoEF&CC F.No.8-45/2018-FC dated 29th Oct, 2020.

19. Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project - NO

20. No mammals, amphibians, reptiles, and avian fauna found during the study period doesn't come under the **Schedule-I category** as per Wildlife Protection Act, 1972

21. The ground water level has been reported to be varying between 15.60m to 17.75m during pre-monsoon and between 13.85m to 15.50m during post-monsoon. Total water requirement for the project is 150 KLD.

22. Application for obtaining the approval of the Central Ground Water Authority for 1200 m^3/hr has been submitted on 30.06.2016.

23. Public hearing for the project of 3.0 MTPA capacity in an area of 186.42ha was conducted on 06.02.2023 at 12.00 Noon, under the Chairmanship of IAS, ADM (Gen.). Major issues raised in the public hearing including appropriate action plan has been attached in **Annexure-II**.

24. Consent to Operate for the existing capacity was obtained from the State PCB on. 30.07.2021 and is valid till 31.07.2026.

25. Hingla River is flowing boundary of lease. The river will not be diverted.

26. Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to SPCB, West Bengal and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.

27. No court cases, violation cases are pending against the project of the PP.

28. The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.

29. The project doesn't involve any project affected families.

30. Total cost of the project is Rs. 111.5 crore. Cost of CSR is Rs.100 lakh, Capital, cost is Rs 278 lakhs & Recurring cost is Rs 77 lakhs.

31. M/s Bengal Emta Coal Mines Ltd. has obtained EC for production of 1 million TPA coal from MoEF vide letter no.- J-11015/375/2006-IA-II. (M), dated 17th May, 2007 and subsequently EC was transferred to M/s West Bengal Power Development Corporation Ltd. (WBPDCL) on 20th Dec., 2018.

32. The Mines has obtained EC in favour of the project for capacity expansion of 1.20 MTPA on 27.12.2022 as 1st Stage of the OM dated 11.04.2022.

33. Environmental Baseline data was generated in the Summer season from From- 01/03/2022 to 31/05/2022 (Summer Season) at 8 locations. The result indicates that the maximum and minimum values are 50.12 to 90.58 µg/m^3 for PM10, 22.62 to 58.13 µg/m3 for PM2.5. The SO2 concentrations are in the range of 4.31 to 9.81 and NOx in the range of 9.18 to 18.15 µg/m^3.

- The incremental increase is projected to be 17.33 µg/m^3 for PM10, 7.26 µg/m^3 for PM2.5. The value of total GLC is estimated to be 105.02 µg/m^3 for PM10, 64.62 µg/m^3 for PM2.5. The observed pollutant levels are compared with CPCB National Ambient Air Quality Standards
- Surface water Monitoring was done at 3 locations. The result indicates that the pH value in the range of 7.24 to 7.8, dissolved oxygen in the range of 6.40 to 7.20 mg/l, total Arsenic found to be BDL (<0.01), total dissolved solids ranged 280 to 402 mg/l, total hardness in range of 110.0 to 172.0 mg/l. Surface water

samples have Coli forms ranges between 123.6 to 267.8 MPN/100 ml and contaminated due to surface runoff entering these sources.

4. The Expert Appraisal Committee in its 49th EAC meeting held on 29th August, 2023 through Video Conferencing has recommended the project for grant of Environment Clearance (EC). Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for Environment Clearance(EC) to **Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum(West Bengal)**.under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions in addition to the standard environmental conditions notified by the Ministry as per Annexure I.

Copy To

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Deputy Director General of Forests, Integrated Regional office, Kolkata IB -198, Sector III Salt Lake City, Kolkata 700106
3. The Secretary, Department of Environment & Forest, Government of West Bengal, Secretariat, Kolkata.
4. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
5. The Chairman, West Bengal State Pollution Control Board, Parivesh Bhawan, 10 A, Block LA, Sector III, Salt Lake City, Kolkata- 700098Mumbai – 2
6. The District Collector, **Birbhum,** Government of **(West Bengal)**
7. Monitoring File 8. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Mining of minerals)

1. Specific condition

S. No	EC Conditions
1.1	*PP shall obtain CTE/CTO from State Pollution Control Board for 3.0 MTPA production capacities for open cast operation.*
1.2	*PP shall install mechanized equipment as much as possible within the mine in order to reduce the dust emission.*
1.3	*Dedicated concrete Road with length of 15.2 km and 12 mt width from mines to Railway siding by October 2023 with fixed sprinkling system at every 500m, away from the villages and sensitive location like school and hospitals shall be constructed to transport the coal prior to the start of the mining operation. Further 10 mts width of tree plantation shall be conducted to mitigate the vehicular and dust emission on both side of road.*

S. No	EC Conditions
1.4	*ETP shall be operationalized and its output result should be monitored regularly and its performance report be submitted IRO.*
1.5	*As proposed, after commissioning of CAAQMS by October 2023 the online data shall be shared with SPCB and CPCB.*
1.6	*PP shall maintain the sufficient distance of at least 150m from ML boundary to Hindo river dam. PP shall construct Garland drain & Toe Wall all around the OB dump site and sufficient height of Toe wall should be provided around the dump towards Hindo river.*
1.7	*Mine water should not allowed to flow into the near Hindo river dam and the quality of river water shall be monitored on six-monthly basis.*
1.8	*PP should not dump the Over burden outside the ML area, all mining related activity shall be implemented concurrently with the stipulation given in mine plan.*
1.9	*PP should not dump overburden towards the Hindo river dam. PP shall complete thick plantation towards the Hindo river dam.*
1.10	*PP shall place atleast 6 nos. of fog canon at proper place in order to arrest the dust emission and working report shall be submitted to IRO.*
1.11	*PP shall submit the Hydrological study report for the near Hindo river Dam to IRO within 12 month.*
1.12	*PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only till the completion of mechanization in the ML area.*
1.13	*PP shall submit the Copy of NOC for withdrawal of groundwater from the concerned authority within six month to IRO, MOEF&CC.*
1.14	*PP shall implement the activities-wise proposed budget of Rs. 278 lakhs and total recurring cost for the entire life of the mine (3 years) is Rs. 77 lakh/year (as EMP cost) in time bound manner mentioned above para 49.3.2 of minutes. The details of annual expenditure incurred shall be part of report to be submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, and continued as a part of CSR budget.*
1.15	*PP shall implement the time bound action plan with budget against issues raised in Public Hearing in time bound manner as mentioned above para 49.3.2 of minutes. The details of annual expenditure incurred shall be part of report to be submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, and continued as a part of CSR budget.*
1.16	*Capital cost of Rs. 1680 lakhs as part of Mining Closure activities shall be implemented concurrently with stipulation given in mine plan for Gangaramchak Bhadulia Coal Mine Project. Mine closure is required to be implemented concurrently with stipulation given in mine plan.*

S. No	EC Conditions
1.17	*2 water harvesting pond shall be created separately to recharging the ground water and usage of project affected families.*
1.18	*PP shall monitor regularly water levels in open dug wells located in village and by establishing Piezometer to ascertain the impact of mining over ground water table and to plan mitigative measures to recharge the area.*
1.19	*Main haul road in the mine shall be provided with permanent water sprinklers, and other roads shall be regularly wetted with water tankers fitted with sprinklers. Also PP shall install Mist Cannon Dust Suppression Systems (distance 80-100 mtrs.) at Coal Stock Yard to suppress the dust particles.*
1.20	*Garland drains (2mX3m) or of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year.*
1.21	*Check dams shall be constructed at required locations within drains to arrest eroded materials and settling ponds shall be constructed to treat mine discharge water inside the mine block.*
1.22	*Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps.*
1.23	*Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development. Wastewater from the HEMM washing/ workshop will be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development.*
1.24	*Dumping of OB shall maintain distance of about 200 mts from any habitation and additional Greenbelt development/plantation (atleast 8 to 10 ft trees) shall be carried out at the periphery of the mine lease area as well as in the adjacent area of village.*
1.25	*PP shall limit the activities of mining in its mine lease area only. No OB Dumping and infrastructure activity should be proposed and dumped on forest land. Accordingly revised Mine Plan should be submitted (if required) and submitted to Ministry.*
1.26	*PP shall make use of advanced computer simulation techniques for design and execution of blasting operation in the mine. PP shall make use of Electronic Delay Detonators for optimal blasting in coal and OB rock to minimize the environmental impacts of blasting such as ground vibration, fly rocks and excessive dust generation.*
1.27	*PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc.*
1.28	*PP shall reduce the carbon footprint after sequestration of CO_2. IRO will review the progress of CO_2 sequestration. The process of sequestration of CO2 will include the planting trees, by "Developing carbon capture and storage (CCS) technologies" and implementation of renewable energy. Further, PP shall carry out enough plantation to ensure carbon sequestration lost due to deforestation and other fossil fuel based activities.*
1.29	*PP shall create a "Public Grievance Redressal and Monitoring System" for resolving any issues*

S. No	EC Conditions
	related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on "Public Grievance Redressal and Monitoring System.
1.30	*PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.*
1.31	*PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.*
1.32	*The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.*
1.33	*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.*
1.34	*PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
1.35	*Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
1.36	*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.*
1.37	*PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.*
1.38	*Union of India &Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.*
1.39	*PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.*

Standard EC Conditions for (Mining of minerals)

1 Statutory compliance

S. No	EC Conditions
1.1	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.
1.2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.3	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. TThe implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
1.4	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 prior to start/commencement of mining operations/production
1.5	The project proponent shall obtain the necessary permission from the Central Ground Water Authority
1.6	Solid/hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.
1.7	Permission of power supply to be taken from the concerned authority for meeting power demand of the project site.
1.8	The maximum production or peak production at any given time shall not exceed the limit as prescribed in the EC.
1.9	Validity of Environment Clearance is as per life of the mine mentioned in EC letter or 30 years as per EIA Notification, 2006 and its amendments therein
1.10	All the conditions stipulated in previous Environment Clearance conditions should be strictly complied within certain timeline

2 Air quality monitoring and mitigation measure

S. No	EC Conditions
2.1	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 PM10, PM2.5, SO2 and NOx. 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. The new CAAQMS should be installed with expansion.
2.2	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal

S. No	EC Conditions
	Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
2.3	Transportation of coal, to the extent, if permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun/ Fog cannon etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
2.4	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
2.5	PP to install solar lights along the road used for transportation of coal to avoid the accidents at night and also seek its maintenance.
2.6	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.
2.7	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.
2.8	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.
2.9	Adequate measures on EMP should be analyzed on annual basis to assess the trend of air pollution data from continuous monitoring station and quarterly report shall be generated and submitted with 6 monthly compliance reports to RO, MoEF&CC.
2.10	Effective safeguard measures for prevention of dust generation and subsequent suppression like regular water sprinkling shall be carried out in areas prone to air pollution. The Fugitive dust emission from all sources shall be regularly controlled by installation of required equipment’s. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB
2.11	Adequate number of Fog canon (mist sprayer) shall be installed to reduce the impact of air pollution at dust generating sources with time bound action plan.
2.12	PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.

S. No	EC Conditions
2.13	Post environmental closure third party monitoring by reputed instituted in air quality, water, land & soil etc shall be carried out and analysed with EMP measures at regular interval. A suitable recommendation in this regard, shall be furnished to IRO, MoEF&CC for compliance. The data used for analysis shall be obtained from continuos AQMS, site specific water regime. Also third party shall analyses the implementation of river diversion, meeting to the requirement of project report.
2.14	Comparison of average monthly temperature of pre and post mine operation after obtaining EC shall be elaborated for post three years and a record to be maintain at regular interval.

3 Water quality monitoring and mitigation measures

S. No	EC Conditions
3.1	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
3.2	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-lA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
3.3	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.
3.4	Monitoring of water quality upstream and downstream of river including pons, lakes, tanks 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.
3.5	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.
3.6	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
3.7	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming

S. No	EC Conditions
	to the specific requirement (standards).
3.8	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
3.9	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.
3.10	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
3.11	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 rivarine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.
3.12	Quality of polluted water generated from the operations which include COD and acid mine drainage and metal contamination shall be monitored along with TDS, DO, TSS. The monitored data shall be uploaded on the website of the company as well as displayed at the site in public domain.
3.13	Domestic water shall be providing to the residents/villages which are coming under the zone of influence of the project due to ground water extraction and mining operation by installing adequate number of RO plants with proper supply line and Taps within 2 years
3.14	No obselete technologies for sewage treatment shall be implemented. Construction of Sewage Treatment Plant with latest technology should be completed within 2 years and treated water shall be reused for plantation. CTE and CTO of STP shall be obtained as per the norms.

4 Noise and Vibration monitoring and prevention

S. No	EC Conditions
4.1	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.
4.2	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

S. No	EC Conditions
4.3	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.

5 Mining Plan

S. No	EC Conditions
5.1	5- Star Rating is mandatory to obtaine certification as per guidelines of Mininstry of Coal
5.2	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
5.3	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).
5.4	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
5.5	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.
5.6	PP shall adopt mining method by preferably using surface miners for the project and silo loading through in-pit conveyor should be adopted
5.7	Tranportation of coal till Railway Siding shall be developed to avoid transportation through Road

6 Land Recalmation

S. No	EC Conditions
6.1	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).
6.2	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
6.3	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/”post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

S. No	EC Conditions
6.4	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
6.5	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
6.6	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.
6.7	Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust
6.8	Progressive backfilling of mine and progressive reclamation of OB dump shall be done
6.9	Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
6.10	PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads/ manufacture of artificial sand, aggregates/ use for farmers etc.)
6.11	All approach roads to mine and all other roads which are in regular use should be black topped. The maintenance of road shall be done by PP in collaboration with state government
6.12	Hon’ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent”. The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC

7 Green belt

S. No	EC Conditions
7.1	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
7.2	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads. And Plantation should also be carried out in nearby area with consent of forest department and gram panchayat within 10 km radius with its proper maintanance

8 Public hearing and Human health issues

S. No	EC Conditions
8.1	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 & it's RO on six-monthly basis.
8.2	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.
8.3	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.
8.4	Implementation of the time bound 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 time bound 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.
8.5	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.I1 (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'.
8.6	PP to conduct need based assessment survey of the area to for in order to decide the activities to be carried under the CSR and to provide detail of the activity carried out with adequate budgetary provision and time bound action plan.
8.7	PP should conduct epidemiology study to (analysis of the distribution, patterns and determinants of health and disease conditions in defined populations).
8.8	Permanent Health care facilities of Hospital should be established within 5 km of project boundary

S. No	EC Conditions
	for the local people.
8.9	PP must ensure an emergency action plan during pandemic in order to provide assistance to the nearby villages located within the 10 km radius buffer zone (If required)
8.10	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
8.11	PP to take measure for installation of Renewable Energy sources in nearby area falling within 10 km radius
8.12	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
8.13	Adequate facility of drinking water, plantation and other social amenities should be provided to established R&R villages.
8.14	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.
8.15	Compensation of the land acquired for the project shall be settled as per the R&R Policy within fixed timeline

9 Corporate Environment Responsibility

S. No	EC Conditions
9.1	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.
9.2	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.
9.3	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.
9.4	Self environmental audit shall be conducted annually. Every three years third party environmental

S. No	EC Conditions
	audit shall be carried out.
9.5	PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority

10 Miscellaneous

S. No	EC Conditions
10.1	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.
10.2	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.
10.3	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.
10.4	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.
10.5	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.
10.6	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.
10.7	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
10.8	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10.9	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.
10.10	No further expansion or modifications in the plant shall be carried out without prior approval of the

S. No	EC Conditions
	Ministry of Environment, Forests and Climate Change.
10.11	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.
10.12	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
10.13	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
10.14	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.
10.15	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.

Additional EC Conditions

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.

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.

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.

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 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.

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 judgment of Hon'ble Supreme Court.

10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

11. All other conditions mentioned in Environment Clearance granted by Ministry vide its letter dated 17.05.2007, 20.12.2018 and 27.12.2022 shall remain unchanged.

This issue with an approval of the Competent Authority.

Annexure 2

Details of the Project

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>a.</td><td>Details of the Project</td><td>GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINE</td></tr>
<tr><td>b.</td><td>Latitude and Longitude of the project site</td><td>23.8057811139,87.2041974109
23.8263243039,87.2311588889</td></tr>
<tr><td>c.</td><td>Land Requirement (in Ha) of the project or activity</td><td><table><tr><th>Nature of Land involved</th><th>Area in Ha</th></tr><tr><td>Non-Forest Land (A)</td><td>84.95</td></tr><tr><td>Forest Land (B)</td><td>101.77</td></tr><tr><td>Total Land (A+B)</td><td>186.42</td></tr></table></td></tr>
<tr><td>d.</td><td>Date of Public Consultation</td><td>Public consultation for the project was held on 2023-02-06</td></tr>
<tr><td>e.</td><td>Rehabilitation and Resettlement (R&R) involvement</td><td>NO</td></tr>
<tr><td>f.</td><td>Project Cost</td><td>176.67</td></tr>
<tr><td>g.</td><td>EMP Cost</td><td>278</td></tr>
<tr><td>h.</td><td>Employment Details</td><td>380</td></tr>
</table>

Details of Minerals Products & By-products

Name of the Mineral to be mined	Classification of mineral [Major/Minor]	Production capacity in MTPA	Remarks
Coal	Major	3.0	

Annexure in EC

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

Pre-mining land use details (Area in Ha)

S. No.	Land Use	Within ML Area	Total
1	Agricultural Land	18.42	18.42
2	Forest land	101.77	101.77
3	Surface Water Bodies, Road	1.65	1.65
4	Barren Land	64.58	64.58
	Total Project Area =	**186.42**	**186.42**

Post Mining

Type	Land Use (Proposed)	Land Use (End of life)	Land Use (Post Closure)						
			Agriculture Land	Plantation	Water Body	Public Use	Forest Land	Undisturbed	Total
Excavation Area	141.90	--	--	--	--	--	--	--	--
Backfilled Area	--	127.9	--	35.90	--	--	92	--	127.9
Excavated Void	--	14.0	--	--	10.0	--	4.0	--	14.0
Top Soil Dump	5.8	5.8	--	5.8	--	--	--	--	5.8
External Dump	12.78	12.78	--	12.78	--	--	--	--	12.78
Safety Zone	8.01	8.01	--	2.24	--	--	5.77	--	8.01
Road & Infrastructure	2.24	2.24	--	--	--	2.24	--	--	2.24
Garland Drain	1.44	1.44	--	--	--	1.44	--	--	1.44
Undisturbed	14.25	14.25	--	--	--	--	--	14.25	14.25
Total	**186.42**	**186.42**	**---**	**56.72**	**10.0**	**3.66**	**101.77**	**14.25**	**186.42**

Commitment made by the Project Proponent to address the Public Hearing as in the following table:

S. No.	Particulars	Year-1 (in lakhs)	Year-2 (in lakhs)	Year-3 (in lakhs)	Annual Cost (Rs in lakhs)
1.	Assist in Yearly Maintenance of Electricity in nearby villages	5.0	5.0	5.0	15.0
2.	Cost of Supply of drinking water with 2 more tankers along with existing 4 tankers	8.0	8.0	8.0	21.0
3	Construction of road to Sagarbhanga village, repairing of Chanditala to Bhadulia road and annual maintenance of these two roads	80.0	10.0	10.0	100.0
4	Delisting of two ponds annually in the nearby villages	5.0	5.0	5.0	15.0
5	Supply of study materials & sports equipments to two schools of the locality every year	4.0	4.0	4.0	12.0
6	Construction and maintenance of football field in Bhadulia village	5.0	1.0	1.0	7.0
7	Deployment of one more tanker along with 2 existing for water sprinkling to minimize dust pollution	15.0	12.0	12.0	39.0
	Total	**122**	**45**	**45**	**209**

ANNEXURE-5

IA-J-11014/112/2022-IA-I
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division
***

Indira Paryavaran Bhavan,
Jor Bagh Road, New Delhi-110 003
Dated: 25th November, 2022

Office Memorandum

Sub:- Standard Operating Procedure (SOP) for Post Environmental Clearance Monitoring and Compliance of the project -reg.

Background

The Ministry has established 19 Integrated Regional Office (IROs) vide Notification No. 1-5/2013-ROHQ dated 13th August, 2020 with a view to achieving mandated outcomes related to Monitoring and Compliance of the project in an improved, timely and effective manner.

2. As far as monitoring and compliance of EC conditions are concerned, as per para 10 of the EIA Notification, 2006, it is mandatory for the project proponent to submit half-yearly compliance reports in respect of the stipulated EC conditions to the Ministry and its Integrated Regional Offices (IROs).

The prescribed SOP wrt the Monitoring & Compliance is as given below:

1. **IROs undertake inspection of the unit, with respect to the following scenarios:**

i. IRO identifies ambiguity in half-yearly compliance reports with respect to the stipulated EC conditions submitted by Project Proponent (PP).
ii. PP request IRO for issuance of Certified Compliance Report (CCR) in order to apply for expansion of the project under EIA, Notification 2006.
iii. Complaint received against the project.
iv. Direction from the Ministry based on PMO/VIP/PG/RTI etc. references.
v. Random Inspection of projects.
vi. Direction from Hon'ble court in various Court Matter.

2. Based on the observations during Monitoring IRO seeks Clarification/Action Taken Report (ATR) to the PP and submit Monitoring Report along with the clarification letter to the Ministry.

3. If PP fails to respond to it a reminder letter is sent by IA-Monitoring Cell allowing PP to submit ATR in 15 days.

4. **Action on the Monitoring Report by the Monitoring Cell:** Monitoring Cell of Ministry analyse the monitoring report submitted by IRO. Based on the observed Major and Minor partial/non-compliances clarification/ATR, if necessary, is sought from Project Proponent with direction to submit the response within a period of Thirty (30) days. If PP fails to submit the response of clarification/ATR letter within the time line period, a reminder letter as warning issued to the PP.

5. The response submitted by PP is examined in the Ministry and the Action taken report submitted by PP is sent to IRO for further verification. Based on IRO's verification report following actions are contemplated:

i. If no satisfactory action has been taken by the PP and EC conditions are yet to be complied Ministry may issue Show-Cause Notice under the Section 5 and other provisions which may include Section 15 and 19 of the Environment (protection) Act, 1986.
ii. If it is observed that the non-compliances are not rectified, Ministry provides an opportunity to PP for clarification in personal hearing under the chairmanship of officer not below the rank of Joint Secretary. Based on the outcome of the personal hearing if necessary, direction for Compensation/Suspension of EC may be issued.
iii. If it is observed that PP has taken credible action to comply with the condition and the action is expected to be completed with some additional time, Ministry grant additional time in which actions are expected to be completed by PP to fully comply with the conditions mentioned in the EC and submit the compliance report duly verified by concerned IRO to the Ministry.
iv. If it is observed that PP has now complied with all the conditions and the same has been confirmed in the verification report, Ministry issues Action Closure Letter (ACL) to the PP with direction to continuously submit six monthly compliance report on time.
v. If it is observed that PP has violated the provisions of EIA Notification, 2006 and attracts the provisions of SOP dated 07.07.2022, Monitoring Cell intimates the concerned sector for taking appropriate action as deem fit.

6. **Action after issuance of Show Cause Notice:**

i. Monitoring Cell of the Ministry prescribes a time line of Fifteen (15) days or Thirty (30) days for submission of reply of SCN based on the gravity of non-compliances. If PP fails to submit the response of SCN within the prescribed time period, if necessary, a warning letter may be issued.
ii. The response to SCN submitted by PP is examined in the Ministry and if found necessary the reply submitted by PP is sent to IRO for further verification. Based on IRO's verification report following actions are contemplated:

a) If it is observed that PP has now complied with all the conditions and the same has been confirmed in the verification report, Ministry issues ACL to the PP with direction to continuously submit six monthly compliance report on time.

b) If it is observed that the non-compliances are not rectifiable, Ministry provides an opportunity to PP for clarification during personal hearing under the chairmanship of officer not below the rank of Joint Secretary. Based on the outcome of the personal hearing if necessary, direction for Compensation/Suspension of EC may be issued.

7. **Action in other scenarios:**

i. If it is observed that there is imminent risk to the environment and health due to noncompliance by the PP, SCN with time line of Fifteen (15) days is issued to PP. If PP fails to submit the response of SCN within the prescribed time period, if necessary

a warning letter may be issued otherwise after Fifteen (15) days personal hearing may be conducted under the chairmanship of officer not below the rank of Joint Secretary.

ii. Based on the outcome of the personal hearing if necessary, direction for Suspension of EC or other prescribed action under EPA may be issued.

iii. If it is observed that due to non-compliance, accident has already been taken place, Ministry may immediately suspend the EC of the project till all the conditions are complied and duly verified by concerned IRO.

(Dr. Shruti Rai Bhardwaj)
Addl. Director/Scientist 'E'

Encl.: As above

To,
All Concerned

Copy for information to:

1. PS to Hon'ble Minister for Environment, Forest and Climate Change
2. PS to Hon'ble MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to DGF&SS (EF&CC)
5. PPS to AS (TK)/PPS to JS(SKB)
6. Guard File/Spare Copies
7. US(IT)/Consultant(IT)

ANNEXURE-6

URGENT
Speed Post/Online

File no. IA-L-11011/5/2025-IA-I
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. compliance and Monitoring Division)
*****

Indira Paryavaran Bhavan
Jor Bagh Road, Aliganj
New Delhi-110 003
Email: bhardwaj.adiraju@gov.in
Dated: 07th February, 2025

To,

Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office - A/3,
Chandersekharpur, Bhubaneswar – 751023

Sub: O.A. No. 222/2024 [Earlier O.A. No. 1238/2024-PB] in the matter of *'News item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024'* before the NGT (EZ), Kolkata - reg.

Ref:

i. **A copy of the news item.**
ii. **A copy of order dated 03.12.2024 passed by the NGT (EZ).**
iii. **Ministry's EC letter no. J-11015/375/2006-IA.II(M) dated 17.05.2007**
iv. **Ministry's EC Transfer letter no. J-11015/375/2006-IA.II(M) dated 20.12.2018**
v. **Ministry's EC Expansion letter no. J-11015/375/2006-IA.II(M) dated 27.12.2022**

Sir/Madam,

This is in reference to the OA No. 222/2024 titled 'News item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024' pending before the NGT (EZ), Kolkata. The news item relates to the blast at a coalmine in Birbhum district, West Bengal that resulted in six fatalities and multiple injuries during the loading of explosives for mining operations. As per the news item the blast has caused significant damage to the mine site and surrounding areas, raising concerns about safety protocols and the handling of explosives in such operations. Furthermore, it is asserted that the blast occurred in the dump yard of the captive coalmine as well as the vehicle carrying the explosive was badly mangled in the blast and there were reports of bodies of the workers being badly severed.

2. In this regard, the Sub Regional Office (SRO) of the Ministry at Kolkata is requested to furnish a (i) factual status report concerning the issues raised in this matter, along with (ii) condition-wise compliance status report (s) for all the ECs associated with the project.

3. Being a Court Matter, the reports may be furnished to the Ministry at the earliest.

This issues with the approval of the competent Authority.

Enclosed: as above.

Yours Faithfully,

(Dr. Bhardwaj Adiraju)
Joint Director / Scientist 'D'

Copy to:

i. Deputy Inspector of General (c), Sub Regional Office, Kolkata IB-198, Sector- III, Salt Lake City, Kolkata – 700106.

(Dr. Bhardwaj Adiraju)
Joint Director/Scientist 'D'

सत्यमेव जयते

भारत सरकार/Government of India
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forest & Climate Change
क्षेत्रीय कार्यालय, भुवनेश्वर/ Regional Office, Bhubaneswar
उप-कार्यालय, कोलकाता/ Sub-Office, Kolkata
IB-198, Sector – III, Salt Lake City, Kolkata-700106
Phone: 033-2335-0902, E-mail: iro.kolkata-mefcc@gov.in

Nature Protects if She is Protected
LiFE Lifestyle for Environment

File No. 102-132/05/EPE/ 133 Date: 15.04.2025

To,

Dr. Bhardwaj Adiraju,
Scientist- D, Impact Assessment Division,
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan,
Jorbagh Road, Aliganj,
New Delhi –110003.
(e-mail: bhardwaj.adiraju@gov.in)

Sub: Issuance of Certified Compliance Report in respect of Environmental Clearance for
i. Expansion of Gangaramchak & Gangaramchak- Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of 186.42 ha located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) by M/s The West Bengal Power Development Corporation Limited - reg.

&

ii. Expansion of Gangaramchak & Gangaramchak- Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.2 MTPA (20%) with total project area of 186.42 ha (Mine Lease Area is 150 ha) located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) (As per O.M. dated 11.04.2022- Stage I) by M/s The West Bengal Power Development Corporation Limited - reg.

&

iii. Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project of 1 MTPA in mine lease area of 150 ha located in village Basantpur, Tehsil Khoyrasole, District Birbhum (West Bengal)- Transfer of Environment Clearance from M/s Bengal Emta Coal Mines Ltd to M/s The West Bengal Power Development Corporation Limited - reg.

&

iv. Integrated Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mine Project of (1 MTPA) located in village Basantpur, Tehsil Khoyrasole, District Birbhum (West Bengal) of M/s Bengal Emta Coal Mines Ltd - reg.

Ref: i. Environmental Clearance No. J-11015/375/2006-IA-II(M) dated 12.10.2023, 27.12.2022, 20.12.2018 & 17.05.2007.
ii. Ministry vide letter no. IA-L-11011/5/2025-IA-I dated 07.02.2025.

Sir,

I am directed to draw your kind attention to the subject and the letter under reference and to state that the above project was monitored by Dr. Shahida P. Quazi, Scientist E, Sub-Office, Kolkata, Regional Office, Bhubaneswar, Ministry of Environment, Forest & Climate Change on 11.03.2025. The factual report is enclosed as **Annexure-A** and monitoring report is enclosed as **Annexure-B**.

This is issued with the approval of competent authority.

Encl: As above

Yours faithfully,

Dr. Shahida Parvin

(डॉ. शाहिदा परवीन काज़ी/ Dr. Shahida Parvin Quazi)
वैज्ञानिक-ई / Scientist-E

डॉ. शाहिदा परवीन काजी / DR. SHAHIDA PARVIN QUAZI
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
क्षेत्रीय कार्यालय, भुवनेश्वर / REGIONAL OFFICE, BHUBANESWAR
उप-कार्यालय, कोलकाता / SUB-OFFICE, KOLKATA
आई बी-198, सेक्टर III, साल्ट लेक सिटी, कोलकाता-700106
IB-198, SECTOR-III, SALT LAKE CITY, KOLKATA - 700106

ANNEXURE -A

O.A. No. 222/2024 (Earlier O.A. No. 1238/2024-PBJ in the matter of 'News item titled "Six killed in accidental blast in Birbhum coal mine" appearing in The Hindu dated 08.10.2024' before the NGT (EZ), Kolkata-reg

The site inspection of the project {Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal)} was conducted by Dr. Shahida P. Quad, Scientist-E, Sub-Office Kolkata on 11.03.2025. During inspection officials from M/s WBPDCL (Shri Narendra Kumar, General Manager(Mining), Shri Samresh Kumar, Agent, G&GB Mine, Shri. Heera Kumar, Mines Manager, Shri Subrata Mukhopadhyay, Surveyor and Dr Sukla Saha, Asst Mgr, Environment) and MDO Shri Uttam Biswas, DGM, GSPL, Shri Tuhin Choudhury, Geologist, GSPL, Smt. Sukanya Mullick, Geologist, GSPL, Shri Bidhan Chandra Khan, Project manager, GSPL, Shri Santanu Mondal, Land Supervisor,GSPL) were present.

During monitoring it was observed that the mine was in operation. Work was also going in the back of the area where the accident had happened. Movement of few dumpers was noticed in that area through the haul road. PAs were requested to provide their preliminary report on the blasting accident. PAs have submitted a copy of the "Preliminary Fact-finding Report" prepared by the Members of Internal Safety Organization (ISO) of WBPDCL (Annexure A-1). As per the report, "an enquiry is being carried out by DGMS to find out the root cause of the accident" and that conclusion could be drawn by DGMS only after "receiving and analyzing of Testing of explosive and detonators of the same batch issued on the day of the accident". As soon as the DGMS report is available, it will be send to Ministry.

Dr. Shahida Parvin

(डॉ. शाहिदा परवीन काज़ी/ Dr. Shahida Parvin Quazi)
वैज्ञानिक-ई / Scientist-E

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

ANNEXURE- AI

Ref: WBPDCL/Director(Mining)/**1968** Date: 25.11.2024

To,
The Under Secretary to the Govt. of India,
Ministry of Coal, MPS Section,
Shastri Bhawan, New Delhi.

Kind Attention: Mr. Hitlar Singh

Sub: Fatal Accident at Gangaramchak & Gangaramchak Bhadulia Coal Mine of WBPDCL on 07.10.2024 -reg.

Ref: File No. CCSD-51022/10/2017-CCSD [E-334089] dtd. 16.10.2024 and subsequent Emails dtd. 16.11.2024 & 20.11.2024.

Sir,

As directed in your letter dated 16.10.2024 and subsequent emails dated 16.11.2024 & 20.11.2024, please find enclosed herewith the "Preliminary Fact Finding Report" regarding the fatal accident happened on 07.10.2024 at Gangaramchak & Gangaramchak-Bhadulia Coal Mine of WBPDCL.

The "Preliminary Fact-Finding Report" has been prepared by the Members of Internal Safety Organization (ISO) of WBPDCL, an independent body comprising of members from different disciplines.

Upon preliminarily enquiry and investigation backed by corroborative evidence, report thus submitted by ISO envisaged that there was no system deficiency in the mine. The report could not be finalized because of absence of certain data and information as mentioned in the ISO Report. WBPDCL is trying all out effort to get the reports and information at the earliest. On receipt of essential data/information from appropriate authorities, and further detailed investigation into the accident, the final report could be submitted depicting the root cause of the accident and responsibilities thereof, if any.

Thanking you,

Yours faithfully

Chanchal Goswami
Director (Mining)

Enclo: As stated.

Copy for kind information to:

1) CMD, WBPDCL.

PRELIMINARY FACT FINDING REPORT OF MAJOR FATAL ACCIDENT OCCURRED AT GANGARAMCHAK& GANGARAMCHAK-BHADULIA COAL MINE (G&GB) OF WBPDCL ON 07.10.2024 AT 10:32AM BY ISO,WBPDCL

BACK GROUND OF THE MINE AND PARTICULARS OF THE VICTIM

A. **GENERAL INFORMATION**

Company	WBPDCL	Area	MROD	Colliery	G&GB
Mine Code	11142	Post Office	Sagarbhanga	Police Station	Lokpur
District	Birbhum	State	West Bengal	Pin Code	731125

B. **DATE & TIME OF ACCIDENT**

Date	07/10/2024	Time	10:32AM	Shift	1st

C. **PARTICULARS OF THE PERSONS INVOLVED**

Details given in Form IV-A and IV Bare attached **in Annexure-I**

D. **DETAILS OF DEPENDANTS and COMPENSATION**

Attached in **Annexure-II**

E.1. **NAME OF THE EXECUTIVES AND OFFICIALS OF WBPDCL AND GMPL (MDO) PRESENT IN THE MINE on 07.10.2024: Attached in Annexure III**

E2: **DEPLOYMENT OF PERSONS FOR BLASTING ON 07.10.2024: Attached in Annexure IV**

F. **BRIEF DESCRIPTION OF THE MINE:**

The Gangaramchak & Gangaramchak-Bhadulia Coal Mines (G&GB) was allotted by the Ministry of Coal, Govt. of India vide Order No. 103/8/2015/NA, Dated 31/03/2015 after its de-allocation by Order of Hon'ble Supreme Court of India Dated: 24/09/2014. After obtaining all necessary statutory clearances and permissions, mining activities started in the year 2019 through M/s. Gangaramchak Mining Pvt. Ltd (GMPL) the Mine Developer & Operator (MDO). M/s. Gangaramchak Mining Pvt. Ltd. has changed its name to M/s. Goquest Solution Pvt. Ltd. (GSPL) on and from 12/8/2024 and has also engaged M/s SAAKAR as their subcontractor w.e.f. 7/2/2020.
(1) PRC: 3 MTPA,(2) Last Yr. Production: 3 Million Te (3) Current year production: 1.02 Million Te (Up to 06.10.2024) (4) Manpower deployed (man-shift): 400 (5) No of OB Bench at time accident: 2 (6) .No of Coal Bench at the time of accident: 1 (7) Pumps operating: 4 nos. (2000 Gpm, 1400 Gpm, 1760 Gpm, and 3497 Gpm)

G. **EVENTS PRIOR TO THE ACCIDENT**:

On 07/10/2024, 160 numbers of holes in the Top OB (1st OB bench) Bench and 301 holes in Lower OB Bench were drilled. 04 Excavators of, 3.1 CuM for OB production, 01 Excavator of, 3.1 CuM for Coal production and 19 Tippers of 31 Te for OB Removal were engaged. 02 Dozers of 200 HP each were

deployed in OB Dump yard and in Coal bench respectively. In top bench 16 nos of tripper and 4 Nos of Excavators were engaged for removal of OB.

Blasting officer of WBPDCL made requisition of the following explosives material after discussion with Manager as per prior planning which has been collected from the two magazines by Blasting Overman of WBPDCL.

1. **Barjora Coal Mine Magazine** bearing **License no. E/EC/WB/22/507 (E113019).**

Sl. No.	Item	Quantity	Make
1.	Cast Booster 100 gms	250 nos. (25 kg)	Regenesis Industries Pvt. Limited (RIPL)
2.	Nonel 25ms/450ms	250 nos.	SOLAR
3.	TLD 42ms	50 nos.	SOLAR
4.	Electric Detonator (ACD)	10 nos.	SRIDET

2. **Sagarbhanga, Gangaramchak Mine Magazine** bearing **License no. (E/EC/WB/22/526 (E141935)**

Sl. No.	Item	Quantity	Make
1.	Emulsion Booster 150gms	300 nos. (45 kg)	Regenesis Industries Pvt. Limited (RIPL)
2.	Electronic Detonator	200 nos	GOCL Corporation Limited
3.	Electronic Detonator	100 nos.	ELCON-D

Two Explosive vehicles/vans transported SME from supplier IDL and RIPL by vehicle No: WB 37D 0868 and TS 30 TA 5588 respectively. Detonators and Boosters had been loaded separately in explosive vans bearing No: JH 02 AM 2688 and JH 02 BQ 0713 respectively which started from the Magazine House to Mine at about 8.34 AM on 7/10/2024. Both the Explosive vans reached the mines entry gate at about 8.40 AM. Blasting Officer & Blasting Overman of WBPDCL reached the mine at about 9.00 AM by another Camper & Bolero Van.

The Explosive Vans reached the bottom OB bench for unloading of required Explosives at about 9.20 AM. After unloading the explosives at the lower bench, the explosive vans proceeded towards the top OB bench for unloading of required explosives at about 10.10 AM.

Both the explosive vans reached the top OB bench for unloading of required explosives at about 10.20 AM. The explosive van No: JH 02 BQ 0713 carrying the Boosters unloaded the Booster boxes in the top OB bench and proceeded to the lower bench as per direction of Blasting Officer at about 10.25 AM.

In the meantime, Priming had been completed in the lower bench and primed Cast Booster & Detonator had been inserted into 300 nos of holes and the loading of SME in the designated holes was in progress. At time of the blast only 11 holes had been charged with SME.

H. OCCURANCE OF ACCIDENT

After inspection of the holes, Mines Manager and one Assistant Manager was approaching towards the explosive van carrying detonators stationed at Top OB bench. Blast of detonators beside and inside the

explosive van No: JH 02 AM 2688 carrying Detonators, Nonels & Surface Connectors occurred at about 10.32 AM while unloading of the detonators and priming of the boosters at top OB bench was being carried out. Mines Manager who was about 30 to 40 M away from the site of blast fell down on the ground due to impact of blast and after getting up saw that the blast site area was fully covered with dust and smoke and he instantly rushed towards the mines office & met with Agent at the mine entry gate and informed about the incident.

I. EVENTS AFTER THE ACCIDENT AND INFORMATION THEREOF

The Welfare Officer informed The Officer-in-Charge, Lokepur Police Station about the blast at about 10.38 AM. Agent of the mine informed Director (Mining), DGMS, PESO and GM(Mining) immediately. Director (Mining) informed Chairman & Managing Director, WBPDCL and immediately rushed to reach the Gangaramchak & Gangaramchak-Bhadulia Coal Mines from Kolkata.

The Officer-in-Charge, Lokepur Police Station along with his police force reached the place of occurrence at about 10.50 AM. A huge number of local people started gathering at the site of the mines which was being controlled by the Officer-in-Charge, Lokepur Police Station. After being informed by GM (Mining), MROD, WBPDCL, Superintendent of Police, Birbhum along with Additional Superintendent of Police reached the site and controlled the mob by convincing them that fair compensation other benefits would be paid to the families of the deceased.

J. RESCUE AND RECOVERY WORK

03 nos. of persons were injured in the accident. Payloader Operator Sri Birendra Kumar Mahato was called on to push the explosive van from behind to release the hand of one of the injured person that had got stuck beneath the front wheel tyre of the van. After pushing about 2 feet the injured person was rescued.

The 3 nos. of injured persons were immediately rescued and sent to Suri Sadar Hospital with the help of persons present there at about 11.30 AM. The deceased and their body parts were recovered by OC, Lokepur PS with the help of person present at the site of accident and sent for post mortem to Suri Sadar Hospital at about 5.00 PM. Police informed Agent, G&GB Mine that Eight (08) no. of workers, who were present at the site of accident , were found dead at about 5.30 PM. OC, Lokepur marked the location of the dead bodies / body parts of the victims on the ground at the site of accident at about 6.00 PM.

K. SEQUENCE OF EVENTS AFTER THE BLAST

It was observed that all most all the boosters and detonators sent to the Upper bench were blasted/ damaged in the accident, either in the van or outside the van. A local depression took place besides the rear tyres on the opposite of the explosive van. One drilled hole was found deformed. One dumper carrying OB was stranded near about 6 ft away beside the exploded explosive van. The camper carrying worker was stranded in front of blasted explosive van at a distance of about 20 ft. The SME Van was about 200 m away from the place of occurrence.

L. ACTION BY STATE & CENTRAL AUTHORITIES

- Police officials registered an FIR and necessary proceedings are underway.
- Directorate General of Mines Safety (DGMS) officials inspected the accident site and started enquiry by issuing Notice of Enquiry from next day onwards as per Mines Act 1952.
- Petroleum and Explosives Safety Organization (PESO) officials inspected the site of accident.
- Coal Controller's Organization (CCO) under Ministry of Coal inspected the accident site.
- Central IB Officials also inspected the site.
- State Forensic Department inspected the site and collected sample for investigation.

- Internal Safety Organization (ISO), WBPDCL team started fact finding enquiry (As per clause no. 104 of CMR'2017).
- Officer in Charge, Dubrajpur P.S., appointed as Investigating Officer (IO), started enquiry into the accident.

M. INVESTIGATION INFERENCES (CORROBORATED WITH EVIDENCE)

After investigation and corroborating evidences, the following are the observations of the ISO investigating team:

i. The Mine Management has taken all due diligence to ensure safety provisions in the mine which has been substantiated as below:
a. Preparation of Safety Management Plan and its periodical review for implementation wherein identification of principal Hazards and the Major Risk associated with all mining activities, preventive and mitigative measures to be taken for safety of the mine and the person working therein .(Copy Attached in annexure VI)

b. Proper SOP for handling of explosives (as part of SMP implementation) has been prepared, distributed and explained to concerned persons and regularly discussed in Safety Committee Meeting for its implementation and review thereof.
The statements(evidences) of Blasting Officer, Blasting Overman, Workmen Inspector ,Blasting Helpers etc has been corroborated by interrogating them (Copy attached VII)

c. Transportation of Detonators and Booster in separate explosive vans from Magazine to Mine.
The statements(evidences) of Magazine Incharge, Magazine Clerk, Blasting Officer, Blasting Incharge, Overman, Workmen Inspector ,Blasting Helpers etc has been corroborated by interrogating them (Copy attached VII)

d. prohibition of carrying Mobile phones and contrabands by persons engaged in handling of explosives:
The statements(evidences) of Blasting Officer, Blasting Incharge, Overman, Workmen Inspector ,Blasting Helpers etc has been corroborated by interrogating them (Copy attached VII)

e.Use of two type of explosives in the same hole. Standing order framed by manager and implemented
The statements(evidences) of Blasting Officer,Blasting Incharge,Overman,Workmen Inspector has been corroborated by interrogating them (Copy attached VII).

f. Priming of booster and detonators near each hole for insertion and initiation.
The statements(evidences) of Blasting Officer,Blasting Incharge,Overman,Workmen Inspector ,Blasting Helpers etc has been corroborated by interrogating them (Copy attached VII)

i. Owner has authorized deemed Agents from WBPDCL and MDO stating their responsibilities and duties on behalf of owner in respect of providing adequate statutory and competent manpower, procurement of safety materials, Supervision for Safe Operations of Mine as per provisions of Statute. Adequate Statutory Manpower has been provided to supervise the safe operation of the mine.(copy attached VIII)

ii. All the competent persons have been authorized by Manager to perform the duties as per provisions of statute.(Sample copy attached as reference IX)

iii. The Blasting crew was imparted VT for safe handling of Explosive (Sample copy attached as reference X)
iv. Regular Pit Top Safety Talk and Safety Committee Meeting is being conducted (Sample copy attached as reference XI)
v. Mock Rehearsal for compliance of Emergency Response Plan is conducted (Sample copy attached as reference XII)
vi. However, an enquiry is being carried out by DGMS to find out the root cause of the accident and responsibilities thereof. DGMS requires the following information and documents to conclude investigation/enquiry process and come out with final conclusion of the cause and responsibilities of the accident:

- The Testing report of the Electric Detonators, Electronic Detonators, Cast Booster and Emulsion Booster of the same batches which are involved in the Blast and led to accident. WBPDCL is trying hard to get the explosive and its accessories of the same batch involved in accident tested from Govt. Lab. Due to non-availability of detonators of the same batch, PESO is being pursued for information about the availability of explosive of same batch which under their domain. Further, for testing CIMFR and PESO have been contacted for modality etc Immediately after getting the information from PESO, WBPDCL will get it tested as required by DGMS. (Chronology of action taken for testing is attached in **Annexure XIII)**

- Further, Post Mortem Report, DNA test report is also required to complete the enquiry which is yet to receive. The same has been sought from district authority (copy attached in annexure XIV)

The final enquiry report of ISO can be submitted after gathering all the above information/reports

N. CONCLUSIONS/FINDINGS

A conclusion to the cause and circumstances leading to the accident can be drawn, only after receiving and analyzing of Testing of explosive and detonators of the same batch issued on the day of accident along with Post Mortem and DMA test reports of Victims.

Inferences drawn by the ISO Investigating team so far, based on corroborative evidence points to the fact that there exists a system for:

a. Transportation of Detonators and Booster in separate explosive vans from Magazine to Mine with due checking by Blasting Officer, Blasting Overman of WBPDCL;
b. implementing the prohibition of carrying Mobile phones and contrabands by persons engaged in handling of explosives;
c. use of two type of explosives in the same hole in accordance with the Standing order framed by manager;
d. Priming of booster and detonators near each hole for insertion and initiation as per SOP framed by Mine Manager.
e. Blasting crew was imparted VT training

ENCLOSURES

(i) Mine Plan
(ii) Two Site plan of the accident
(iii) Copy of Form –IV A ,IVB and IV C
(iv) Copy of Standing Order/SOP/SMP
(v) All the annexures as above

Signature of the ISO committee members of WBPDCL:

Aloke Kumar Nath
Consultant(Mining)

Sarathi Sengupta
GM(Mining)

Rudra Bhanu Gupta
AGM(HR & A)

Dr. Swaraj Deb
Dy. Chief. Medical Officer

Subhas Chandra Ghosh
Sr Manager (F & A)

Chiranjit Mondal
Elect Engg

Upendra Kumar
Surveyor

FORM IV - A

(See Regulation 9)

Notice of Accident/Occurrence

From

Name of Applicant/Mine User	GANGARAMCHACK & GANGARAMCHACK-BHADULIA COAL MINE	Address of Applicant/Mine User	Office of GM (Mining), Qtr. No. AN 4, DPL Township, Durgapur-713201, Dist. Paschim Burdwan , , Durgapur , West Bengal , India-713201
To	The Chief Inspector of Mines/Director General of Mines Safety, Dhanbad - 826001 The Regional Inspector of mines / Direcrtor of Mines safety,SITARAMPUR , , Sitarampur , West Bengal , India - 456025		
Mine Code	11142		

Date of Accident	07/10/2024	Time of Accident	10:32 AM

Owner's Address

Name	CHANCHAL GOSWAMI	Address	WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED, Bidyut Unnayan Bhaban, Plot No.3/C, LA-Block, Sector-III, Bidhannagar, Kolkata-700098

Particulars of Mine

Name	GANGARAMCHACK & GANGARAMCHACK-BHADULIA COAL MINE	Mineral Type	
Village	Gangarampur	P.O (Post Office)	Sagarbhanga
Pincode	731125	Police Station	Lokpur
Sub Division	Suri Sadar	District	BIRBHUM
State	West Bengal		

Particulars of Accident

No./Name of Shift			
Cause Name	Other explosive accident	Cause Code	0559
Place Name	Opencast	Place Code	2
Working Name	Benches	Working Code	8

Site Name	Waste/overburden hard rock	Site Code	213
No. of Person Killed	8	No. of Person Seriously Injured	1
Location of Accident	North West Portion of the Mine	PIT/Incline No.	Na
District/Panel/Bench /OutSide Working	Bench	Seam/Vein	Kasta SVIIA
Level Dip No.	Na	Distance from Face(In Meters)	150.00
Details not covered Above	Na	Department	

Victim's Details

Sl. No	Name of Victim	Designation	Designation Code(nn)	If Contractor Worker(IF Y/N)	Sex(M/f)	Age(in years)	Hours at work(hhmm)	Nature of Injury & Cause of Death	Victim Type
1	Amit singh	Subordinate Supervisory Official	30	Yes	Male	28	02:32	Fatal due to the explosion	Killed
2	Asharfi Yadav	Short Firer	44	Yes	Male	55	02:32	Fatal due to the explosion	Killed
3	Bhajaram Ghosh	Truck etc. Operator	72	Yes	Male	47	02:32	Fatal due to the	Killed

Sl. No	Name of Victim	Designation	Designation Code(nn)	If Contractor Worker(IF Y/N)	Sex(M/f)	Age(in years)	Hours at work(hhmm)	Nature of Injury & Cause of Death	Victim Type
								explosion	
4	Yuddha Marandi	Any Other	99	Yes	Male	43	02:32	Fatal due to the explosion	Killed
5	Jaydeb Murmu	Any Other	99	Yes	Male	53	02:32	Fatal due to the explosion	Killed
6	Shomlal Hembram	Any Other	99	Yes	Male	40	02:32	Fatal due to the explosion	Killed
7	Rabilal Murmu	Any Other	99	Yes	Male	30	02:32	Fatal due to the explosion	Killed
8	Mangal Marandi	Any Other	99	Yes	Male	34	02:32	Fatal due to the explosion	Killed

Sl. No	Name of Victim	Designation	Designation Code(nn)	If Contractor Worker(IF Y/N)	Sex(M/f)	Age(in years)	Hours at work(hhmm)	Nature of Injury & Cause of Death	Victim Type
1	Laxmiswar Hembram	Any Other	99	Yes	Male	26	02:32	Serious Injured due to the explosion	Serious/Injured

Sl. No	Name of Victim	Designation	Designation Code(nn)	If Contractor Worker(IF Y/N)	Sex(M/f)	Age(in years)	Hours at work(hhmm)	Nature of Injury & Cause of Death	Victim Type
1	Khandu Marandi	Any Other	99	Yes	Male	49	02:32	Reportable injured due to the explosion	Reportable
2	Mahadeb Marandi	Any Other	99	Yes	Male	26	02:32	Reportable injured due to the explosion	Reportable

Brief Description of the cause of Accident On 07.10.2024 at about 10:32 AM one major accident occurred at Gangaramchak & Gangaramchak-Bhadulia Coal Mine of WBPDCL due to blast of explosive van at 2nd OB bench at North-West side of the Mine involving 11 persons (8 fatal, 1 serious & 2 reportable). Victims body were recovered by district police and sent to Suri District

Hospital, Birbhum for post mortem. Immediately the seriously and reported injured persons were admitted to Suri District Hospital, Birbhum for further medical assistance.

Immediate Last Accident

Type of Accident	Fatal Accident	Date of Immediate Last Accident	05/10/2021
Place	BIRBHUM	Name	Samresh Kumar
Designation	Agent	Date	13/10/2024

Annexure-I

FORM IV - B / 4-B

(See Reg. 7 of OMR, 2017 / Reg. 8 of CMR, 2017 / Reg. 9 of MMR, 1961)

Particulars of Deceased/Injured Person

(To be Given in respect of every person Killed or Injured in an accident in the mine within 7 days of occurrence)

File No. : N-11021/1/94193410/71/2024

1. GENERAL INFORMATION

1.1	Name OF Mine	GANGARAMCHACK & GANGARAMCHACK- BHADULIA COAL MINE	1.2	Mine Code	11142
1.3	Mine Owner Name	WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED	1.4	LIN No.	1582962818
1.5	Mineral	Coal	1.6	District	BIRBHUM
1.7	State	West Bengal			
1.8	Date of Accident	07/10/2024	1.9	Time of Accident	10:32

2. DETAILS OF THE INJURED WORKERS

Sl. No.	Name(s) of Victim(s)	Injury Code(n)	Body Part(nn)	Ex-gratia payment made(Rs)	Compensation paid(Rs)	Others benefits if any	Total Experience(months)	What was the	Experience of Victim In	If vocationally trained in	Initial Vocationally training	Date of Refresher training	Nature of job(regular/temporary)	Cause of Death/Injury	Victim Type
								Job being done at the time of accident							
									Months	(Yes/No)					
1	Amit Singh	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	35	Overman	35	false			Regular	Explosion	Killed
2	Asharfi Yadav	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from	27	Mining Sirdar	27	false			Regular	Explosion	Killed

Sl. No.	Name(s) of Victim(s)	Injury Code(n)	Body Part(nn)	Ex-gratia payment made(Rs)	Compensation paid(Rs)	Others benefits if any	Total Experience(months)	What was Job being done at the time of accident	Experience of Victim In Months	If vocationally trained in (Yes/No)	Initial Vocationally training	Date of Refresher training	Nature of job(regular/temporary)	Cause of Death/Injury	Victim Type
						State relief fund .									
3	Bhajaram Ghosh	Others	Others	20 Lakhs	In process	A Govt. job with 2 lakhs from State relief fund .	12	Explosive Van Driver	12	false			Temporary	Explosion	Killed
4	Yuddha Marandi	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	53	Blasting Helper	53	true	05.12.2020		Regular	Explosion	Killed
5	Jaydeb Murmu	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	51	Blasting Helper	51	true	05.12.2020		Regular	Explosion	Killed
6	Shomlal Hembram	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	56	Blasting Helper	56	true	15.05.2024		Regular	Explosion	Killed
7	Rabilal Murmu	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	56	Blasting Helper	56	true	27.06.2020		Regular	Explosion	Killed
8	Mangal Marandi	Others	Others	20 Lakhs	10 Lakhs as an advanced	A Govt. job with 2 lakhs from State relief fund .	9	Blasting Helper	9	true	05.12.2020		Regular	Explosion	Killed
9	Laxmiswar Hembram	Others	Others	N/A	5 Lakhs	All treatment expenses & continuation of salary	8	Blasting Helper	8	true	23.11.2020		Regular	Explosion	Serious/Injur
10	Khandu Marandi	Others	Others	N/A	5 Lakhs	All treatment expenses & continuation of salary	56	Blasting Helper	56	true	27.06.2020		Regular	Explosion	Serious/Injur
11	Mahadeb Marandi	Others	Others	N/A	5 Lakhs	All treatment	56	Blasting Helper	56	true	27.06.2020		Regular	Explosion	Serious/Injur

Sl. No.	Name(s) of Victim(s)	Injury Code(n)	Body Part(nn)	Ex-gratia payment made(Rs)	Compensation paid(Rs)	Others benefits if any	Total Experience(months)	What was	Experience of Victim In	If vocationally trained in	Initial Vocationally training	Date of Refresher training	Nature of job(regular/temporary)	Cause of Death/Injury	Victim Type
								Job being done at the time of accident							
									Months	(Yes/No)					
						expenses & continuation of salary									

3. RESPOSIBILITY FOR THE ACCIDENT

Sl.No.	Name(s) of Person(s) held responsible	Designation	Design. Code(nn)	Rules/Reg. Contravented	Nature of Contraventions	Action Taken
1	Responsibility can be fixed after outcomes of the enquiry / investigation.					

4.0 As a sequel to this accident

4.1 Loss of production (in tones) 140000

4.2 Loss of Manshifts (indirect loss) 8000

5.0 Could the accident have been averted, of so how? All the provisions of rules and regulation are being followed. Investigation is under process. Recommendations of the enquiry will also be followed strictly to avert such accident.

Submitted Date 27/10/2024

Name Samresh Kumar

Place BIRBHUM

Designation Agent

Intimate To Deputy Director General



Details of the Compensation Provided to the Deceased:

1. Lt Amit Singh, Blasting Overman :
   Receipent: Mangal Singh F/o Amit Singh

a) Cheque no: 7959 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 7960 RBL Bank, Date:08.10.2024 Rs 10,00,000
c) Cheque no: 0033 AXIS Bank LTD, Date:09.10.2024 Rs 2,00,000

2. Lt Asharfi Yadav, Mining Sardar :
   Receipent: Anita Yadav W/o Asharfi Yadav

a) Cheque no: 7955 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 7925 RBL Bank, Date:08.10.2024 Rs 10,00,000
c) Cheque no: 0034 AXIS Bank LTD, Date:09.10.2024 Rs 2,00,000

3. Lt Yuddha Marandi, Explosive Crew :
   Receipent: Anjali Marandi W/o Yuddha Marandi

a) Cheque no: 7942 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 912372 Punjab National Bank, Date:08.10.2024 Rs 2,00,000

4. Lt Jaydeb Murmu, Explosive Crew :
   Receipent: Mani Murmu W/o Jaydeb Murmu

a) Cheque no: 7943 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 912377 Punjab National Bank, Date:08.10.2024 Rs 2,00,000

5. Lt Shomlal Hembram, Explosive Crew
   Recipient: China Hemram M/o Shomlal Hembram

a) Cheque no: 7944 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 7922 RBL Bank, Date:08.10.2024 Rs 10,00,000
c) Cheque no: 912374 Punjab National Bank, Date:08.10.2024 Rs 2,00,000

6. Lt Rabilal Murmu, Explosive Crew
   Recipient: Rani Murmu W/o Rabilal Murmu

a) Cheque no: 7945 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 7923 RBL Bank, Date:08.10.2024 Rs 10,00,000
c) Cheque no: 912375 Punjab National Bank, Date:08.10.2024 Rs 2,00,000

7. Lt Mangal Marandi, Explosive Crew
   Recipient: Buri Hembram, W/o Mangal Marandi

a) Cheque no: 7946 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 7924 RBL Bank, Date:08.10.2024 Rs 10,00,000
c) Cheque no: 912376 Punjab National Bank, Date:08.10.2024 Rs 2,00,000

8. Lt Bhajaram Ghosh , Driver
   Recipient: Subhadra Ghosh, W/o Bhajaram Ghosh

a) Cheque no: 7941 RBL Bank, Date:08.10.2024 Rs 20,00,000
b) Cheque no: 912371 Date:08.10.2024 Rs 2,00,000

ANNEXURE-III

1. **NAME OF THE EXECUTIVES AND OFFICIALS OF WBPDCL AND GMPL (MDO) PRESENT IN THE MINE on 07.10.2024:**

Sl. No.	Name	Designation	Organization
1	Samresh Kumar	Agent	WBPDCL
2	Bhavesh Kr. Ranjan	Manager	WBPDCL
3	Swrup Banerjee	Safety Officer	WBPDCL
4	Bikram Das	Shift I/C	WBPDCL
5	Sujit Jash	W.I. (Mech)	WBPDCL
6	Sadhan Kumar Mandal	Blasting Officer	WBPDCL
7	Sourav Shrivastav	Blasting Overman	WBPDCL
8	Sk. Rocky	Overman	WBPDCL
9	Kumar Sourav	Overman	WBPDCL
10	Avinav Ojha	W.I. (Mining)	WBPDCL
11	Lokesh Kumar	Project Manager	MDO
12	Krishna Kumar Pandey	Production In-charge	MDO
13	Prem Pandey	Shift In-charge	MDO
14	Subhash Patel	ACM	GMPL/GSPL
15	Munna Singh	Overman	GMPL/GSPL
16	BhajanGarai	Elect. Helper	GMPL/GSPL
17	Rabilal Marandi-01	Elect. Helper	GMPL/GSPL
18	Binod Lo	Fitter	GMPL/GSPL
19	Mofijul Mondal	Exv. Opt	GMPL/GSPL
20	Nirmal Murmu	Mech. Helper	GMPL/GSPL
21	Somelal Marandi	Mech. Helper	GMPL/GSPL
22	Debsebak Chakraborty	Attendance Clerk	GMPL/GSPL
23	Bidhan Ch. Khan	Project in. Charge	GMPL/GSPL
24	Basudeb Poddar	Attendance Clerk	GMPL/GSPL
25	Sandeep Kumar	Overman	GMPL/GSPL

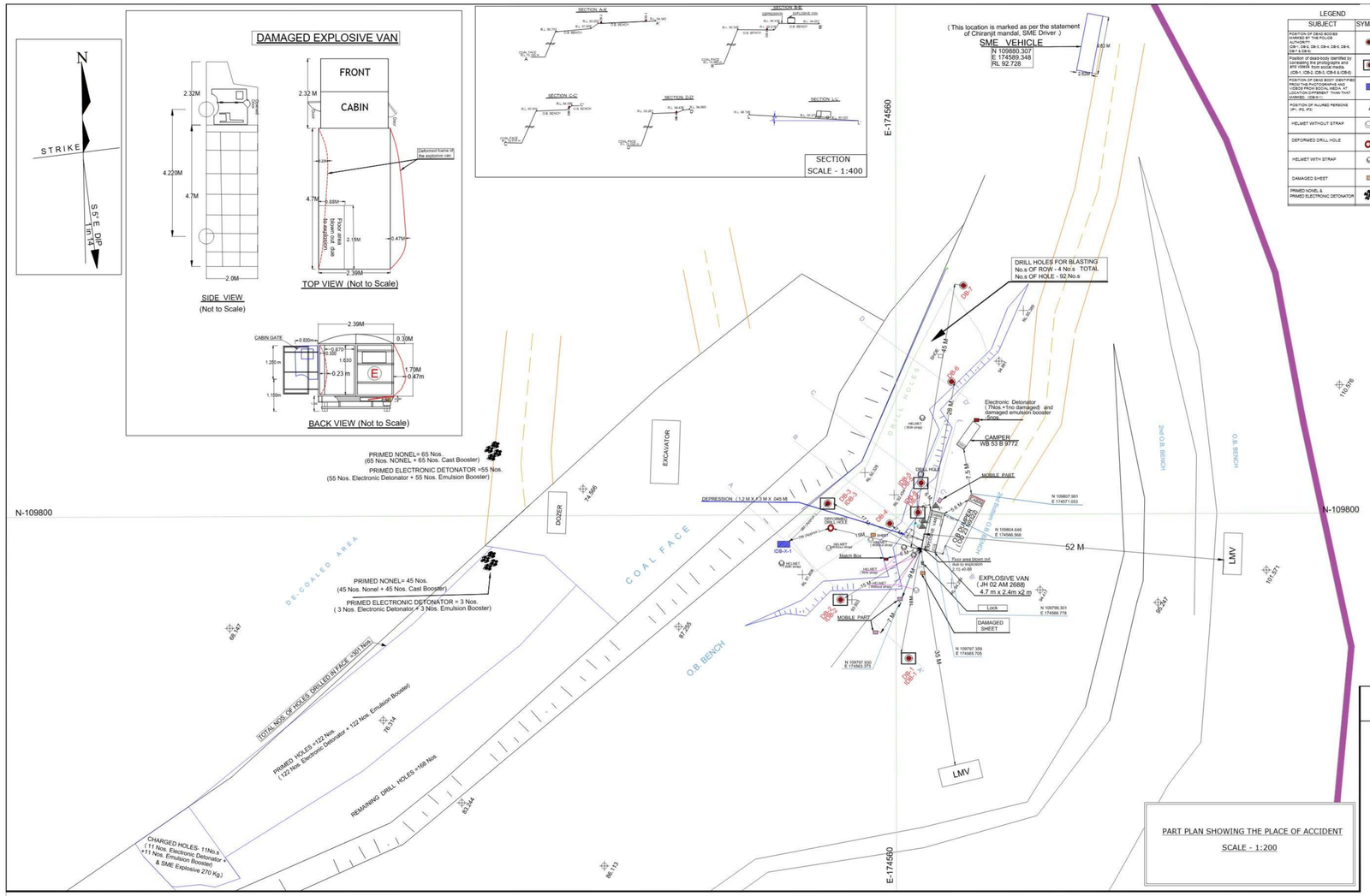
26	Sanjoy Bose	Mining Supervisor	GMPL/GSPL
27	Bijoy Kumar Sarkar	Mining Supervisor	GMPL/GSPL
28	Saurabh Kr. Rai	Mechanical Engineer	GMPL/GSPL
29	Md. Parvez Siddiqui	Electrical Supervisor	GMPL/GSPL
30	Ram Krishna Kuiry	Electrician	GMPL/GSPL
31	Lokesh Kumar	Project Manager	SAAKAR
32	Kriti Ghosh	Camper Driver	SAAKAR
33	Sarvind Kumar	Dumper Operator	SAAKAR
34	Dilip Mishra	Excavator Operator	SAAKAR

ANNEXURE-IV

2: DEPLOYMENT OF PERSONS FOR BLASTING ON 07.10.2024:

Sl. No.	Name	Designation	Organization	Remarks
1.	Sri Sadhan Kumar Mondal	Blasting Officer	WBPDCL	
2.	Sri Saurabh Srivastava	Blasting Overman	WBPDCL	
3.	Sri Amit Singh	Blasting Overman	GMPL/GSPL	Deceased
4.	Sri Asrafi Yadav	Mining Sirdar	GMPL/GSPL	
5.	Sri Yuddha Marandi	Helper	GMPL/GSPL	
6.	Sri Jaidev Murmu	Helper	GMPL/GSPL	
7.	Sri Shomlal Hemram	Blasting helper	GMPL/GSPL	
8.	Sri Robilal Murmu	Blasting helper	GMPL/GSPL	
9.	Sri Mangal Marandi	Blasting helper	GMPL/GSPL	
10.	Sri Laxmiswer Hemram	Blasting helper	GMPL/GSPL	Reportable Injury
11.	Sri Khandu Marandi	Blasting helper	GMPL/GSPL	
12.	Sri Mahadeb Marandi	Blasting helper	GMPL/GSPL	
13.	Sri Sunil Kisku	Blasting helper	GMPL/GSPL	
14.	Sri Bihari Marandi	Blasting helper	GMPL/GSPL	
15.	Sri Ravindra Hemram	Blasting helper	GMPL/GSPL	
16.	Sri Sunil Hemram	Blasting helper	GMPL/GSPL	
17.	Sri Shiblal Marandi	Blasting helper	GMPL/GSPL	
18.	Sri Sandeep Kumar	Blasting Overman	GMPL/GSPL	

ANNEXURE-V


DAMAGED EXPLOSIVE VAN
FRONT
CABIN
SIDE VIEW
(Not to Scale)
TOP VIEW (Not to Scale)
BACK VIEW (Not to Scale)
STRIKE
S 5° E DIP 11°
SECTION
SCALE - 1:400
(This location is marked as per the statement of Chiranjit mandal, SME Driver)
SME VEHICLE
N 106880.307
E 174589.348
RL 92.728
LEGEND
SUBJECT
SYMBOL
POSITION OF DEAD BODIES MARKED BY THE POLICE (DB-1, DB-2, DB-3, DB-4, DB-5, DB-6, DB-7 & DB-8)
Position of dead-body identified by comparing the photographs and IPD VIDEOS from social media (DB-1, DB-2, DB-3, DB-4 & DB-8)
POSITION OF DEAD BODY IDENTIFIED BY COMPARING THE PHOTOGRAPHS AND VIDEOS FROM SOCIAL MEDIA AT LOCATION DIFFERENT THAN THAT MARKED. (DB-5,6,7)
POSITION OF INJURED PERSONS (IP1, IP2, IP3)
HELMET WITHOUT STRAP
DEFORMED DRILL HOLE
HELMET WITH STRAP
DAMAGED SHEET
PRIMED NONEL & PRIMED ELECTRONIC DETONATOR
PRIMED NONEL= 65 Nos.
(65 Nos. NONEL + 65 Nos. Cast Booster)
PRIMED ELECTRONIC DETONATOR =55 Nos.
(55 Nos. Electronic Detonator + 55 Nos. Emulsion Booster)
PRIMED NONEL= 45 Nos.
(45 Nos. Nonel + 45 Nos. Cast Booster)
PRIMED ELECTRONIC DETONATOR = 3 Nos.
(3 Nos. Electronic Detonator + 3 Nos. Emulsion Booster)
TOTAL NOS. OF HOLES DRILLED IN FACE - 301 Nos.
PRIMED HOLES =122 Nos.
(122 Nos. Electronic Detonator + 122 Nos. Emulsion Booster)
REMAINING DRILL HOLES =168 Nos.
CHARGED HOLES- 11No.s
(11 Nos. Electronic Detonator + 11 Nos. Emulsion Booster & SME Explosive 270 Kg.)
DRILL HOLES
DRILL HOLE
DRILL HOLE (With strap)
DRILL HOLE (Without strap)
DEFORMED DRILL HOLE
DRILL HOLE (Damaged)
DRILL HOLE (Damaged sheet)
DRILL HOLE (Helmet without strap)
DRILL HOLE (Helmet with strap)
DRILL HOLE (Injured person)
DRILL HOLE (Dead body)
DRILL HOLE (Dead body identified by comparing the photographs and IPD VIDEOS from social media)
DRILL HOLE (Dead body identified by comparing the photographs and IPD VIDEOS from social media & location different than that marked)
DRILL HOLE (Primed Nonel & Primed Electronic Detonator)
DRILL HOLE (Primed Electronic Detonator)
DRILL HOLE (Primed Nonel)
DRILL HOLE (Remaining drill holes)
DRILL HOLE (Charged holes)
DRILL HOLE (Helmet)
DRILL HOLE (Match Box)
DRILL HOLE (Mobile part)
DRILL HOLE (Lock)
DRILL HOLE (Damaged sheet)
DRILL HOLE (Explosive van)
DRILL HOLE (Camper)
DRILL HOLE (Electronic Detonator & damaged emulsion booster)
DRILL HOLE (Drill holes for blasting)
DRILL HOLE (Deformed drill hole)
DRILL HOLE (Helmet with strap)
DRILL HOLE (Damaged sheet

DOCUMENT NO.- WBPDCL/G&GBCM/SMP/Rev/01

REVIEW -I

From April 2023 – 12.02.2024

SAFETY MANAGEMENT PLAN

OF

GANGARAMCHAK & GANGARAMCHAK – BHADULIA COAL MINE

The West Bengal Power Development Corporation Limited.

APPROVALOF "SAFETY MANAGEMENT PLAN"

With reference to various DGMS circulars issued from time to time and finally making it statutorily binding on the owner, agent and manager of a mine by **Regulation 104 of Coal Mines Regulations, 2017** to prepare an auditable document based on the identified hazards and risks called **"Safety Management Plan"**, that forms part of the overall management and includes organizational structure, planning, activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining a safety and health policy of a company.

Safety Management Plan has been prepared with respect to **G&GBCM** with the help of all the stakeholders. Further as per directions issued by DGMS, the **Safety Management Plan** needs approval of the **Owner of the Mine**.

So this proposal is being put before GM, WBPDCL through the Agent of G&GBCM for approval by the Owner of the mine, DIRECTOR (MINING), WBPDCL of **"Safety Management Plan"** in respect to G&GBCM.

SAFETY OFFICER, WBPDCL

MINE MANAGER, WBPDCL

AGENT, WBPDCL

Approved review-1 of SMP.
19/02/2021.

GENERAL MANAGER (MINING), WBPDCL

15/2/2021.

NOMINATED OWNER, WBPDCL

SUBSEQUENT QUERRY TO RABINDRA HEMRAM,
Blasting helper, Vill- Bastabpur,

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	3-4 Yrs. from the very beginning as a Blasting Helper.
2.	What is your actual job?	Stemming with sand, stone chips and with the help Bamboo/ Wooded stemming rod.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the bottom bench and went towards top bench. Thereafter the Explosive van carrying detonator reached and unloaded and went to top bench.
4.	Who made to primed cartridge, where & lowered it?	The primed cartridge is prepared by blasting in-charge under supervision of Blasting Officer and lowered by blasting In-charge along with competent person.
5.	What was the next activity?	The after lowering the primed cartridge SME pouring started.
6.	What you are doing at that time?	I was seating in the Camper.
7.	Did you get SOP for blasting & explained to you?	Yes & explained.
8.	Did you understand the Blasting SOP?	Yes understood.
9.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge?	Blasting In-Charge
11.	Medical Examination done (IME/PME)?	Yes.
12.	Did you obtained any training for performing the blasting?	Yes
13.	Who supervises the job and explain day to day?	Blasting Officer/Blasting In-Charge & Mining Sirdar.

The above questions and reply have been read before me about the content and I understand the explanation in Bengali

রবিন্দ্র হেমব্রম

Signature of Rabindra Hemram

Date 22.11.24

Witness by workmen Inspector

(The statement taken in front of W.I.- Tanmoy Datta)

SUBSEQUENT QUERRY TO SUNIL KISKU,
Blasting helper, Vill- Bhadulia,

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	3-4 Yrs. from the very beginning as a Blasting Helper.
2.	What is your actual job?	Stemming with sand, stone chips and with the help Bamboo/ Wooded stemming rod.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the bottom bench and went towards top bench. Thereafter the Explosive van carrying detonator reached and unloaded and went to top bench.
4.	Who made to primed cartridge, where & lowered it?	The primed cartridge is prepared by blasting in-charge under supervision of Blasting Officer and lowered by blasting In-charge along with competent person.
5.	What was the next activity?	The after lowering the primed cartridge SME pouring started.
6.	What you are doing at that time?	I was seating in the Camper.
7.	Did you get SOP for blasting & explained to you?	Yes & explained.
8.	Did you understand the Blasting SOP?	Yes understood.
9.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge?	Blasting In-Charge
11.	Medical Examination done (IME/PME)?	Yes.
12.	Did you obtained any training for performing the blasting?	Yes
13.	Who supervises the job and explain day to day?	Blasting Officer/Blasting In-Charge & Mining Sirdar.

The above questions and reply have been read before me about the content and I understand the explanation in Bengali

Signature of Sunil Kisku

Date 22.11.24

Witness by workmen Inspector
(The statement taken in front of W.I.- Tanmoy Datta)

368

SUBSEQUENT QUERRY TO SHIBLAL MARANDI,
Blasting helper, Vill- Bastavpur,

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	3-4 Yrs. from the very beginning as a Blasting Helper.
2.	What is your actual job?	Stemming with sand, stone chips and with the help Bamboo/ Wooded stemming rod.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the bottom bench and went towards top bench. Thereafter the Explosive van carrying detonator reached and unloaded and went to top bench.
4.	Who made to primed cartridge, where & lowered it?	The primed cartridge is prepared by blasting in-charge under supervision of Blasting Officer and lowered by blasting In-charge along with competent person.
5.	What was the next activity?	The after lowering the primed cartridge SME pouring started.
6.	What you are doing at that time?	Started stemming.
7.	Did you get SOP for blasting & explained to you?	Yes & explained.
8.	Did you understand the Blasting SOP?	Yes understood.
9.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge?	Blasting In-Charge
11.	Medical Examination done (IME/PME)?	Yes.
12.	Did you obtained any training for performing the of blasting?	Yes
13.	Who supervises the job and explain day to day?	Blasting Officer/Blasting In-Charge.

The above questions and reply has been read before me about the content and I understand the explanation in Bengali

Signature of Shiblal Marandi

Date 22.11.24

Witness by workmen Inspector
(The statement taken in front of W.I.- Tanmoy Datta)

369

ANNEXURE-IX 370

SUBSEQUENT QUERRY TO SUDHANSHU DOM,
Blasting helper, Vill- Bhadulia,

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	3-4 Yrs. from the very beginning as a Blasting Helper.
2.	What is your actual job?	Stemming with sand, stone chips and with the help Bamboo/ Wooded stemming rod.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the bottom bench and went towards top bench. Thereafter the Explosive van carrying detonator reached and unloaded and went to top bench.
4.	Who made to primed cartridge, where & lowered it?	The primed cartridge is prepared by blasting in-charge under supervision of Blasting Officer and lowered by blasting In-charge along with competent person.
5.	What was the next activity?	The after lowering the primed cartridge SME pouring started.
6.	What you are doing at that time?	Started stemming.
7.	Did you get SOP for blasting & explained to you?	Yes & explained.
8.	Did you understand the Blasting SOP?	Yes understood.
9.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge?	Blasting In-Charge
11.	Medical Examination done (IME/PME)?	Yes.
12.	Did you obtained any training for performing the of blasting?	Yes
13.	Who supervises the job and explain day to day?	Blasting Officer/Blasting In-Charge.

The above questions and reply have been read before me about the content and I understand the explanation in Bengali

Signature of Sudhanshu Dom

22.11.24

Witness by workmen Inspector
(The statement taken in front of W.I.- Tanmoy Datta)

SUBSEQUENT QUERRY TO MAHADEB MARANDI,
Blasting helper, Vill- Bastavpur,

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	3-4 Yrs. from the very beginning as a Blasting Helper.
2.	What is your actual job?	Stemming with sand, cutting debris with the help Bamboo/ Wooded stemming rod.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the top bench and went back. Thereafter the Explosive van carrying detonator reached and started unloading.
4.	What you are doing at that time?	We are seating nearby, then the blast occurred.
5.	Did you get SOP for blasting & explained to you?	Yes & explained.
6.	Did you understand the Blasting SOP?	Yes understood.
7.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
8.	Who used to do pouring of Primed Cartridge?	Blasting In-Charge
9.	Medical Examination done (IME/PME)?	Yes.
10.	Did you obtained any training for performing the blasting?	Yes
11.	Who supervises the job and explain day to day?	Blasting Officer/Blasting In-Charge.

371

The above questions and reply has been read before me about the content and I understand the explanation in Bengali

Signature of Mahadeb Marandi

22.11.24

Witness by workmen Inspector
(The statement taken in front of W.I.- Tanmoy Datta)

SUBSEQUENT QUERRY TO SANDIP KUMAR,
Overman, Bhuli-Dhanbad.

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	2-3 Yrs. as overman.
2.	What is your actual job?	I am authorised as an Overman and of and on help with Blasting crew for Blasting operation.
3.	How the Explosive & detonators arrived?	By two diff. explosive van. First the booster (Cast & Emulsion) was unloaded at the bottom bench and went towards top bench. Thereafter the Explosive van carrying detonator reached and unloaded and went to top bench.
4.	Who made to primed cartridge, where & lowered it?	The primed cartridge is prepared by blasting in-charge under supervision of Blasting Officer and lowered by blasting In-charge along with competent person.
5.	What was the next activity as per law? Do you aware of the Regulations of handling of explosive?	Yes, I know Regulation. After lowering the primed cartridge in the drilled hole by Blasting in-charge, SME is poured followed by stemming.
6.	What you are doing at that time?	I was at lower bench, where primed cartridge of about 301 nos. was completed out of which 11 no. of holes were charged with SME.
7.	Did you get SOP for blasting & explained to the person concerned?	Yes & I used to explain the content of SOP to Blasting helpers for safe operation.
8.	Did you understand the Blasting SOP?	Yes, I understood.
9.	Do you carry Mobile phone, while on job?	No. The blasting crew also do not carry mobile phones and contrabands at the site of blasting. Before entering the Blasting Site Mr. Saurav Srivastav personally check for Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge?	By the Blasting In-charge along with competent person used to lower the primed cartridge under supervision of Blasting Officer.
11.	Medical Examination done (IME/PME)?	Yes.
12.	Did you obtained any training for performing the blasting?	Yes.
13.	Who supervises the job and explain day to day blasting activities?	Blasting Officer/Blasting In-Charge.
14.	Whether the explosive reached through Van at site being checked regarding quantity and physical appearance by Blasting Officer/Blasting In-Charge?	Yes.
15.	Whether any surprised checking is done by senior officials in respect of work being carried out safely & as per law?	Yes, regularly by Blasting officer and frequently by Manger & safety officer.

Sandeep Kumar

Signature of Sandip Kumar

Date 22.11.24

Witness by workmen Inspector

(The statement taken in front of W.I.- Tanmoy Datta)

372

373

SUBSEQUENT QUERRY TO MR. SAURAV SRIVASTAVA, BLASTING OVERMAN, G&GB COAL MINE, WBPDCL

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	I am in this mine from July'2021, but authorized as blasting overman in September'2024
2.	What is your actual job?	As per instruction of blasting officer and authorization of manager as a blasting overman I am looking after and execute drilling and Blasting operation in G&GB coal Mine
3.	Sequence of your job performance in respect of Duties and responsibilities	Bring the explosive and detonator from Magazine as per requisition based on planning for drilling & Blasting in different benches. Checking of Contrabands & Mobile Phone of the Blasting Gang is being done by me every day. Move to the blasting face along with blasting crew and explosive vans. Inspection of faces demarked the faces with red flag. Check explosive vans whether material reached as per requisition. Booster and accessories unloading at blasting face. Priming the holes first, placing bulk explosive van, pouring the shot hole as per design. Where two type of explosive use prime cartridge lower first then SME poured. Lowering primer cartridge and SME pouring is not being done simultaneously. Stemming the holes with cutting debris and sand. Connection as per firing pattern. Before firing the shots clear the danger zone area. Siren given, firing the shot. Checking the blasting result and any misfire. Finally, clearance siren has been given. This activities & measuring vibration has been recorded in bound page.
4.	How the Explosive & detonators arrived at mine	Placing the requisition of explosive & detonator, Magazine-In-Charge issue the explosive & detonator as per requisition. After loading Explosive & detonator the van is locked in presence of Magazine-In-Charge, Blasting Officer and myself in both of magazine. For unloading at site the explosive and detonator van are unlocked in presence of Blasting officer. When both of explosive van reached the mine site we check explosive and accessories whether it is as per requisition or not as per instruction of Blasting officer.
5.	What was your activities on the day of accident	When both of explosive vans arrived at mine parked it near weighbridge with following explosive and accessories

Saurabh
21/11/2024

		a. Electronic Detonator: 300Nos b. Emulsion Booster: 300 Nos c. Nonel (25ms/450ms,12 mtr length): 250 Nos d. Cast Booster (100Gm): 250 Nos e. TLD (42 ms) : 50 nos f. Electric Detonator: 10 Nos After that, weighing the bulk explosive. We checked both of faces and demarked the faces with red flags and caution tape. We decided to start charging lower bench first. Accordingly, both vans reached the lower bench. Unloaded at lower bench 191 nos Electronic detonator, 191 emulsion booster, 110 Nos Nonel & 110 nos cast booster as per instruction given by Blasting Officer. Afterthat, locked the both of explosive van after checking. Started priming the hole at lower bench. In this time at about 10:10 AM, Sri. Amit Singh, Authorized Overman with blasting crews went to upper bench as per Blasting Officer's Instruction. First Booster van reached at upper bench, next Amit Singh and Blasting Crew reached, then accessories van reached. Myself and Blasting Officer stayed back at lower bench to start SME pouring. Suddenly, at about 10:32 AM blast in accessories van occurred.
6.	Is SOP for blasting framed ,by whom and how it is being implemented by you?	Yes, SOP for Blasting Framed. SOP has been distributed & explained to concern person for implementation. We conducted also safety talks regarding handling, priming & charging of explosive regularly.
7.	Is there any system of surprise checking of Blasting operation in your mine?	Yes, Mine Manager along with Safety officer frequently check the blasting operation surprisingly.
8.	In your opinion are the Supervisors and blasting helper competent and do you ascertain?	Yes they are competent and vocationally trained to do the job.
9.	Do you carry Mobile phone, while on job? what is the protocol?	No. Before entering the Blasting Site myself check Mobile phone and Contrabands of all blasting gang.
10.	Who used to do pouring of Primed Cartridge? What was the system of priming?	Booster and detonator separately kept near the hole. Preparation Priming and lowering it into the hole is done by Blasting-In-Charge & other competent persons.
11.	Do you inspect both the benches planned for blasting?	Yes, I along with Blasting Officer inspected both the benches before planning the priming and charging the shot holes.

Gaurab h
21/11/2024

12.	Is there any system of checking the explosive and blasting accessories arrived at Mine? How?	Yes, Quantity has been checked after arriving the mine site with requisition
13.	Why no of explosive and accessories indent was more than no of hole ,Explain.	As per blasting Plan the requisithonfor explosive & accessories are placed for issuance. After completion of blasting operation, the surplus/balance explosive & accessories are duly accounted for and return to the explosive magazine as per prescribed procedure.
14.	What may be the cause of accident ?	May be the faulty detonator or Mishandling of Explosive. Actual cause of accident is not known.
15	How it could be averted ?	The person engaged in blasting operation should be trained and retrained rigorously for safe conduct of blasting operation.

Saurabh
21/11/2024
Signature of SAURAV SRIVASTAVA

Designation:- Blasting overman

375

376

SUBSEQUENT QUERRY TO Bhavesh Kumar Ranjan: Manager, G & GB Coal Mine
Address: Gauchhari, Dist Khagaria, Bihar

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine? Total Experience as Mine Manager.	I year This Mine. Total Experience as Mine Manager:5 years 10 Month Years
2.	Sequence of your job performed in respect of Duties and responsibilities	Management, Supervision, Control and Direction of Mine.
3.	How the Explosive & detonators arrived at mine	This mine operated by two Magazine, viz. Barjore & Sagarbhanga. The explosive and detonator are arrived at Mine from both Magazine in separate vehicles
4.	What was your activities on the day of accident	I go to mine at about 9.45 am from my office for supervision of activities done in mine at first I visit the coal stock and go to top bench at that time (10.05 am) no any explosive van was present there. Mr. Lokesh (Project Manager) present there, I go with him and Mr. Santosh (ACM-1st class) at the edge of top bench and discuss about today program and I give program for leave width of 10 meter bench near Bastabpur Village side. After that I moved to my vehicle and after few minutes a blast sound is heard and I fell down (10.32 am).
5.	Is SOP for blasting operation framed by whom and how it is being implemented by you?	Yes, I framed and distributed among the employee of WBPDCL, GMPL & concerned persons engaged in explosive handling.
6.	Is there any system of surprise checking of Blasting operation in your mine?	Yes, randomly done by me and also by ACM, Sri Santosh
7.	In your opinion are the Supervisors and blasting helper competent and do you ascertain?	Yes, my supervisor is blasting officer and blasting overman is 1st class Mine management Certificate holder and blasting crew is given special training by expert of blasting. Also authorisations for competent person were issued to all persons engaged in blasting operation
8.	Do you carry Mobile phone, while on job? What is the protocol?	Yes, but I don't enter in the area where preparation for blasting operation is going on.
9.	Who used to do pouring of Primed Cartridge? What was the system of priming?	In the constant supervision blasting overman of WBPDCL & GMPL the pouring of primed cartridge by blasting crew. The priming is done in front of each hole and prime cartridge is lowered in the hole.

Bn. Ranjan
22/11/24
Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

10.	Have you inspected both the benches planned for blasting?	Yes, I inspected the top bench planned for blasting after that I wanted to go to lower bench for observing the preparation for blasting and at that time the blast occurred
11.	Is there any system of checking the explosive and blasting accessories arrived at Mine? How?	Yes, there is a system. After reaching of the explosive van near the blasting patch site, first before charging operation blasting officer and blasting overman check the blasting accessories in respect of quantity and quality. Frequently this activity is carried out in presence of Mine Manager also.
12.	Why no of explosive and accessories indent was more than no of hole ,Explain.	Not more than (in that day 300 holes present in the lower bench and 200 holes in the upper bench, but in upper bench near about 100 holes are damaged due to water flowing from upper side to lower side
13.	What may be the cause of accident, in your opinion ?	Probable cause may be Manufacturing defect of explosive/detonators or Mishandling of Explosives
14.	**How it could be averted ?**	Frequent Test of explosives and accessories in authorised labs in an interval of 15 days and training and retraining of explosive crew .
15.	What is the provisions of checking of holes for blasting?	The holes are checked for any obstruction and cracks etc before commencing charging operation.
16.	Whether the persons employed in the Mine are medically examined and trained as per rule?	Yes. IME/PME and VT Training are done as per statute.
17.	What is the direction / instruction from your side for priming and charging the hole?	In the constant supervision of blasting overman of WBPDCL & GMPL the pouring of primed cartridge by blasting crew. The priming is done in front of each hole and prime cartridge is lowered in the hole.
18.	What is the system of authorisation of the competent person for safe working.	Authorisation of competent persons are done as per statute

B.K. Ranjan
22/11/24

Signature of Bhavesh Kumar Ranjan

Mine Manager
Gangaramchak & Gangaramchak
Chadulia Coal Mine, WBPDCL

377

378

SUBSEQUENT QUERRY TO MR. RANJIT PAL,
Authorized Magazine-In-Charge, GMPL/GSPL

Sl. No.	QUERRY	REPLY
1.	How long you are working in this Mine?	1 Year from starting of the Magazine
2.	What is your actual job?	Magazine-In-Charge, Explosive Issue, Return, Storage. Total accountability of Explosive.
3	Sequence of your job performance in respect of Duties and responsibilities	Issue Explosive from Magazine with respect to Requisition slip duly signed by Blasting-In-Charge & Blasting Officer. And securely handed over by me the requisite explosive to Blasting-In-Charge. Explosive & detonator van is locked in presence of Blasting Overman/ Blasting officer and myself. After That checking of stock and maintained the register in RE-3 & RE-5. After Charging in confirmation in LE-1 then Generated RE-13. After blasting rest of explosives return.
3.	How the Explosive & detonators arrived at mine	By two diff. explosive van. First the booster (Cast & Emulsion) was loaded. 2nd detonator departure from magazine.
5.	Is SOP for blasting framed ,by whom and how it is being implemented by you?	Yes & explained by Mine Manager. I have been comply the Sl. No 3.4 of the SOP.
	Is there any system of surprise checking of magazine functions?	Yes, it is done randomly by Mines Manager & Blasting Officer.
7.	Do you carry Mobile phone, while on job? what is the protocol?	No, it was deposited in a my office locker.
12	Explain the discrepancies in actual issuance time and RE 13 statement?	Normally requisition of explosives accessories is prepared by blasting overman in consultation with the blasting officer. Blasting Overman put the requisition slip to transport the same to the mine. Two Magazine explosive & accessories, SME (LE-1) maintain on RE-13. It confirmation done after RE-13. When two BDS coming in Mine.

Ranjit Pal.

Signature of Ranjit Pal
Authorized magazine incharge
Khajarasole, Bioburn.

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

86

Ref No: WBPDCL/ Director(Mining)/1762

Date:06.03.2024

To

1. Director General of Mines Safety
   DGMS, Dhanbad
2. Director of Mines Safety
   DGMS, Eastern Zone
   Region-III

Sub: Authorization to work as Agent as per provision of Regulation 7 of CMR-2017

Dear Sir,

In reference to above subject the undersigned, the owner of Gangaramchak & Gangaramchak-Bhadulia Coal Mine, is hereby authorising the following persons to act on behalf of the owner in respect of Management,Control, Supervision and Direction of the aforesaid mines.

Name	Designation	Authorised as	Responsibilities
Sri Narendra Kumar	General Manger (Mining)	Agent under Regulation 7(4)	Management, Control, Direction and Supervision of Gangaramchak & Gangaramchak-Bhadulia Coal Mine in compliance with the provisions of the Mines Act' 1952, Rules, Regulations and guidelines framed there under, including: a) Identification and mitigation of hazards to ensure safe operation in the aforesaid mines; b) Oversee implementation of provisions as regards to safeguarding health and welfare of persons working in the aforesaid mines; c) Attending to financial matters as well as making provisions of fund for procurement of materials etc. in the aforesaid mines; d) Facilitate effective emergency preparedness and response systems in the aforesaid mines; e) Facilitate arrangement of training and necessary human resource facilities in the aforesaid mines.
Sri Dhruba Dasgupta	General Manager (HR & A)	Agent Under regulation 7(4)	Management, Control, Direction and Supervision of Gangaramchak & Gangaramchak-Bhadulia Coal Mine including recruitment and placement of manpower to ensure their safe operation in compliance with the provisions of the Mines Act' 1952, Rules, Regulations and guidelines framed there under;
Sri Samaresh Kumar	Agent	Agent Under regulation 7(4)	Management, Control, Direction and Supervision of Gangaramchak & Gangaramchak-Bhadulia Coal Mine in compliance with the provisions of the Mines Act' 1952, Rules, Regulations and guidelines framed there under, which includes, among others the following: a) Formulation and implementation of Safety Management Plan in the aforesaid mines;

			b) Ensure implementation of provisions as regards to safeguarding health and welfare of persons working in the aforesaid mines; c) Timely procurement and supply of machineries, equipment and material etc., to ensure safe working of the aforesaid mines; d) Installation and maintenance of HEMM and workshops thereof for their safe operation in the aforesaid mines; e) Installation and maintenance of electrical and mechanical equipment's for their safe operation in the aforesaid mines; f) Civil construction work connected with or incidental to working of the aforesaid mines; g) Ensure procurement and rational distribution of safety items to aid safe operation in the aforesaid mines; h) Ensure training and re-training of persons employed in the aforesaid mines; i) Formulation and implementation of emergency response and evacuation plan in the aforesaid mines; j) Ensure that all accidents and dangerous occurrences are investigated and appropriate remedial actions are taken; k) Ensure the reporting of information and notices regarding accidents and dangerous occurrences; and l) Ensure providence of medical and rescue facilities for persons employed in the aforesaid mines.
Shaiku Waheed	AGM (F&A)	Agent Under regulation 7(4)	Management, Control, Direction and Supervision of Gangaramchak & Gangaramchak-Bhadulia Coal Mine including attending to financial matters as well as making provisions of fund for procurement of materials etc. in the aforesaid mines to ensure their safe operation in compliance with the provisions of the Mines Act' 1952, Rules, Regulations and guidelines framed there under;

This is for your kind information.

Thanking you,

Yours faithfully,

06/03/2024

(Chanchal Goswami),
Director (Mining), WBPDCL

Copy to:

1. CMD, WBPDCL
2. DDG, Eastern Zone
3. Director (HR)/(F&A)
4. Person Concerned

.....Ga & GaB..... Colliery

Form of Appointment of Competent Person

The Coal Mines Regulations, ~~1957~~ 2017
Clause ~~35~~ (3)

Book No. 01 No. 55

You .....Amit Singh.....

having been appointed at this Mine oilfield are hereby authorised as .....
Blasting overman at ....Ga & GaBCM.....
Mine/oilfield/district, a copy of the regulations, rules, bye-laws and orders made thereunder which affect you, being, made over to you.

Mine Manager B.N. Ranjan
Gangaramchak & Gangaramchak ..... Owner / Agent / Manager
Bhadulia Coal Mine, WBPDCL Dated 03/06/2024

I Amit Singh ..... having been appointed at this Mine accept authorisation as Blasting overman at .....Ga & GaBCM..... mine/ seam/ district and acknowledge receipt of a copy of the regulations ules, By - laws and orders made thereunder which effect me.

Amit singh 03/06/24
Signature of
Thumb Impression of the
Person appointed / Authorised

Date 03/06/24

Scanned with OKEN Scanner

G & GB ..... Colliery

Form of Appointment of Competent Person

The Coal Mines Regulations, ~~1957~~ 2017
Clause 35 (3)

Book No. 01 No. 56

You Sourabh Shrivastava

having been appointed at this Mine oilfield are hereby authorised as .....
Blasting overman at G & GB CM
Mine/oilfield/district, a copy of the regulations, rules, bye-laws and orders made thereunder which affect you, being, made over to you.

Mine Manager
Gangaramchak & Gangaramchak
Bl ... Coal Mine. WBPDCL

Dn. Ranjan
..... Owner / Agent / Manager

Dated 04.09.2024

I Sourabh Shrivastava having been appointed at this Mine accept authorisation as Blasting overman at G & GB CM mine/ seam/ district and acknowledge receipt of a copy of the regulations ules, By - laws and orders made thereunder which effect me.

Signature of
Thumb Impression of the
Person appointed / Authorised

Date 04.09.2024

Scanned with OKEN Scanner

.....G&GBCM..... Colliery

Form of Appointment of Competent Person

The Coal Mines Regulations, ~~1957~~ 2017
Clause ~~36 (3)~~ 35 & 35(3)

Book No. 04 No. 230

You .....Laxmiswar Hemram.....

having been appointed at this Mine oilfield are hereby authorised as .....
Blasting Helper at .....G&GBCM.....
Mine/oilfield/district, a copy of the regulations, rules, bye-laws and orders made thereunder which affect you, being, made over to you.

Bn Rajar
MINE MANAGER
GANGARAMCHAK
BHADULIA COAL MINE
W.B.P.D.
.....Owner / Agent / Manager
Dated 07/10/2023

I .....Laxmiswar Hemram..... having been appointed at this Mine accept authorisation as Blasting Helper at .....G&GBCM.....
mine / seam / district and acknowledge receipt of a copy of the regulations rules, By - laws and orders made thereunder which effect me.

Date ....10/10/2023.....

Signature of
Thumb Impression of the
Person appointed / Authorised

FORM – B
{See Rule 28 (1)}

Certificate of refresher Training*/Training of special categories workmen.

I, hereby certify that Shri/~~Shrimati~~YuddhaMarandiS/o/D/o/W/o JanakMarandi, VillageDebganj, Thana (Police Station) Lokepur P.OBhaduliaDistrictBirbhumState West Bengal has between 15.01.2024 to 20.01.2024 duly undergone the ~~refresher~~ **/special training required under Chapter IV*/Chapter V of the Mines Vocational Training, 1966, for Loading, Unloading, Priming, Handling, Charging of Explosives and Steaming. **



Date 30/01/24

Prince Parashar
30/01/24
Signed
Training Officer
Mine/Training Centre

VTO
GANGARAMCHAK & GANGARAMCHAK
BHADULIA COAL MINES
WBPDCL

(Specify below whether non-gassy or Gassy mine)

Signature of left hand thumb impression of the person trained.

Date 01/02/24

Bn. Ranjan
Counter Signature of the Agent or Manager.

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

*Delete whichever is not applicable.
**Insert dates between which the training was undergone.
*** Specify here the refresher training undergone.

FORM – B
{See Rule 28 (1)}

Certificate of refresher Training*/Training of special categories workmen.

I, hereby certify that Shri/~~Shrimati~~MangalMarandiS/o/D/o/W/o SupalMarandi, VillageBastabpur, Thana (Police Station) Lokepur P.OBhaduliaDistrictBirbhumState West Bengal has between 15.01.2024 to 20.01.2024 duly undergone the ~~refresher~~ **/special training required under Chapter IV*/Chapter V of the Mines Vocational Training, 1966, for Loading, Unloading, Priming, Handling, Charging of Explosives and Steaming. **



Date 30/01/24

Prince Parashar
30/01/24
Signed
Training Officer
Mine/Training Centre

VTO
GANGARAMCHAK & GANGARAMCHAK
BHADULIA COAL MINES
WBPDCL

(Specify below whether non-gassy or Gassy mine)

Signature of left hand thumb impression of the person trained.

Date 01/02/24

BN. Ranjan
Counter Signature of the Agent or Manager.

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

*Delete whichever is not applicable.
**Insert dates between which the training was undergone.
*** Specify here the refresher training undergone.

FORM – B
{See Rule 28 (1)}

Certificate of refresher Training*/Training of special categories workmen.

I, hereby certify that Shri/~~Shrimati~~JaydebMurmuS/o/D/o/W/o Late HaruMurmu, VillageBastabpur,Thana (Police Station) Lokepur P.OBhaduliaDistrictBirbhumState West Bengal has between 15.01.2024 to 20.01.2024 duly undergone the ~~refresher~~ **/special training required under Chapter IV*/Chapter V of the Mines Vocational Training, 1966, for Loading, Unloading, Priming, Handling, Charging of Explosives and Steaming. **



Prince Parashar
30/01/24

Date 30/01/24

Signed
Training Officer
Mine/Training Centre
VTO
GANGARAMCHAK & GANGARAMCHAK
BHADULIA COAL MINES
WBPDCL

(Specify below whether non-gassy or Gassy mine)

Signature of left hand thumb impression of the person trained.

Dn. Ranjan

Date 01/02/24

Counter Signature of the Agent or Manager.

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

*Delete whichever is not applicable.
**Insert dates between which the training was undergone.
*** Specify here the refresher training undergone.

Ref No: - WBPDCL/G&GBCM/MGR/24-25/140 Date: - 03/09/2024

GANGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINE, WBPDCL

The Safety Committee meeting was held on 28/08/2024 at the conference room WBPDCL.

Safety Committee Secretary Mr. Swarup Banerjee welcomed Mr. Samresh Kumar along with all the Safety Committee members. In brief Mr. Swarup Banerjee explained details about the information of incidents and accidents of the surrounding mines. He explained the near miss of the mine. The circular no 05 of 2024 dated 23/08/2024 and circular 06 of 2024 dated 23/08/2024 was discussed in details. Briefly he advised that every person should wear proper PPE during working hours in mine.

Safety Committee Chairman Mr. Bhavesh Kumar Ranjan welcomed and greeted all the Safety Committee members. Mr. Bhavesh Kumar Ranjan advised all the members to percolate the discussions of the meeting to all grass root workers of the mine and should take lesson to avert the same type of accident in future at the mine.

The following members acknowledged their presence by participating in the meeting wholeheartedly.

SL. NO.	NAME	DESIGNATION
1.	Mr. Samresh Kumar	Agent, GGBCM, WBPDCL.
2.	Mr. Bhavesh Kumar Ranjan	Mine Manager, Chairman GGBCM, WBPDCL.
3.	Mr Swarup Banerjee	Safety Officer, Secretary, GGBCM, WBPDCL.
4.	Mr. Santanu Chattopadhyay	Welfare Officer, GGBCM, WBPDCL.
5.	Mr. Sadhan Kumar Mandal	Blasting Officer, GGBCM, WBPDCL.
6.	Mr. Prince Parashar	Asst. Mgr., GGBCM, WBPDCL.
7.	Mr. Bikram Das	Asst. Mgr., GGBCM, WBPDCL.
8.	Mr. Surya Hemram	Asst. Mgr., GGBCM, WBPDCL.
9.	Mr. Subrata Mukhopadhyay	Surveyor, GGBCM, WBPDCL.
10.	Mr. Sudip Ghosh	Surveyor, GGBCM, WBPDCL.
11.	Mr. Sujit Kumar Jash	Mechanical Engineer, GGBCM, WBPDCL.
12.	Mr. Biplab Mazumder	Colliery Engineer, GGBCM, WBPDCL.
13.	Mr. Abhinava Ojha	Overman, W.I.Mining., GGBCM, WBPDCL.
14.	Mr. Kumar Saurav	Overman, GGBCM, WBPDCL.
15.	Mr. Sk. Rocky	Overman, GGBCM, WBPDCL.
16.	Mr. Subhajit Sasmal	Overman, GGBCM, WBPDCL.
17.	Mr. Sanat Mukherjee	Mining In charge, GMPL.
18.	Mr. Bidhan Chandra Khan	Project Co-Ordinator, GMPL.
19.	Mr. Sanjoy Bose	Section In charge, GMPL.
20.	Mr. Anik Banerjee	Mechanical Engineer, (Workman Inspector, Mechanical GMPL)
21.	Mr. Ramkrishna Koiri	Electrician, GMPL.
22.	Mr. Saurabh Roy	Mechanical Engineer, GMPL.
23.	Mr. Parwez Siddiqui	Electrical Supervisor (Workman Inspector, Electrical)
24.	Md. Ansarul	Dumper Driver, GMPL.
25.	Md. Rahim Khan	Dozer Operator, GMPL.
26.	Mr. Ashis Nayak	Dumper Operator, GMPL
27.	Mr. Santanu Ghosh	Dumper Operator, GMPL
28.	Mr Lokesh Kumar	Project In charge, SAAKAR.
29.	Mr. Balaram Prasad	Mechanical Engineer, MDO(SAAKAR)
30.	Mr Rajkumar	Mechanical Supervisor, SAAKAR.
31.	Md. Abdur Salam	Dumper Driver, SAAKAR.
32.	Mr. Shyampada Paik	Dozer Operator, SAAKAR.
33.	Mr. Manoj Kumar	Excavator Operator, SAAKAR.
34.	Mr. Santosh Rai	Drill Operator, SAAKAR.
35.	Mr. Ambooj Kumar	Blasting Helper, SAAKAR.
36.	Mr. Tarkeshwar Mahto	Grader operator, SAAKAR.
37.	Mr. Ayush Kumar	S.M. Operator, GMPL.

➢ **Review of last discussions of Safety Committee Meeting: -**

Sl No.	Items Pointed out	Raised By	Responsibility	Implementation status
1.	Proper rest shelter is to be made of at least 151 sq ft of area of height of not less than 2.5 metre from the lowest part of the roof to the base of the rest shelter. The rest shelters are to be provided at following places. 1) at the entrance of the mine. 2) at the open cast working. 3) at the workshop. 4) at the loading point.	Mr. Prince Parashar, ACM, WBPDCL.	Mr. Srinivas Pillai, DGM Mines, MDO, GMPL.	Pl arrange to comply as early as possible.
2.	Section 22 A (1) was imposed on 28/06/2024 for the following points 1) LMV road is not maintained. 2) The high wall is formed.	Ref No S-3/11142/Notice-22A (1)/2024/592 Dated 28.06.2024 It was read over to all the Safety committee members.	Mr. Srinivas Pillai, DGM Mines, MDO, GMPL.	Complied.
3.	The height of the berm is to be heightened at some places towards SE direction.	Mr. Pramod Kr. Harijan, Assistant Manager, GGBCM, WBPDCL.	Mr. Sanat Mukherjee, Mining In charge (MDO).	Complied.
4.	Adequate berm is to be provided on the new In pit dumping.	Mr. Abhinav Ojha, WI Mining.	Mr. Sanjay Bose, Section In charge, GMPL.	Complied.

➢ **Incident / Accident of surrounding/adjacent mines: -**

Till date No Incident /Accident information report is yet received from surrounding mine.

➢ **New Technologies Introduced at the Mine: -**

No such new technologies introduced at the mine except running of Surface Miner.

➢ **Near Miss Reported 2024: -**

Sl. No.	Months	Near miss	Action Taken
1.	January	01	Near miss recorded, Safety talk and special training given.
2.	February	02	Near miss recorded, Safety talk and special training given.
3.	March	01	Near miss recorded, Safety talk and special training given.
4.	April	Nil	-
5.	May	01	Near miss recorded, Safety talk and special training given.
6.	June	01	Near miss recorded, Safety talk and special training given.
7.	July	01	Near miss recorded, Safety talk and special training given.
8.	August	01	Near miss recorded, Safety talk and special training given.

➢ **Discussions of The Present Safety Committee Meeting: -**

Sl No.	Items Pointed out	Raised By	Responsibility	Implementation status
1.	As it is rainy season the wear and tear of breaks of tipper/dumpers are maximum. Special treatment should be given to the breaks during maintenance of dumpers.	Mr. Sujit Kumar Jash, Mechanical Engineer, WBPDCL.	Mr. Balaram Prasad, Mechanical Engineer, MDO(SAAKAR)	To be checked on regular basis.
2.	Illumination in some part of the mine need to be increased especially in the mine working area. Two tower lights are to be provided on urgent basis.	Mr. Biplab Mazumder, Colliery Engineer, GGBCM, WBPDCL.	Mr. Srinivas Pillai, DGM Mines, MDO, GSPL.	To be complied as early as possible.
3.	PME of eligible employees are to be done within December 2024 as per statute. Trainable persons are to be trained at Group vocational training centre, ITI, Rupnarayanpur.	Mr. Bikram Das, ACM, WBPDCL.	Mr. Jitendra Sinha, Advisor, GSPL. & Mr. Sanat Mukherjee, Mining In charge (GSPL).	To be complied as early as possible.
4.	Dust survey is to be done by PDS dust sampler. To prevent migration of to the atmosphere from the loaded trippers which is going from the mine to the siding (during despatch) must be covered with tarpaulin in all around the trippers.	Mr. Prince Parashar, ACM, WBPDCL.	Mr. Jitendra Sinha, Advisor, GSPL.	To be complied as early as possible.
5.	The rest shelter was provided but its placement is in correct position. It must be placed near to working area near to viewpoint which will be helpful for workers.	Mr. Sadhan Kumar Mandal, B.O, WBPDCL.	Mr. Bidhan Chandra Khan, Project Co-Ordinator, GSPL.	To be complied as early as possible.

➢ **Major deficiencies pointed out by Workmen's Inspector: -**

Sl No.	Items Pointed out	Raised By	Suggestion	Responsibility	Implementation status
1.	Width of Haul Road at some places are not sufficient as per CMR 2017.	Mr. Abhinava Ojha, W.I (Mining)	Width of haul road all over the mine should be maintained as per regulation 106 (5) of CMR 2017.	Mr. Sanat Mukherjee, Mining In charge (MDO)	Complied.
2.	Poor illumination in the Sump.	Mr. Parwez Siddiqui, W.I (Electrical)	Proper lighting arrangement should be provided in sump.	Mr. Bidhan Chandra Khan, Project Coordinator, MDO.	Complied.
3.	AVA of dozer no. 09 and 11 are defunct.	Mr. Anik Banerjee, W.I (Mechanical)	Replace the AVA on an urgent basis.	Mr Aman Sharma, Mechanical Engineer, SAAKAR.	Complied.

➢ **Accident Report: -**

1. Fatal: - NIL
2. Serious body Injury: - NIL
3. Reportable Injury: - NIL

➢ **Major Violations pointed out by DGMS: -**

SL. No.	Observations/Violation	Ref. No.	Implementation status	Special Remarks
1.	**Mining:** Nil		All violations complied.	

2.	**Mechanical:** 1) Regulations 139(1)(d):- Automatically operated fire detection and suppression system (AFDSS) was not provided in Hydraulic Excavators, Tata Hitachi, Ex-490, 00050109 & 00050115, Komatsu make, dozer, D-85, Sl. No.7028, Pay loader, JCB-make, Sl. No. 4306745, Drill machine, Velson-make, Sl. No. S200-25198 deployed in the mine. 2) Regulation 216(2) read with Gazette rectification 01/2018 also read with DGMS (Tech.) Circular 06/2020: - (i) Semi-automatic fire suppression system, auto load indicator, auto dipping system, rear vision system, seat belt with reminder, proximity warning system, speed limiting device, operator fatigue sensor, tail gate protection system and retro reflective reflectors were not provided in Bharat Benz-make, 3532CM tippers having Reg. No. WB53C7102, WB53C7136, WB53C7121 and WB53C7141. deployed in the mine. Tippers and trucks deployed for transportation of coal from coal stock yard to railway siding were not provided with reminder and retro reflective reflectors with safety features like audio visual reversing alarm, rear view mirrors, seat belt (ii) Seat belt with reminder, AFDSS, turbocharger guard, rear vision system was not provided in Komatsu make, dozer, D-85, Sl. No.7028 deployed in the mine. Rear vision system was not provided in Pay loader, JCB-make, Sl. No. 4306745. (iii) Seat belt with reminder, proximity warning system, rear vision system and turbocharger guard were not provided in Hydraulic Excavators, Tata Hitachi, Ex-490, 00050109 & 00050115 deployed in the mine. (iv) Emergency stop push button, wet drilling arrangement, seat belt with reminder and rear vision system found defunct in the drill machine, Tata Hitachi excavator mounted, Velson-make, Sl. No. S200-25198 deployed in the mine deployed in the mine. 3) Regulation 217 (2): HEMM operators and mechanical fitters were not conversant in respect of safe operation and maintenance of the HEMMs and AFDSS. They were not provided adequate proper training for the same by OEM.	Form VI	Partly Complied. Partly Complied. Partly Complied. Partly Complied. Partly Complied. Not yet complied.	**Attention drawn to Mr. Jitendra Sinha, Advisor, GSPL to arrange to rectify the above violation with proper discussion with representative of SAAKAR as it is a Standing Violation.**
3.	**Electrical:** **Nil**			
Over all Attention to Mr. Srinivas Pilli, DGM, GSPL. **Please look into this matter and arrange to ensure the above violations must be removed at the earliest.**				

- **Chairman Mr. Bhavesh Kumar Ranjan Advises the safety committee members to communicate the following message to grassroot level workers.**

1. Proper berm is to be maintained all over the haul road and OB dump.
2. Entry of unauthorised persons in mine should strictly be prohibited.
3. Over loading of tippers is to be restricted.
4. No persons are allowed to work unless it is his designated working place.

➢ **Secretary Mr. Swarup Banerjee gave the following message to the safety committee members to communicate to grassroots level workers.**

1. Every workers will be allowed to work with full responsibility and report to his superior at the end of the shift.
2. No worker will be allowed to discharge their duty at any place unless it is designated working place.
3. No workers will try to temper the fencing and cross the fencing illegally.
4. No person will be allowed to enter the mine with INTOXICATED Condition.

Secretary
Safety Committee
Gangaramchak & Gangaramchak-
Bhadulia Coal Mine, WBPDCL

Chairman
Safety Committee
Gangaramchak & Gangaramchak-
Bhadulia Coal Mine, WBPDCL

CC:

1. DMS-Sitarampur, Region-II
2. DDMS-Sitarampur, Region-II
3. GM (Mining), MROD
4. Agent, Gangaramchak & Gangaramchak Bhadulia Coal Mine
5. COO, GMPL, Acting Manager, GMPL (MDO)
6. Person concern
7. Notice Board

WBPDCL

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
(A Government of West Bengal Enterprise)
Corporate Identity No: U40104WB1985SGC039154
:Registered & Corporate Office:
"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector- III, Salt Lake, Kolkata- 700 106
• Phone: (033) 2335-0571/2339-3100 • Fax: (033)2339 3186 / 2339 3286 • Website: www.wbpdcl.co.in
• email: wbpdcl&wbpdcl.co.in

Ref No: WBPDCL/G&GBCM/MGR/23-24/ 100

Date: 01/04/2024

To
The Director of Mines Safety
Sitarampur, Region III, DGMS,
P.O.- Sitarampur, Dist- Paschim Bardhaman

Subject: Mock Drill Report during 4th qtr. of FY 2023-24 (Qtr. ending 31 March 2024) For Gangaramchak & Gangaramchak-Bhadulia coal mine, WBPDCL.

Respected Sir,
Please find herewith the Mock Drill report during 4th qtr. of FY 2023-24 for Gangaramchak & Gangaramchak-Bhadulia Coal Mine, WBPDCL

Subject: Mock Drill Report during 4th qtr. of FY 2023-24 (Qtr. ending 31 March 2024) For Gangaramchak & Gangaramchak-Bhadulia coal mine, WBPDCL.

S NO.	Zone and Region	Name and Address of Mine	Owner	Name and full Address of owner	Date of Mock Drill	Type of Mock Drill	Observation (including response time)	Outcomes/ Shortcomings	Suggestion to the Management
01	Eastern Zone, Sitarampur, Region III	Gangaramchak & Gangaramchak-Bhadulia coal mine Address- P.O.- Sagarbhanga, P.S.- Lokpur Birbhum - 713325	M/S WBPDCL	Shri Chanchal Goswami Address- Bidyut Unnayan Bhavan, Salt lake, Sector-III Kolkata	25/01/2024	Fire	Response time is approx. 15 minutes	The workers including supervisor left the working place without trying to extinguish the fire.	Every worker must be motivated that, everybody will arrange to extinguish the fire under the proper supervision of officials and competent persons without leaving the working site.
02					20/03/2024	OB dump sliding.	Response time is approx. 10 minutes	The workers were panic and were running here & there and were not following the safety rules.	A Safety talk with training is to be given at unit level for better acquaintance of the situation.

Safety Officer
Gangaramchak and Gangaramchak Bhadulia Coal Mine
WBPDCL.

02/04/24

Mine Manager
Gangaramchak and Gangaramchak Bhadulia Coal Mine
WBPDCL.

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

Ref. No: WBPDCL/Director (Mining)/1959 Date: 14.11.2024

To
The Director of Mines Safety
Eastern Zone, Region-III, Sitarampur
Dist: Paschim Bardhaman-713359

Sub: Regarding submission of the test reports of the blasting accessories used at Gangaramchak & Gangaramchak- Bhadulia Coal Mine.

Ref: S-III/EZ/FA/15829661818/2024/892 dated 08.11.2024

Sir,

In reference to the above letter regarding submission of explosive test report it may kindly be noted that the testing of the Explosive & Accessories of the same batch issued on 07.10.24 at Gangaramchak & Gangaramchak- Bhadulia Coal Mine has been taken on top priority. The undersigned is exploring all the possibilities of the testing required. But due to the non-availability of clarity on guideline of testing facilities available with Govt. agencies the process is being delayed. The efforts taken by the undersigned is given chronologically for your kind perusal.

Sl.No	Date	Letter from	Letter To	Subject	Remarks
1	16.10.24	GM(Mining)	Director, CSIR-CIMFR	Regarding Testing of the Explosive & Accessories	Attached in annexure-I
2	18.10.24	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	GM(Mining)	Regarding Testing of the Explosive & Accessories	Attached in annexure-II
3	25.10.24	Agent, G&GB Mine	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	Regarding Request for offer for testing of the Explosive & Accessories	Attached in annexure-III
4	26.10.24	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	Agent, G&GB Mine	Regarding Testing of the Explosive & Accessories , reg Clarification	Attached in annexure-IV
5	27.10.24	Agent, G&GB Mine	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	Regarding Clarification of sample testing	Attached in annexure-V
6	29.10.24	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	Agent, G&GB Mine	Regarding Testing of the Explosive & Accessories , & Clarification thereof	Attached in annexure-VI
7	04.11.24	Agent, G&GB Mine	Chief Scientist & HoS, Rock Excavation Engineering, CSIR-CIMFR	Regarding Clarification of sample testing	Attached in annexure-VII
8	04.11.24	Agent, G&GB Mine	Jt. Chief Controller of Explosive	Regarding Permission for transportation of explosive	Attached in annexure-VIII
9	07.11.24	Agent, G&GB Mine	Chief Controller of	Regarding	Attached in

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

			Explosive	Clarification of sample testing	annexure-IX
10	07.11.11	MDO (M/s GSPL)	MD, Ideal Detonators Pvt Ltd	Regarding Testing Report of Electronic Detonators	Attached in annexure-X
11	07.11.11	MDO(M/s GSPL)	MD, GOCL	Regarding Testing Report of Electronic Detonators	Attached in annexure-XI
12	08.11.24	MDO(M/s GSPL)	MD, CDET Explosive	Regarding Testing Report of Electronic Detonators	Attached in annexure-XII
13	08.11.24	MD, GOCL	MDO(M/s GSPL)	Regarding Submission of Test report	Attached in annexure-XIII
14	13.11.24	Agent, G&GB Mine	Jt. Chief Controller of Explosive	Regarding Testing of the Explosive & Accessories	Attached in annexure-XIV

Apart from the above measures a team of GM(Mining), Agent & MDO representative visited PESO office Nagpur on 11.11.24 where in it was advised to represent the issue in VC conducted by PESO. In the VC, the matter was placed before the Officer, Chairing the VC. The Chairman advised to raise the matter on the very next day VC where it was told that all the concern person will be called upon.

In the next day's VC i.e. 12.11.2024 it was revealed from Dy. Chief Controller of Explosive/chairing the VC, that such matter shall be taken up at National Academy for Petroleum and Explosive safety and Testing Station at Gondkhairy. In the meantime, GM and Agent visited Testing Station at Gondkhairy to discuss the procedure, wherein it has been informed that the matter shall be taken up with Jt. Chief Controller of Explosive, PESO of Regional Circle, Kolkata office. Subsequently a letter bearing number: WBPDCL/AG(G)/24/180 dated 13.11.24 has been given, requesting for the necessary support (Copy attached) at the earliest.

Undersigned met with Director, CSIR-CIMFR,Dhanbad & Jt. Chief Controller of Explosive, Kolkata on 17.10.2024 & 24.10.2024 respectively regarding conducting testing of explosive & accessories of the same batch which was involved in the incidents of Gangaramchak & Gangaramchak-Bhadulia Coal Mine on 07.10.2024.

Accordingly, as mentioned in the above table, some test reports have been obtained from the various manufacturers, which is attached herewith as referred in the table.

All the sincere efforts are being taken from our end to comply with the direction pointed out in spot inspection report of Form-VI dated 09.10.2024 with respect of the sample testing.

Thanking you,

Yours faithfully,

Encl: As above.

16/11/2024

(Chanchal Goswami)
Director (Mining)

Copy to:

1. Dy. Director General, DGMS, Eastern Zone, Region-III

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
Corporate Identity No. : U40104WB1985SGC039154
"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector-III, Bidhannagar, Kolkata-700 106
Phone: No. (91) (33) 2335 0581/2339 3204/3294, Fax: (91) (33) 2335 0524 / 2339 3286, Mobile: 9425176555
E-mail : c.goswami@wbpdcl.co.in, Website : www.wbpdcl.co.in

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

Ref. No: WBPDCL/Director (Mining)/**1955**

Date: 06.11.2024

To
The Superintendent of Police
Birbhum, West Bengal

Sub: Requirement of DNA test report of 2 deceased and Post- Mortem report of 8 deceased i.r.o Inquiry into major fatal accident by DGMS occurred on 07.10.2024 at 10:32 AM due to Blast in Explosive Van at Gangaramchak & Gangaramchak-Bhadulia Coal Mines Owned by M/s West Bengal Power Development Corporation Limited-Reg

Ref.

1. EZ/2024/1284 dated 28.10.2024
2. EZ/2024/1282 dated 28.10.2024

Dear Sir,

Deputy Director General of Mines Safety, Eastern Zone, DGMS vide above references instructed to submit the DNA test report of 2 deceased (Namely Yuddha Marandi & Jaydeb Murmu) and Post-Mortem report of 8 deceased (Namely 1. Amit Singh, 2. Asharifi Yadav, 3. Bhajaram Ghosh, 4. Yuddha Marandi, 5. Jaydeb Murmu, 6. Shomlal Hembram, 7. Rabalal Murmu, 8. Mangal Marandi).

It is requested to kindly arrange to provide the DNA test and Post-Mortem report of the deceased as mentioned above at the earliest to submit to DGMS.

Thanking you,

Yours faithfully,

06/11/2024.

(Chanchal Goswami)
Director (Mining)

Encl: As Above

Copy to:

1. The CMD, WBPDCL
2. The District Magistrate, Birbhum

Copy for kind information to: -

1. The DDG, EZ, DGMS

The West Bengal Power Development Corporation Limited
(A Government of West Bengal Enterprise)

Gangaramchak & Gangaramchak Bhadulia Coal Mine

SOP FOR BLASTING IN GANGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINES OF WBPDCL

Procedure for Deep-Hole Blasting in Opencast Coal Mine:

General

1. The Manager of the mine where deep hole drilling and blasting is proposed shall ensure the following: -
   a. Only properly trained and competent persons who are authorized in writing by the manager for the purpose are deployed.
   b. Adequate personal protective equipment as required to be used by persons deployed in thisconnection are provided and used.
   c. Adequate scientific equipment for measurement of groundmovements and various blasting parameters like ground vibrations, noise, etc., are provided.
2. The entire operations of conduct of safe deep-hole drilling and blasting operations in the mine including transport of the explosive to the site of its use, shall be placed under the overall supervision of a competent person holding First class manager's certificate, here in after referred to as "Blasting Officer", duly appointed in writing by the manager for the purpose. He shall be assisted in operations connected there with by adequate number of persons holding at least an Overman certificate of competency, who will act as blaster/shot firer are duly authorized in writing by the Manager and are fully trained in deep hole drilling and blasting techniques.

Drilling of Deep-Holes

1. Before commencement, the position of every deep hole to be drilled shall be distinctly marked by an Overman (MDO) working under the direct control of the Blasting Officer to be readily seen by the Drill Operator.
2. No drilling shall be commenced in an area where shots have been fired, until the Shotfirer has made a thorough examination at all places, including remaining butts of old deep holes, for unexploded charges that a drill may strike.
3. No drill or bore rod or pick shall be inserted in butts of old deep holes even if an examination has failed to reveal presence of explosives.
4. Drilling operations shall not be carried on simultaneously on two benches, at places directly one above the other.
5. Wherever, drilling operations are being carried out, charging of already drilled deep holes shall not be carried out in the same area at the same time.

The preparation of charges and the charging and stemming of holes shall be carried out by or under the personal supervision of a competent person.

Bn. Ranjan
23/02/24
Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Charging and Stemming

1. During the approach and progress of an electric storm, no charging and blasting shall be done.
2. No shot hole shall be charged in crushed, broken, or fractured ground strata.
3. All detonators and primed cartridges shall be kept in secure receptacles at a safe distance from the detonating fuse and the explosive, until required for use.
4. Charging of explosives shall be such as to ensure continuity of the explosive column. Where deck charging is done, continuity shall be ensured for each deck of explosive charge.
5. Primer explosive cartridge shall not be slit or deformed.
6. Adequate amount of cap sensitive explosive shall be used with non-cap-sensitive explosive charge to ensure complete detonation of the explosive charge.
7. In case, water is encountered in any shot-hole, either the shot hole shall be dewatered by blowing compressed air into the hole or the explosive column shall be gently pushed down by wooden rod and sufficient time given for the explosive column to sink to the desired depth before the round is fired. Decking in watery holes shall be avoided.
8. The charging of holes shall be carried out in day light hours only.

Firing of Shotholes

1. Shots shall not be fired except during the hours of day light.
2. The Mine manager shall fix the blasting time and shall circulate it to all concerned and display it prominently on the notice Board and at conspicuous places in and around the mine.
3. The danger zone shall be distinctly demarcated (by means of red flags properly arranged and supported) at least 30 minutes before firing of holes is done.
4. All holes charged on any one day shall be fired on the same day. However, in case of specific problems which may lead to the charged holes to sleep over night, the following conditions shall be strictly complied with.
    a. Explosives charged shotholes in coal faces and the OB bench immediately above coal seam **SHALL NOT** be kept sleeping and shall be blasted off on the day of charging.
    b. The total duration of sleeping of holes with explosives shall not exceed the hours as designated by the Manager in writing after consultations with the manufacturer of the explosive(s).
    c. Elaborate standing orders shall be formulated by the Mines Manager on the various precautions to be taken during the sleeping of shotholes. The standing orders shall clearly spell out the responsibilities of various officials and supervisors including the Blasting Officer of the mine in maintaining the sleeping shotholes in safe condition.
    d. Before deciding to allow shot holes on sleeping at any place in the mine other than the coal benches and the immediate OB bench over the coal seams, care shall be taken to ensure that there is no heating of strata any where along the depth of the shotholes. Details of bottom hole temperatures of all shot holes proposed to be charged with explosives and later kept sleeping shall be recorded. For regularly monitoring the bottom hole temperature for any increase, a few pilot holes shall be left un-charged. If the bottom hole temperature shows any sign of abnormal increase, then immediate steps shall be taken to blast all the shot holes at the earliest. The details of all such abnormal increase of temperature, shall be recorded in the register separately kept for the purpose and also signed and dated by the blasting officer and the Manager.
    e. The area where the shot holes are kept sleeping with charged explosives shall be conspicuously marked by such an arrangement which could be clearly visible during any time of the day or the night.
    f. No person shall be allowed to be present anywhere within 100 m of the shot holes sleeping with explosives. The entrance to such areas shall be effectively cordoned off to prevent any inadvertent and unauthorized entry.
    g. The fuse wire emanating out of the shot hole charged with explosives shall be covered with any incombustible material so as to prevent any accidental ignition due to the influence of static electricity form lighting etc.
    h. Adequate arrangement of water under high pressure shall be made available near the area of sleeping of shot holes for dealing with any exigencies, including flushing out of charged explosives from the shot holes and for de-sensitizing the explosives in the charged shot holes.
5. The area of explosives charged shot holes shall be conspicuously marked by visible bright red flags.
6. Blasting shall be done preferably against a free face. Blasted material shall be cleared off before commencement of drilling operations for succeeding round.
7. All normal precautions for charging and firing, as laid down under Reg. 192 of the Coal Mines Regulations 2017, shall be strictly observed.
8. Guards shall be posted to ensure that no person inadvertently enters the danger zone and to ensure that all persons within the danger

zone, have taken proper shelter.

9. Before shots are charged, stemmed, and fired, sufficient warning by siren or other suitable means shall be given to warn persons in the danger zone, including to the habitants of structures and dwellings, not belonging to Owner.
10. In case of misfires, precautions as laid down in the Regulation 204 of the CMR-2017, shall be taken.

Regulatory aspects of drilling, charging, stemming and blasting

1. No drill shall be used for drilling a shot-hole unless it allows a clearance of at least 0.3 centimetres over the diameter of the cartridge of explosives, which it is intended to use.
2. Before starting the drilling, operation drilling face should be properly cleaned by dozer and no loose materials should be left over.
3. No shot-hole shall be charged before it is thoroughly cleaned.
4. Before any shot-hole is charged, the direction of the hole shall, where practicable, be distinctly marked.
5. No detonator shall be inserted into a priming cartridge until immediately before it is to be used, however that in case of wet workings, priming cartridges may be prepared at the nearest convenient dry place and such primed cartridges shall be carried to the working place in a securely closed case or container.
6. Detonators once inserted into a priming cartridge shall not be taken out.
7. Same type of explosive shall be used in any shot hole. To use two types of explosives in any shot- hole, the manager shall frame and enforce standing orders for the safe use of explosives and a copy of the same shall be submitted to the Regional Inspector.
8. The shot-firer shall, to the best of his judgment, ensure that no shot-hole is over-charged or under charged, having regard to the task to be performed.
9. Shots shall be fired electrically or by any other means or instruments or apparatus as approved by the Chief Inspector.
10. Every shot-hole shall be stemmed with sufficient and suitable non-inflammable stemming so as to prevent the shot from blowing out.
11. Only sand loosely filled in, or soft clay lightly pressed home, or a compact but not hard mixture of sand and clay or water shall be used as stemming and in no case, shall coal dust be used for the purpose of stemming.
12. In charging or stemming a shot-hole, no metallic tool, scraper, or rod shall be used, and no explosive shall be forcibly pressed into a hole of insufficient size.
13. No shot shall be fired except in a properly drilled, charged, and stemmed shot-hole.
14. All surplus explosives shall be removed from the vicinity of a shot hole before connecting the shotfiring cable to the shot holes.
15. As far as practicable, a shot shall be fired by the same shot-firer who charged it.
16. No shot-hole shall be charged except those which are to be fired in that round and all shot-holes which have been charged shall be fired in one round.
17. Where a large number of shots have to be fired, shot firing shall, as far as practicable, be carried out between shifts.
18. No person shall remove any stemming, or pull out any detonator lead, or remove any explosive froma shot-hole either before firing or after a misfire or bore out a hole that has once been charged or deepen or tamper with empty holes or sockets.

Misfire treatment procedure as per Regulation 204 of the CMR-2017

1. After firing the shots electrically, no person shall re-enter or be permitted to re-enter the place until 5 minutes after the source of electricity has been disconnected from the cable.
2. In opencast working, mark the place of the misfire with a red flag.
3. In the event of a misfire, a second charge shall not be placed in the same hole.
4. If the misfire contains a detonator, the leads thereof shall be attached by a string to the shot-firing cable or some distinctive marker.
5. Except where the misfire is due to faulty cable or a faulty connection, and the shot is fired as soon as practicable after the defect is remedied, another shot shall be fired in a relieving hole which shall be so placed and drilled in such a direction that at no point shall it be nearer than 30 centimeters from the misfired hole: Provided that the new hole shall be bored in the presence of a shot-firer, preferably the same person who fired the shot.
6. After a relieving shot has been fired, a careful search for cartridges and detonators, if any, shall be made in the presence of the shot-firer, amongst the material brought down by the shot.
7. If a misfired hole is not dislodged by a relieving shot, the procedure laid down in (6) and (7) shall be repeated.
8. A misfired hole which cannot be dealt with in the manner so provided, shall be securely plugged with a wooden plug, and no person other than a shot-firer, an official or a person authorized for the purpose shall remove or attempt to remove any such plug.

Mine Manager
Gangaramchak & Gangaram
Kulia Coal Mine, IWC
23/02/24

Miscellaneous

1. Mobile phones shall not be used by any person connected with deep hole drilling and blasting operations. Only a two-way communication by wireless devices other than mobile phones shall be provided to the Assistant Manager, In-charge of blasting, shot-firers and to the assistant of the shotfirer.
2. A proper record of blast parameters like spacing & burden of holes, hole depth, number of holes fired in the round, charge/hole, charge/delay, charge/round, length of explosive column(s) & stemming column length(s), initiation pattern (with proper sketches wherever called for), results of ground vibration observed (ppv, frequency, & air over pressure) and distance up to which flying fragments resulting out of blasting projected, shall also be kept maintained in a bound paged book for each round of deep-hole shots fired. The records shall be duly signed by the Blasting Officer and countersigned by the Manager of the mine.
3. The Manager of the mine, after thorough consultations with the OEM and explosives manufacturers, shall formulate suitable Codes of Practice in respect of drilling, charging, stemming, warning of persons, taking shelter, and firing of shots.
4. No person is allowed to smoke or use of light other than enclosed light, torch or light approved by DGMS.
5. Blasting should be isolated from other mining operations activities like drilling, excavation, loading transportation etc.

Stepwise Activity Responsibility

STEP	ACTIVITY	REQUIREMENT	RESPONSIBILITY
1.	Pre-ConditionChecks	To check the followings: 1. Drilling bit 2. Drilling Machine health check-up 3. Battery box/ fire prone areas shall be freefrom the Inflammable material. 4. Drilling crew shall ensure usage of PPEs(Personal Protective Equipment)	• Driller (Every day before start of production drilling) • Blaster (Every day during blasting operation)
2.	Drilling Operation		
2.1	Movement on drilling rigs	To prepare the long lateral production face for drilling operation.	• Driller (Every day during drilling operation)
2.2	Start of drill	Competent person shall be required to operate the drilling machine. He shall keep himself away from the rotating elements of drill, and do not wear loose clothing. Lower down the rotary head attachment till bit touches ground. Give feed, rotation & operate water pump. To minimize the boulders, drilling and other operation shall not be carried on simultaneously on the benches at places directly one above the other. Precautions shall be taken while dealing with boulder material and flying of chips from collaring. During flushing of drilled hole, safety goggles shallbe used. Safety belt shall be used while dealing with theedges of drill machine. Competent person shall inspect and declare the site safe for drilling after fall of broken edges from highwall.	• Driller (Every day during production as well as exploratory drilling) • Driller Helper (Every Day during production as well as exploratory drilling) • Shift In charge (Every day before and after the shift completion) • Blaster (Every day before again starting of drilling operation after fall of broken pieces)
2.3	Drilling rod attachment & detachment	While attaching or detaching drill bit, any person shall not be allowed under suspended tools. Proper size of the spanner shall be used to hold back the column of drill bit tightly. While attaching a new drill rod, use spanner for holding the first rod, and open its rotary head from the adapter. Then, rotary head needs to move to the top, and rotary carrier needs to bring just below the rotary head and rotary head is attached	• Driller/ Driller Helper (Every Day during attaching and detaching of drill rod)

		to the second rod. Later, the second rod is taken out from the rod carrier and join both rod by lowering down. While detaching the second rod from the first rod, place the rod in its casing and shall ensure proper locking of the rod with rod carrier. Detach the rotary head from second rod and lower the rotary head safely and join the first rod with it.	
2.4	Covering of holes	Precautions shall be taken while plugging the hole to prevent damage of collar & fall of foreign material inside the drilled hole.	• Blaster/ Blaster Helper (Every dayduring covering of holes)
2.5	Bit detachment & attachment	While detaching or attaching the drill bit, drill operator shall remove the centralizer and place the bit chuck in position. One end of the chain spanner shall be placed properly and bolted to break out the wrench and connect the other end of the wire sleeve of the drill, followed by opening of wrench. Two/three pinch shall loosen the drill bit. Tight the adjusting bolt of the chain spanner in case of slippage at the grip. The bit shall be open after a reverse rotation to the rotary.	• Driller/ Driller Helper (Every time during the installation of a new bit)
2.6	Parking of drillingrig	Placement of the drilling machine unit to a safeplace where blasted projectiles will not affect it.	• Driller/ Driller Helper(Every day during blast operations)
2.7	Reading and writing of Logbook	At the beginning of each shift, reading shall be done for the status of machine in the Logbook. At the end of each shift, writing shall be done forthe status of machine in the Logbook.	• Driller (Every day before and after each shift completion) • Shift In charge (Everyday before & after each shift completion)
3	Charging, stemming & blasting		
3.1	Guarding & Signalling before Charging	Explosives shall not be left unattended. Precautions shall be taken regarding blasting event for the employees, visitors, and neighbors regarding a scheduled blasting event. Neighboring mines shall be informed before every round of blasting. Prohibition shall be done for the charging area by using caution tape and red flags.	• Blasting Helper (Every day before charging of holes)
3.2	Explosives Charging	Competent person shall supervise the whole operation. Charging of the explosives into the hole shall be done as soon as possible after the explosives is transported to the blasting site. Every hole shall be thoroughly cleaned before charging with explosive materials, and not more than one hole shall be in the process of being charged at any point of time. Explosive cartridge shall not be slit or deformed. Explosive cartridge shall not be forcibly pressed into a hole of insufficient size.	• Blaster/ Blaster Helper (Every dayduring charging of explosives)

Mine Manager

		Same type of explosives shall be use in a hole. Lowering of explosives shall be done carefully to avoid sticking of cartridges in the shot hole. After charging of hole with explosives, measure the length of the remaining portion of the hole to confirm that the cartridges are in closed contact with each other and there is no air gap between the explosive's columns. In case uncharged portion of the hole is not as per calculation, thereby indicating air space. So, attempt may be made to push down the charge in case of slurry explosive only. Charging shall be properly done as per the calculation. Ensure that no charge in a shot hole is over charged or under charged. Hand gloves shall be use while handling of explosives to avoid skin infection. Smoking, naked light or open flame shall not be allowed within 300 meters from charging area. Explosives shall not be dropped into the hole during the charging to avoid shock. For the priming cartridges, a pricker made of wood or of a nonferrous metal shall be used to avoid any sparking hazards. No steel knife will be used to cut the cordtex or explosive case. Precautions shall be taken for blast vibration and noise	
3.3	Stemming the holes.	Stemming shall be carried out manually using drill cuttings or proper stemming material for stemming purpose. Use spade with care for manual filing of the hole. Precautions shall be taken to avoid the cutting of lead. Keep stemming column proper to avoid blownout shots and subsequent noise. During stemming, do not use iron or steeltools for tamping. A tamping rod made entirely of wood shall be used.	• Blaster/ Blaster Helper (Every day during stemming theholes)
3.4	Return of Explosives & Issue of Detonator	All surplus explosives shall be removed from the face. It shall be secured properly into the explosive van. Surplus explosive shall be return to the Magazine and detonator issuer. Detonators shall be kept into the locked box and shall not take out from the box unless it is required for immediate use. Detonators shall not be kept into a container which contains other explosives, materials or tools. Always carry the detonators in a wooden box.	• Magazine In charge (Every day during issuing and returning of explosives) • Blaster/ Blaster Helper (Every day during collecting and handing over of the explosives)
3.5	Guarding & Signaling before Firing	Competent personnel shall be posted at all access points leading to the blast area to prevent entry of people in the danger zone. Warning siren shall be given at least 15 minutes	

		before the holes are fired. Obey the followings: a) Three sirens – 15 minutes before the firing b) Two sirens – just before firing c) One siren – All Clear after the inspection of blasting face To prevent injury due to fly rock, the danger zone shall be distinctly marked (by means of red flags or caution tape) at least 30 minutes before firing of holes.	• Blaster/ Blaster Helper (Every day before firing of holes)
3.6	Taking Shelter	Blaster shall immediately move to blasting shelter after lighting the safety fuse. Vehicle as a means to escape from danger zone shall not be used to run to the blasting shelter. Precautions shall be taken to avoid the hit by flying rocks projectiles.	• Blaster/ Blaster Helper (Every day before firing of holes)
3.7	Firing the shot	All holes charged on any one day shall be fired on the same day. Blasting operations shall be carried out only in between the shifts. The timings as fixed by the Mine Manager. No shot shall be fired except in properly drilled, charged and stemmed blast hole. Connections shall be made with the help of cordtex and relay or shock-tubes. In case of ordinary blasting, the detonator shall be crimp to one end of the safety fuse. All equipments in the blast area will be removed or protected from the fly rock damage. In case of electric blasting, the electric detonator shall be tied up to the cordex, and connection shall be made to shot the firing apparatus. Lead wire of detonator and cable shall be connected to shot the firing cable and to the detonator respectively.	• Blaster/ Blaster Helper (Every day during the blasting of holes) • Mine Manager (Once in a month)
3.8	Electric shotfiring	No detonator shall be inserted into a priming cartridge until immediately before it is to be used. No shot shall be fired except by means of a suitable shotfiring apparatus and number of shots fired at any one time by the apparatus shall not exceed the number for which it is designed. The key of exploder shall not be placed in position until a shot is about to be fired and shall be removed as soon as a shot has been fired. No apparatus shall be used which is defective; and every apparatus shall, once at least in every three months, be cleaned and thoroughly overhauled by a competent person. If the apparatus fails to fire all the shots in a properly connected circuit, the blaster shall return the apparatus to the Manager or Assistant Manager as soon as possible, and it shall not be used again unless it has been tested and found to be in safe workings order.	• Blaster/ Blaster Helper (Every dayduring firing of the holes)

B.M. Ranjan
23/02/24
Mine Manager
Ramgarmchak & Gange
dia Coal Mine, V

		The result of every overhaul, test or repair, as aforesaid shall be recorded in a bound- paged book and shall be signed and dated by the person making the overhaul, test or repair. Before coupling the cable to the firing apparatus, couple up the cable itself to the detonator leads. Adequate precautions shall be taken to protect electrical conductors and apparatus from injury. While coupling up the cable to the firing apparatus; and before doing so, ensure that all persons in the vicinity shall taken proper shelter as provided under Reg.164. The circuit shall be tested either for electrical resistance or for continuity before connecting it to the firing apparatus. Such a test shall be made with an ohm meter, and the cable to the shotfiring apparatus shall be connected last. Disconnect the cable from the firing apparatus, after firing the shots and before entering the place of firing. Detonators once inserted into a cartridge shall not be taken out. No current from a signalling, lighting or power circuit shall be used for firing shots. The blaster shall take care to prevent the cable from coming into contact with any power or lighting cable or other electrical apparatus.	
4	Inspection of blasting face and clearance		
4.1	Prohibition to enter blast Area.	Competent persons shall inspect the blasted face, after a shot has been fired. No other person except the blasting crew member shall be permitted into the blasted site.	• Blaster Helper (Everyday after the blasting)
4.2	Entering the blasting face	Fall of ground soon after blasting shall be judged and accordingly proceeded to the spot. Wait until all the smoke & dust is cleared from the blasted face. Precautions shall be taken against the cracks, under cuts etc. and remain alert for possible fallfrom the edge.	• Blaster/ Blaster Helper (Every day before entering the blasting face)
4.3	Checking ofblasting face	Visual inspection shall be made for the Misfires/Back break/Blown out shot. The performance of blasting shall be check and observations shall be recorded in the note book as Per CMR'2017.	• Blaster/ Blaster Helper (Every day before entering the blasting face)
4.4	Clearance	An all-clear signal of one long siren shall be givenafter the inspection that area is safe. The guards shall be withdrawn after checking that there are no misfires and declared as safe to resume work. In case of misfire the procedure under Regulation 167 shall be followed from the CMR 2017. If for clearing a Misfire, long process is required and is not cleared on that period, then the place	• Blaster/ Blaster Helper (Every day while inspectingclearances)

		shall be marked with red flag and no man or machinery shall be deployed until it is cleared and safe in all respects.	
5	Handling of Misfire		
5.1	Restricting the entry to Danger zone	"All Clear" signal shall not be given until the misfire is located & re blasted. The place of misfire bench shall be marked by red flag and suitably guarded.	• Blaster/ Blaster Helper (Every daywhile in case of handing a misfire)
5.2	Clearing of stemming material	Compressed air or water under pressure shall be used to clean the stemming portion of the hole. Clearing process shall not use iron scrapper.	• Blaster/ Blaster Helper (Every day while in case of handing a misfire)
5.3	Re-priming and Firing	Primer shall be inserted to the explosive column,after cleaning the stemming material. Re-priming of hole shall be carried out by or in thepresence of blaster. To avoid skin corrosion, explosives shall be handled by using hand gloves.	• Blaster/ Blaster Helper (Every day while in case of handing a misfire)
5.4	Drilling of relieving hole	All loose rock shall be removed from the face, before drilling. Examine the presence of explosives in the socket or misfire hole. The relieving hole shall be drilled in the presence of a blaster, preferable the same person who fired the hole. Dry drilling shall not be allowed in the process to avoid the dust.	• Blaster/ Blaster Helper (Every daywhile in case of handing a misfire) • Driller (Every dayduring drilling operation)
5.5	Search for unexploded cartridge and detonator	Unexploded explosives in the material brought down by the shot shall be searched carefully after re blasting. Detonators and cartridges in the muck pile shall not be searched using equipment. The recovered explosives shall be handled by using hand gloves.	• Blaster/ Blaster Helper (Every day after the blasting operation)
5.6	Repetition of procedure	If a misfire hole is not cleared by a relieving shot, then repeat the same procedure until it is confirmed that the hole is cleared, and no existence of explosives are there.	• Blaster/ Blaster Helper (Every day while in case of handing a misfire)
5.7	Reporting of misfire shot	Before leaving the mine, the blaster shall give information of his failure to official who take over charge from him. It shall be the responsibility of reliever to not to engage man or machine to that spot. Access route to the misfired face shall be blocked.	• Blaster/ Blaster Helper (Every day while in case of handing a misfire) • Shift In charge (Every day during inspecting a misfire)
5.8	Recording of misfire	The blaster shall record the followings in a bound paged book kept for the purpose, every misfire, whether suspected, and whether relieved or not relieved. It shall be the responsibility of reliving official also to sign the report and left on to record in the said book.	• Blaster (Every daywhile in case of handing a misfire) • Shift In charge (Every day during inspecting a misfire)

B N Ranjan
23/02/19
Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Safety and Precautions

1. Wear all safety PPEs like safety shoes, safety helmet, hand gloves, safety goggles, dust mask etc.
2. Take care when any horn buzz & watch the movement of vehicle nearby.
3. Provision of water sprinkling during operations to reduce the dust inhalation.
4. Wear Safety dust mask to prevent from air pollution.
5. A fire tender must be available at blasting site to deal with situation where fire has initiated during blasting operation.
6. Safety measures needs to be taken while drilling in coal mines.
7. Proper awareness and knowledge about drilling & blasting operation to all employed at site
8. Person should not work at edge of the bench because there is possibility of sliding of bench. Adequate spacing and burden should be left between holes and bench edge.
9. Be careful of moving vehicle and keep safe distance of 2-3 Mtrs.
10. Do not touch any machine without hand gloves.

1. SOP FOR TRANSPORTATION OF EXPLOSIVES/ BLASTING MATERIAL AT THE MINE SITE

Procedure to be followed

1. The Owner, Agent or/and Manager of the mine where transportation of explosives in bulk is proposed to be practiced, shall ensure the following:

a. Only properly trained and competent persons who are authorized in writing by the mines manager for the purpose are deployed.

b. Adequate and approved personal protective equipment (PPE) as required to be used by persons deployed in this connection are to be provided by GMPL(MDO).

2. The entire operations of transportation of explosives in bulk within mine shall be placed under theoverall charge of a competent person holding at least an Overman's certificate of competency.
3. Transportation of explosives in bulk to the priming station or the site of blasting shall be done only during day light hours.
4. The physical condition of explosives supplied shall be checked before transportation for blasting.
5. The quantity of explosives to be transported in bulk at one time to the site of blasting shall not exceed the actual quantity required for use in one round of shots. Explosive shall not be brought at blastingsite before 30 minutes of the commencement of charging of holes.
6. Explosives shall only be transported in Explosive vans which shall be duly approved by the Mine Manager.
7. All conditions stipulated by the licensing authority in respect of the vehicle deployed for transportation and handling of explosives in bulk shall be strictly followed.
8. Such explosive vans shall be in safe operating condition and should be operated by competent licensed drivers duly authorized by the Manager.
9. At least two fire extinguishers of suitable size and capable of fighting electrical and petroleum fires shall be provided in each vehicle in an easily accessible position and maintained in a state of readiness.
10. Before transporting explosives in bulk, the competent person authorized in this regard shall personally search every person engaged in the transport and use of explosives and shall satisfy himself that no person so engaged has in his possession any cigar, cigarette, or other smoking material or any match or any other apparatus like mobile phone etc., of any kind capable of producing a light, flame or spark.
11. Additionally, the following precautions shall be strictly observed while transporting explosives in bulk.
    a. The vehicle shall be properly earthed with chain links while loading.
    b. The vehicle shall be well locked except during times of placement and removal of stocks of explosives.
    c. The vehicle shall not be overloaded.
    d. The vehicle shall strictly follow the mine transport rule.
    e. The vehicle loaded with explosives shall not be left un-attended.
    f. The vehicle shall be kept in isolated places while loaded.
    g. The vehicle loaded with explosives shall not be taken into garage or repair shop and shall notbe parked in a congested place.
    h. The vehicle transporting explosives shall not be refueled except in emergencies; even theuit's engine shall be stopped, and other precautions should be taken to prevent accidents.
    i. Wherever, drilling operations are being carried out, charging of already drilled deep holes shall not be carried out in the same area at the same time.
12. Every vehicle used for the transport of explosives in bulk shall be carefully inspected once in every 24-hours by a competent person.

to ensure that:

a. fire extinguishers are filled and are in place,

b. the electric wiring is well insulated and firmly secured,

c. the chassis, engine and body are clean and free from surplus oil and grease,

d. the fuel tank and feed lines are not leaking and

e. lights, brakes and steering mechanism are in good working order.

13. A report of every inspection made under sub-clause (a) shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by the competent person making the inspection.

Stepwise Activity Responsibility

STEP	ACTIVITY	REQUIREMENT	RESPONSIBILITY
1.	Pre-Condition Checks	To check the followings: • Competent person who shall be authorized in handling ofexplosives • Approved vehicle for explosive transportation • Explosive issue slip • Explosive handover slip • Security guard • Charging site location confirmation. • The effectiveness of emergency siren.	• Explosive van driver (Every day during transportation) • Blasting officer (Once in every month) • Blaster Helper (Every day during transportation) • Mines Manger(Once in every month)
2	Storage		
2.1	Explosives to be stored in aMagazine	Inventory of the explosives on the premises at any time shall not exceed the license capacity. Distance should be maintained from the transmission line (15 meters for below 440 Volts and 90meters for above 440).	• Magazine In charge(Every day during handover of the explosives) • Electrical Engineer(Every day during inspection of magazine)
2.2	Repairing & Maintenance of Magazine	Magazine shall at all times be kept in state of good repair or maintained in good condition. Interior shall be kept clean, dry and free of grit, paper etc. Fencing shall be provided and properly maintained, to secure the magazine. Adequate lighting shall be provided for proper illumination around the Magazine. The resistance of lightning conductor to earth shall be checked half yearly and in no case be more than 10 ohms. Magazines shall be well ventilated and ventilating screens shall be kept clear at all times. A distance of 15 meters surrounding the magazine shall be kept clear of dried grass or bush or flammable materials. Sufficient stock of fire extinguishers, sand and water shall be kept near the Magazine. Empty explosive cartoons shall becollected and disposed off in an impervious pit.	• Magazine In charge (Every day during inspection of magazine) • Electrical Engineer (Every day during inspection of magazine)
2.3	Storage of Explosives, Issuing of key	Competent person who shall be responsible for magazine access, proper receipt, storage and issue of explosives. Detonator shall be stored in a separate room and having sufficient distance from the magazine. Manufacturing dates and the condition of explosive packages shall be checked. Necessary precautions shall be taken while in case any explosive that may be dangerously impacted by water. Magazine key shall be issued or returned to the office security	• Magazine In charge(Every day during inspection and handover of the explosives from the magazine) • Office Security (Every day during issue of the magazine key)

Bm. Rayan
23/02/24

		only.	
2.4	Guarding	Competent persons responsible for24 hours guarding at the magazine. Unauthorized person shall not be allowed to enter the magazine.	• Office Security (Every day duringissue of the magazine key) • Magazine Security(Every day and night)
2.5	Record of Explosives	Issue and return of explosives shall be maintained by a competent person. He shall keep records and accounts of all explosives.	• Magazine In charge(Every day during transportation)
3	Loading, unloading and transportation		
3.1	Pre-start checking of Explosive Van	To check the conditions of Explosive Van such as tyre, brakes and steering system, fueland oil and fire extinguisher, window, rear view mirror, Earth continuity chain and electricalwirings	• Explosive van driver (Every Day before Start of thevan) • Colliery engineer(Once in every month)
3.2	Loading of explosives to the Explosive Van	During carriage of explosives, hand gloves shall be used. While loading/unloading, ensure no spillage of explosives from the case/container.	• Blaster Helper (Every Day During loading and unloading) • Blaster (Once in aweek during loading and unloading) • Blasting officer (Once in every month)
3.3	Transportation of Explosives to the Charging site.	Explosives are transported shall always be under the charge of a competent person who shall be experienced in handling of explosives and fully conversant thereunder. Detonators shall not be transported with any other explosives. Detonator shall be secured in a wooden box and carried in a locked condition. During transportation the explosive van will travel with a red flag to attract the attention ofanother vehicle on the road. Unauthorized persons shall not travel in the explosive van Security guard shall always with the explosive van	• Blaster Helper/ Driver (Every Day during transportation) • Blaster (Once in aweek during loading and unloading) • Blasting officer (Once in every month)
3.4	Unloading of Explosives	After unloading from explosive van, the explosives will not be left unattended. Proper hand over shall be done to the blasting crew members. The explosives will not be unloaded at a bench just below the working bench where machines are operative. The explosive van will be stationed at a safe distance from the charging site. It will not be allowed to approached or take turn in a bench which has no barrier.	• Blaster Helper/ Driver (Every Dayduring transportation) • Blaster (Every Day during handover of the explosive) • Blasting officer (Once in every month)
4	Issue, Receipt & Return of explosives from magazine		
4.1	Sending blaster for Issuing required amount of explosive from magazine	To bring explosives from magazine, a written requisition shall be presented. Before charging holes, they shall be properly measured, and calculated explosives shall be issued from the magazine to avoid excessive consumption.	• Blaster/ Blaster Helper (Every day during the requirement of explosives from themagazine)
4.2	Entering to magazine premises	At a time, not more than 4 persons shall be allowed to enter the magazine premises. Before entering to magazine, the authorized person shall be required to put their signature in the register and the record shall be maintained regularly. Competent persons entering the magazine shall not allowed to carry mobile and metal objects, match box, lighter or open flames. Synthetic clothes are not allowedin the magazine, only cotton dresses shall be allowed to wear in the magazine premises.	• Magazine In charge(Every day while issuing explosives from magazine) • Blaster/ Blaster Helper (Every day during the requirement of explosives from the magazine)

4.3	Entering to magazine room	No other lighting device except torch shall be allowed in the magazine room. Before entering the magazine premises, competent persons shall first clean shoes with the help of water then put palm on brass plate fitted on the wall.	• Magazine In charge(Every day while issuing explosives from magazine) • Blaster/ Blaster Helper (Every dayduring the enteringof explosives from the magazine)
4.4	Receiving of explosives	To issue explosives from magazine to the authorized person, a written requisition shall be presented with count of the required explosives followed by loading into the explosive van through explosive carriers. Explosives shall only be issued toa substantial construction container which shall be securely locked.	• Blaster (Every day during the receiving explosives from the magazine) • Explosive van driver (Every day during transportation of explosives) • Magazine In charge(Every day while issuing explosives from magazine) • Mine manager (Once in month)
4.5	Carrying of explosive to the van	While loading/unloading operation, the competent person shall ensure safe carriage without any fall of explosives. Explosives and detonator shall not be transported simultaneously in the explosive van. Explosives shall not be issued whenever a thunderstorm appears to be imminent in the vicinity of the magazine. Every person engaged in or about the magazine shall be withdrawn to a safe distance.	• Blaster/ Blaster Helper (Every dayduring loading and unloading of explosives) • Explosive van driver (Every day during loading and unloading of explosives) • Magazine In charge(Every day while issuing explosives from magazine)
4.6	Issuing of Detonator	Detonator shall be issued after the completion of charging in the holes. Detonator shall not be issued in case if the box has not lock and key.	• Blaster (Every day during the receiving from the room distant from magazine) • Magazine In charge(Every day while issuing detonators)
4.7	Return of Explosives	Removal of the remaining explosives from the blasting site shall be done which is left after charging in the hole completed with calculated amount. After firing, the balance explosives shall be returned back to the Magazine. Any person finding any explosivesin or about the mine shall depositthe same in the magazine. Every such occurrence shall be brought to the notice of Manager in writing.	• Blaster/ Blaster Helper (Every dayafter the blasting operation)

Safety Officer
G&GB Coal Mine
WBPDCL

Manager
G&GB Coal Mine
WBPDCL

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Ref NO- WBPDCL/G&GBCM/MGR/24-25//67 Date- 09.11.2024

410

FORM 4 - C

Particulars of injured person(s) returning to duty
(to be given in respect of every person within 15 days of his return to duty)
(See Regulation 8)

From

(Owner, agent or manager)
Name : **Bhavesh Kumar Ranjan**
Postal address : Gangaramchak & Gangaramchak-Bhadulia Coal Mine
District : **Birbhum**
State : **WEST BENGAL**
PIN : **731125**
Mobile Number: 9006130259
Telephone Number (Landline):
Fax number :
Email ID : bhavesh.ranjan4@gamil.com

To:

1. The Chief Inspector of Mines/Director General of Mines Safety, Dhanbad-826001
2. The Regional Inspector of Mines/Director of Mines Safety **SITARAMPUR Region-III** / Dy. Director in Charge of Sub-Region.

Sir,

I have to furnish the following particulars of injured person(s) returning to duty

Name of Mine : Gangaramchak & Gangaramchak-Bhadulia Coal Mine
Name of Owner : Sri Chanchal Goswami
Mine code (nnnnnn) : 0 1 1 1 4 2
Labour Identification Number (LIN): 1 5 8 2 9 6 1 8 1 8
Date of accident (DD/MM/YYY): 0 7 1 0 2 0 2 4
Time of Accident (hhmm) : 1 0 3 2

Sl. No.	Name(s) of injured worker's	Date of return to duty (dd/mm/yyyy)	Whether returned to regular or other job	Permanent Disablement		Ex-gratia / Compensation payment made (Rs.)	Statutory Compensation paid (Rs.)	Benefits to dependents or other benefits
				Part(s) of body				
				Loss	Gone out of use			
1	**LAXMISWAR HEMRAM**	28/10/2024	Light duty	nil	nil	5 lakhs (Compensation Injury)	Official procedure is being process.	All medical treatment facilities was given.
2	**MAHADEB MARANDI**	28/10/2024	Light duty	nil	nil	5 lakhs (Compensation injury)	Official procedure is being process.	All medical treatment facilities was given.

Date: 09/11/24
Place: G&GB COAL MINE

Signature: Bh. Ranjan
Name in Block letters: **BHAVESH KUMAR RANJAN**
Designation: Owner / Agent/Manager

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Application No.
Gangaramchak and Gangaramchak Bhadulia Coal MineWBCWB003/APP00222/2022
Coal Controller Organization
A subordinate organization of
Ministry of Coal, Government of India,

ShastriBhawan, New Delhi
2022-11-16

To
THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
Address:
THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED State- West Bengal District- Birbhum
Email: c.goswami@wbpdcl.co.in
Contact: 9425176555
Fax:

Subject: Approval of Mining Plan and Mine Closure Plan (second Modification) forGangaramchak and Gangaramchak Bhadulia Coal Mine of M/s THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

Sir,
I am directed to refer to your application for approval of Mining Plan and Mine Closure Plan for Gangaramchak and Gangaramchak Bhadulia Coal Mine located inRaniganj Coal Field Submitted through application number APP00222 of Single Window Portal of Ministry of Coal for approval of the Central Government under Rule 22EOf MCR 1960 for a rated capacity of 3.00Mtpa Peak capacity 4.5000 Mtpa, Lease area186.42Ha and Project area186.42 Ha has been considered and approval of the Central Government there on is here by conveyed under Section 5(2)(b) of the Mines & Minerals (Development & Regulation) Act 1957 subject to the following conditions:

1. The project proponent should ensure implementation of all observations made by internal committee during actual operation.
2. Project Proponent shall take all necessary precautions regarding safety of mine workings and persons deployed therein.
3. Mining lease of this block shall not encroach into any other adjacent coal block.
4. The cost of abandonment for carrying out the closure activities envisaged in the Mine closure plan is indicative. The actual cost for carrying out the activities at the time of final closure may be higher. The actual cost of abandonment will have to be borne by the project proponent for carrying out the closure activities.
5. The approval of the Mining Plan (including Mine Closure Plan) is without prejudice to the requirement of approvals from competent/prescribed authority under the relevant rules/ regulations etc.
6. Approval of Mining plan is technical in nature, which is granted with a view to facilitating further developmental activities by the allocattee. This approval will have no effect on the penalty provisions of the agreement in case of nonachievement of Milestones.
7. Monitoring of milestone for development of mine will be as per efficiency parameters in CBDPA/CMDPA and appropriation of PBG will be done in case of failure/delay in compliance with the timelines of CBDPA/CMDPA.
8. Evacuation route/ roads/ water bodies/other surface features/infrastructure outside the Geological Block/Project Area shall not be part of the Mining Plan (in line with para 1.6 of OM F.No. 34011/28/2019-CPAM dated 29.05.2020 of MoC for guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining Plan for coal and lignite blocks).
9. It has been observed that liquidation plan of a part of the geological block has not been furnished in the Mining Plan. Instead, an exploration program has been proposed and a revised mining plan, incorporating the liquidation programme of the balance reserves also (by opencast) has been proposed to be submitted within one year of date of approval of the mining plan (refer Point 5 of Additional Annexure-25 of the Mining Plan). A conceptual report for liquidation of the balance reserves has been furnished (refer Point 1.e of Additional Annexure-25 of the Mining Plan)

16/11/2022

(a)Revised Mining Plan covering the entire allotted block, including the liquidation programmee of balance reserves also, shall be submitted within one year of approval of mining plan.(b)It is observed that details given in the conceptual plan (refer Additional Annexure-24 and Plate-25 of the Mining Plan) is tentative in nature and will be finalized with the approval of the proposed Mining Plan. Efforts shall be made to maximize percentage of recovery of the balance reserves.

You are requested to download the copy of the mining plan and mine closure plan duly signed by the competent authority for needful actions and submissions at your end.

Yours Faithfully

16/11/2022

(ShantaGuha)

Deputy Assistant Coal Controller,

Coal Controller Organisation (A subordinate organization of MinistryofCoal)

Copy to:

1.Under Secretary,NA section,MoC

2.Under Secretary,NA section,MoC

Approved

Ref No - WBPDCL/G&GBCM/MGR/23-24/91a 413 Date- 16.02.24

12

Gangaramchak And Gangaramchak Bhadulia Coal Mine

STANDING ORDER FOR USING OF TWO OR MORE TYPE OF EXPLOSIVES IN SAME BLAST HOLE

A. ORGANISATION

1. All procedure and operations involved in blasting shall be under the charge of blasting officer having First Class Manager's Certificate of competency.
2. There shall be at least 2 no's of assistant manager who will assist the blasting officer to promote safety.
3. There shall be at least one overman for every charging and blasting site so that all operations related to blasting can be carried out safely.
4. Only such number of trained & authorized persons as may be required shall be engaged during transportation, loading, unloading, charging, stemming, connection, guarding and blasting.

B. TRANSPORTATION

1. Transportation of explosives to the blast site shall be only in day light hours.
2. The transportation of explosive shall be under the supervision of a competent person as per the SOP.
3. Every person engaged in the transport and use of explosives shall not possess with any cigar, cigarette, bidi or any smoking material or any matches or any other apparatus like mobile phone etc. of any kind of producing a light, flame or spark.
4. The vehicle loaded with explosives shall not be left un-attended, refuelled and shall not be taken to the garage for repair.
5. Nonel and booster shall not be transported together simultaneously in the same vehicle.
6. The explosive van shall not be used as a conveyance for the personnel.
7. Explosive van shall be in safe operating condition and shall be driven by the competent licensed drivers duly authorized by the manager.

BN. Rayan
16/02/24

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Co...

Gangaramchak And Gangaramchak Bhadulia Coal Mine

C. PRIMING AND CHARGING

1. Priming shall be carried out nearest to the blasting site.
2. It shall be free from traffic movement, power line and suitably marked with red flags.
3. Drilling and charging shall not be conducted on the same blast face simultaneously.
4. Only one type of booster shall be used for a particular blast face. Emulsion booter and cast booster shall not be used in the same hole.
5. The explosive properties of both booster and SME shall be compatible with each other.
6. Nonel of adequate length with respect to the drill hole shall be used.
7. The primed booster shall be lowered carefully to the bottom of the holes.
8. Adequate amount of cap sensitive explosive(booster) shall be used with respect to the quantity of non-cap sensitive explosive (SME) used for particular blast hole.
9. Charge per hole and charge per delay shall be as per the blast design framed by CIMFR and Controlled Blasting approved by DGMS vide ref no-11142|EZ|Sitarampur Region No.III|Permrelax|2024|261029 date 06.02.2024.
10. In no case the hole shall be undercharged or overcharged.

D. STEMMING

1. After certain time of interval (gassing time) the holes shall be filled with a suitable stemming material and the collar portion shall be stemmed tightly with wooden stemming rod or bamboo.
2. In no case metallic rod shall be used as stemming tool.

Dr. Ranjan
16/02/24

Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Gangaramchak And Gangaramchak Bhadulia Coal Mine

E. CONNECTION, GUARDING AND BLASTING

1. As per the blasting pattern, proper delay arrangement shall be maintained during connection.
2. Danger zone for blasting is 500 m from blasting place in all direction as per CMR 2017.
3. Blasting time shall be from 2.00 pm to 3.00 pm and in no case, it shall be differed.
4. Following signals shall be used during blasting: -
    a. Preparing to blast – one long siren.
    b. Ready to blast – two short siren
    c. All clear – three short siren.
5. Blasting guards shall be provided with communication means at all the entry point of the danger zone.
6. Only use the electronic logger after confirming that the blast site is fully cleared of all personnel, minimizing any potential risk during logging operations.
7. All the persons shall be withdrawn by the guard from the danger zone before blasting.
8. All the HEMM/vehicle shall be marched to safe place before blasting.
9. The blasting shelter shall be used during blasting.
10. Blasting guard shall not allow any persons or vehicle entering into the danger zone after giving clear signal to blasting officer to carry out blasting till blasting is completed and clear signal is received from the blasting officer 'The Blasting is Over'.

F. GENERAL REQUIREMENTS

1. Copies of Safe Operating Procedure of every Blasting Operation as well as the copies of the Standing Orders shall be kept posted at Magazine and Blasting Office.
2. The copies shall be in English, Hindi & Bengali languages.
3. The copies shall be handed over to Officers, Overman and other persons engaged in the Blasting Operations.
4. The Blasting Officer shall explain the SOPs and Standing Order so that every persons are well conversant with the operation

16/02/24
Mine Manager
Gangaramchak & Gangaramchak
Bhadulia Coal Mine, WBPDCL

Report of Medical Examination Under Mine Rule 29B (FORM - O)

[See Rule 29F(2) and 22I.] [To be issued in triplicate]**

ıcate No : MAHADEB MARANDI

ication Mark ..... BLACK Mole over Back

Certificate that Shri ..... MAHADEB MARANDI

oyed as ..... (Name of Contractor) ..... in mine

ıA No ..... has been examined for an initial / ~~periodical~~ medical examination. He appears

: ..... 26 ..... years of age. The findings of the examining authority are given in the attached sheet. It is

idered that Shri ..... MAHADEB MARANDI

is medically fit for any employment in mines.

is suffering from ..... and is medically unfit for

ıny employement in mine , or

ıny employment below ground ; or

ıny employment or work .....

is suffering from ..... is should get this disability* cured/controlled and should be again exam-

: within a period of ..... months. He/She will appear for re-examination with the result of

..... and the opinion of ..... Specialist from ..... He/She

y be permitted/not* permitted to carry on his duties during this period.

S Mk

paste his affixing passpost size photo of the candidate

S Mk

gnature of the examining authority

.....

ace : Name and designation in Block letters

ıte : 7/10/2020

Delete whatever is not applicable

Report of Medical Examination Under Mine Rule 29B (FORM - O)

[Report of the examining authority]

filled in the every medical examination whether initial or periodical or re-examination or after cure / control of ity).

ure to Certificate No..... as result of medical examination on..... 7/10/2020

ication Mark ..... B.I.M. ..... Mole over Back

umb Impression ot The Candidate

eral development - Good / ~~Fair / Poor~~

ght .....1.62.....Cms.

ght .....53.....kg.

s :

al acuity-Distant vision (~~With~~ or without glasses).

ye .....6/6.....Left Eye.....6/6.....

organic disease of eyes

nt blindness

int / Nil Abnormal

:

ring : Right Ear .....Normal.....Left Ear .....Normal.....

organic diseases. Nil

iratory System.

neasurement :

ful inspiration .....89.....cms.

full expiration .....87.....cms.

ulatory System :

Pressure Pulse 75/m

men : 130/82

rness No tenderness

n / Nil Pallor

Nil Pedal

ous System :

y of fits or epilepsy No Loss of sight

ysis Normal Abnormal

l health Good

omotory System Normal

Healthy

rocele Nil Abnormal

Report of Medical Examination Under Mine Rule 29B (FORM - O)

13. **Hernia.** N.A present

14. **Any other abnormality** N.A

15. **Urine :**
Reaction Acidic
Albumin / Sugar N.A present

16. **Skiagram of Chest.** Lt. Hilum Normal C.A

17. **Result of Lung Function Test (Spirometry)**

Parameters	Predicted Value	Performed Value	% of Predicted
Forced Vital Capacity (FVC)	3.94	3.1	91
Forced Expiratory Volume 1 FEV1	3.33	3.58	82
FEV1 / FVC	84.52	85.36	101
Peak Expiratory flow	9.72	8.32	86

Spirometry report enclosed.

18. **Cardiological Assessment :**

Auscultation	S1	Normal
	S2	Normal
	Additional Sound	N.A present
Electrocardiograph (12 leads) Findings :		Normal / ~~Abnormal~~

Enclosed ECG

19. **Neurological Assessment :**

Findings	Normal / Abnormal
Superficial Reflexes	Normal
Deep Reflexes	Normal
Peripheral Circulation	Normal
Vibrational Syndromes	Normal.

20. **ILO Classification of Chest Radiograph :** N.A

Profusion of Pneumoconiotic opcities	Grades	Types
Present / Absent		

Enclosed Chest Radiograph N.A

21. **Audiometry findings :**

Conduction Type	Left Ear	Right Ear
Ear Condition	Normal / Abnormal	Normal / Abnormal
Bone Condition	Normal / Abnormal	Normal / Abnormal

Enclosed audiometry Report

22. **Pathological / Microbiological Investigations :**

Sl. No.	Test	Findings
1.	Blood - Tc, Dc. Hb, ESR, Platelets	WNL / Abnormal
2.	Blood Sugar - Fasting & PP	WNL / Abnormal
3.	Lipid Profile	WNL / Abnormal
4.	Blood Urea, Creatine	WNL / Abnormal
5.	Urine Routine	WNL / Abnormal
6.	Stool Routine	WNL / Abnormal

Enclosed Investigation Reports

23. **Special Tests for Mn Exposure :**

Behavioral Disturbances		Present / Not Present
Neurological Disturbance	Speech Defect	Present / Not Present
	Tremor	Present / Not Present
	Adiadocokinesia	Present / Not Present
	Emotional Change	Present / Not Present

24. **Any other special Test Required :** Not required

25. **Any other test considered necessary by the examining authority.** Nil required

26. **Any opinon of specialist considered necessary.** Not required

Signature of the examining authority

Place :

DIAGNOS PATH LAB
Ultramodern Facilities Available For Advanced Diagnostic
14 YEARS SERVING WITH HUMILITY
CERTIFIED ISO 9001:2015 CERTIFIED



Patient Name	: MR. MAHADEB MARADI	Barcode No	: 0162
Age / Gen	: 26 Years / Male	Invoice Generated	: 7/10/2020
Referred By	: -	Sample Received	: 7/10/2020
Lab Code	: X 62	Report Generated	: 7/10/2020

Investigation	Result	Unit(s)	Reference Range
HAEMATOLOGY			
HB TC DC ESR			
Haemoglobin (Hb)	13.2	g/dL	13 - 17
Total Leucocytes (WBC) Count Method : Impedance	9100	/cumm	4000 - 11000
Differential count of Leucocytes			
Neutrophils	66	%	40 - 70
Lymphocytes	31	%	20 - 40
Eosinophils	02	%	01 - 06
Monocytes	01	%	02 - 08
Basophils	00	%	00 - 01
Method : Electrical Impedance. **INSTRUMENTS USED : "Sysmex XP-300" (Japan)**			
ESR - Erythrocyte Sedimentation Rate Method : Westergren & Manual	03	mm/h(1st Hr.)	0 - 15
PLATELET COUNT			
Platelet Count Method : IMPEDANCE	2.6	Lakhs/cumm	1.5 - 4.0

----------END OF REPORT----------

Dr.Gaurav Pal
MD (Pathology)
Reg-No:71015 (WBMC)

Dr. Debkumar Ray
MD (Biochemistry)
Reg No: 54126(WBMC)

DIAGNOS PATH LAB
Ultramodern Facilities Available For Advanced Diagnostic
14 YEARS SERVING WITH HUMILITY
CERTIFIED ISO 9001:2015 QUALITY



Patient Name	: MR. MAHADEB MARADI	Barcode No	: 0162
Age / Gen	: 26 Years / Male	Invoice Generated	: 7/10/2020
Referred By	: -	Sample Received	: 7/10/2020
Lab Code	: X 62	Report Generated	: 7/10/2020

Investigation	Result	Unit(s)	Reference Range
BIOCHEMISTRY			
GLUCOSE, FASTING (F)			
Glucose Fasting, Plasma Method : GOD-POD	92.6	mg/dL	70 - 110
GLUCOSE, POST PRANDIAL (PP), 2 HOURS			
Glucose-Post Prandial, Plasma Method : GOD-POD	120.4	mg/dL	UPTO 140
LIPID PROFILE (SCREEN)			
LIPID PROFILE, Serum			
Total Cholesterol Method : CHOD-POD	151.2	mg/dl	<200 Desirable 200-239 Border line High >240 High Risk
Triglycerides Method : GPO-POD	99.0	mg/dl	Desirable <160 Borderline High 160-200 High >200
HDL Cholesterol Method : DIRECT ENZYMETIC	36.8	mg/dl	more than 40
LDL Cholesterol (calculated) Method : DIRECT ENZYMETIC	94.6	mg/dl	DESIRABLE <130 BORDERLINE : 130-159 HIGH >160
VLDL Cholesterol (calculated) Method : Calculated	19.8	mg/dl	<40
CHOL/HDL Ratio	4.10		> 5.0 High Risk

Notes:

- Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL& LDL Cholesterol.
- NLA-2014 recommends a complete lipoprotein profile as the initial test for evaluating cholesterol.
- Friedewald equation to calculate LDL cholesterol is most accurate when Triglyceride level is < 400 mg/dL. Measurement of Direct LDL cholesterol is recommended when Triglyceride level is > 400 mg/dL

UREA			
Urea, Serum Method : Urease-GLDH	21.4	mg/dL	15 - 40
CREATININE			
Creatinine, Serum Method : Enzymatic	1.0	mg/dL	0.6 - 1.3

----------END OF REPORT----------

DIAGNOS PATH LAB
Ultramodern Facilities Available For Advanced Diagnostic

14 YEARS - SERVING WITH HUMILITY

ISO 9001:2015 CERTIFIED



Patient Name	: MR. MAHADEB MARADI	Barcode No	: 0162
Age / Gen	: 26 Years / Male	Invoice Generated	: 7/10/2020
Referred By	: -	Sample Received	: 7/10/2020
Lab Code	: X 62	Report Generated	: 7/10/2020

Investigation	Result	Unit(s)	Reference Range

Dr.Gaurav Pal
MD (Pathology)
Reg-No:71015 (WBMC)

Dr. Debkumar Ray
MD (Biochemistry)
Reg No: 54126(WBMC)

DIAGNOS PATH LAB
Ultramodern Facilities Available For Advanced Diagnostic
14 YEARS SERVING WITH HUMILITY
CERTIFIED ISO 9001:2015 QUALITY



Patient Name	: MR. MAHADEB MARADI	Barcode No	: 0162
Age / Ger	: 26 Years / Male	Invoice Generated	: 7/10/2020
Referred By	: -	Sample Received	: 7/10/2020
Lab Code	: X 62	Report Generated	: 7/10/2020

X-RAY

X-RAY CHEST PA VIEW

Observation:

The lung fields are clear.
The cardio thoracic ratio is within normal limit.
The apices, costo and cardio phrenic angles are clear.
The cardio vascular shadow and hila show no abnormal feature.
The bony thorax shows no significant abnormality.
The domes of diaphragm are well delineated.

IMPRESSION : No significant abnormality noted .

----------END OF REPORT----------

M.B.B.S,D.M.R.D(CAL)
Consultation Radiologist
Reg No- 44517 WBMC



DIAGNOS PATH LAB

Ultramodern Facilities Available For Advanced Diagnostic

14 YEARS SERVING WITH HUMILITY

ISO 9001:2015 CERTIFIED

AUDIOMETRY REPORT

Test Date:7th October2020
Report Date: 7th October2020

Name: MAHADEB MARADI

Age/Sex: 26 yrs./M

Pure Tone Average

RE:17dB

LE : 17dB

Findings

Hearing sensitivity is within normal limit in both ears.

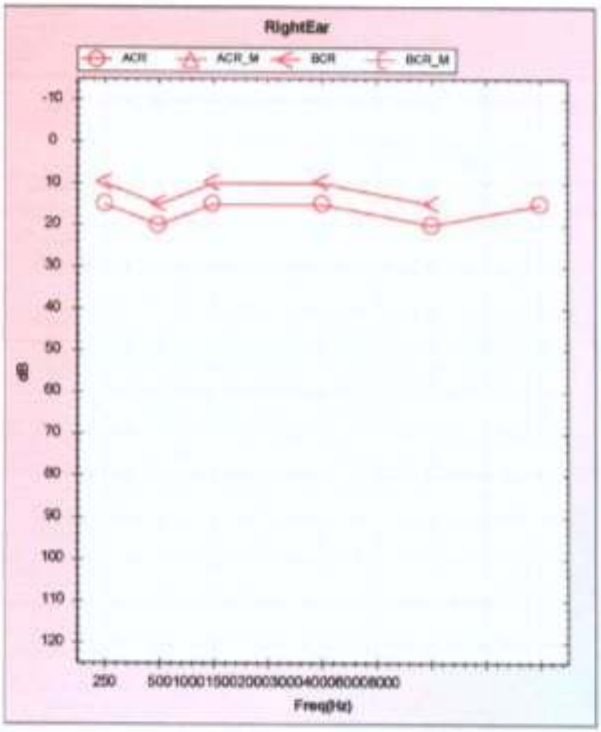
Please correlate clinically.

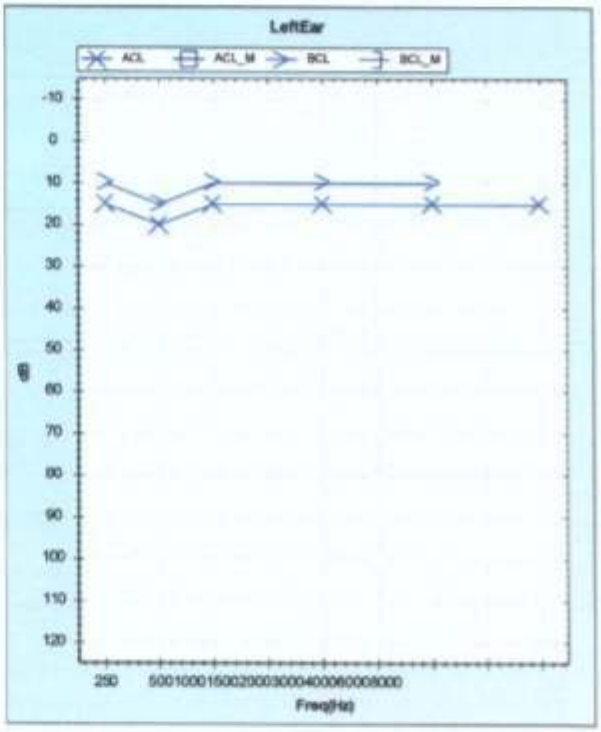
Mr.Tapas Roy
MASLP
Audiologist

Audiometric Evaluation Report

Patient:	Audiometry conducted by:
MAHADEB MARADI Male 26 Years Session Date: 7.10.2020	Mr. Tapas Roy MASLP Audiologist

Comments:





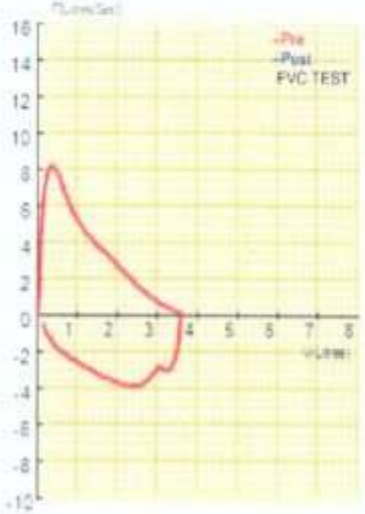
DIAGNOS PATH LAB

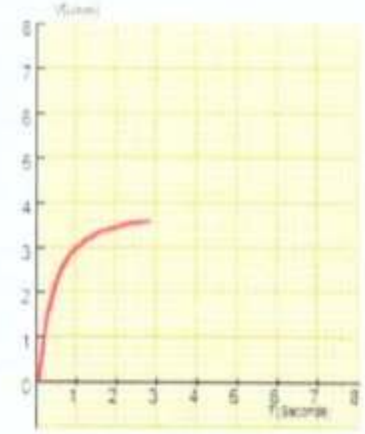
VIDYASAGAR ABASAN, (NEAR GHOSH MARKET SBI ATM),
SAGARBHANGA, DURGAPUR-713211

Id : X62 **Name :** MAHADEB MARADI **Age :** 26 Yrs. **Gender :** Male

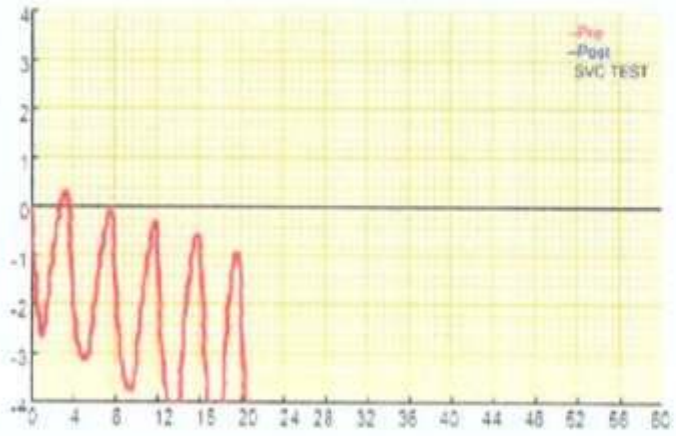
Weight : 53.1 Kg **Height :** 162 Cms. **Smoker :** No

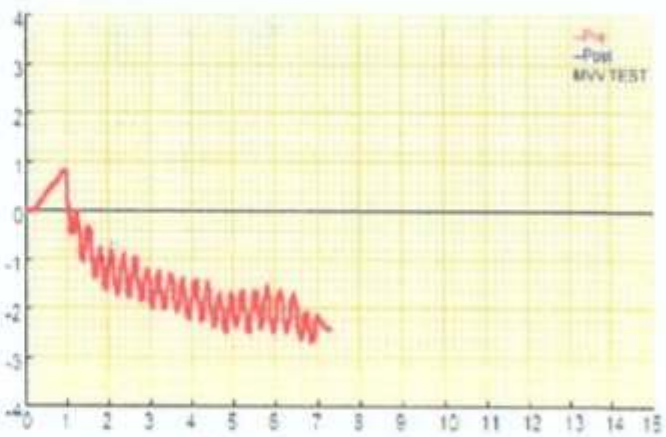
Refd By : **Date :** 07.10.2020 **Equation Set :** INDIAN





Parameters		Predicted	Pre Medicine	% Pred	Post Medicine	% Pred	%Improvement
FVC	(L)	3.64	3.6	97	------	------	------
FEV1	(L)	3.33	3.08	92	------	------	------
FEV1/FVC	(%)	84.57	85.56	101	------	------	------
FEF 25-75	(L/S)	4.55	3.27	72	------	------	------
PEFR	(L/S)	9.72	8.32	86	------	------	------
FIVC	(L)	------	3.46	------	------	------	------
FEV 5	(L)	------	2.33	------	------	------	------
FEV3	(L)	3.62	0	0	------	------	------
PIFR	(L/S)	------	3.85	------	------	------	------
FEF 75-85	(L/S)	------	0.09	------	------	------	------
FEF25%	(L/S)	8.34	5.54	66	------	------	------
FEF50%	(L/S)	6.13	3.25	53	------	------	------
FEF75%	(L/S)	3.27	1.31	40	------	------	------
FEV 5/FVC	(%)	------	64.72	------	------	------	------
FEV3/FVC	(%)	99.95	0	0	------	------	------
FET	(Sec)	------	2.9	------	------	------	------
Lung Age (Yrs)		25	31	------	------	------	------
FEV6	(L)	3.64	------	------	------	------	------
SVC	(L)	------	4.76	------	------	------	------
ERV	(L)	1.58	0.24	15	------	------	------
IRV	(L)	------	0.3	------	------	------	------
VE	(L/min)	------	41.87	------	------	------	------
RF	(1/min)	------	14.71	------	------	------	------
Ti	(sec)	------	1.92	------	------	------	------
Te	(sec)	------	2.16	------	------	------	------
VT	(L)	------	4.22	------	------	------	------
VT/Ti		------	2.2	------	------	------	------
Ti/Tot		------	0.47	------	------	------	------
IC	(L)	------	4.52	------	------	------	------
MVV		150.06	75.91	51	------	------	------
MRF		------	110	------	------	------	------





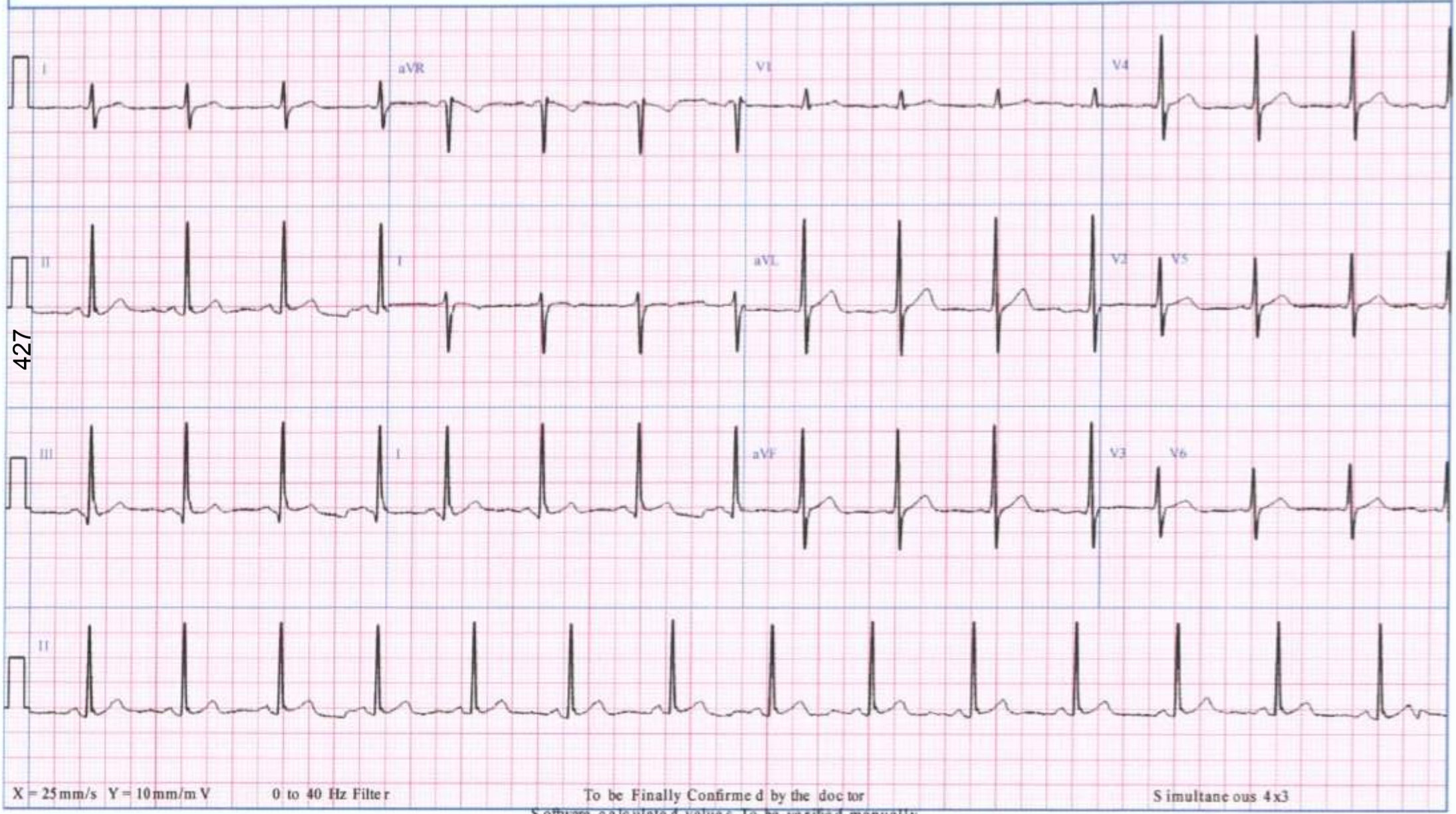
Doctor's Note: Spirometry is in Normal Limits.

Patient Info
Id :
Name : MAHADEB MARADI
Age : 26
Gender : Male
Device ID : Dr.Cardio/242-22C5

Comments

HR: 79 /min
R(II): 1.7mV
RR: 757ms P
R: 127ms
QRS : 73 ms
QT: 352 ms
QTc : 404 ms
QT/QTc : 0.87

M.B.B.S.
Reg. Patient Sign
Dr. Sign



X = 25mm/s Y = 10mm/mV
0 to 40 Hz Filter
To be Finally Confirmed by the doctor
Simultaneous 4x3
Software calculated values. To be verified manually

Report of Medical Examination Under Mine Rule 29B (FORM - O)

[See Rule 29F(2) and 22L] [To be issued in triplicate]**

Certificate No. .....

Name : LAXISWAR HEMRAM

Idenfication Mark : ..... SC on Mark Rt Leg

Certificate that Shri LAXISWAR HEMRAM

employed as ..... (Name of Contractor) ..... in mine

Form A No. ..... has been examined for an initial / periodical medical examination. He appears

to be ..... 25 ..... years of age. The findings of the examining authority are given in the attached sheet. It is

considered that Shri ..... LAXISWAR HEMRAM .....

(a)* is medically fit for any employment in mines

(b)* is suffering from ..... and is medically unfit for

(b) any employement in mine or

(c) any employment below ground , or

(d) any employment or work .....

(C)* is suffering from ..... is should get this disability* cured/controlled and should be again exam-

ined within a period of ..... months. He/She will appear for re-examination with the result of

test ..... and the opinion of ..... Specialist from ..... He/She

may be permitted/n ot* permitted to carry on his duties during this period.



DR. SUJIT KUMAR SARKAR
Res. No.- 33724 (W.B.M.C.)

Signature of the examining authority

DR. SUJIT KUMAR SARKAR
Res. No.- 33724 (W.B.M.C.)

Place : Name and designation in Block letters

Date : 25/8/23

* Delete whatever is not applicable

(DGMS Circular Tech 5/2011 10th Conference Mine Safety recommendation)

Report of Medical Examination Under Mine Rule 29B (FORM - O)

[Report of the examining authority]

To be filled in the every medical examination whether initial or periodical or re-examination or after cure / control of disability).

Annexure to Certificate No..... as result of medical examination on 25/8/23

Identification Mark ..... Scar Mark R1 Le)

Left thumb impression of The Candidate



1. **General development** - Good / ~~Fair / Poor~~
2. **Height** ..... 160 Cms.
3. **Weight** ..... 58 kg.
4. **Eyes :**
   (i) Visual acuity-Distant vision (~~With~~ or without glasses).
   Right Eye ..... 6/6 ..... Left Eye ..... 6/6 .....
   (ii) Any organic disease of eyes
   (iii) Night blindness / Not present
   (iv) Squint
5. **Ears :**
   (a) Hearing : Right Ear ..... Normal ..... Left Ear ..... Normal .....
   (b) Any organic diseases. Nil
6. **Respiratory System.**
   Chest measurement :
   (i) After ful inspiration ..... 86 ..... cms.
   (ii) After full expiration ..... 84 ..... cms.
7. **Circulatory System :**
   Blood Pressure 120/80 Pulse 74/min
8. **Abdomen :**
   Tenderness No tenderness
   Liver / Not palpable
   Spleen Not present
   Tumor
9. **Nervous System :**
   History of fits or epilepsy No such history
   Paralysis Not present
   Mental health Good
10. **Locomotory System** Normal
11. **Skin** Healthy
12. **Hydrocele** Not present

Report of Medical Examination Under Mine Rule 29B (FORM - O)

3. **Hernia.** Not present

4. **Any other abnormality .** Nil

5. **Urine :**
   Reaction. Acidic
   Albumin. / Not present
   Sugar.

6. **Skiagram of Chest.**

7. **Result of Lung Function Test (Spirometry)**

Parameters	Predicted Value	Performed Value	% of Predicted
Forced Vital Capacity (FVC)	2.95	3.2	108
Forced Expiratory Volume 1 FEV1	2.36	2.43	103
FEV1 / FVC	80.0	75.94	76
Peak Expiratory flow	8.04	2.55	32

Spirometry report enclosed.

8. **Cardiological Assessment :**

Auscultation	S1	Normal
	S2	Normal
	Additional Sound	Not present
Electrocardiograph (12 leads) Findings :		Normal / ~~Abnormal~~

Enclosed ECG

9. **Neurological Assessment :**

Findings	Normal / Abnormal
Superficial Reflexes	Normal
Deep Reflexes	Normal
Peripheral Circulation	Normal
Vibrational Syndromes	Normal

10. **ILO Classification of Chest Radiograph :** N.A

Profusion of Pneumoconiotic opcities	Grades	Types
Present / Absent		

Enclosed Chest Radiograph N.A

Report of Medical Examination Under Mine Rule 29B (FORM - O)

21. **Audiometry findings :**

Conduction Type	Left Ear	Right Ear
Ear Condition	Normal / ~~Abnormal~~	Normal / ~~Abnormal~~
Bone Condition	Normal / ~~Abnormal~~	Normal / ~~Abnormal~~

Enclosed audiometry Report

22. **Pathological / Microbiological Investigations :**

Sl. No.	Test	Findings
1.	Blood - Tc, Dc. Hb, ESR, Platelets	WNL / ~~Abnormal~~
2.	Blood Sugar - Fasting & PP	WNL / ~~Abnormal~~
3.	Lipid Profile	WNL / ~~Abnormal~~
4.	Blood Urea, Creatine	WNL / ~~Abnormal~~
5.	Urine Routine	WNL / ~~Abnormal~~
6.	Stool Routine	WNL / ~~Abnormal~~

Enclosed Investigation Reports

23. **Special Tests for Mn Exposure :**

Behavioral Disturbances		Present / Not Present
Neurological Disturbance	Speech Defect	~~Present~~ / Not Present
	Tremor	~~Present~~ / Not Present
	Adiadocokinesia	~~Present~~ / Not Present
	Emotional Change	~~Present~~ / Not Present

24. **Any other special Test Required :** Nil nil

25. **Any other test considered necessary by the examining authority.** Nil nil

26. **Any opinon of specialist considered necessary.** Nil nil

Signature of the Examining Medical Officer

DR. SUJIT KUMAR SARKAR
Regn. No.- 33724 (W.B.M.C.)

Place :

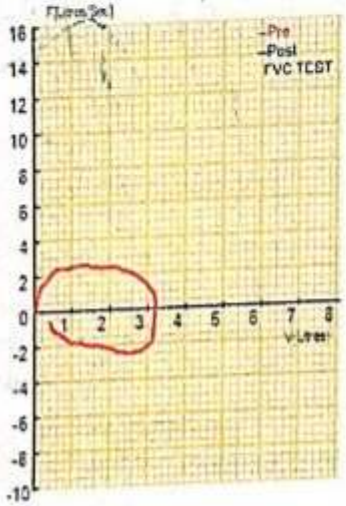
DIAGNOS PATH LAB

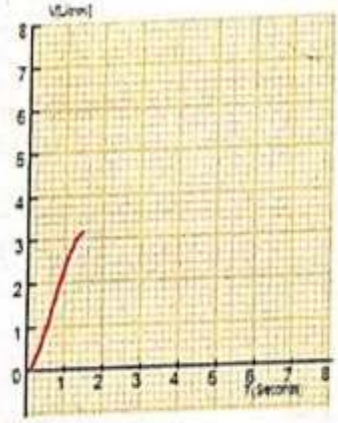
VIDYASAGAR ABASAN, (NEAR GHOSH MARKET SBI ATM),
SAGARBHANGA, DURGAPUR-713211

ID : X 18 **Name :** LAXMISWAR HEMRAM **Age :** 25 YEARS **Gender :** Male

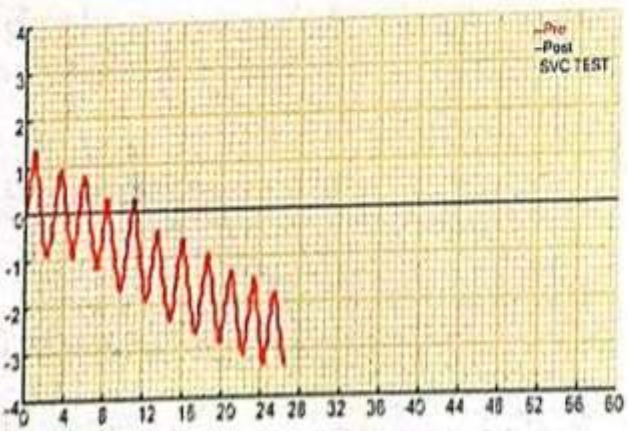
Weight : 59 Kgs **Height :** 160 Cms **Smoker :** No

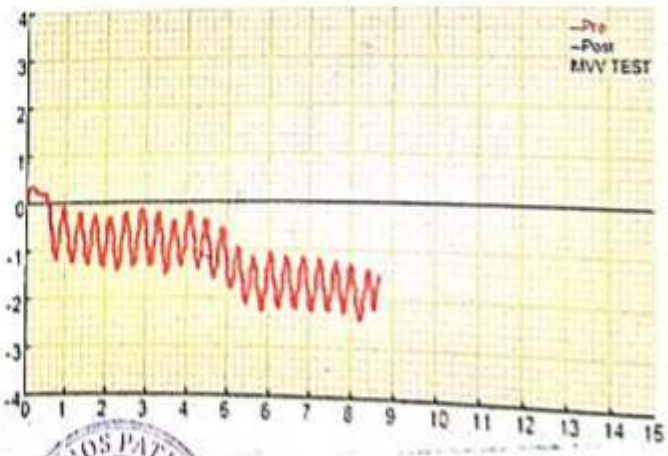
Refd By : **Date :** 25/08/2023 **Equation Set :** INDIAN





Parameters		Predicted	Pre Medecine	% Pred	Post Medecine	% Pred	%Improvement
FVC	(L)	2.95	3.2	108	------	------	------
FEV1	(L)	2.35	2.43	103	------	------	------
FEV1/FVC	(%)	80	75.94	95	------	------	------
FEF 25-75	(L/S)	3.47	2.43	70	------	------	------
PEFR	(L/S)	8.04	2.59	32	------	------	------
FIVC	(L)	------	2.84	------	------	------	------
FEV.5	(L)	------	0.83	------	------	------	------
FEV3	(L)	2.86	0	0	------	------	------
PIFR	(L/S)	------	2.5	------	------	------	------
FEF 75-85	(L/S)	------	2.05	------	------	------	------
FEF25%	(L/S)	7.46	2.33	31	------	------	------
FEF50%	(L/S)	5.2	2.48	48	------	------	------
FEF75%	(L/S)	3.32	2.17	64	------	------	------
FEV.5/FVC	(%)	------	25.94	------	------	------	------
FEV3/FVC	(%)	96.95	0	0	------	------	------
FET	(Sec)	------	1.52	------	------	------	------
Lung Age	(Yrs)	47	46	------	------	------	------
FEV6	(L)	2.95	------	------	------	------	------
SVC	(L)	------	4.23	------	------	------	------
ERV	(L)	1.2	------	------	------	------	------
IRV	(L)	------	------	------	------	------	------
VE	(L/min)	------	29.99	------	------	------	------
RF	(1/min)	------	25.86	------	------	------	------
Ti	(sec)	------	3.44	------	------	------	------
Te	(sec)	------	-1.12	------	------	------	------
VT	(L)	------	------	------	------	------	------
VT/Ti		------	------	------	------	------	------
Ti/Tot		------	1.48	------	------	------	------
IC	(L)	------	------	------	------	------	------
MVV		113.75	100.92	88	------	------	------
MRF		------	115	------	------	------	------





Doctor's Note: Spirometry is in Normal Limits.

DIAGNOS PATH LAB DURGAPUR

Report of Medical Examination Under Mine Rule 29B (FORM - O)

[See Rule 29F(2) and 22L] [To be issued in triplicate]**

Certificate No. : .....

Name KHADU MURMU

Idenfication Mark : ..... S Cut Mark over Back

Certificate that Shri ..... KHADU MURMU .....

employed as ..... (Name of Contractor) ..... in mine

Form A No. ..... has been examined for an initial / periodical medical examination. He appears

to be ..... 37 ..... years of age. The findings of the examining authority are given in the attached sheet. It is

considered that Shri ..... KHADU MURMU .....

(a)* is medically fit for any employment in mines.

(b)* is suffering from ..... and is medically unfit for

(b) any employement in mine or

(c) any employment below ground , or

(d) any employment or work .....

(C)* is suffering from ..... is should get this disability* cured/controlled and should be again examined within a period of ..... months. He/She will appear for re-examination with the result of test ..... and the opinion of ..... Specialist from ..... He/She may be permitted/not* permitted to carry on his duties during this period.



DR. SUJIT KUMAR SARKAR
Res. No.- 33724 (W.B.M.C.)

Signature of the examining authority

DR. SUJIT KUMAR SARKAR
Res. No.- 33724 (W.B.M.C.)

Place : Name and designation in block letters

Date : 25/8/23

* Delete whatever is not applicable

(DGMS Circular Tech 5/2011 10th Conference Mine Safety recommendation)

Report of Medical Examination Under Mine Rule 29B (FORM - O)

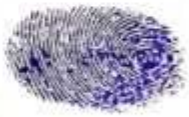
[Report of the examining authority]

To be filled in the every medical examination whether initial or periodical or re-examination or after cure / control of disability).

Annexure to Certificate No..... as result of medical examination on.....25/8/23

Identification Mark .....Scar Right eye Right

Left thumb impression ot The Candidate



1. **General development** - Good / ~~Fair / Poor~~
2. **Height** .....162.....Cms.
3. **Weight** .....50.....kg.

4. **Eyes :**
   (i) Visual acuity-Distant vision (~~With~~ or without glasses).
   Right Eye .....6/6.....Left Eye.....6/6.....
   (ii) Any organic disease of eyes
   (iii) Night blindness / Not present
   (iv) Squint

5. **Ears :**
   a) Hearing : Right Ear .....Normal.....Left Ear .....Normal.....
   b) Any organic diseases. Nil

6. **Respiratory System.**
   Chest measurement :
   (i) After ful inspiration .....86.....cms.
   (ii) After full expiration .....84.....cms.

7. **Circulatory System :**
   Blood Pressure 120/80 Pulse 74/m

8. **Abdomen :**
   Tenderness Not felt
   Liver / Not palpable
   Spleen Not present
   Tumor

9. **Nervous System :**
   History of fits or epilepsy Nil Last night
   Paralysis Not present
   Mental health Ok

10. **Locomotory System** Normal

11. **Skin** Healthy

12. **Hydrocele** Not present

Report of Medical Examination Under Mine Rule 29B (FORM - O)

3. **Hernia.** Nil Present

4. **Any other abnormality.** Nil

5. **Urine :**
   Reaction: Acidic
   Albumin: /
   Sugar: Nil Present

6. **Skiagram of Chest.** Both Hilar Normal Lung

7. **Result of Lung Function Test (Spirometry)**

Parameters	Predicted Value	Performed Value	% of Predicted
Forced Vital Capacity (FVC)	3.76	2.95	78
Forced Expiratory Volume 1 FEV1	3.41	2.84	83
FEV1 / FVC	88.29	96.27	112
Peak Expiratory flow	9.49	9.02	95

Spirometry report enclosed

8. **Cardiological Assessment :**

Auscultation	S1	Normal
	S2	Normal
	Additional Sound	Nil Present
Electrocardiograph (12 leads) Findings		Normal / ~~Abnormal~~

Enclosed ECG

9. **Neurological Assessment :**

Findings	Normal / Abnormal
Superficial Reflexes	Normal
Deep Reflexes	Normal
Peripheral Circulation	Normal
Vibrational Syndromes	Normal

10. **ILO Classification of Chest Radiograph :** N.A

Profusion of Pneumoconiotic opcities	Grades	Types
Present / Absent		

Enclosed Chest Radiograph N.A

Report of Medical Examination Under Mine Rule 29B (FORM - O)

21 **Audiometry findings :**

Conduction Type	Left Ear	Right Ear
Ear Condition	Normal / ~~Abnormal~~	Normal / ~~Abnormal~~
Bone Condition	Normal / ~~Abnormal~~	Normal / ~~Abnormal~~

Enclosed audiometry Report

22 **Pathological / Microbiological Investigations :**

Sl. No.	Test	Findings
1.	Blood - Tc, Dc, Hb, ESR, Platelets	WNL / ~~Abnormal~~
2	Blood Sugar - Fasting & PP	WNL / ~~Abnormal~~
3.	Lipid Profile	WNL / ~~Abnormal~~
4	Blood Urea, Creatine	WNL / ~~Abnormal~~
5	Urine Routine	WNL / ~~Abnormal~~
6	Stool Routine	WNL / ~~Abnormal~~

Enclosed Investigation Reports

23 **Special Tests for Mn Exposure :**

Behavioral Disturbances		Present / Not Present
Neurological Disturbance	Speech Defect	~~Present~~ / Not Present
	Tremor	~~Present~~ / Not Present
	Adiadocokinesia	~~Present~~ / Not Present
	Emotional Change	~~Present~~ / Not Present

24. **Any other special Test Required :** Not req'd

25 **Any other test considered necessary by the examining authority.** Nil req'd

26. **Any opinon of specialist considered necessary.** Nil req'd

Signature of the examining authority

DR. SUJIT KUMAR SARKAR
Res. No.- 33724 (W.B.M.C.)

Place

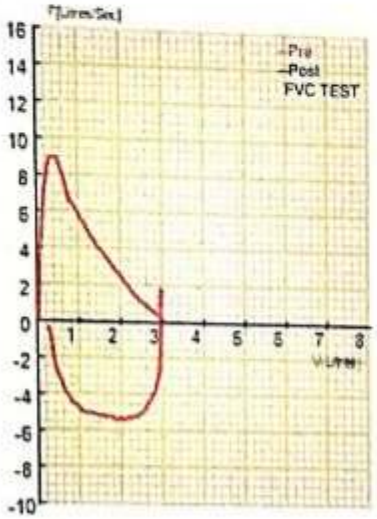
DIAGNOS PATH LAB

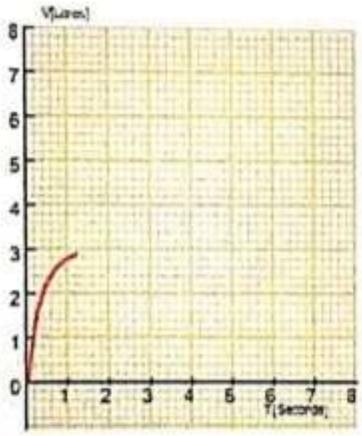
VIDYASAGAR ABASAN, (NEAR GHOSH MARKET SBI ATM),
SAGARBHANGA, DURGAPUR-713211

ID : X 8 **Name :** KHANDU MURMU **Age :** 37 YEARS **Gender :**

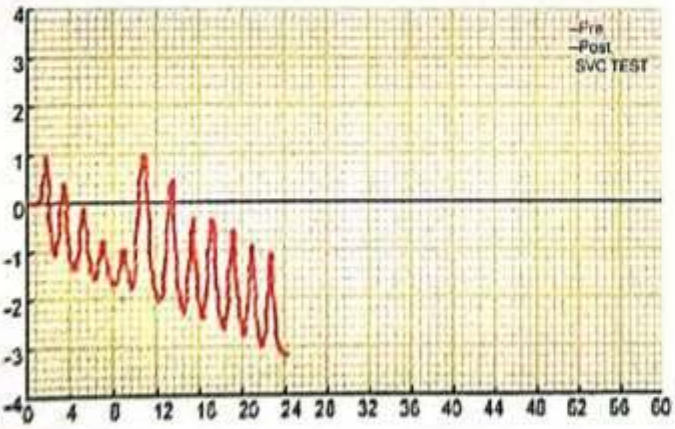
Weight : 50 Kgs **Height :** 158 Cms **Smoker :** No

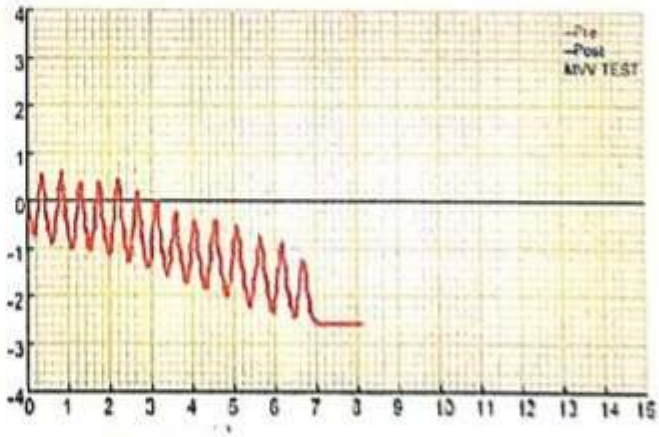
Refd By : **Date :** 25/08/2023 **Equation Set :** INDIAN





Parameters		Predicted	Pre Medecine	% Pred	Post Medecine	% Pred	%Improvement
FVC	(L)	3.72	2.95	79	------	------	------
FEV1	(L)	3.21	2.84	88	------	------	------
FEV1/FVC	(%)	86.29	96.27	112	------	------	------
FEF 25-75	(L/S)	4.72	4.12	87	------	------	------
PEFR	(L/S)	9.49	9.02	95	------	------	------
FIVC	(L)	--------	2.7	--------	------	------	------
FEV.5	(L)	--------	2.29	--------	------	------	------
FEV3	(L)	3.61	0	0	------	------	------
PIFR	(L/S)	--------	5.35	--------	------	------	------
FEF 75-85	(L/S)	--------	1.42	------	------	------	------
FEF25%	(L/S)	8.24	6.66	81	------	------	------
FEF50%	(L/S)	6.15	4.07	66	------	------	------
FEF75%	(L/S)	3.43	1.79	52	------	------	------
FEV.5/FVC	(%)	--------	77.63	------	------	------	------
FEV3/FVC	(%)	97.04	0	0	------	------	------
FET	(Sec)	--------	1.2	--------	------	------	------
Lung Age	(Yrs)	23	26	--------	------	------	------
FEV6	(L)	3.72	--------	--------	------	------	------
SVC	(L)	--------	3.59	------	------	------	------
ERV	(L)	1.6	0.2	12	------	------	------
IRV	(L)	--------	0	------	------	------	------
VE	(L/min)	-------	40.99	------	------	------	------
RF	(1/min)	-------	32.61	------	------	------	------
Ti	(sec)	-------	2.56	------	------	------	------
Te	(sec)	--------	-0.72	------	------	------	------
VT	(L)	-------	3.4	------	------	------	------
VT/Ti		-------	1.33	------	------	------	------
Ti/Tot		-------	1.39	------	------	------	------
IC	(L)	-------	3.4	------	------	------	------
MVV		147.68	90	61	------	------	------
MRF		-------	72	------	------	------	------





Doctor's Note: Spirometry is in Normal Limits.

ANNEXURE - B

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment, Forest & Climate Change
Regional Office (),
Monitoring Report
Part – I
DATA SHEET

1.	Project Type: River-valley / Mining / Industry /Thermal / Nuclear / Other (Specify)	Mining
2.	Schedule and category of the Project as per EIA, 2006	Category A
3.	Category of the project as per CPCB Guidelines (Red, Orange, Green)	Red
4.	Name of the project and project proponent	Gangaramchak & Gangaramchak Bhadulia Coal Mines
5.	Clearance Letter (s) / OM No. and date (Chronological Order)	Environmental Clearance • J -11015/375/2006-IA-II(M) dated 12.10.2023 (3 MTPA) • J -11015/375/2006-IA-II(M) dated 27.12.2022 (1.2 MTPA) • J -11015/375/2006-IA-II(M) dated 20.12.2018 (1 MTPA-Transfer) • J -11015/375/2006-IA-II(M) dated 17.05.2007 (1 MTPA) Forest Clearance • F. No. 8-45/2018-FC dated 10.04.2019 • F. No. 8-45/2018-FC dated 29.10.2018
6.	Location a. District (s) b. State (s) c. Latitude d. Longitude	District-Birbhum, State-West Bengal Latitude: 23°48'20"N to 23°49'29"N Longitude: 87°12'20"E to 87°13'53"E

Q. Shahida Parvin

7.	Address for correspondence a. Address of concerned Project Chief Engineer (with Pin Code & Telephone/ Telex/ Fax Numbers and Email id) : & Address of Executive Project Engineer / Manager (with pin code/fax numbers and Email id)	West Bengal Power Development Corporation Limited; Bidyut Unnayan Bhaban, Plot no- 3/C, LA Block, Sector III, Salt Lake, Kolkata, West Bengal 700098.
8.	Salient features a. Of the Project b. Of the Environmental Management Plan	The Block represents an isolated narrow elongated strip of coal bearing sediments of about 9 km in length in Trans-Hingla area of the Raniganj Coalfield in the district of Birbhum, West Bengal. Capacity of the mine is 3 MTPA.
9.	Break up of the Project area a. Submergence Area: Forest & Non Forest b. Others	Total Area 186.42 Ha Forest Area 101.77 Ha Government Land 66.23 Ha Private 18.42 Ha
10.	a. Total Plot Area	186.42 Ha
	b. Built – Up Area (Including Road)	164.16 Ha
	c. Open Space available	14.25 Ha
	d. Green belt area	8.01 Ha

S. Shahida Parvin

11.	Financial Details a. Project costs as originally planned & subsequent revised estimates and the year of price reference. b. Allocations made for Environmental Management Plan with item wise & year wise breakup. c. Actual expenditure incurred on the Project so far d. Actual expenditure incurred on the Environmental Management Plan so far	No information has been provided by PAs.
12.	Forest land requirement a. The status of approval for diversion of Forestland for non-forestry use	Forest Land 101.77 Ha Stage I and Stage II Clearance has been granted vide letter no F. No. 8-45/2018-FC dated 29.10.2018 & F. No. 8-45/2018-FC dated 10.04.2019 respectively.
13.	Whether project located in Critically Polluted Area/Severely Polluted	Not Applicable
14.	Status of construction a. Date of commencement (Actual and/or Planned) b. Date of completion (Actual and/or Planned)	The mine is in operation. Mining had been started from 2019.
15.	Production details as per EC & CTO	

Year	Total production As per EC	Total production As per CTO	Actual Production
19-20	1 MTPA	1 MTPA	1 MTPA
20-21	1 MTPA	1 MTPA	1 MTPA
21-22	1 MTPA	1 MTPA	1 MTPA
22-23	1.2 MTPA	01.04.2022-26.01.2023= 1MTPA	1.0MTPA

D. Shahida Parveen

				27.01.2023-31.03.2023= 1.2 MTPA	0.2 MTPA
		23-24	3 MTPA	01.04.2023-12.10.2023= 1.2 MTPA	1.2 MTPA
				13.10.2023-31.03.2024= 3MTPA	1.8 MTPA
16.	Reasons for the delay if the project is yet to start	Not Applicable			
17.	KML file of the project	Annexed			
18.	Status of Public Hearing Commitments	PAs have not submitted the compliance status of the Public Hearing Commitments.			
19.	Status of R&R	Not Applicable			
20.	Dates of site visits a. The dates on which the Project was monitored by Regional Office on previous occasions, if any b. Date of site visit for this monitoring Report	A (i) 19.07.2022 (ii) 22.05.2023 B (i) 11.03.3025			

Q. Shahida Parveen

21.	Purpose of present Site visit: a. Suo moto/ Random Inspection of projects by RO/SRO b. CCR for expansion project's EC under EIA Notification 2006 c. Verification Report (VR) of Action Taken Report (ATR) or SCN response submitted by the PP d. Complaint received against the project e. Reference forwarded by the Ministry which inter-alia may include PMO, VIP, Public Grievance, Parliamentary, RTI references f. Direction by Hon'ble court or by the Ministry in various Court Matter g. Direction from the Ministry in any other matter	Direction from Ministry vide letter dated 07.02.2025
22.	Pending litigation if any or directions issued by any regulatory authority.	Not Applicable
23.	Recommendations a. Major Non-compliance b. Minor Non-Compliance c. Violation	Non compliance detected. Letter issued to the PAs.

Signature of the inspecting officer

डॉ. शाहिदा परवीन काज़ी / DR. SHAHIDA PARVIN QUAZI
वैज्ञानिक-ई / SCIENTIST-E
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
क्षेत्रीय कार्यालय, भुवनेश्वर / REGIONAL OFFICE, BHUBANESWAR
उप-कार्यालय, कोलकाता / SUB-OFFICE, KOLKATA
आई बी-198, सेक्टर III, साल्ट लेक सिटी, कोलकाता-700106
IB-198, SECTOR-III, SALT LAKE CITY, KOLKATA - 700106

File No- J-11015/375/2006-IA-II(M),dated 12th October,2023.			
S No	**Condition**	**Status as per six monthly compliance report submitted by the PP**	**Observations of RO/SRO**
A	Specific Conditions		
1.1	PP shall obtain CTE/CTO from State Pollution Control Board for 3.0 MTPA production capacities for open cast operation.	CTE has been obtained on 29.09.2023 vide Memo No. 661-2N-87/2022(E) and CTO has been obtained on 13.10.23 vide Memo No.581-7/WPBD-Cont (4540)/10(Part-I).	**Being complied.** PAs have received CTO from WBPCB vide memo No. 613-7/WPBD-Cont (4540)/10 and Consent Letter No. C0123361 dated 30.07.2021 with validity till 31/7/2026. PAs again received CTO vide Consent Letter No. C0141026 and Memo No.- 48-7/WPBD-Cont (4540)/10 (Part-I) dated 21.01.2023 with validity till 31.07.2026. Further, for the production of 1.8 MTPA, CTO was granted vide Consent Letter No.- C0144043 and Memo No.- 581-7/WPBD-Cont (4540)/10 (Part-I) dated 13.10.2023 with validity till 31.07.2026
1.2	PP shall install mechanized equipment as much as possible within the mine in order to reduce the dust emission.	Mechanized equipment has been installed to reduce the dust emission and water is being sprayed along the mining operation by Fog Canon mist water sprayer (8 Nos). Battery operated sweeping machine has been commissioned at site for extraction of dust from the road.	**Being complied.** Surface miner is being used for mining. Fog cannons were observed during monitoring. Further, PAs also have battery operated sweeping machine in the project site.

S. Shahida Parveen

1.3	Dedicated concrete Road with length of 15.2 km and 12 mt width from mines to Railway siding by October 2023 with fixed sprinkling system at every 500m, away from the villages and sensitive location like school and hospitals shall be constructed to transport the coal prior to the start of the mining operation. Further 10 mts width of tree plantation shall be conducted to mitigate the vehicular and dust emission on both side of road.	Total length of the road from Mines to Railway Siding is approximately 15.2 km, whereas WBPDCL has constructed road of 5.6 km by paver blocks along the Canal Embankment which has been substantially built and as good as Metal topped road. The rest of the road is a district Board road maintained by PWD. Ten wheels-trucks have been deployed for coal transportation from mines to nearest siding. Trucks are being optimally loaded and covered by tarpaulin during transportation. Water is being sprayed all along the road by Fog Canon mist water sprayer. There are patrolling vehicles in the road for proper control over transportation. For developing Green-belt along both sides of the coal transportation road, plantation of 965 no of saplings had been done and more plantation is being done. Photographs & Google Map of Road Layout showing Natural Plantation and Plantation Plan is annexed.	**Partially complied.** It was informed that the total length of the road from the mines to the Railway siding is 15.2 km. During monitoring, road along the canal embankment was found to be with paver blocks (5.6 km). Further, PAs have installed wind shield on the road close to Tarapur village. ***Plantation was observed in certain portion of the road close to the Tarapur village. However, the plants need more maintenance and PAs also need to plant more saplings all along the transportation road.*** It was informed that planted saplings are often taken away by the villagers and others, which creates hindrance in the proper maintenance and plantation program.
1.4	ETP shall be operationalized and its output result should be monitored regularly and its performance report be submitted IRO.	ETP of 100 m3/hr capacity has been installed and commissioned on 05.12.2022. The sample analysis report of intake water and treated water has been submitted to IRO.	ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
1.5	As proposed, after commissioning of CAAQMS by October 2023 the online data shall be shared with SPCB and CPCB.	Monitoring data has been furnished in WBPDCL website and the link had been shared with SPCB and CPCB. Location of CAAQMS: 23°49'30.00"N & 87°12'44.50"E.	**Partially complied.** CAAQM stations have been installed at two locations: 1.Near HSD PUMP, Core zone and 2. At WBPDCL office area, buffer zone. ***CAAQMS data revealed that both PM_{10} and $PM_{2.5}$ were high in both stations on many days.***
1.6	PP shall maintain the sufficient distance of at least 150m from ML boundary to Hinglo	•Distance between Hinglo River Dam and lease boundary is 206 m. •Garland drain and toe wall all around the OB dump site has been constructed.	**Being complied.** PAs have informed that the distance between Hinglo river and mine lease boundary is 206 m. During

S. Shahida Parveen

	river dam. PP shall construct Garland drain & Toe Wall all around the OB dump site and sufficient height of Toe wall should be provided around the dump towards Hinglo river.	•Toe wall with a height of 1.5 m has been constructed around the dump towards Hinglo River.	monitoring it was observed that the inactive OB dump is present towards the Hinglo dam. Retaining wall has been provided at the toe of the inactive OB dump and in some other area (including beside the fruit garden). Plantation has done on that side.
1.7	Mine water should not allowed to flow into the near Hinglo river dam and the quality of river water shall be monitored on six-monthly basis.	Mine water is being used 100% for the purpose of water spraying, plantation, workshop etc. Hence, there is zero discharge. No water has been discharge outside the mine. The water is being treated through ETP for above use. Quality of river water has been monitored at half yearly interval.	**Being complied.** During monitoring it was observed that ETP has been installed. PAs informed that the ETP is being used for the treatment of mine water and the treated effluent is being used for green belt development and dust suppression. PAs have submitted the monitoring report of the quality of river water conducted by third party agency (Prodcontrol (India)) Private Limited on 13.07.2024.
1..8	PP should not dump the Over burden outside the ML area, all mining related activity shall be Implemented concurrently with the stipulation given in mine plan.	Overburden is being dumped (backfilling) within the lease hold area as per approved mining plan. Present working plan is **attached as Annexure I.**	**Being complied.** It was observed that backfilling is being conducted within the mine lease area.
1.9	PP should not dump overburden towards the Hindo river dam. PP shall complete thick plantation towards the Hindo river dam.	Overburden is being dumped only within the mined out void only. Plantation towards the Hinglo river dam has already been done. Gap plantation (1500 no of saplins is being done.	**Being complied.** The inactive OB dump is present towards the Hinglo dam. Retaining wall has been provided at the toe of the inactive OB dump. Plantation has been done on that side.
1.10	PP shall place at least 6 nos. of fog canon at proper place in order to arrest the dust emission and working report shall be submitted to IRO.	Total 8 number of fog cannons already in operation at mine and the report is being submitted to IRO.	**Being complied.** Fog cannons were observed during monitoring. During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. PAs have submitted the fugitive emission data from April to December 2024. Monitoring report states that the data ranged from 56.3 $\mu g/m^3$ to 113.91 $\mu g/m^3$.

A. Shahida Parveen

1.11	PP shall submit the Hydrological study report for the near Hindo river Dam to IRO within 12 month.	Hydrological Study has been completed by CIMFR by Sept,2024 and is being submitted to IRO.	**Being complied.** PAs have submitted a copy of the Hydrological study of Gangaramchak & Gangaramchak Bhadulia Coal Mine, Birbhum, West Bengal of M/s West Bengal Power Development Corporation Ltd. by Water Resource Management Group, CSIR-Central Institute of Mining & Fuel Research, Barwa Road, Dhanbad, Jharkhand.
1.12	PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only till the completion of mechanization in the ML area.	Ten wheel-trucks of 40 tonnes capacity have been deployed for coal transportation from mines to nearest siding. Trucks are being optimally loaded and covered by tarpaulin during transportation. Water is being sprayed all along the road by Fog cannon mist wate4r sprayer. There are patrolling vehicles in the road for proper control over transportation with tarpaulin cover.	**Being complied.** Coal transportation is being done in trucks of 40 tonnes capacity. Fog cannons and sprinkling with movable water tankers are both being used for dust suppression.
1.13	PP shall submit the Copy of NOC for withdrawal of groundwater from the concerned authority within six month to IRO, MOEF&CC.	Permission for withdrawal of ground water has been obtained from State Water Investigation Directorate (SWID) and submitted to IRO MoEF&CC.	PAs have submitted a copy of permission received for mine dewatering from open cast mine sump vide Permit No. P03040620000000042501WHE dated 30.06.2016 from District Level Ground Water Resources Development Authority, Birbhum. ***PAs need to submit the groundwater clearance received (if any) as specified in this stipulation.***

B. Shankar Parwa

1.14	PP shall implement the activities-wise proposed budget of Rs. 278 lakhs and total recurring cost for the entire life of the mine (3 years) is Rs. 77 lakh/year (as EMP cost) in time bound manner mentioned above para 49.3.2 of minutes. The details of annual expenditure incurred shall be part of report to be submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, and continued as a part of CSR budget.	Year wise expenditure incurred towards EMP compliance & CSR activity are attached. The audited report will be submitted shortly.	**Partially complied.** PAs have informed that the year wise expenditure incurred towards EMP compliance has been attached. ***PAs need to submit details of the recurring expenditure along with activities undertaken.***
1.15	PP shall implement the time bound action plan with budget against issues raised in Public Hearing in time bound manner as mentioned above para 49.3.2 of minutes. The details of annual expenditure incurred shall be part of report to be submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, and continued as a part of CSR budget.	Year wise expenditure incurred towards EMP compliance, Public Hearing compliance & CSR activity are attached. The audited report will be submitted shortly.	**Partially complied.** PAs have reported that the year wise expenditure incurred towards EMP compliance, Public Hearing compliance and CSR activities have been submitted with the six monthly compliance report. However no such reports have been attached. ***PAs need to submit the time bound action plan for issues raised in Public Hearing. Further, PAs also need to provide the details of the expenditure incurred and activities undertaken with respect to issues raised in the Public Hearing.***

A. Shahida Parveen

1.16	Capital cost of Rs. 1680 lakhs as part of Mining Closure activities shall be implemented concurrently with stipulation given in mine plan for Gangaramchak Bhadulia Coal Mine Project. Mine closure is required to be implemented concurrently with stipulation given in mine plan.	Mine closure activity is being implemented concurrently with stipulation given in the approved mine plan and Mine Closure Plan.	***PAs need to provide details of the mine closure activities undertaken till date.***
1.17	2 water harvesting pond shall be created separately to recharging the ground water and usage of project affected families.	Three (3) water harvesting pond/Recharge Pit has been created separately to recharging the ground water and usage of project affected families.	**Being complied.** Three ponds have been created/constructed at the following locations: Sagarbhanga, Bastabpur, Sahapur.
1.18	PP shall monitor regularly water levels in open dug wells located in village and by establishing Piezometer to ascertain the impact of mining over ground water table and to plan mitigative measures to recharge the area.	Monitoring of water level is being done periodically by 2 numbers of piezometers installed at the site and record are kept in the office. Monitoring of Ground water pressure is being done regularly.	**Being complied.** From information submitted, it is observed the PAs are keeping record of the water levels from the piezometer reading. Piezometer report from April 2024 -till date has been submitted by PAs.
1.19	Main haul road in the mine shall be provided with permanent water sprinklers, and other roads shall be regularly wetted with water tankers fitted with sprinklers. Also PP shall install Mist Cannon Dust Suppression Systems (distance 80-100 mtrs.) at Coal Stock Yard to suppress the dust particles.	Total 3 no of 12 kl water sprinkler for dust suppression in haul road. Total 8 number of fog cannons already in operation at mine.	**Yet to be complied.** Permanent water sprinklers have not been provided in the mine haul road. Fog cannons and sprinkling with movable water tankers was observed in the project site.

D. Shakti'da Parui

1.20	Garland drains (2mX3m) or of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year.	Construction of catch drain and garland drain of adequate dimension in commensurate with the past rainfall data has been provided at stipulated places to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump. Drains and ponds have been de-silted before onset of monsoon period. Adequate sump capacity has been created in the mine pit. Water collected in the sump is being solely used for prevent generation and suppression of dust and greenbelt development/plantation.	**Not complied.** Garland drain was observed all along the periphery of the mine, so that water do not enter the mine. ***No garland drains at the toe of the benches was observed.***
1.21	Check dams shall be constructed at required locations within drains to arrest eroded materials and settling ponds shall be constructed to treat mine discharge water inside the mine block.	Check dam is under construction . ETP of 100 m3/hr capacity has been commissioned. The mine water is being solely used for mines operation like water spraying, washing, plantation etc.	**Yet to be complied.** It was informed that check dam is under construction. ETP has been installed to treat mine discharge water. PAs informed that mine water is solely used for dust suppression, washing and green belt development.
1.22	Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps.	Profiling of working benches of pits and dumps have been done in such a way to channelize water in garland drains & sumps.	**Partially complied.** PAs have informed that profiling of working benches of pits and dumps have been done in such a way that water is channelized into drains and sumps. ***No garland drain was observed at the toe of the benches of OB dump.***
1.23	Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development. Wastewater from the HEMM washing/ workshop will be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development	STP had already been commissioned and operationalized. ETP of 100 m3/hr capacity has been commissioned. The mine water is being solely used for mines operation like water spraying,washing, green belt development and plantation etc.	STP has been installed and is in operation. ETP has been installed and PAs informed that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression.During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal and water after removal of oil and grease is reused for washing of HEMM.
1.24	Dumping of OB shall maintain distance of	Dumping of OB shall maintain distance of about 200 mts from any habitation	**Being complied.** Green belt has been done in the inactive OB

D. Shahida Parveen

<table>
<tr><td></td><td>about 200 mts from any habitation and additional Greenbelt development/plantation (atleast 8 to 10 ft trees) shall be carried out at the periphery of the mine lease area as well as in the adjacent area of village.</td><td>and additional Green belt and safety zone plantation area has been developed under the guidance of Forest Officer.
An expense of amount of Rs.72983023.00 has already incurred for plantation and development work in safety zone to the Forest Department.

Safety zone/green belt plantation as on date.
<table><tr><th>Area in ha</th><th>No of Sapling</th></tr><tr><td>1.68 Ha in the safety zone</td><td>5387</td></tr></table></td><td>dump and areas where back filling has concluded. Safety zone plantation (around 1.68 Ha) has also been developed with green belt (5387 saplings).</td></tr>
<tr><td>1.25</td><td>PP shall limit the activities of mining in its mine lease area only. No OB Dumping and infrastructure activity should be proposed and dumped on forest land. Accordingly revised Mine Plan should be submitted (if required) and submitted to Ministry.</td><td>Noted and is being Complied with.</td><td>Being complied.</td></tr>
<tr><td>1.26</td><td>PP shall make use of advanced computer simulation techniques for design and execution of blasting operation in the mine. PP shall make use of Electronic Delay Detonators for optimal blasting in coal and OB rock to minimize the environmental impacts of blasting such as ground vibration, fly rocks and excessive dust generation.</td><td>Noted and is being Complied with.
Control blasting practice have been adopted as per recommendation by CIMFR, Dhanbad and guidelines laid down in DGMS permission. Electronic Detonator (ED) is used for controlling the ground vibration & Fly rock.</td><td>PAs have informed that control blasting is adopted as per recommendation by CIMFR, Dhanbad and guidelines by DGMS. PAs have submitted a report on the scientific advice for optimization of blast design parameters at Gangaramchak and Gangaramchak-Bhadulia coal mines, Dist . Birbhum, W.B to safeguard nearby structure of the adjacent village conducted by CSIR-Central Institute of mining & Fuel Research (CSIR), Dhanbad.</td></tr>
<tr><td>1.27.</td><td>PP shall deploy at least 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc.</td><td>Enquiry is being conducted for finding out the appropriate manufacture.</td><td>Yet to be complied.</td></tr>
</table>

D. Shahida Parveen

<table>
<tr>
<td>1.28</td>
<td>PP shall reduce the carbon footprint after sequestration of CO2. IRO will review the progress of CO2 sequestration. The process of sequestration of CO2 will include the planting trees, by "Developing carbon capture and storage (CCS) technologies" and implementation of renewable energy. Further, PP shall carry out enough plantation to ensure carbon sequestration lost due to deforestation and other fossil fuel based activities.</td>
<td>Plantation as per EC condition is being under progress.
<table>
<tr><th>Year</th><th>Area in Ha</th><th>No of Sapling</th></tr>
<tr><td>Prior allotte</td><td colspan="2">About 4.6 Ha area has been covered by prior allottee</td></tr>
<tr><td>2020-21</td><td>1.18 Ha in the safety zone</td><td>No of plantation 4787</td></tr>
<tr><td>2021-22</td><td>Over the top of the dump</td><td>60 kg of seed has been spread</td></tr>
<tr><td>2022-23</td><td>18.00 ha over the external dump top, dump slopes and backfield area</td><td>No of plantation 29470(sapling) + 15000(from seeds) = 44470 and 140 kg of seed has been spread</td></tr>
<tr><td rowspan="2"></td><td>16.38 ha over the backfield area</td><td>No of plantation 26210 and 220 kg of seed has dump slopes</td></tr>
<tr><td>2023-24</td><td>Gap plantation has been done mainly in the area of 4.60Ha of plantation done by prior allottee</td><td>No of plantation 8300</td></tr>
<tr><td>2024-25</td><td>6 Ha over backfield area and 0.5 Ha in safety zone area</td><td>No of plantation 19600</td></tr>
<tr><td>Total</td><td>46.66 Ha</td><td>10367</td></tr>
</table>
</td>
<td>Agreed with. PAs are in the process of complying with the stipulation condition.
As per the information submitted and observations made during monitoring, plantation has been carried out at various locations in the projects site; including safety zone, external dump top, dump slopes, backfilled area, gap plantation in the 4.6 Ha area from 2020-21 till 2024-25.

During monitoring, it was observed that solar lights have been installed in the coal transportation road close to the Tarapur village.</td>
</tr>
</table>

D. Shahida Parveen

1.29	PP shall create a "Public Grievance Redressal and Monitoring System" for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on "Public Grievance Redressal and Monitoring System.	Drop box for "Public Grievance Redressal and Monitoring System" has been introduced in the mine office, WBPDCL to drop any type of grievances among the public and talking corrective action accordingly. Log book is being Maintained.	**Being complied.** PAs have informed that drop box "Public Grievance Redressal and Monitoring System" has been introduced in the mine office, WBPDCL to drop any type of grievances among the public. It was further informed that no grievances have been received till date.
1.30	PP shall ensure distribution of water from the artificial reservoir within and outside mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.	Arrangement of providing fresh drinking water has been made to the villages within core and buffer zone.	**Being complied.**
1.31	PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.	Is being complied with and Half yearly audit report is being sent to concern authority	**Yet to be complied.** ***PAs have not conducted any third party audit of compliance of EC conditions and report submitted.***
1.32	The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.	Is being complied with.	***PAs need to submit the status of mine closure activities to this Office.***

D. Shahi de Parui

1.33	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.	Installation of 20 solar lights has been completed .	**Being complied.** During monitoring, it was observed that solar lights has been installed in the coal transportation road close to the Tarapur village.
1.34	PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.	Installation of 04 No's of Bio-toilet has been completed.	**Being complied.**
1.35	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.	Proper training on skill development are being provided to the villagers of Bastabpur village.	**Partially complied.** ***PAs need to provide details of the training on skill development provided to the villagers.***
1.36	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.	Noted. There is no such demand of crop compensation.	PAs have informed that there is no such demand for crop compensation.
1.37	PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine	Provided at nearly Power Plant at Bakreswar of WBPDCL Dedicated team to oversee environment management has been formed comprising of Environment Engineers, officials of WBPDCL and staff for monitoring of air, water quality parameters on routine basis.	**Partially complied.** ***PAs have not established in house (at project site) environment laboratory.*** PAs have been reported that environment laboratory has been provided at the nearby power plant of WBPDCL at Bakreswar. PAs have submitted a copy of the Office Order No.17/2023 dated 06.12.2023 with respect to the Environment Management Cell at Gangaramchak.

S. Shahida Parvin

	basis. Any non-compliance or infringement should be reported to the concerned authority.		
1.38	Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.	Noted. The Mine is being worked following the provisions of Progressive Mine & will continue till the final mine closure activities exist as per Mine Plan and Mine Closure plan approved by MoC,Gol.	**Agreed with.**
1.39	PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.	There is no scope of Back Filling of void by external material like Ash as per Mine Plan approved by MoC, Gol.	PAs have informed that there is no scope of back filling of void by ash as per the approved mine plan approved by MoC, Govt. of India.

D. Shukla Parvin

Standard EC Conditions for (Mining of minerals)			
1	**Statutory compliance**		
1.1	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.	Stage II Forest Clearance of 101.77 Ha had been obtained from Ministry of Environment, Forest & Climate change vide letter no F.No.8-45/2018-FC dated 10th April,2019.	**Being complied.** PAs have received Stage II Forest Clearance of 101.77 Ha from Ministry of Environment, Forest & Climate change vide letter no F.No.8-45/2018-FC dated 10th April,2019.
1.2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Terratribal Environmental Conservancy Pvt. Ltd, Kolkata has prepared the Wildlife Conservation Plan for certified species with requisite budgetary Provision as per WPA-2022 in consultation of Forest Department, Birbhum. The draft Wildlife Conservation Plan has been submitted to DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest.	PAs have reported that the draft Wildlife Conservation Plan for certified species has been prepared and submitted to the DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest.
1.3	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).	Terratribal Environment Conservancy Pvt. Ltd, Kolkata has prepared the Wildlife Conservation Plan for certified species with requisite budgetary Provision as per WPA-2022 in consultation of Forest Department, Birbhum. The draft Wildlife Conservation Plan has been submitted to DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest. After obtaining approval the implementation of the conditions pertaining to WBPDCL will be done in consultation with Forest Department.	

S. Shahida Parvin

1.4	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 prior to start/commencement of mining operations/production	CTE has been obtained on 29.09.2023 vide Memo No.661-2N- 87/2022(E) and CTO has been obtained on 13.10.23 vide Memo No.581-7/WPBD-Cont (4540) / 10 (Part-I).	**Being complied.** PAs have received CTO from WBPCB vide memo No. 613-7/WPBD-Cont (4540)/10 and Consent Letter No. C0123361 dated 30.07.2021 with validity till 31/7/2026.PAs again received CTO vide Consent Letter No. C0141026 and Memo No.- 48-7/WPBD-Cont (4540)/10 (Part-I) dated 21.01.2023 with validity till 31.07.2026. Further, for the production of 1.8 MTPA, CTO was granted vide Consent Letter No.- C0144043 and Memo No.- 581-7/WPBD-Cont (4540)/10 (Part-I) dated 13.10.2023 with validity till 31.07.2026.
1.5	The project proponent shall obtain the necessary permission from the Central Ground Water Authority	Permission for withdrawal of ground water has been obtained from State Water Investigation Directorate (SWID) and submitted to IRO MoEF&CC.	PAs have submitted a copy of permission received for mine dewatering from open cast mine sump vide Permit No. P0304062000000042501WHE dated 30.06.2016 from District Level Ground Water Resources Development Authority, Birbhum. ***PAs need to submit the groundwater withdrawal clearance received (if any) as specified in this stipulation.***
1.6	Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.	Oil & grease trap has been installed & accomplished. Generated Solid/hazardous waste is being sold to authorised vendor.	**Partially complied**. It was observed that for the workshop, oil and grease removal is being done. It was informed that solid/hazardous waste is sold to authorized vendor. ***Details of Hazardous Waste Authorization have not been furnished.***
1.7	Permission of power supply to be taken from the concerned authority for meeting power demand of the project site.	Complied with.	**Being complied.**
1.8	The maximum production or peak production at any given time shall not exceed the limit as prescribed in the EC.	Noted and will be adhered to.	**Being complied.** As per the information submitted, the production has not exceeded the limit prescribed in the EC.

S. Shahida Parveen

1.9	Validity of Environment Clearance is as per life of the mine mentioned in EC letter or 30 years as per EIA Notification, 2006 and its amendments therein	Noted.	**Agreed with.**
1.10	All the conditions stipulated in previous Environment Clearance conditions should be strictly complied within certain timeline	Noted and is being complied with.	**Agreed with.** PAs have complied/in the process of complying with the conditions of previous ECs.
2	**Air quality monitoring and mitigation measure**		
2.1	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 PM10, PM2.5, SO2 and NOx. 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. The new CAAQMS should be installed with expansion.	The mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. Continuous ambient air quality monitoring stations has been installed in addition to the regular monitoring stations as per the requirement and /or in consultation with the SPCB and connected on with SPCB. Please refer Annexure II. Check Annexure II	**Partially complied.** As per the monitoring report submitted and information provided by PAs, it is observed that the mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. The buffer zones include: 1. Bastavpur village, 2. Embankment road, 3. WBPDCL camp office, 4. Gangpur village. The core zones include: 1. Office camp and security barrack, 2. Junction roads towards mine, 3. Weigh Bridge of mines. Monitoring report submitted for Jan 2024, April 2024 and July 2024 indicates that the parameters are within the limit. CAAQM stations have been installed at two locations: 1.Near HSD PUMP (Core zone) and 2. At WBPDCL office area (Buffer zone). ***CAAQMS data revealed that both PM_{10} and $PM_{2.5}$ were high in both stations on many days (for the month of January and February 2025).***

S. Shahida Parvin

2.2	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.	The mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. Monitoring of heavy metals such as Hg, As , Ni , Cd , Cr ,etc is being conducted . Please refer Annexure II.	Same as above. ***PAs have monitored Cd, Cr As and Ni. However, except on July 2023, they have not monitored Hg as stipulated in the EC condition.***
2.3	Transportation of coal, to the extent, if permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun/ Fog cannon etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.	Trucks transporting coal from mine to Railway siding are covered fully by tarpaulin. During transportation by road water is being sprayed by Fog cannon mist water sprayer. Regular monitoring is being carried out by Gravimetric dust sampler for monitoring Fugitive dust is found below is standard as specified in Coal Mines Regulation'2017,Reg.143(2).	**Partially complied.** No transportation of coal was observed during monitoring. During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. PAs have submitted the fugitive emission data from April 2024 to December. Monitoring report states that the data ranged from 56.3 µg/m3 to 113.91 µg/m3. As per the monitoring report submitted and information provided by PAs, it is observed that the mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. The buffer zones include: 1. Bastavpur village, 2. Embankment road, 3. WBPDCL camp office, 4. Gangpur village. The core zones include: 1. Office camp and security barrack, 2. Junction roads towards mine, 3. Weigh Bridge of mines. Monitoring report submitted for Jan 2024, April 2024 and July 2024 indicates that the parameters are within the limit. CAAQM stations have been

Q. Shahida Parveen

			installed at two locations: 1.Near HSD PUMP (Core zone) and 2. At WBPDCL office area (Buffer zone). ***CAAQMS data revealed that both PM_{10} and $PM_{2.5}$ were high in both stations on many days (for the month of January and February 2025).***
2.4	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	Total length of the road from Mines to Railway Siding is approximately 15.2 km, whereas 5.6 km along the Canal Embankment has been development by WBPDCL at its own cost and the rest of the road is district road maintained by PWD in coordination with WBPDCL. 10 wheel-trucks which are 100% owned by the local community are being used for transportation, thereby creating an indirect source of employment to the community. During transportation water is being sprayed by Fog Canon mist water sprayer and trucks are covered fully by tarpaulin. There are patrolling vehicles in the road for proper control over transportation and surveillance upon road safety.	**Agreed with**. It was informed that the total length of the road from the mines to the Railway siding is 15.2 km. During monitoring, road along the canal embankment was found to be with paver blocks (5.6 km). Further, PAs have installed wind shield on the road close to Tarapur village. ***Plantation was observed in certain portion of the road close to the Bataspur village. However, the plants need more maintenance and PAs also need to plant more saplings all along the transportation road.*** It was informed that planted saplings are often taken away by the villagers and others, which creates hindrance in the proper maintenance and plantation program.
2.5	PP to install solar lights along the road used for transportation of coal to avoid the accidents at night and also seek its maintenance.	Installation of 20 solar lights has been completed.	**Being complied.** Solar lights have been installed along the transportation road close to the Tarapur village.
2.6	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 centers.	Vehicular emissions has been kept under control and regularly monitored . 'PUC' certificates of all the vehicle engaged in mining and allied activities have been submitted to RTO and are being renewed within stipulated time.	**Being complied.** Few PUC certificates have been submitted by PAs to this Office.

S. Shahida Parvin

	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.	Arrangement of adequate water spraying system has been done in coal stock yard for dust suppression. There is no crusher and feeder-breaker in the mines. Coal is being extracted by surface miner. Belt-conveyor system could not be installed as the remaining mine life is very minimum i.e.only 3 years.	No crusher and feeder-breaker was observed in the project site. It was observed that coal is being extracted by surface miner. PAs have reported that belt conveyor system could not be installed as the remaining mine life is only 3 years.
2.8	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.	Not Applicable as no Coal handling plant exists.	No coal handling plant is present within the project site.
2.9	Adequate measures on EMP should be analyzed on annual basis to assess the trend of air pollution data from continuous monitoring station and quarterly report shall be generated and submitted with 6 monthly compliance reports to RO, MoEF&CC.	Is being complied with.	**Agreed with.** PAs have complied/in the process of complying with the different measures of EMP. ***PAs need to submit the analysis report on measures on EMP taken, based on air pollution trend.***
2.10	Effective safeguard measures for prevention of dust generation and subsequent suppression like regular water sprinkling shall be carried out in areas prone to air pollution. The fugitive dust emission from all sources shall be regularly controlled by	All the trippers used for transportation are being covered by tarpaulin. Adequate water spraying system through water sprinklers has been adopted to prevent generation and suppression of dust. Regular monitoring is being carried out by Gravimetric dust sample for monitoring Fugitive dust emission. In the analysis report level of fugitive dust is found below the standard as specified in Coal Mines Regulation'2017,Reg .143 (2).	**Being complied.** During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. PAs have submitted the fugitive emission data from April 2024 to December. Monitoring report states that the data ranged from 56.3 µg/m3 to 113.91 µg/m3

Q. Shahida Parveen

	installation of required equipment's. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB		
2.11	Adequate number of Fog canon (mist sprayer) shall be installed to reduce the impact of air pollution at dust generating sources with time bound action plan.	Total 3 no of 12 kl water sprinkler for dust suppression in haul road and 8 number of fog cannons are already in operation at mine.	**Being complied.**
2.12	PP should install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.	Wind breaker/shield arrangement along the railway siding has been installed.	**Being complied.**
2.13	Post environmental closure third party monitoring by reputed instituted in air quality, water, land & soil etc shall be carried out and analysed with EMP measures at regular interval. A suitable recommendation in this regard, shall be furnished to IRO, MoEF&CC for compliance. The data used for analysis shall be obtained from continuos AQMS, site specific water regime. Also third party shall analyses the implementation of river diversion, meeting to the requirement of project report.	Being complied.	The mine is in operation and PAs have informed that remaining mine life is only 3 years.
2.14	Comparison of average monthly temperature of pre and post mine operation after obtaining EC shall	Is being maintained and record has been kept in the office.	**Partially complied.** ***PAs have informed that records of average monthly temperatireof pre and post mine operation after obtaining EC has been***

D. Chandra Prasad

	be elaborated for post three years and a record to be maintain at regular interval.		***maintained. PAs need to provide the same to this Office.***
3	**Water quality monitoring and mitigation measures**		
3.1	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.	ETP of 100 m3/hr capacity has been commissioned. The sample analysis report of intake water and treated water has been submitted to IRO. Oil and grease trap has been installed at the workshop.	**Being complied.** ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
3.2	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.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	The Monitoring Data uploaded on company's website. Digital board showing ambient air quality real time monitoring data at entry and exit gate of mine lease area for public display has been installed.	**Partially complied.** Digital board has been installed. CAAQMS data has been uploaded in the website. ***However, other data (noise level, ground water quality, fugitive emission)*** **have not been uploaded.**

S. Shahida Parvin

3.10	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, has been prepared as per approved mining plan and implemented. Distance of Higlo Canal is 0.77 km in west direction from project site. Surface drainage plan including surface water conservation plan has been attached.	**Partially complied.** ***PAs need to submit the surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations.***
3.11	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 rivarine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	There is approved Mine Closure Plan for this particular mine. However, a riverine / riparian ecosystem conservation and management plan will be prepared and implemented in consultation with the irrigation / water resource department in the state government within 6 months of time period.	**Yet to be complied.** ***PAs are yet to prepare a riverine/riparian ecosystem conservation and management plan and implement in consultation with the irrigation / water resource department in the state government.***

S. Shahida Parvin

3.12	Quality of polluted water generated from the operations which include COD and acid mine drainage and metal contamination shall be monitored along with TDS, DO, TSS. The monitored data shall be uploaded on the website of the company as well as displayed at the site in public domain	Oil and grease trap had been installed at the workshop.ETP and STP had already been commissioned and operationalized. COD and acid mine drainage and metal contamination have been monitored along with TDS, DO,TSS. The monitored data has been uploaded on the website.	**Partially complied.** PAs have submitted the monitoring report of the effluent. ***PAs have not analyzed metals in the treated effluent water though it has been analyzed in the inlet water. Further, TDS and DO has not been monitored.***
3.13	Domestic water shall be providing to the residents/villages which are coming under the zone of influence of the project due to ground water extraction and mining operation by installing adequate number of RO plants with proper supply line and Taps within 2 years	Arrangement of providing fresh drinking water has been made to the villages within core and buffer zone.	Installed RO plants in the villages were not observed during monitoring. It was informed and also observed that water is being provided with movable water tankers.
3.14	No obsolete technologies for sewage treatment shall be implemented. Construction of Sewage Treatment Plant with latest technology should be completed within 2 years and treated water shall be reused for plantation. CTE and CTO of STP shall be obtained as per the norms.	Construction of STP has been completed an operationalized.	**Being complied.** STP has been installed and was in operation during monitoring.
4	**Noise and Vibration monitoring and prevention**		

Q. Shahida Parveen

4.1	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.	Workers engaged in drilling, blasting and HEMM operation have been provided with paper PPE i.e. ear plugs/ muffs etc. Periodically sound level has been measured and result of analysis found that noise level stands below 85 dBA. Adequate Awareness programmers are being conducted in the mine and group vocational training centre. Additionally discussed in PSC, pit top safety Talk for proper use of the PPE and its utility.	**Being complied.** It is observed that PAs have submitted noise monitoring conducted on for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.
4.2	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.	Control blasting practice has been adopted as per recommendation by CIMFR, Dhanbad and guidelines laid down in DGMS permission.	**Agreed with.** PAs have informed that control blasting is adopted as per recommendation by CIMFR, Dhanbad and guidelines by DGMS. PAs have submitted a report on the scientific advice for optimization of blast design parameters at Gangaramchak and Gangaramchak_bhadulia coal mines, Dist . Birbhum, W.B to safeguard nearby structure of the adjacent village conducted by CSIR-Central Institute of mining & Fuel Research (CSIR), Dhanbad.
4.3	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.	Noise level monitoring has been done on quarterly basis and analysis report had been submitted to the Ministry/RO.	**Being complied.** It is observed that PAs have submitted noise monitoring conducted on for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.
5	**Mining Plan**		

5.1	5- Star Rating is mandatory to obtain certification as per guidelines of Ministry of Coal	Information and data required for Rating is being sent to Ministry regularly as per format.	**Agreed with.** It has been informed that requisite data and information is sent regularly.
5.2	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	Mining Operation is being carried out as per provisions of Mines Act' 1952, CMR' 2017, Mines Rules and DGMS Guidelines etc.	PAs have informed that mining operation is undertaken as per Mines Act' 1952, CMR' 2017, Mines Rules and DGMS Guidelines etc.
5.3	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).	Mining Operation is being carried out as per Approved Mining Plan and Mine Closure Plan abiding by Statutory Provisions and DGMS circulars.	
5.4	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.	Stage II Forest Clearance of 101.77 ha had been obtained from Ministry of Environment, Forest & Climate change vide letter no F.No.8-45/2018-FC dated 10th April, 2019.	**Being complied.** PAs have received Stage II Forest Clearance from MoEF&CC vide letter no. F.No.8-45/2018-FC dated 10th April, 2019.
5.5	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Noted for Strict compliance.	**Being complied.** It was observed that solar lights have been installed along the coal transportation road beside the Tarapur village.
5.6	PP shall adopt mining method by preferably using surface miners for the project and silo loading through in-pit conveyor should be adopted	Only surface Miner is being used solely for extraction Coal. Coal is being transported by road by tarpaulin covered Trucks/Dumper from pit head to nearby railway siding. As the remaining life of the project is short, construction of silo and in-pit conveyor would not be economically viable.	**Partially complied.** Surface miner is being used for coal extraction. It was observed that coal transportation takes place through trucks/dumpers. PAs have informed that construction of silo and in-pit conveyor is not economically viable since the remaining life of the project is short.
5.7	Transportation of coal till Railway Siding shall be developed to avoid transportation through road	Since the life of the mine is only 3 year the development of infrastructure for transportation of coal by Conveyor Belt and Silo Loading is found not cost effective.	Same as above.

6	**Land Reclamation**		
6.1	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).	Digital Survey on entire lease hold area / core zone using Satellite Remote Sensing survey is being carried out.	**Not complied.** ***Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has not been submitted to this Office.***
6.2	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.	Mining Operation including excavation , backfilling , external OB dumping , top soil dumpling and afforestation has been carried out as per Approved Mine Plan and Mine Closure Plan.	**Agreed with.** It has been reported that all mining operation is being carried out as per the approved mining plan.

S. Shahida Parveen

6.3	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.	Mining Operation including excavation, backfilling, external OB dumping, top soil dumping and afforestation has been carried out as per Approved Mining Plan and Mine Closure Plan. Progressive compliance status vis-a-vis the post mining land use pattern will be submitted to the MOEFCC/RO.	***Partially complied. PAs need to submit the progressive compliance status vis-à-vis the post mining land use pattern to this Office.***
6.4	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	There is no scope of back Filling of void by external material like Ash as per Mine Plan approved by MoC,GoI.	It has been stated that there is no possibility of back filling of void by fly ash as per mine plan approved by MoC, Govt. of India.

Q. Shahi da Pasun

6.5	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes selfsustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office	Top soil has been stored separately. The top soil is being used for reclamation and plantation purpose in the final dump. Active dump will be stabilised with native plants. The void is being backfilled as per Approved Mine Closure Plan. Periodic compliance will be submitted to Ministry of Environment , Forest and Climate Change / Regional office. Please refer Annexure I.	**Being complied.** Top soil has been stored separately and is being used for green belt development. Back filling is being done. As per the information submitted and observations made during monitoring, plantation has been carried out at various locations in the projects site; including safety zone, external dump top, dump slopes, backfilled area, gap plantation in the 4.6 Ha area from 2020-21 till 2024-25.
6.6	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	There is no grazing land with mining lease area.	No grazing land was observed in the mine lease area.

S. Shahida Parveen

	Supreme Court with regard to acquiring grazing land.		
6.7	Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust	Top soil has been stored separately and grass plantation has been done all along and maintained in order to avoid dust.	**Being complied.** Top soil was observed to be stacked separately and is also being used for plantation.
6.8	Progressive backfilling of mine and progressive reclamation of OB dump shall be done	Backfilling has been started in the void area and progressive reclamation has been undertaken over the final dump.	**Being complied.** Both back filling and progressive reclamation is undergoing.
6.9	Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles	Active dump has been stabilised with temporary grass and native plants after top soil spreading.	**Partially complied.** ***Not all areas of the active dump have been covered by temporary grass.***
6.10	PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads/ manufacture of artificial sand, aggregates/ use for farmers etc.)	Is being explored.	**Yet to be complied.** PAs have reported that possibilities of utilization of OB material for different purposes is being explored.
6.11	All approach roads to mine and all other roads which are in regular use should be black topped. The maintenance of road shall be done by PP in collaboration with state government	Total length of the road from Mines to Railway Siding is approximately 15.2 km by paver blocks along the Canal Embankment which has been substantially built and as good as metal topped road. The rest of the road is a district Board road maintained by PWD.	**Being complied.**

S. Shahida Parveen

6.12	Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC	Mine Closure Plan is being followed and conditioned laid down in point no 6.12 will be adhered to and implementation report will be sent to the Regional Office of the MoEF&CC.	**Agreed with.** The mine is still in operation.
7	**Green Belt**		

A. Shahida Parvin

<table>
<tr>
<td>7.1</td>
<td>The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.</td>
<td>Plantation as per EC condition is being under progress.
<table>
<tr><th>Year</th><th>Area in ha</th><th>No of Sapling</th></tr>
<tr><td>Prior allottee</td><td colspan="2">About 4.6 ha area has been covered by plantation by prior allottee</td></tr>
<tr><td>2020-21</td><td>1.18 Ha in the safety zone</td><td>No of plantation 4787</td></tr>
<tr><td>2021-22</td><td>Over the top of the dump</td><td>60 kg of seed has been spread</td></tr>
<tr><td>2022-23</td><td>18.00 ha over the external dump top, dump slopes and backfilled area</td><td>No of plantation 29470 (sapling)+15000(from seeds)=44470 and 140 kg of seed has been spread</td></tr>
<tr><td rowspan="3">2023-24</td><td>16.38 ha over the backfilled area</td><td>No of plantation 26210 and 220 kg of seed has been spread over the dump slopes</td></tr>
<tr><td>Gap plantation has been done mainly in the area of 4.60 ha of plantation done by prior allottee</td><td>No of Plantation 8300</td></tr>
<tr><td>6 ha over backfilled area and 0.5 ha in safety zone area</td><td>No of Plantation 19600</td></tr>
<tr><td>Total</td><td>46.66 Ha</td><td>103367</td></tr>
</table>
</td>
<td>PAs have reported that the draft Wildlife Conservation Plan for certified species has been prepared and submitted to the DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest.</td>
</tr>
<tr>
<td>7.2</td>
<td>Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of</td>
<td>Green belt and safety zone has been developed under the guidance of forest officer. No endangered/endemic flora/fauna has been found within the project area.
Amount of Rs 7298302 already paid for plantation and development work in safety zone to the Forest Development.</td>
<td>Partially complied. Safety zone plantation (around 1.68 Ha) has also been developed with green belt (5387 saplings).

Plantation was observed in certain portion of the road close to the Tarapur village.</td>
</tr>
</table>

	native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads. And Plantation should also be carried out in nearby area with consent of forest department and gram panchayat within 10 km radius with its proper maintanance	**Safety zone/green belt plantation as on date,** **Area in Ha** | **No of sapling** 1.68 Ha in the safety zone | 5387 For developing Green-belt along both sides of the canal-embankment road, plantation of 965 no of sapling had been done and more plantation is being done. WBPDCL has already submitted letter to DFO for estimate and demand for plantation work from Sharsha More to Hazzatpur	***However, the plants need more maintenance and PAs also need to plant more saplings all along the transportation road.*** It was informed that planted saplings are often taken away by the villagers and others, which creates hindrance in the proper maintenance and plantation program.
8	**Public hearing and Human health issues**		
8.1	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 & it's RO on sixmonthly basis.	Adequate illumination has been in the mines area as per DGMS standard. Report is being submitted as advised.	**Being complied.** PAs have submitted the illumination survey for the month of August
8.2	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.	IME has been conducted for all employees engaged in mines and periodic medical examination thereof is being conducted in accordance to the Mine Rule 1955. PME has also done in accordance to the Mine Rule 1955. Employees have been identified from the work force who are engaged in active mining operations for occupational disease and hearing impairment check, Health checking of these employees has been carried out. Conducted medical Examinations-Blood Test, X-ray, Audiometry, E.C.G. and Spirometry.	**Being complied.** PAs have submitted a copy of the report of the medical examination under Mine Rule 29 B (Form 0). Few copies of the Blood report, chest x-ray, audiometry test report, spirometry report and ECG reports have been submitted by PAs.
8.3	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training	All the workers have been provided with PPE i.e. safety shoe, radium jacket, helmet, dust respirator, goggles etc. as per Reg. 240,241,242 of CMR' 2017.	**Being complied**

S. Chakraborty Parai

	and information on safety and health aspects.		
8.4	Implementation of the time bound 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 time bound 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.	Action plan against the issues raised during public hearing has been prepared and submitted.	**Partially complied.** ***PAs need to submit the status of the measures undertaken along with the budget provisions with respect to the issues raised during public hearing.***
8.5	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'.	There is no habitants within lease area for this particular mine. The mining operation has been conducted as per mitigation measure provided in this Ministry's OM No.Z-11013/5712014-IA.II (M)dated 29th October,2014.	As per information submitted and observations made from the surface layout plan, no village/habitation is present within the mining lease area. PAs have stated that mining operation is being conducted as per OM No.Z-11013/5712014-IA.II (M)dated 29th October,2014.
8.6	PP to conduct need based assessment survey of the area to for in order to decide the activities to be carried under the CSR and to provide detail of the activity carried out with adequate budgetary provision and time bound action plan.	CSR activities has been done as per approved EIA and EMP.	**Partially complied.** PAs have informed that CSR activities have been undertaken as per approved EIA and EMP. However, ***PAs have not provided any details of the activities undertaken under CSR. PAs need to submit the same to this Office.***
8.7	PP should conduct epidemiology study to (analysis of the	Health check-up camp and medical camp has been conducted on regular basis at the mine site and nearby villages.	**Not complied.** ***No epidemiology study has been conducted and report submitted.***

B. Shahida Parveen

	distribution, patterns and determinants of health and disease conditions in defined populations).		
8.8	Permanent Health care facilities of Hospital should be established within 5 km of project boundary for the local people.	Is being complied with.	**Yet to be complied.** There is no permanent health care facility within 5 km of project boundary. PAs have reported that all medical check-ups are being done in the community hall of Bastavpur and Debganj Adivasi Village
8.9	PP must ensure an emergency action plan during pandemic in order to provide assistance to the nearby villages located within the 10 km radius buffer zone (If required)	An emergency action plan during pandemic in order to provide assistance to the nearby villages located with8in the 10 km radius buffer zones has been prepare for implementation if required.	**Partially complied.** ***PAs need to submit the emergency action plan plan during pandemic in order to provide assistance to the nearby villages located within the 10 km radius buffer zone.***
8.10	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	Installation of 20 solar lights has been completed.	**Being complied.** It was observed that solar lights have been installed along the coal transportation road beside the village.
8.11	PP to take measure for installation of Renewable Energy sources in nearby area falling within 10 km radius	Will be adhered to.	Same as above.
8.12	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	Periodically sound level has been measured and result of analysis found that noise level stands below 85 dBA. Awareness programmes is being conducted in the mine through group vocational training centre and PSC and pit top safety talk.	**Being complied.** PAs have submitted the illumination survey for the month of August. As per the information submitted, it is observed that PAs have submitted noise monitoring conducted on for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.

S. Shukla Parui

	levels well within the prescribed limits for day light/night hours		
8.13	Adequate facility of drinking water, plantation and other social amenities should be provided to established R&R villages.	There is not established R & R villages.	It has been informed that there are no established R& R village
8.14	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.	Awareness programmes is being conducted in the time through group vocational training centre and PSC and pit top safety talk.	**Partially complied.** ***Details of training if given to the persons of nearby villages need to be submitted to this Office.***
8.15	Compensation of the land acquired for the project shall be settled as per the R&R Policy within fixed timeline	Complied with.	***PAs need to submit details of the compensation of the land acquired for the project.***
9	**Corporate Environment Responsibility**		
9.1	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 West Bengal Power Development has an environmental policy.	**Being complied.** PAs have submitted a copy of the corporate environmental policy of the West Bengal Power Development Corporation Limited.
9.2	A separate Environmental Cell both at the project and company head quarter level, with qualified	A separate environment management cell has been established at WBPDCL and Gangaramchak and Gangaramchak Bhadulia Coal Mine for monitoring the environment at the mines.	**Being complied.** PAs have submitted a copy of the Office Order No.17/2023 dated 06.12.2023 with respect to the Environment Management Cell at

S. Shahida Parvin

	personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.		Gangaramchak.
9.3	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 yearwise 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.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company is under preparation and will be completed within 3 months of the time period. Year wise progress of implementation of action plan will be reported to the Ministry/Regional office along with the Six Monthly Compliance Report	**Partially complied.** ***PAs need to submit the action plan for implementation of EMP and environmental conditions along with the responsibility matrix. PAs also need to submit the year wise progress of implementation of action plan.***
9.4	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self-environment audit has been conducted and third party audit will be conducted within the stipulated time.	**Partially complied.** ***PAs have not submitted the self-environment audit that has been conducted as mentioned in the six monthly compliance report. The same needs to be submitted to this Office.***
9.5	PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on	A separate environment management cell has been established at WBPDCL and Gangaramchak and Gangaramchak Bhadulia Coal Mine for monitoring the environment at the mines.	Partially complied. ***PAs have not established an in-house (at project site) environmental laboratory.*** It has been reported that environment laboratory has been provided at the nearby power plant of WBPDCL at Bakreswar. PAs have submitted a copy of the Office Order No.17/2023 dated 06.12.2023 with respect to the Environment Management Cell at Gangaramchak.

Q. Shahida Parveen

	routine basis. Any non-compliance or infringement should be reported to the concerned authority		
10	**Miscellaneous**		
10.1	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.	Publication has been done in two local newspapers one Bengali News Paper Ei Somay (Vernacular language of the locality) an the other one was in English News Paper Times of India was done informing that the project has been accorder environmental Clearance and a copy of the clearance letter is available with Sate Pollution Control Board and may be seen at the website of the Ministry of Environment & Forest at http://envfor.nic.in.	**Partially complied.** PAs have informed that publication of EC had been done in two newspapers (Ei Samoy and Times of India). However, ***the newspaper cuttings submitted on request are the related to the Publice Hearing meeting instead of the EC advertisement. PAs need to submit the advertisement copies to this Office.***
10.2	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.	Copies of EC were submitted to BDO, khayrasol Block, Birbhum and Gram Panchayat, Nakaraconda, Birbhum by prior allottee, however WBPDCL has again submitted the same to the concerned offices.	**Being complied.**
10.3	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.	The status of compliance of the stipulated environment clearance conditions, including results of monitored data has been uploaded and being updated the same on half-yearly basis.	***Not complied. PAs have not uploaded the status of compliance with respect to EC dated 2023.***

S. Shahida Parveen

10.4	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.	The mine has seven monitoring stations in core zones and as well as buffer zones for monitoring and analysis of ambient air quality. Continuous ambient air quality monitoring stations has been installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB.	**Being complied.**
10.5	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.	Half-yearly compliance report of Environmental Clearance is being submitted in every six month of the time period.	**Not complied.** ***Half yearly compliance report has not been uploaded on the Ministry's website.***
10.6	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.	Environmental statement for each financial year is being submitted.	**Partially complied.** As per information submitted, it is observed that PAs have submitted the Environment Statement to the State Pollution Control Board. However, ***PAs have not uploaded the Environment Statement in their website.***
10.7	The project authorities shall inform to the Regional Office of the MOEFCC regarding Commencement of mining operations.	The project proponent has been already informed to the Regional Office of the MOEF&CC regarding commencement of mining operations.	The project is in operation. PAs have stated that the mining operation started in 2019.
10.8	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State	Stipulations made by the State Pollution Control Board and the State Government are being adhered to.	**Agreed with.** PAs have complied or in the process of complying with the stipulations made by the Pollution Control Board.

D. Shahida Parveen

	Government.		
10.9	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.	The project proponent will abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and presentation to the Expert appraisal Committee.	***Agreed with.*** PAs have complied or in the process of complying with the recommendation made in the EIA/EMP report. ***PAs may provide the compliance status with respect to the commitments made in the public hearing meeting.***
10.10	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	Further expansion or modifications will not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.	**Agreed with.**
10.11	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.	**Agreed with.**
10.12	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.	**Agreed with.**
10.13	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.	**Agreed with.**
10.14	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	Noted.	**Being complied.**

S. Shahida Parvin

	Regional Office by furnishing the requisite data / information/monitoring reports.		
10.15	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.	Noted	**Agreed with.**
	Additional EC Conditions		
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.	Is being Complied with.	***Agreed with.*** PAs have complied or in the process of complying with the recommendation made in the EIA/EMP report. ***PAs may provide the compliance status with respect to the commitments made in the public hearing meeting.***
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	All necessary clearance/approval had been obtained.	**Being complied.**

Q. Shahida Parveen

	competent authority may stipulate any further condition for environmental protection.		
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.	Not Applicable.	**Agreed with.**
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 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.	Noted. There is no illegal mining practice.	**Agreed with.** PAs have informed that there is no illegal mining practice.
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 judgment of Hon'ble Supreme Court.	Noted.	**Agreed with.**
10	This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Noted.	**Agreed with.**
11	All other conditions mentioned in Environment Clearance	All other conditions stipulated in the Environment Clearance to the project under EIA Notification, 2006 Ministry's	**Agreed with.** PAs have complied/in the process of complying with the conditions

D. Shahida Parveen

	granted by Ministry vide its letter dated 17.05.2007, 20.12.2018 and 27.12.2022 shall remain unchanged.	letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 and Transfer of EC vide letter dated 20th December , 2018 for 1.0 MTPA will be adhered to.	mentioned in the EC dated 2007,2018 and 2022.
File No- J-11015/375/2006-IA. II (M), dated 27th December,2022 (As per status submitted for the period April 2023-September 2023) vide mail dated 30.11.2023			
4.i)	PP to obtain the CTO for production of 1.2 MTPA production capacity from SPCB	Consent to Operate has been obtained from West Bengal state Pollution Control Board vide Consent Letter No Co141026, Memo No 48-7/WPBD-Cont (4540)/109(part-I) dated 27.01.2023 for 1.2 MTPA production capacity.	PAs have received CTO from WBPCB vide memo No. 613-7/WPBD-Cont (4540)/10 and Consent Letter No. C0123361 dated 30.07.2021 with validity till 31/7/2026.PAs again received CTO vide Consent Letter No. C0141026 and Memo No.- 48-7/WPBD-Cont (4540)/10 (Part-I) dated 21.01.2023 with validity till 31.07.2026. Further, for the production of 1.8 MTPA, CTO was granted vide Consent Letter No.- C0144043 and Memo No.- 581-7/WPBD-Cont (4540)/10 (Part-I) dated 13.10.2023 with validity till 31.07.2026
4.ii)	PP shall complete the work of ETP within 4 months and obtain the CTO by April 2023 with submission of performance report to IRO	ETP of 100 m3/hr capacity has been installed and commissioned on 05.12.2022. The sample analysis report of intake water and treated water has been submitted to IRO. CTO has been obtained.	**Being complied.** ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
4.iii)	PP shall comply all the conditions stipulated by Ministry's EC vide its letter no J-11015/375/2006-1A.II (M) dated 17th May 2007 and complete the non-compliance within 3 months.	All the conditions stipulated by Ministry's EC vide its letter no J-11015/375/2006-1A.II (M) dated 17th May 2007 have been complied.	As per available records the review report of final ATR was sent by IRO Kolkata vide letter dated 1.03.2023.
4.iv)	Mining shall be carried out only by surface	Only surface Miners is being used solely for extraction of Coal.	**Partially complied.** It was observed that coal is being

S. Shakti de Parmi

	miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road. No road transportation shall be conducted.	Coal is being transported by road by tarpaulin covered Trucks/Dumper from pit head to nearby railway siding. As, the remaining life of the project is only 3 years, construction of silo and in-pit conveyor would not be economically viable.	extracted by surface miner. Coal is being transported by road. PAs have reported that since the remaining life of the project is only 3 years, construction of silo and in-pit conveyor is not economically viable.
4.v)	PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.	The mine has seven monitoring stations in core zones and as well as buffer zones for monitoring and analysis of ambient air quality. Online continuous ambient air quality monitoring station has been installed in addition to the regular monitoring stations as per the equipment and/or in consultation with the SPCB.	**Being complied.** CAAQM stations have been installed at two locations: 1.Near HSD PUMP (Core zone) and 2. At WBPDCL office area (Buffer zone). Display board has also been installed in the projects site and CAAQMS data has been uploaded in their website.
4.vi)	PP shall install fixed fog canon (mist sprayer) all along the haul road till CHP. Railway siding and OB dump area and accordingly sufficient number of fog canons(not less than 10 nos.) 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEF&CC/CPCB	Two nos of Fog Canons had been installed in mines and additional two nos of Fog Cannons have been installed at railway siding. Another two no of Fog Cannons are under process of procurement. Air pollution level is under the standards prescribed by the MOEF&CC/CPCB.	**Partially complied**. Fixed fog cannons have not been installed. During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. ***Fixed fog cannons have not been installed.*** No CHP was observed within the project site. PAs have submitted the fugitive emission data from April 2024 to December. Monitoring report states that the data ranged from 56.3 µg/m3 to 113.91 µg/m3
4.vii)	PP should install wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.	Initiative has been taken and will be installed after completion of the civil work. Already 750 mtrs of boundary wall has been constructed and the remaining work is under progress.	**Being complied.**
4.viii)	PP to obtain its pending groundwater clearance within 3 months from Ground Water Board/CGWA.	As per CGWA notification, CGWA does not issue NOC for ground water withdrawal in the State of West Bengal. Under this notification permit for withdrawal of ground water had been obtained from State Water Investigation Directorate (SWID). Mail received from CGWA in this regards.	PAs have submitted a copy of permission received for mine dewatering from open cast mine sump vide Permit No. P03040620000000042501WHE dated 30.06.2016 from District Level Ground Water Resources Development Authority, Birbhum.

D. Shahida Parvin

			PAs need to submit the groundwater withdrawal clearance received (if any) as specified in this stipulation.
4.ix)	PP to develop an ECO park with separate area of 5 Ha for medical and herbal species within two years.	An area of about 2.5 ha has been indentified for development of ECO park for medicinal and herbal species. Topsoil spreading has been completed and plantation has been done.	PAs have planted herbal trees in 2.5 Ha (in 2024-2025) and another 2.5 Ha in 2023-24. Further mango plants have been planted in 2.5 Ha. It was also observed that 1 acre fruit garden has been developed in front of the temple.
4.x)	Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.	Topsoil has been stored separately and plantation has been done all along and maintained in order to avoid dust.	**Being complied.** Top soil has been stored separately and is being used for green belt development. Back filling is being done.
4.xi)	Progressive backfilling of mine and progressive reclamation of OB dump shall be done.	Adhere to Progressive Mine Closure Plan backfilling has been started from 3rd year as a part of reclamation of quarry area. Native plants has been planted as recommended by Forest Ranger,Dubrajpur. Plantation of 26,210 in backfilled area of 16.38 Ha has been done in this half yearly period.	**Being complied.** Backfilling is being done. Plantation has been developed in the back filled area. PAs have reported that plantation has been developed as per the recommendation of Forest Ranger, Dubrajpur with 16.38 Ha of backfilled area being covered with plantation.
4.xii)	Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2024, Common Cause vs Union of India & Ors vide its judgement dated 8th January , 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder,flora,fauna etc.Compliance of this	Mine Closure Plan is being followed and conditioned laid down in point no 4.xii will be attached to and implementation report will be adhered to and implementation report will be sent to the Regional Office of the MoEF&CC.	**Agreed with.** The mine is in operation at present.

D. Chandra Parai

	condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional office of the Moef&CC.		
4.1			
a)	**Statutory compliance**		
i)	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	State II Forest Clearance of 101.77 ha had been obtained from Ministry of Environment, Forest & Climate change vide letter no F.No.8-45/2018-FC dated 10th April,2019.	**Being complied.** PAs have received Stage II Forest Clearance vide letter no F.No.8-45/2018-FC dated 10th April,2019.
ii)	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	In compliance of this condition work order has been issued Terratribal Environmental Conservancy Pvt Ltd, Kolkata for preparation of wild Life Conservation Plan for certified species with requisite budget as per WPA-2022 in consultation of Forest Department, Birbhum. Draft Wildlife Conservation Plan has been submitted to DFO,Birbhum. As per clause i.(a) of the File No. FC-11/43/2021-FC of MoEF&CC dated 07.06.2023, WBPDCL has already submitted a letter to DFO, Suri and deposited 2% of the project cost.	PAs have reported that the draft Wildlife Conservation Plan for certified species has been prepared and submitted to the DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest. Further, PAs have submitted a copy of the letter to the DFO, Birbhum Division (Letter No. WBPDCL Director (Mining)/1871 dated 29.07.2024).
iii)	The project proponent shall prepare a site-Specific Conservation Plan / 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	In compliance of this condition work order has been issued to Terratribal Environmental Conservancy Pvt Ltd, Kolkata for preparation of Wild Life Conservation Plan for certified species with requisite budget as per WPA-2022 in consultation of Forest Department , Birbhum. Draft Wildlife Conservation Plan has been submitted to DFO, Birbhum. As per clause i.(a) of the File No. FC-11/43/2021-FC of MoEF&CC dated 07.06.2023, WBPDCL has already submitted a letter to DFO,Suri and deposited 2% of the project cost.	Same as above

D. Shahida Parvin

	Schedule-I species in the study area).		
iv)	The project proponent shall obtain Consent to Establish/operate under the provisions of Air (Prevention & Control of Pollution) Act,1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned state Pollution Control Board/Committee.	Consent to Establish has been obtained from West Bengal Pollution Control Board vide Memo No 06-2N-87/2022 (E) dated 04.01.2023 and subsequently Consent to Operate has been obtained from West Bengal State Pollution Control Board vide Consent Letter No CO141026, Memo No 48-7/WBPD-Cont (4540)/10(Part-I) dated 27.01.2023 for 1.2 MTPA production capacity.	**Being complied.** PAs have also received CTO from WBPCB vide memo No. 613-7/WPBD-Cont (4540)/10 and Consent Letter No. C0123361 dated 30.07.2021 with validity till 31/7/2026.PAs again received CTO vide Consent Letter No. C0141026 and Memo No.- 48-7/WPBD-Cont (4540)/10 (Part-I) dated 21.01.2023 with validity till 31.07.2026. Further, for the production of 1.8 MTPA, CTO was granted vide Consent Letter No.- C0144043 and Memo No.- 581-7/WPBD-Cont (4540)/10 (Part-I) dated 13.10.2023 with validity till 31.07.2026
v)	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	As per CGWA notification, CGWA does not issue NOC for ground water withdrawal in the State of West Bengal. Under this notification permit for withdrawal of ground water has been obtained from State Water Investigation Directorate (SWID). Mail received from CGWA in this regards.	PAs have submitted a copy of permission received for mine dewatering from open cast mine sump vide Permit No. P03040620000000042501WHE dated 30.06.2016 from District Level Ground Water Resources Development Authority, Birbhum. ***PAs need to submit the groundwater clearance received (if any) as specified in this stipulation.***
vi)	Solid/hazardous waste generated in the mines needs to address in accordance Waste Management Rules, 2016/Hazardous & Other Waste Management Rules,2016.	Oil & grease trap has been installed & accomplished. Generated Solid/hazardous waste is being sold to authorised vendor.	**Partially complied.** ***PAs need to submit the Hazardous Waste Authorization Certificate received from State Pollution Control Board.***
b)	**Air quality monitoring and preservation**		
i)	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 PM10. PM25, SO2 and NO. Location of the stations shall be decided based on the metrological data,	The mine has seven monitoring stations in core zones and as well as buffer zones for monitoring and analysis of ambient air quality. Online ambient air quality monitoring stations has been 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, Ag, Ni, Cd, Cr, etc has been conducted.	**Partially complied.** As per the monitoring report submitted and information provided by PAs, it is observed that the mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. The buffer zones include: 1. Bastavpur village, 2. Embankment road, 3. WBPDCL camp office, 4. Gangpur village. The core zones include: 1. Office camp and security barrack, 2. Junction roads towards mine,

S. Sharada Parui

	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.		3. Weigh Bridge of mines. Monitoring report submitted for Jan 2024, April 2024 and July 2024 indicates that the parameters are within the limit. CAAQM stations have been installed at two locations: 1.Near HSD PUMP (Core zone) and 2. At WBPDCL office area (Buffer zone). ***CAAQMS data revealed that both PM_{10} and $PM_{2.5}$ were high in both stations on many days (for the month January and February 2025).*** ***PAs have monitored Cd, Cr As and Ni. However except on July 2023, they have not monitored Hg as stipulated in the EC condition.***
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 September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg. As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office to the CPCB/SPCB	Half yearly Environmental Compliance Report is being submitted in every six months to the Ministry/Regional Office to the CPCB/SPCB. Monitoring of heavy metals such as Hg. As, Ni, Cd, Cr, etc has been conducted.	Same as above.
iii)	Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measure such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas	• During transportation water is being sprayed by Fog Canon mist water sprayer and trucks are covered fully by tarpaulin. There are patrolling vehicles in the road for proper control over transportation. •Regular monitoring is being carried out by Gravimetric dust sampler for monitoring Fugitive dust emission. In the analysis report level of Fugitive dust is found below the standard as specified in Coal Mines Regulation'2017, Reg.143 (2).	During monitoring, transportation of coal through the transportation road was not observed. During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. PAs have submitted the fugitive emission data from April 2024 to December. Monitoring report states that the data ranged from 56.3 µg/m3 to 113.91 µg/m3
iv)	The transportation of coal shall be carried out as per the provisions and route envisaged in	Total length of the road from Mines Railway siding is approximately 15.2 km, whereas WBPDCL has constructed road of 5.6 km by paver blocks along the Canal	**Being complied.** It was informed that the total length of the road from the mines to the Railway siding is 15.2 km.

S. Shaheda Parveen

	the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a "bypass road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	Embankment which has been substantially built and as good as metal topped road. The rest of the road is a district Board road maintained by PWD. Ten wheel-trucks have been deployed for coal transportation from mines to nearest siding. Trucks are being optimally loaded and covered by tarpaulin during transportation. Water is being sprayed all along the road by Fog Canon mist water sprayer. There are patrolling vehicles in the road for proper control over transportation.	During monitoring, road along the canal embankment was found to be with paver blocks (5.6 km). Further, PAs have installed wind shield on the road close to Tarapur village.
v)	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining "PUC certificate from the authorized pollution testing centres.	Vehicular emissions has been kept under control and regularly monitored. PUC certificates had been submitted.	**Being complied.** Few PUC certificates have been submitted by PAs to this Office.
vi)	Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid 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.	Arrangement of adequate water spraying system has been done in coal stock yard for dust suppression. There is no crusher and feeder-breaker in the mines. Coal is being extracted by surface miner. As the remaining mine life is very short, huge expenditure for implementing in-pit conveyor belt and silo loading system is not going to be economically viable. As advised, amendment of EC condition in this regard will be taken up as per Approved Mine Plan	During monitoring, it was observed that coal is being extracted with surface miners. Fog cannons were observed in the coal stock yard. PAs have reported that since the remaining mine life is short, implementation of in-pit conveyor belt and silo loading system is not economically viable.
vii)	Coal handling plan shall be operated with effective control measure w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.	There is no Coal Handling Plant in Gangaramchak and Gangramchak-Bhadulia Coal Mine.	No CHP was observed in the project site.
c)	**Water quality monitoring and preservation**		
i)	The effluent discharge (mine waste water workshop effluent) shall be monitored in terms of	ETP of 100 m3/hr capacity has been installed and commissioned on 05.12.2022. The sample analysis report of intake	**Being complied.** ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green

Q. Shahida Parveen

	the parameters notified under the Water Act,1974 Coal Industry Standards vide GSR 742 (E) dated 25 September, 2000 and as amended from time to time by the Central Pollution Control Board.	water and treated water has been submitted to IRO. Oil and greases trap had been installed at the workshop.	belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
ii)	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27 May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	The real time data so generated has been uploaded on company website. Digital board showing ambient air quality real time monitoring data at entry and exit gate of mine lease area for public display has been installed.	**Partially complied.** ***The six monthly compliance report along with monitoring data for EC dated 2022 has last been uploaded in the PAs's website for the period October 2022 to March 2023. No six monthly compliance report for EC dated 2022 and the monitoring data (except CAAQMS data) has been uploaded after March 2023 in the website.***
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 peizometers 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 MOEF&CC/RO.	1. Monitoring of ground water quality from nearby villages like Bhadulia, Gangpur and Bastabpur is being carried out on regular basis from NABL accredited laboratory. 2. Monitoring a ground water level is being done periodically and record has been kept in the office. 3. Monitoring of ground water pressure is being done regularly by peizometers installed at the site (2 no). 4. the monitoring of ground water levels has been carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. 5. The ground water quality has been monitored once a year, and the data thus collected had been submitted to MOEF&CC/RO.	**Being complied.** From information submitted, it is observed the PAs are keeping record of the water levels from the piezometer reading. Piezometer report from April 2024 –till date has been submitted by PAs. The ground water quality has also been monitored.
iv)	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months record of monitoring	There is no river within mining lease area of Gangaramchak & Gangaramchak-Bhadulia Coal Mines.	**Partially complied.** Hinglo Dam is situated in the north-west side of the mine and a can originating from the dam is passing also. Transportation of

S. Shahida Parveen

	data shall be maintained and submitted to the Ministry Of Environment, Forest And Climate Change / Regional Office.		coal occurs through a road constructed along the bank of this canal. PAs have submitted the monitoring report of Hinglo Dam water. ***PAs also need to submit the monitoring report of the canal water.***
v)	Ground water, excluding mine water, shall not be used for mining operations. Rainwater shall be implemented for conservation and augmentation of ground water resources.	No ground water is being used for mining purpose in Gangaramchak & Gangaramchak-Bhadulia coal mines. Rainwater is used for conservation and augmentation of groundwater resources through recharge pits.	**Agreed with.** PAs have informed that no ground water is being used for mining purpose.
vi)	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, Coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and bodies. Further, dump materials shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper setting of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the	Construction catch drain garland drain of adequate dimension in commensurate with the past rainfall data has been done to prevent runoff water flow. Drains and ponds have been de-silted onset of monsoon and post monsoon period. Adequate sump capacity has been created in the mine pit. Water collected in the sump is being solely used for prevent generation and suppression of dust and greenbelt development/plantation. Retaining wall constructed at the toe of OB dump to check runoff and siltation. Plantation of native species has been done at the toe of dump and top of the dump. It is an ongoing process.	**Partially complied.** Catch drain/garland drain has been provided along with the periphery of the mine so that storm water cannot enter the mine. Retaining wall has been provided at the toe of the inactive OB dump and in some other area (including beside the fruit garden). ***Garland drains have not been observed in other areas as stipulated.*** Plantation has been provided at the inactive dump that is present towards the Hinglo Dam.

Q. Shahida Parvin

	rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.		
vii)	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby villages(s) after due treatment conforming to the specific requirement (standards).	• Recharge pits has been made for augmentation of groundwater resources. • De-siltation of nearby pond had been done for artificial groundwater recharge in the nearby villages (sahapur village and Bastabpur village). • Monitoring of ground water level is being done periodically and record has been kept in the office.	**Being complied.** Pond constructed by PAs was observed during monitoring. PAs have reported that de-siltation of pond in Sahapur village and Bastabpur village has been done for groundwater recharge.
viii)	Industrial waste water generated from CHP workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under water act 1974 and environment (protection) act 1986 and the Rules made there under, and as amended from time to time. Adequate ETP/STP needs to be provided.	Oil and grease trap had been installed at the workshop. Generated Solid /hazardous waste is being sold to authorised vendor. ETP had already been installed and commissioned.	**Being complied.** ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
ix)	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	The mine water is being solely used for mines spraying , washing plantation, etc. If there is a requirement to discharge mine water to outside drains, the mines water will be treated in ETP at first instance before discharging. Drains have been de-silted during pre and post monsoon.	**Being complied.**
x)	The surface draining including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of	The surface draining plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, has been prepared as per approved mining plan and implemented by the project proponent.	**Partially complied**. ***PAs need to submit the surface draining including surface water conservation plan for the area of influence affected by the mining operations.***

S. Shahida Parveen

	river/rivulet/pond/lake/ etc, shall be prepared and implemented by the project proponent. The surface draining plan and/or any diversion of natural water course shall be as per the approved Mining Plan/ELA/EMP report and with due approval of the concerned state/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS or any other authority as prescribed by the law.	Distance of Hinglo Canal is 0.77 km in west direction from project site. Surface Draining Plan and Monsoon Plan as per DGMS guideline has been submitted.	
xi)	The project proponent shall take all precautionary measures to ensure riverine /riparian ecosystem in and around the coal mine up to a distance of 5 km. A rivarine /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	DGPS survey is under process in the core zone, a detail report will be prepared in consultation with state Irrigation Department and will be submitted.	**Yet to be complied.** ***PAs need to submit the rivarine /riparian ecosystem, conservation and management plan and implement the same.***
d)	**Noise and Vibration monitoring and prevention**		
i)	Adequate measures shall be taken control of noise level as per Noise Pollution Rules, 2016 in the wok environment. Workers engaged in blasting and drilling operations, operation of HRMM, etc shall be provided with personal protective equipment (PPE) like ear plugs/muffs in conformity with the	• Workers engaged in drilling, blasting and HEMM operation have been provided with ear plugs / muffs. • Periodically sound level has been measured and result of analysis found that noise level stands below 85 dBA. • Awareness programmes have been conducted in the mine through vocational training centre situated in the mine.	**Being complied.** It is observed that PAs have submitted noise monitoring conducted for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.

S. Shekhar Parui

	prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.		
ii)	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc. as per the guidelines prescribed by the DGMS.	Control blasting practice have been adopted as per recommendation by CIMFR, Dhanbad and guidelines laid down in DGMS permission.	**Agreed with.** PAs have informed that control blasting is adopted as per recommendation by CIMFR, Dhanbad and guidelines by DGMS. PAs have submitted a report on the scientific advice for optimization of blast design parameters at Gangaramchak and Gangaramchak_bhadulia coal mines, Dist . Birbhum, W.B to safeguard nearby structure of the adjacent village conducted by CSIR-Central Institute of mining & Fuel Research (CSIR), Dhanbad.
iii)	The noise level survey shall be carried out as per the prescribed guidelines to asses noise exposure of the workmen at vulnerable points in the regard shall be submitted to the Ministry/RO on six-monthly basis.	Noise level monitoring has been done on quarterly basis and analysis report had been submitted to the Ministry/RO.	**Being complied.** It is observed that PAs have submitted noise monitoring conducted for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.
e)	**Mining Plan**		
i)	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under applicable.	Mining operation is being carried as per Mines Act' 1952, CMR' 2017, rules and circulars etc.	PAs have informed that mining operation is undertaken as per Mines Act' 1952, CMR' 2017, Mines Rules and DGMS Guidelines etc.
ii)	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines safety (DGMS).	Mining Operation is being carried out as per Approved Mining Plan and Mine Closure Plan abiding by mining laws and DGMS circulars.	Same as above.
iv)	Efforts should be made to reduce energy and	Will be adhered to.	**Being complied.** It was observed that solar lights have been

A. Shahida Parvin

	fuel consumption by conservation, efficiency improvements use of renewable energy.		installed along the coal transportation road beside the Tarapur village.
f)	**Land reclamation**		
i)	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEF&CC) from time to time shall be submitted to MOEF&CC/Regional Office (RO).	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has been carried out at the time of Forest Clearance.	**Not complied.** ***PAs have not submitted digital survey of the entire lease hold area//core zone using Satellite Remote Sensing survey.***
ii)	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m. adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purpose and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.		**Agreed with.** The mine is in operation.
iii)	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which	Mining Operation including excavation, backfilling, external OB dumping, top soil dumping and afforestation has been carried out as per Approved Mining Plan and Mine Closure Plan. Progressive compliance status vis-a-vis the post mining land use pattern will be submitted to the MOEFCC/RO.	***Partially complied. PAs need to submit the progressive compliance status vis-à-vis the post mining land use pattern to this Office.***

Q. Shahida Parveen

	is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.		
iv)	Fly ash shall be used for external dump of overburden, backfilling or stowing of mines as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	There is no generation of fly ash.	It has been stated that there is no possibility of back filling of void by fly ash as per mine plan approved by MoC, Govt. of India.
v)	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilizing. The topsoil shall temporarily be stored at earmarked site (s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure	Top soil has been stored separately. The top soil is being used for reclamation and plantation purpose in the final dump. Active dump will be stabilised with native plants. The avoid is being backfilled as per Approved Mine Closure Plan. Periodic compliance will be submitted to Ministry of Environment, Forest and Climate Change/ Regional Office. Already Top soil has been done over an area of 16.38 ha above OB dump and dump slope for plantation in 2023-24.	**Partially complied.** Top soil has been stored separately and is being used for green belt development. Back filling is being done. ***Not all areas of the active dump have been covered by temporary grass.***

S. Shahida Parvin

	Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate change/Regional Office.		
vi)	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	There is no grazing land with mining lease area.	**Not Applicable.** There is no grazing land within the mine lease area.
g)	**Green Belt**		
i)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.	**Year** / **Area in ha** / **No of sapling** 16.38 ha over the backfilled area — No of plantation 26210 and220 kg of seed has been spread over the dump slopes Gap plantation has been done mainly in the area of 4.60 ha of plantation done by prior allotee — No of planation 8300	PAs have reported that the draft Wildlife Conservation Plan for certified species has been prepared and submitted to the DFO, Birbhum for examination and modification, if any and forward to PCCF WL for approval through Conservator of Forest. Further, PAs have submitted a copy of the letter to the DFO, Birbhum Division (Letter No. WBPDCL Director (Mining)/1871 dated 29.07.2024).

Shahida Parvin

<table>
<tr><td>ii)</td><td>Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/coal transportation roads.</td><td>Green belt and safety has been developed under the guidance of Forest Officer. No endangered/ endemic flora/fauna has been found within the project area.
Amount of Rs. 7298302 already paid for plantation and development work in safety zone to the Forest Department.
Safety zone/green belt plantation as on date.
<table><tr><th>Area in Ha</th><th>No of Sapling</th><th>Density</th></tr><tr><td>1.18 Ha in the safety zone and green belt</td><td>No of plantation 4787</td><td>4056.78 /Ha</td></tr></table>For developing Green-belt along both sides of the coal transportation road, plantation of 365 no of sapling had been done will be continued for successive years.</td><td>As per the information submitted and observations made during monitoring, plantation has been carried out at various locations in the projects site; including safety zone, external dump top, dump slopes, backfilled area, gap plantation in the 4.6 Ha area from 2020-21 till 2024-25.</td></tr>
<tr><td>h)</td><td colspan="3">Public hearing and Human health issues</td></tr>
<tr><td>i)</td><td>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 & it's RO on six-monthly basis.</td><td>Adequate illumination has been done in the mines areas per DGMS standards. Report will be submitted as advised.</td><td>Being complied. PAs have submitted the illumination survey for the month of August</td></tr>
<tr><td>ii)</td><td>The project proponent shall undertake occupation health survey for initial and periodical medical examination of the personal engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circular. 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</td><td>IME has been conducted for all employees engaged in mines and periodic medical examination there of is being conducted in accordance to the Mines Rule 1955.
Employees have been identified from the workforce who are engaged in active mining operations for occupational disease and hearing impairment check. Health checking of these employees has been carried out. Conducted medical Examinations-Blood Test, Chest x-ray, Audiometry E.C.G. and spirometry.</td><td>Being complied. PAs have submitted copy of the report of the medical examination under Mine Rule 29 B (Form 0). Few copies of the Blood report, chest x-ray, audiometry test report, spirometry report and ECG reports have been submitted by PAs.</td></tr>
</table>

B. Shahida Parveen

	impairment, if any, as amended time to time.		
iii)	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on and health aspects.	All the workers have been provided with PPE i.e. safety shoe, radium jacket, helmet, dust respirator, goggles etc.as per Reg. 240,241,242 of CMR 2017.	**Being complied.**
iv)	Implementation of the action plan on the issues raised during the public haring shall be ensured. The project proponent shall undertake all the takes/measures as per the action plan submitted with budgetary provisions during the public hearing. Land outees shall be compensated as per the norms laid down in the R&R policy of he company/sate Government/Central Government, as applicable.	Action plan against the issues raised during public hearing has been prepared and submitted.	**Partially complied.** ***PAs need to submit the status of the measures undertaken along with the budget provisions with respect to the issues raised during public hearing.***
v)	The project proponent shall follow the mitigation measure provided in this Ministry's OM No.Z-11013/57120114-IA.I1(M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are part of mine lease areas or habitations and villages are surrounded by the mine lease area'	There is no habitants with mining lease area for this particular mine. The mining operation has been conducted as per mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014.	As per information submitted and observations made from the surface layout plan, no village/habitation is present within the mining lease area. PAs have stated that mining operation is being conducted as per OM No.Z-11013/5712014-IA.I1 (M)dated 29th October,2014.
i)	**Corporate Environment Responsibility**		
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	WBPDCL has a well laid down Corporate Environmental Policy.	**Being complied.** PAs have submitted a copy of the corporate environmental policy of the West Bengal Power Development Corporation Limited.

Q. Shahida Parvin

	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.		
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.	Structure of Environment Management Cell at corporate level consisting of one Environmental Engineer and two Senior Managers. Environmental Cell at Gangaramchaak and Gangaramchak-Bhadulia Coal Mine consisting of one Environmental Engineer, One Civil Engineer and one Surveyor.	**Being complied.**
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 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.	Action plan for implementation EMP and environmental conditions along with responsibility matrix of the company will be prepared. Year wise progress of implementation of action plan will be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	**Partially complied.** ***PAs need to submit the action plan for implementation of EMP and environmental conditions along with the responsibility matrix. PAs also need to submit the year wise progress of implementation of action plan.***
iv)	Sel-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self-environmental audit and third party audit will be conducted before 3.03.2024.	**Partially complied.** ***PAs have not submitted the self-environment audit that has been conducted as mentioned in the six monthly compliance report. The same needs to be submitted to this***

S. Shahida Parveen

			Office.
j)	**Miscellaneous**		
i)	The projects 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 vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Since the EC accorded to the prior allotee was transferred to WBPDCL on 20th December, 2018 vide Letter No: J-1105/375/2006-IA-II (M) all the old records & documents were traced to ascertained whether the prior allotee had advertised in two local Newspapers at that time. Since no documentary evidences were available on this, so publication in two local newspapers one was in Bengal News Paper Ei Samay (Vernacular language of the locality) and the other one was in English News Paper Times of India was done informing that the project has been accorder environmental clearance and a copy of the Clearance and a copy of the clearance letter is available with State Pollution Control Board and may be seen at the website of the Ministry of Environmental & Forest at http://envfor.nic.in.	**Not complied.** ***PAs need to submit a copy of the advertisement for EC dated 2022 in two local news paper as per the EC stipulation.***
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.	Copies of EC were submitted to BDO, Khayrasol Block, Birnhum and Gram Panchayat, Nakaraconda, Biirbhum by prior allotee, however WBPDCL has again submitted the same to the concerned offices.	**Not complied.** ***PAs need to submit the copies of the letter submitted BDO, Khayrasol Block, Birnhum and Gram Panchayat, Nakaraconda, Biirbhum wrt to EC dated 2022.***
iii)	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	The status of compliance of the stipulated environment clearance conditions, including results of monitored will be uploaded and updated the same on half-yearly basis.	**Partially complied.** ***The six monthly compliance report along with monitoring data for EC dated 2022 has last been uploaded in the PAs's website for the period October 2022 to March 2023. No six monthly compliance report for EC dated 2022 has been uploaded after March 2023 in the website.***
iv)	The project proponent shall monitor the criteria pollutants level namely; PM10, SO, Nox (ambient levels) or criteria sectorial parameters, indicated for the projects and display the same at a	The mine has seven monitoring statins in core zones and as well as buffer zones for monitoring analysis of ambient air quality. Digital board showing ambient air quality monitoring data at entry and exit gate of mine lease area for public display has been installed.	**Being complied.**

Q. Shahida Parveen

	convenient location for disclosure to the public and put on the website of the company.		
v)	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment , Forest and Climate Change at environment clearance portal.	Half-yearly compliance report of Environmental Clearance will be submitted after every six month of time period.	**Not complied.**
vi)	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.	The mining operation has been conducted as per mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II(M) dated 29th October, 2014	As per information submitted and observations made from the surface layout plan, no village/habitation is present within the mining lease area. PAs have stated that mining operation is being conducted as per OM No.Z-11013/5712014-IA.II (M)dated 29th October,2014.
Vii)	The project proponent shall submit the environmental statement for each financial year in From-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.	Environmental statement for each financial year had been submitted.	**Partially complied.** ***PAs have not uploaded the Environmental Statement in Form V in their website.***
viii)	The project authorities must strictly adhere to the stipulations made by MOEFCC regarding commencement of mining operations.	The project proponent has been already informed to the Regional office of the MOEF&CC regarding commencement of mining operations.	**Agreed with.**
ix)	The project authorities must strictly adhere to the stipulations made by the State Pollution	Stipulation made by the State Pollution Control Board and the State Government are being adhered to.	**Agreed with.** PAs have complied/in the process of complying with the stipulations made by the State Pollution Control Board.

S. Shahida Parvin

	Control Board and the State Government.		
x)	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The project proponent will abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and presentation to the Expert Appraisal Committee.	**Agreed with.** PAs have complied or in the process of complying with the recommendation made in the EIA/EMP report. ***PAs may provide the compliance status with respect to the commitments made in the public hearing meeting.***
xi)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.	Further expansion or modifications will not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.	**Agreed with.**
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.	**Agreed with.**
xiii)	The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory	Noted.	**Agreed with.**
xiv)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.	**Agreed with.**
xv)	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorised should extended full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Noted.	**Being complied.**
xvi)	The above conditions	Noted.	**Agreed with.**

Q. Shahida Parvin

	shall be enforced, inter-alia under the provisions of the Water & Control of Pollution) Act, 1981. The Environment (Protection) Act, 1986,, Hazardous and other (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 matter.		
5.	The proponent shall abide by all the commitments and recommendation made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised public hearing shall also be implemented in letter and spirit.	Is being complied with.	**Agreed with.** PAs have complied or in the process of complying with the recommendation made in the EIA/EMP report. ***PAs may provide the compliance status with respect to the commitments made in the public hearing meeting.***
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.	All necessary clearance /approval had been obtained. Complied with.	**Being complied.**
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	Not Applicable .	**Agreed with.**

D. Shekhida Pasmi

	Act, 2010.		
8.	The coal company/project proponent shall be liable to play 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.	Noted. There is no illegal mining practice.	**Agreed with.** PAs have informed that there is no illegal mining practice.
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 judgment of Hon'ble Supreme Court.	Noted.	**Agreed with.**
10.	This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Noted.	**Agreed with.**
11.	All other conditions stipulated in the Environment Clearance to the project under EIA Notification, 2006 Ministry's letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 and Transfer of EC vide letter dated 20th December, 2018 for 1..0 MTPA in mine lease area of 150 ha (Project Area-186.42 ha) shall be complied.	Complied with. All other conditions stipulated in the Environment Clearance to the project under EIA Notification, 2006 Ministry's letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 and Transfer of EC vide letter dated 20th December, 2018 for 1..0 MTPA will be adhered to.	**Agreed with.**
File No. J-11015/375/2006-IA.II(M) dated 17.05.2007 (As per compliance status submitted for the			

& the Lida Pasmi

period April 2022 to September 2022 vide mail dated 03.12.2022)			
A.	**Specific Conditions**		
S No	**Condition**	**Status as per six monthly compliance report submitted by the PP**	**Observations of RO/SRO**
i	No mining operations shall be undertaken in the forestland until forestry clearance has been obtained under the provisions of FC Act, 1980.	Stage II Forest Clearance of 101.77 ha has been obtained from Ministry of Environment, Forest & Climate Change vide letter no F.No.8-45/2018-FC dated 10th April 2019.	**Being complied.** PAs have received Stage II Forest Clearance of 101.77 Ha had been obtained from Ministry of Environment, Forest & Climate change vide letter no F.No.8-45/2018-FC dated 10th April,2019.
ii	Mining shall be carried out as per statuette at a safe distance from the Hingula River flowing adjacent to the lease boundry.	Adhered to CMR, 2017 Reg 149 (2), (6) • Distance between Hingla River and lease boundary is 700 m	PAs have informed that they are adhering to the CMR 2017 Reg 149(2)
iii	An embankment being constructed between Hingula river and the quarry/working pits shall have a minimum height of 3 m. The slope of the embankment shall at least 2:1 towards the ML. The height of the embankment shall be at least 5 m higher than the HFL.	Implemented. • Mining Lease having a RL is approx 105 m which is more than in respect to HFL of Hingla river which is 96.5 m.	PAs have stated that the RL is 105 m and the HFL of Hingula river is 96.5 m.
iv	Topsoil should stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.	Topsoil spreading has been done. Except the active dump, bases and slopes of OB dump has been covered by topsoil well enough to provide the base for plantation. Remaining top soil has been stocked separately. Total area covered by topsoil is 16 Ha. Plan is enclosed (**Annexure I**).	**Being complied.** Top soil has been stored separately and is being used for green belt development. Back filling is being done.
v	OB should be stacked at earmarked two external OB dumpsites and shall be a maximum height of 45m only and consist of benches of 15m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of	The bases and slopes of the OB dump have been covered by topsoil well enough to provide the base for plantation. Total area covered by topsoil is 16 Ha. Spreading of top soil over backfilled area (8.53 Ha) is under process for next year plantation. The slopes and height of the OB dump have been maintained as per Reg.108 (4) of Coal Mines Regulation 2017. Active Dump - overall slope of the dump is 10-11degree with the horizontal in active dump faces. Final Dump - overall slope of the	PAs have reported that the overall slope of the dump is 24 degree with the horizontal.

B. Shankar Rajani

	Environment& Forests and its Regional office located at Bhubaneswar on an yearly basis.	dump is 24 degree with the horizontal.	
vi	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediments flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area. Adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.	Drains have been de-silted, Adequate sump capacity has been created in the de-coaled area in mine pit. Construction of catch drain of adequate dimension in commensurate with the past rainfall data has been done.	Catch/Garland drains has been provided along the periphery of the mines, so that water do not enter the mines. Sump was observed in the project site. PAs informed that the sump capacity in the de-coaled mine pit is with adequate capacity.
vii	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	No OB outfalls in the river, siltation ponds had been provided. Construction of retaining wall of adequate dimension has been done.	Retaining wall has been provided at the toe of the inactive OB dump and in some other area) including beside the fruit garden). ***No information has been provided whether the dimension of the retaining wall is based on the rainfall data.***
viii	High efficiency bag filters/water sprinkling system should be provided to check fugitive emissions, from conveyor system, haulage roads, transfer points, etc.	Adequate water spraying system through water tankers is adopted for suppression of dust.	During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. No CHP was observed within the project site.
ix	No ancillary operations such as mineral beneficiation shall be taken up at the time site without the prior approval of this Ministry.	Not Applicable.	Not applicable

S. Shahida Parveen

<table>
<tr><td>x</td><td>The dedicated road railway siding and approach road to mine site shall be metal topped. Mineral transportation by trucks which are optimally loaded and covered by tarpaulin . Green belt shall be developed on both sides of the roads.</td><td>• Dedicated metal-road has been constructed from mine site to railway siding.
• All the trippers used for transportation are optimally loaded and covered by tarpaulin.
• Green belt development on both side of transportation road is under progress.</td><td>Partially complied. It was informed that the total length of the road from the mines to the Railway siding in 15.2 km.

During monitoring, road along the canal embankment was found to be with paver blocks (5.6 km).

Further, PAs have installed wind shield on the road close to Tarapur village.

Plantation was observed in certain portion of the road close to the Tarapur village. However, the plants need more maintenance and PAs also need to plant more saplings all along the transportation road. It was informed that planted saplings are often taken away by the villagers and others, which creates hindrance in the proper maintenance and plantation program.</td></tr>
<tr><td>xi</td><td>Drills should be wet operated only</td><td>Wet drilling operation has been adopted.</td><td>Being complied.</td></tr>
<tr><td>xii</td><td>Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks boulders should be implemented.</td><td>• Control blasting has been practiced as per recommendation by CIMFR, Dhanbad.
• Control blasting practice to control ground vibration and prevention fly rocks with non-electric delay detonators has been adopted, Regular vibration monitoring has been practiced by Vibrograph.</td><td>Agreed with. PAs have informed that control blasting is adopted as per recommendation by CIMFR, Dhanbad and guidelines by DGMS. PAs have submitted a report on the scientific advice for optimization of blast design parameters at Gangaramchak and Gangaramchak_bhadulia coal mines, Dist . Birbhum, W.B to safeguard nearby structure of the adjacent village conducted by CSIR-Central Institute of mining & Fuel Research (CSIR), Dhanbad.</td></tr>
<tr><td>xiii</td><td>The total area that shall be brought under afforestation at the time of mine closure shall be 144 ha which includes external OB dump (27ha) and backfilled area (105 ha), along ML boundary, unworked area (12 ha), green belt and includes safety zone, along roads and infrastructure and in township outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per</td><td>Additional 2000 sapling have been planted. Further, 17600 saplings have been planted. Total plantation= 25600 (saplings) + 15000 (from germination of seeds) = 40600.

Year wise detailed report with viability rate of the planted species is furnished below in Table No 1.
Table No1: Year wise detailed report with viability rate of the planted species
<table>
<tr><th>Year</th><th>Area in ha</th><th>No of Sapling</th><th>Density</th><th>Viability rate</th></tr>
<tr><td>Prior allotte</td><td colspan="4">About 4.6 Ha area has been covered by plantation by prior allottee</td></tr>
</table></td><td>As per the information submitted and observations made during monitoring, plantation has been carried out at various locations in the projects site; including safety zone, external dump top, dump slopes, backfilled area, gap plantation in the 4.6 Ha area from 2020-21 till 2024-25.</td></tr>
</table>

D. Shahida Parvin

	ha.	2020-21	1.18 Ha in the safety zone	No of plantation 4787	4056.78/ha	70%	
		2021-22	Over the top of the dump	60 kg sonajhuri seed spread	-	-	
		2022-23	16.00 ha over the external dump top, dump slopes and backfilled area	No of plantation 25600 (sapling) + 15000(from seeds) =40600 and 140 kg of seed has been spread	2537.50/ha	80%	
		Total Plantation	**21.78 Ha**	-	-	-	
xiv	Compensatory afforestation shall be undertaken in an area of at least 100 acres of degraded forestland to be identified in consultation with the State Forest Department.	Mutation of CA land of 106.795 ha has been done in favour of Forest Department and Rs. 8,98,97,344/- for cost of compensatory afforestation had been deposited to Ad-HOC CAMPA along with NVP of the diverted forest land Rs.9,02,69,990/-					PAs have reported that mutation of CA land of 106.795 ha has been done in favour of Forest Department and Rs. 8,98,97,344/- for cost of compensatory afforestation had been deposited to Ad-HOC CAMPA along with NVP of the diverted forest land Rs.9,02,69,990/-
xv	A progressive Mine Closure plan shall be implemented by reclamation of quarry area of 105 ha which shall be backfilled from the 3rd year of mining operation and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.	Adhere to Progressive Mine Closure Plan backfilling has been started from 3rd year as a part of reclamation of quart area. Native plants has been planted as recommended by Forest Ranger , Dubrajpur. Year wise details of backfilling and plantation is furnished below in Table No 2. **Table No 2:Details of bakfilling and plantation**					**Being complied.** Backfilling is being done. Plantation is being developed in the back filled area. PAs have reported that plantation has been developed as per the recommendation of Forest Ranger, Dubrajpur.

	Type / **Year/Stage**	**Back filled Area in ha**	**Plantation with in back fille**
Plantatio			

S. Shahida Parvin

		n already done				**d area in ha**
			By prior allottee	before-2019	0	0
			1st year	2019-20	0	0
			2nd year	2020-21	0	0
			3rd year	2021-22	15.27	0
			4th year	2022-23	21.66	2.63
			Total		**36.93**	**2.63**
xvi	No groundwater shall be used for project activities. Prior approval of the CGWB/CGWA shall be obtained for use of groundwater, if required.	No ground water is used for mining purpose in Gangaramchak & Gangaramchak-Bhadulia Coal Mines.				PAs have stated that no GW is used for mining purpose.
xvii	Regular monitoring of groundwater level and quality should be carried out by establishing a network of exiting wells and constructions of new peizometers. The monitoring for quality should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon(November)and Winter (January) seasons and for quality in May . Data thus collected should be submitted to the Ministry of Environment & Forests and tot eh Central Pollution Control Board quarterly within one month of monitoring.	A. Testing of groundwater quality has been done from The District water testing laboratory, Office of the Executive Engineer, Birbhum Division, P.H.Engineer Dte.,Government of West Bengal . B. Monitoring of ground water level is being done periodically and record has been kept in the office. C. Monitoring of Ground water pressure is being done regularly by piezometers installed at the site (2 no). **Annexure-II.**				**Being complied.** From information submitted, it is observed the PAs are keeping record of the water levels from the piezometer reading. Piezometer report from April 2024 –till date has been submitted by PAs. PAs have also submitted the water quality monitoring data.
xviii	The Company shall put up artificial groundwater recharge measures for augmentation of nearby	• De-siltation of nearby pond had been done for artificial groundwater recharge in the nearby villages. • Information has been collected on regular basis from nearby				**Being complied.** PAs have informed that de-siltation of pond has been done for recharging in the nearby villages.

Dr. Shahida Parveen

	village(s) in case the village wells go dry due to dewatering of mine.	villages.	
xix	Sewage treatment plant should be installed in the colony. ETP should also be provided for workshop and for treating excess mine water to prescribed standards before discharge outside the lease.	No colony is present within lease area. Mine water is being used 100% for the purpose of water spraying plantation, workshop etc. Civil construction of ETP has been completed. Installation and commissioning is under progress and shall be completed within 7 days.	**Being complied.** STP has been installed and is in operation. ETP has been installed and that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal.
xx	Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	IME has been conducted for all employees engaged in mines and periodic medical examination thereof is being conducted in accordance to the Mines Rule 1955.. PME has also done in accordance to the Mines Rule 1955. IME-175 completed and PME-33 completed out of scheduled 59 (2022-23).	**Being complied.** PAs have submitted copy of the report of the medical examination under Mine Rule 29 B (Form 0). Few copies of the Blood report, chest x-ray, audiometry test report, spirometry report and ECG reports have been submitted by PAs.
xxi	A Final Mine Closure Plan along the with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Will be complied	Agreed with.
xxii	Consent to Operate shall be obtained before expanding mining operations.	Consent to Operate has been obtained on 30.07.2021.	**Being complied.** PAs have received CTO from WBPCB vide memo No. 613-7/WPBD-Cont (4540)/10 and Consent Letter No. C0123361 dated 30.07.2021 with validity till 31/7/2026.PAs again received CTO vide Consent Letter No. C0141026 and Memo No.- 48-7/WPBD-Cont (4540)/10 (Part-I) dated 21.01.2023 with validity till 31.07.2026. Further, for the production of 1.8 MTPA, CTO was granted vide Consent Letter No.- C0144043 and Memo No.- 581-7/WPBD-Cont (4540)/10 (Part-I) dated

B. Shekhar Parmi

			13.10.2023 with validity till 31.07.2026
B	**General Conditions**		
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests	There is no change in mining technology. Mining Operation has been carried out as per Approved Mining Plan including Mine Closure Plan.	Agreed with. PAs have informed that mining operation has been carried out as per the approved mining plan.
ii	No change in the calender plan including excavation, quantum of mineral coal and waste should be made.	Complied with.	Agreed with.
iii	Four ambient air quality monitoring stations should be established in core zone as well as in the buffer zone for SPM, RSPM, SO2 and NOx monitoring. Locations of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	The reports are submitted to the regional office. The monitoring reports are being enclosed herewith. **Annexure II.**	**Partially complied.** As per the monitoring report submitted and information provided by PAs, it is observed that the mine has seven monitoring stations including core zones and buffer zones for monitoring and analysis of ambient air quality. The buffer zones include: 1. Bastavpur village, 2. Embankment road, 3. WBPDCL camp office, 4. Gangpur village. The core zones include: 1. Office camp and security barrack, 2. Junction roads towards mine, 3. Weigh Bridge of mines. Monitoring report submitted for Jan 2024, April 2024 and July 2024 indicates that the parameters are within the limit. CAAQM stations have been installed at two locations: 1.Near HSD PUMP (Core zone) and 2. At WBPDCL office area (Buffer zone). ***CAAQMS data revealed that both PM_{10} and $PM_{2.5}$ were high in both stations on many days (for the month January and February 2025).*** ***PAs have monitored Cd, Cr As and Ni. However except on July 2023 they have not monitored Hg as stipulated in the EC condition.***
iv	Data on ambient air quality (SPM, RSPM, SO2 and NOx) should be regularly submitted to the Ministry including its Regional Office at Bhubaneshwar and to the State Pollution Control Board and the Central Pollution Control Board once in	Data on ambient air quality has been submitted on half yearly basis at Regional Office, Bhubaneshwar, State Pollution Control Board and Central Pollution Control Board. **Annexure-II.**	**Being complied**. PAs have submitted the data on AAQ monitoring.

	six months		
v	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained	Adequate water spraying system through water tankers is adopted. The Fugitive dust emission level is found below the standard specified in Coal Mines Regulation'2017,Reg.143 (2). Gravimeter dust sampler had been installed at mine site. The result of samples analyzed for respirable dust are given below 09.09.22 =0.137 mg/cum 10.09.22 =0.151 mg/cum 11.10.22 =0.189 mg/cum 13.10.22 =0.066 mg/cum 15.10.22 =0.100 mg/cum 08.11.2022 =0.124 mg/cum 10.11.2022 =0.076 mg/cum **Annexure-II.**	**Being complied.** During monitoring, it was observed that sprinkling of the haul roads and other areas of the project site is being done through fog cannons and movable water tankers. PAs have submitted the fugitive emission data from April 2024 to December. Monitoring report states that the data ranged from 56.3 µg/m3 to 113.91 µg/m3
vi	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs	• Adequate measures have been taken for the controlling of noise level to keep it below 85dBA. • Safety Shoe, radium jacket, helmet, mask and goggles etc has been provided to mine workers. **Annexure-II**	**Being complied.** It is observed that PAs have submitted noise monitoring conducted on for the following locations: Gangapur village, junction roads towards mine, Office camp and security barrack, weigh bridge of mines, Bastavpur playground, embankment road, WBPDCL camp office on different time periods. Monitoring report indicated that the noise level is within the stipulated limit.
vii	Industrial wastewater (workshop and wastewater from the mine) should be property collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1933 and 31st December 1933 or as amended from time to time before discharge of workshop effluents.	Oil and grease trap had been installed at the workshop. Mine water is being used 100% for the purpose of water spraying, plantation, workshop etc. Civil construction of ETP has been completed. Installation and commissioning under progress and shall be completed within 7 days.	ETP has been installed that ETP is used for the sump/mine water and the treated water is used for green belt development and dust suppression. During monitoring, the ETP was not in operation. The workshop is small and PAs have separate arrangement for oil and grease removal. PAs have submitted the monitoring report of the effluent and the report indicates that the parameters are within the stipulated limit.
viii	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	• Control measures have been taken & monitored regularly. • All the trippers used for transportation are optimally loaded and covered by tarpaulin.	**Being complied.** Few PUC certificates have been submitted by PAs to this Office.
ix	Environmental laboratory should be	Environmental laboratory and monitoring cell has been established	PAs have informed that environmental laboratory has been established at

D. Shankar Parui

	established with adequate number and type of pollution monitoring and analysis equipment in consultations with the State Pollution Control Board.	at Bakreshwar Thermal Power Plant located nearby to the mine belonging to WBPDCL.	Bakreshwar Thermal Power Plant located near to the mine.
x	(x)Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	• All the workers have been provided with PPE i.e. safety shoe, radium jacket, helmet,mask and goggles etc. (i) • IME has been conducted for all employees engaged in mines and periodic medical examination thereof is being conducted in accordance to the Mines Rule 1955. PME has also done in accordance to the Mines Rules IME- 175 Completed and PME- 33 completed out of scheduled 59 (2022-23)	**Being complied.** PAs have submitted copy of the report of the medical examination under Mine Rule 29 B (Form 0). Few copies of the Blood report, chest x-ray, audiometry test report, spirometry report and ECG reports have been submitted by PAs.
xi	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	Environmental management cell already exists in Bakreshwar Thermal Power Plant by WBPDCL headed by qualified Environment Engineer and same is being monitored by them.	**Being complied.** PAs have submitted a copy of the Office Order 17/2023 dated 06.12.2023 for the same.
xii	The funds earmarked for environmental protection measure should e kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhubaneswar.	Adhered to year wise expenditure on this is being reported of MOEF & its regional office at Bhubaneshwar Yearly cost distribution is furnished below. Year 2019-2020: 20,83,188/-, Year 2020-2021: 28,15,043/- Year 2021-2022: 53,86,441/- and 2022-2023: 1,31,28,465/-	**Partially complied.** ***PAs need to submit details of the recurring expenditure along with activities undertaken.***
xiii	A copy of the environmental clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	Complied with.	**Being complied.** As per the available records, PAs in their ATR dated 17.08.2022 , submitted two copies dated 10.08.2022, wherein they have provided information in regards to compliance towards EC and the copy of the EC was enclosed with letter dated 10.08.2022.

Q. Shahida Parvin

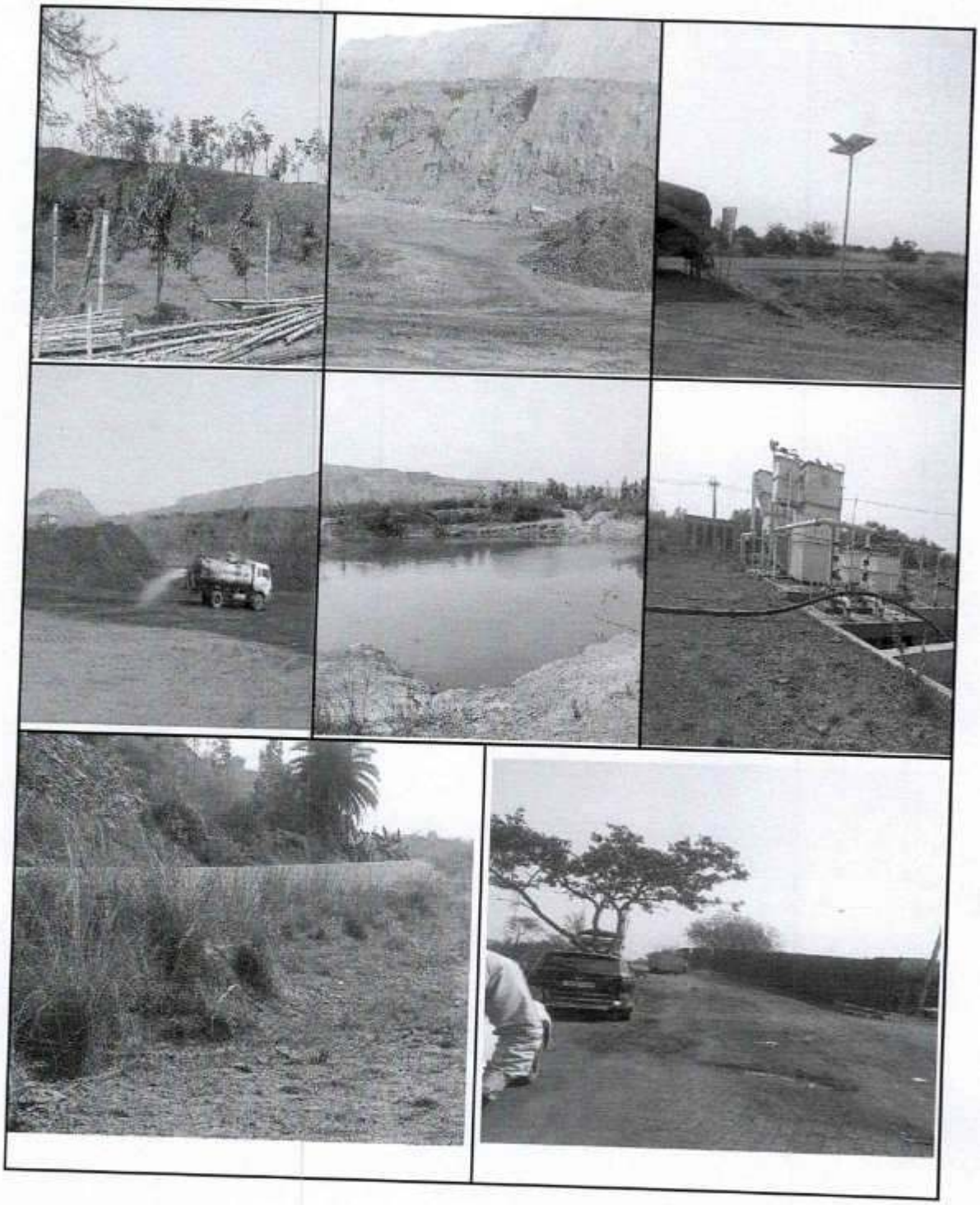
xiv	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	Not Applicable	Agreed with.
xv	The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.	Since the EC accorded to the prior allottee was transferred to WBPDCL on 20th December, 2018 vide Letter No: J-11015/375/2006-IA-II (M) all the old records & documents were traced to ascertained whether the prior allottee had advertised in two local Newspapers at that time. Since no documentary evidences were available on this, so publication in two local newspapers one was in Bengali News Paper Ei Somoy (Vernacular language of the locality) and the other one was in English News Paper Times of India was done informing that the project has been accorder environmental clearance and a copy of the Clearance and a copy of the clearance letters available with State Pollution Control Board and may be seen at the website of the Ministry of Environment & Forest at http://envfor.nic.in	PAs have informed that since the old records and documents were untraccable, PAs have published their EC is two local newspapers: Ei Samoy and Times of India on 09.08.2022.

Q. Shahida Parveen

Site Photographs



S. Shahida Parveen



Signature of the inspecting officer

डॉ. शाहिदा परवीन कादी/ DR. SHAHIDA PARVIN QUAZI
वैज्ञानिक-ई / SCIENTIST-E
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
क्षेत्रीय कार्यालय, भुवनेश्वर / REGIONAL OFFICE, BHUBANESWAR
उप-कार्यालय, कोलकाता / SUB-OFFICE, KOLKATA
आई बी-198, सेक्टर III, साल्ट लेक सिटी, कोलकाता-700106
IB-198, SECTOR-III, SALT LAKE CITY, KOLKATA - 700106

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

ANNEXURE-8

Ref No: WBPDCL/Director(Mining)/**2129** Date:13.06.2025

To,
Director/ scientist F
Compliance and Monitoring Division,
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan, Jorbagh Road,
Aliganj, New Delhi- 110003

Kind attention: Dr. Shruti Roi Bhardwaj, scientist F

Subject: Submission of Reply and compliance thereof towards Show Cause Notice under Section 5 of the Environment (Protection) Act, 1986

Ref No: F. No. IA-J-11011/5/2025-IA-I dated 10.06.2025

Respected Sir/Madam,

This is in reference to the Show Cause Notice dated 10.06.2025 (F. No. IA-J-11011/5/2025-IA-I) issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), concerning the project *"Expansion of Gangaramchak & Gangaramchak Bhadulia Opencast Coal Mine from 1.2 MTPA to 3.0 MTPA"* by M/s The West Bengal Power Development Corporation Limited (WBPDCL).

Most respectfully WBPDCL would like to submit the reply and compliance thereof i.r.o the points raised in the above show cause notice. WBPDCL commits to abide by all the environmental laws and the conditions imposed in the clearances sincerely.

1. In accordance with the Environmental Clearance (EC) dated 12.10.2023, all specific and standard conditions are being systematically implemented in a time-bound and holistic manner, maintaining proper records and timely submission to the Integrated Regional Office (IRO) of MoEF&CC.
2. Any delays or partial non-compliances of any conditions shall be addressed sincerely for immediate corrective action for compliance thereof.
3. Compliance documentation including plantation records, ambient air quality data, water quality data, skill development, EMP expenditure statements, third-party audit report status, and status reports on Mine Closure have been annexed as required and are being regularly updated.

Hope the reply is at the best of your satisfaction for consideration of revoking the above notice and oblige.
Thanking you,

Yours faithfully,

13/06/2025

(Chanchal Goswami)
Director (Mining)

Encl: As stated above.

Copy to:

1. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
2. Secretary, D/o Labour, Govt. of West Bengal, New Secretariat Building, 12th Floor, 1, Kiran Sankar Roy Road, Kolkata-700 001. Email: labour-wb@gov.in
3. Directorate General of Mines Safety, Ministry of Labour and Employment, Government of India, Hirapur, Dhanbad, Jharkhand, 826001.
4. The Deputy Director General of Forests (C), Regional Office, Bhubhaneshwar, A/3, Chandersekharpur, Bhubhaneshwar-751023.
5. Sub-Office, Ministry of Environment, Forest and Climate Change, Kolkata, IB -198, Sector-III, Salt Lake City, Kolkata - 700106
6. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, LA Block, Sector III, Bidhannagar, Kolkata, West Bengal-700106
7. The Member Secretary, Caol Sector, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-03.

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
Corporate Identity No. : U40104WB1985SGC039154
"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector-III, Bidhannagar, Kolkata-700 106
Phone: No. (91) (33) 2335 0581/2339 3204/3294, Fax: (91) (33) 2335 0524 / 2339 3286, Mobile: 9425176555
E-mail : c.goswami@wbpdcl.co.in, Website : www.wbpdcl.co.in

Submission of Compliance to the Observations in the Show Cause Notice under Section 5 of Environment (Protection) Act, 1986 for non-compliances observed with respect to the project "Expansion of Gangaramchak & Gangaramchak Bhadulia Opencast Coal Mine from production capacity of 1.2 MTPA to 3.0 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) MoEF & CC vide letter NO. 102-132/05/EPE/184 dated 15.05.2025

F. No. IA-J-11011/5/2025-IA-I. Dated 10.06.2025

<table>
<tr><th>S/NO</th><th>Observation of the showcase Notice</th><th>Reply</th></tr>
<tr><td>i</td><td>Plants at road close to the Tarapur village has not been maintained properly

Specific Conditions: 1.3, Standard Conditions: 2.2.4, 7.7.2 as per EC dated 12.10.2023
Specific condition: x as per EC dated 17.05.2007).</td><td>Transportation is done through Paver blocked Cannal embankment road.

Greenbelt along both sides of the coal transportation road has been done and maintained properly, construction of metal top road has been completed close to Tarapur village and maintained regularly.

Please Refer Annexure_1

Further, along the periphery of lease hold 7.5 m width Green belt is being done in phase manner. Total 2.38 Km has been completed.

Additional plantation is planned during the monsoon season of 2025. Protective measures such as barbed wire and net fencing have been installed to safeguard the plantations. Regular watering is being carried out to ensure their growth.

<table>
<tr><th>Year</th><th>Area in ha,</th><th>No of Sapling</th></tr>
<tr><td>Upto 2020</td><td colspan="2">About 4.6 Ha area has been covered by plantation.</td></tr>
<tr><td>2020-21</td><td>1.18 Ha in the safety zone</td><td>No of plantation 4787</td></tr>
<tr><td>2021-22</td><td>Over the top of the dump</td><td>60 kg of seed has been spread</td></tr>
<tr><td>2022-23</td><td>18.00 ha over the external dump top, dump slopes and backfilled area</td><td>No of plantation 29470 (sapling) + 15000 (from seeds) = 44470 and 140 kg of seed has been spread</td></tr>
<tr><td rowspan="2">2023-24</td><td>16.38 ha over the backfilled area</td><td>No of plantation 26210 and 220 kg of seed has been spread over the dump slopes</td></tr>
<tr><td>Gap plantation has been done mainly in the area of 4.60 ha of plantation done.</td><td>No of plantation 8300</td></tr>
</table>
</td></tr>
</table>

519

Manager (Mining)
Corporate Office,
WBPDCL

226

		2024-25	6.00 ha over the backfilled area and 0.5 ha in safety zone	No of plantation 19600
ii	CAAQM stations have been installed at two locations and PM10, and PM2.5 value shows exceedence. Further, details of Hg have not been submitted except on July 2023. **Specific Conditions: 1.5, Standard Conditions: 2,2.1, Standard Conditions: 2,2.3 as per EC dated 12.10.2023,Standard EC Condition: 4.1.b.i, 4.1.b.ii as per EC dated 27.12.22, General condition: iii as per EC dated 17.05.2007).**	Recalibration of the Continuous Ambient Air Quality Monitoring Stations (CAAQMS) was carried out on 26th March 2025. Post recalibration, the data generated from the stations has been found to be within the permissible limits. Please Refer Annexure-2 & 3 Monitoring of heavy metals is being conducted regularly. Hg monitoring has been resumed as part of the regular six-monthly monitoring protocol. Please Refer Annexure- 9.3 & 7		
iii	Groundwater clearance wrt withdrawal of groundwater has not been submitted **(Specific Conditions: 1.13, Standard Conditions: 1,1.5, 2,2.2 as per EC dated 12.10.2023, Standard EC Condition: 4.viii, 4.1.a.v as per EC dated 27.12.22).**	Permission for withdrawal of groundwater has been obtained from the State Water Investigation Directorate (SWID), Government of West Bengal. The NOC has been submitted to the IRO, MoEF&CC in compliance. Please Refer Annexure-15.		
iv	Details of the recurring expenditure along with activities undertaken has not been submitted **Specific Conditions: 1.14 as per EC dated 12.10.2023, General condition: xii as per EC dated 17.05.2007**	Year-wise expenditure incurred towards EMP compliance and CSR activities has been compiled and is enclosed herewith. The audited report is currently under finalization and will be submitted to IRO immediately after completion of audit. Please Refer Annexure-20 and Annexure-11.		
v	Time bound action plan and details of the expenditure incurred and activities undertaken with respect to issues raised in the Public Hearing has not been submitted **Specific Conditions: 1.15 as per EC dated 12.10.2023.**	The time-bound Action Plan to address Public Hearing issues has been prepared, and the activities have been implemented as per the scheduled timelines. Expenditure records have been maintained and are being audited. Detailed information, including budget utilization, is being submitted to the IRO, MoEF&CC. **Livelihood enhancement activities** under CSR and issues raised during the public hearing have been incorporated through a **structured, budget-linked implementation plan**, in line with MoEF&CC Circular dated 30.09.2020 on public hearing follow-up.		

Director (Mining)
Corporate Office,
WBPDCL

		Please refer Annexure-13.
vi	Details of the mine closure activities undertaken till date has not been submitted **Specific Conditions: 1.16 as per EC dated 12.10.2023**	The details of concurrent mine closure activities undertaken so far, in line with the approved Mine Closure Plan, are enclosed herewith. Please Refer Annexure-18
vii	Details of permanent water sprinklers in the mine haul road has not been submitted **Specific Conditions: 1.19 as per EC dated 12.10.2023**	A total of 08 fog cannons, meeting the required specifications, have already been installed at dust-generating locations along the haul road. In addition, 03 mobile water sprinklers (each with a capacity of 12 KL) have been deployed to supplement dust suppression, ensuring continuous coverage and flexibility. The current dust suppression arrangement is being monitored and has been found to be adequate in controlling air pollution within permissible limits.
viii	Details of garland drains at the toe of the benches has not been submitted. **Specific Conditions: 1.20, 1.22 as per EC dated 12.10.2023**	To mitigate water-related risks during monsoons, our coal mine has implemented the following measures: 1. Garland Drains: 1153 meters of garland drains have been constructed at critical locations, as per the approved Mining Plan and Environmental Management Plan (EMP). 2. Drainage Design: Garland drains, check dams, toe walls, and settling ponds have been designed and constructed in accordance with EC conditions 1.20 and 1.21. 3. Periodic Maintenance: Regular maintenance of garland drains, sumps, and siltation ponds is ensured before the onset of monsoons. 4. Profiling of Benches: Working benches of pits and dumps have been profiled to channelize water into garland drains and sumps. 5. Water Reuse: Collected water is reused for dust suppression and plantation purposes. 6. Native Species Plantation: Plantation of native species has been initiated between the OB dump toe and nearby sensitive areas to prevent soil erosion and enhance environmental stability.

Director (Mining)
Corporate Office,
WBPDCL

		Monsoon Preparedness Measures: 1. Pre-monsoon maintenance of garland drains, sumps, and siltation ponds. 2. Regular cleaning and inspection of drains and sumps. 3. Monitoring of water levels and quality. 4. Implementation of water reuse systems. Attached as Annexure-4A Monsoon Preparation in accordance with mine plan & DGMS guideline Please Refer Annexure -4
ix	Construction of check dam has not been completed **Specific Conditions: 1.21 as per EC dated 12.10.2023**	Check dams has been constructed at required locations as per the scheme prepared. Settling pond has been already constructed. ETP of 100 m3/hr capacity has been commissioned. The mine water is being solely used for mines operation like water spraying, washing, plantation etc. If there is any requirement to discharge mine water to outside drains, the mines water will be treated in ETP at first instance before discharging. Please Refer Annexure – 21 & 21A
x	Electric or CNG/LNG-based dumpers/trucks has not been used **Specific Conditions: 1.27 as per EC dated 12.10.2023**	Enquiry is being conducted for finding out the appropriate manufacturer.
xi	Third party audit of compliance of EC conditions has not conducted **Specific Conditions: 1.31 as per EC dated 12.10.2023**	The third-party audit is underway by an accredited agency, and the report will be submitted to the IRO, MoEF&CC, in accordance with the compliance requirements. Please refer Annexure-22
xii	Status of mine closure activities has not been submitted **Specific Conditions: 1.32 as per EC dated 12.10.2023**	The updated status of mine closure activities carried out in accordance with the approved Mine Closure Plan has been compiled and is enclosed herewith. Please Refer Annexure-18
xiii	Details of the training on skill development to the villagers has not been submitted	As part of livelihood and skill development initiatives, a total of 175 sewing machines have been distributed to villagers from Bastavpur and Debganj. Additionally, training sessions were conducted

Director (Mining)
Corporate Office,
WBPDCL

522

2x9

	Specific Conditions: 1.35 as per EC dated 12.10.2023	by experts to ensure that the beneficiaries are equipped with the required skills. Please Refer Annexure-5
xiv	Details of in house (at project site) environment laboratory has not been submitted **Specific Conditions: 1.37, Standard Conditions: 9,9.3 as per EC dated 12.10.2023**	An environmental laboratory has been made operational at the nearby Bakreswar Power Plant of WBPDCL, which serves the project's monitoring requirements. The **Environment Management Cell**, comprising qualified Environmental Engineers, Chemists, and field technicians, has been constituted for **in-house environmental monitoring**, and is operating in accordance with EC condition 1.37 and 9.3. Furthermore, a dedicated team comprising Environment Engineers, officials from WBPDCL, and technical staff has been constituted to carry out regular monitoring of air and water quality parameters. Please refer Annexure-26.
xv	Details of Hazardous Waste Authorization have not been submitted **1,1.6 as per EC Dated 12.10.2023, Standard EC Condition:** **4.1.a.vi as per EC dated 27.12.22**	• An Oil & Grease Trap has been installed and is fully operational to prevent contamination. Please Refer **Annexure-6** • All solid and hazardous waste generated at the site is being disposed of through authorized vendors. Please Refer **Annexure-23.** The Project Authority is currently in the process of obtaining Hazardous Waste Management Authorization from the State Pollution Control Board.
xvi	Analysis report on measures of EMP taken, based on air pollution trend has not been submitted. **Standard Conditions: 2,2.9 as per EC dated 12.10.2023**	A trend analysis report of ambient air quality data has been prepared based on quarterly monitoring conducted through CAAQMS. **Please Refer Annexure-8**
xvii	Records of average monthly temperature of pre and post mine operation after obtaining EC has not been submitted **Standard Conditions: 2,2.14 as per EC dated**	Records of average monthly temperatures, both pre-mining and post-mining, are being systematically maintained since the issuance of Environmental Clearance. The data is being recorded through CAAQMS and on-site instruments.

Director (Mining)
Corporate Office,
WBPDCL

	12.10.2023	Please Refer Annexure-2 & Annexure-3
xviii	Noise level, ground water quality, fugitive emission monitoring report data have not been uploaded and submitted. **Standard Conditions: 3,3.2 as per EC dated 12.10.2023**	All environmental parameters, including noise, groundwater, and fugitive emissions, are uploaded regularly in company's website. Please find the link below: https://www.wbpdcl.co.in/mines The real time data so generated would be uploaded on company website. Digital board showing ambient air quality real time monitoring data at entry and exit gate of mine lease area for public display has been installed. The **Continuous Ambient Air Quality Monitoring Stations (CAAQMS)** have been recalibrated and post-calibration data demonstrates conformance with **CPCB/SPCB norms**, including for PM_{10}, $PM_{2.5}$, SO_2, Nox, and other parameters. Mercury monitoring details have also been incorporated.
xix	Surface drainage plan including surface water conservation plan for the area of influence affected by mining operations has not been submitted. **(Standard Conditions: 3,3.10 as per EC dated 12.10.2023, Standard EC Condition: 4.1.c.x as per EC dated 27.12.2022).**	The Surface Drainage Plan, including the Surface Water Conservation Plan, for the area of influence affected by mining operations has been prepared in alignment with the approved Mining Plan and has been implemented at site. These plans take into account the proximity of the Hinglo Canal, which is located approximately 0.77 km west of the project site. The design ensures protection against surface runoff and flooding, and embankments have been planned and executed as per the specifications laid out in the approved mine plan and statutory requirements. Please Refer Annexure-10
xx	Rivarine/riparian ecosystem conservation and management plan implement in consultation with the irrigation / Water resource department in the state	An approved Mine Closure Plan is already in place for the project, which incorporates environmental safeguards. However, a separate and detailed Riverine/Riparian Ecosystem

Director (Mining)
Corporate Office,
WBPDCL

	government has not been prepared **(Standard Conditions: 3,3.11 as per EC dated 12.10.2023, Standard EC Condition: 4.1.c.xi as per EC dated 27.12.22)**	Conservation and Management Plan is under preparation. This plan will be developed and implemented in consultation with the Irrigation/Water Resource Department, Government of West Bengal, and will be completed within a time frame of six months from the date of this submission.
xxi	Details of metals analysed on the treated effluent water and monitoring data of TDS and DO have not been submitted **(Standard Conditions: 3,3.12 as per EC dated 12.10.2023)**	The **effluent water quality** has been monitored in accordance with the parameters specified in the **Consent to Operate (CTO)** granted by the State Pollution Control Board. Please refer Annexure-21.
xxii	Silo and in-pit conveyor has not been constructed. **(Standard Conditions: 5,5.6, 5,5.7 as per EC dated 12.10.2023, Standard EC Condition: 4.iv as per EC dated 27.12.2022)**	Since life of the mines is only 3 years the development of infrastructure for transportation of coal by conveyor belt and Silo loading is found not cost effective. WBPDCL will take all mitigative and corrective measures to wards environment protection ensuring stipulated provisions of the law.
xxiii	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has not been submitted **(Standard Conditions: 6,6.1 as per EC dated 12.10.2023, Standard EC Condition: 4.1.f.i as per EC dated 27.12.22)**	Digital Survey of the entire leasehold area/core zone using Satellite Remote Sensing is being been carried out in accordance with the stipulated condition through external agency. Work Order is attached in Annexure-22.
xxiv.	Progressive compliance status vis-à-vis the post mining land use pattern has not been submitted **(Standard Conditions: 6,6.3 as per EC dated 12.10.2023, Standard EC Condition: 4.1.f.iii as per EC dated 27.12.22).**	The progressive reclamation and post-mining land use compliance are being implemented in accordance with the approved Mining Plan and Mine Closure Plan. Please refer Annexure- 27 (mine plan post mining land use plate) A detailed status report covering OB dump stabilization, backfilling, afforestation, and land use transformation is under preparation and shall be submitted to MoEF&CC/RO in the forthcoming

Director (Mining)
Corporate Office,
WBPDCL

		six-monthly compliance report.
xxv	Details of areas of the active dump have been covered by temporary grass has not been submitted **(Standard Conditions: 6,6.9 as per EC dated 12.10.2023, Standard EC Condition: 4.1.f.v as per EC dated 27.12.22**	Temporary grassing and vegetative cover are being progressively implemented. Seed spreading is carried out during every monsoon season to stabilize the dump slopes and minimize dust generation. The upcoming monsoon plantation program includes targeted coverage of uncovered OB dump areas with grass species suitable for slope stabilization and dust suppression. This activity is in line with the Mine Closure Plan and is monitored under the seasonal afforestation schedule.
xxvi	Possibilities of utilization of OB material for different purposes has not been submitted. **(Standard Conditions: 6,6.10 as per EC dated 12.10.2023)**	Hinglo Cannal Road prepared by OB material for WBM purpose which has been used as coal transportation road. Other possibilities also been explored.
xxvii	Status of the measures undertaken along with the budget provisions with respect to the issues raised during public hearing has not been submitted **(Standard Conditions: 8,8.4 as per EC dated 12.10.2023, Standard EC Condition: 4.1.h.iv as per EC dated 27.12.22)**	A detailed Action Plan for addressing issues raised during the Public Hearing has been prepared and submitted by WBPDCL, along with the corresponding budgetary provisions. Implementation of the identified measures is being carried out in a time-bound manner, and progress is reviewed periodically to ensure compliance with the commitments made during the Public Hearing process. Please refer to Annexure-13 for the action plan and implementation status.
xxviii	Any details of the activities undertaken under CSR has not been submitted **(Standard Conditions: 8,8.6 as per EC dated 12.10.2023).**	A need-based assessment has been conducted and various CSR initiatives have been undertaken by WBPDCL in alignment with the needs of the local community. Please refer Annexure-11

Director (Mining)
Corporate Office,
WBPDCL

xxix	Details of epidemiology study has not been submitted **(Standard Conditions: 8,8.7 as per EC dated 12.10.2023)**	While a formal epidemiological study has not yet been undertaken, regular health check-up camps and medical outreach programs are being conducted at the mine site and nearby villages to monitor general health indicators and respond to community health needs. Plans are being formulated to initiate an epidemiological baseline survey through a qualified public health agency or institution. This study will evaluate long-term health impacts and establish health baselines for periodic comparison. **Please Refer Annexure-12**
xxx	Details of permanent health care facility within 5km of project boundary has not been submitted **(Standard Conditions: 8,8.8 as per EC dated 12.10.2023)**	One doctor appointed at G&GB coal Mines for medical treatment and health care facility to the local people. Further health camp has been organized nearby village on regular interval. **Please Refer Annexure-12**
xxxi	Emergency action plan during pandemic in order to provide assistance to the nearby villages located within the 10 km radius buffer zone has not been submitted **(Standard Conditions: 8,8.9 as per EC dated 12.10.2023)**	Emergency Action Plan has been formulated and kept ready for implementation to assist local communities in the event of a pandemic or similar public health emergency. The plan covers all nearby villages within a 10 km radius and has been developed in alignment with public health protocols issued by government authorities. Please refer Annexure 24.
xxxii	Details of training given to the persons of nearby villages has not been submitted **(Standard Conditions: 8,8.14 as per EC dated 12.10.2023)**	As part of the livelihood and skill development initiatives, 154 sewing machines have been distributed to villagers in Bastavpur and Debganj. Along with this, skill-based training was imparted by domain experts to ensure practical employability of the beneficiaries. Records of distribution, beneficiary details, and training documentation are being maintained. Please Refer Annexure-5.
xxxiii	Details of compensation of the land acquired for the project has not been submitted **(Standard Conditions: 8,8.15 as per EC dated**	As per previous EC (File No.: J -11015/375/2006-IA-II(M) on dated 12.102.023) for 186.42 Ha area, there is no established R&R Village.

Director (Mining)
Corporate Office,
WBPDCL

	12.10.2023)	However, the land compensation process will be complied with as per the provisions of the approved R& R Policy. Compensation will be provided to affected landowners through the designated administrative officials within the stipulated timeline.
xxxiv	Action plan for implementation of EMP and environmental conditions along with the responsibility matrix also year wise progress of implementation action plan has not been submitted **(Standard Conditions: 9,9.3 as per EC dated 12.10.2023, Standard EC Condition: 4.1.i.iii as per EC dated 27.12.22**	The Action Plan for the implementation of the EMP and environmental stipulations, along with the Responsibility Matrix assigning specific roles within WBPDCL, is currently under preparation. It will be finalized and approved by the competent authority within the next three months. The year-wise environmental expenditure and implementation status will be recorded and reported to the MoEF&CC/Regional Office as part of the Six-Monthly Compliance Report. Please Refer Annexure-20.
xxxv	Details of self-environment audit has not been submitted **Standard Conditions: 9,9.4 as per EC dated 12.10.2023, Standard EC Condition: 4.1.i.iv).**	The Self-Environmental Audit for the reporting period has been completed and its findings are under internal review. The report will be submitted to the MoEF&CC/Regional Office along with the current Six-Monthly Compliance Report. However, Third-Party Environmental Audit is under process in line with EC conditions. Please refer Annexure-22.
xxxvi	Advertisement copies of EC has not been submitted. **(Standard Conditions: 10,10.1 as per EC dated 12.10.2023, Standard EC Condition: 4.1.j.i as per EC dated 27.12.22).**	The Environmental Clearance advertisement was duly published in compliance with EC conditions: • In the Bengali language newspaper: *Ei Somoy* (Bengali), and • In the English language newspaper: *The Times of India*. • Company's website The advertisement clearly stated that the project has been accorded Environmental Clearance, and mentioned that: • The EC may be accessed via the Ministry's website at http://envfor.nic.in.
xxxvii	Status of compliance with respect to EC dated 2023 has not been submitted **(Standard Conditions: 10,10.3 as per EC dated**	The status of compliance with all stipulated EC conditions, including monitored environmental data, has now been uploaded on the official website of the project proponent. This information is being updated on a half-yearly basis in accordance with the EC condition and is

Director (Mining)
Corporate Office,
WBPDCL

	12.10.2023).	available in the public domain for reference.
xxxviii	Half yearly compliance report has not been uploaded on ministry's website **(Standard Conditions: 10,10.5 as per EC dated 12.10.2023, Standard EC Condition: 4.1.j.v as per EC dated 27.12.22**	The Half-Yearly Compliance Reports of the Environmental Clearance conditions are being prepared and submitted regularly by WBPDCL at six-month intervals. Moving forward, these reports has been uploaded to the MoEF&CC's Environmental Clearance portal (https://parivesh.nic.in) as per the prescribed procedure.
xxxix	Environmental Statement company's website has not uploaded **(Standard Conditions: 10,10.6 as per EC dated 12.10.2023, Standard EC Condition: 4.1.j.vii as per EC dated 27.12.22).**	The Environmental Statement (Form-V) for each financial year is being duly submitted to the West Bengal Pollution Control Board (WBPCB) as per statutory requirements. Action has been initiated to ensure that the Form-V documents are also uploaded on the official website of the project proponent for public disclosure. This will be updated regularly in alignment with future submissions. Kindly follow the link below: https://www.wbpdcl.co.in/mines
xl	Compliance status with respect to the commitments made in the public hearing meeting has not been provided **(Standard Conditions: 10,10.9, Additional EC condition: 5 as per EC dated 12.10.2023, Standard EC Condition: 4.1.j.x, 4.1,5 as per EC dated 27.12.2022)**	The WBPDCL reaffirms its commitment to fully abide by all assurances and recommendations made in: • The approved EIA/EMP report, • The Public Hearing, and • The presentations before the EAC. A detailed Action Taken Report on Public Hearing issues, including timelines and budgetary provisions, has been prepared and submitted. Refer Annexure-13.
xli	Details of fog cannons installed have not been provided **(Standard EC Condition: 4.vi as per EC dated 27.12.2022).**	A total of 08 fog cannons, meeting the required specifications, have already been installed at dust-generating locations along the haul road, CHP, and OB dump areas. In addition, 03 mobile water sprinklers (each with a capacity of 12 KL) have been deployed to supplement dust suppression, ensuring continuous coverage and flexibility. The current dust suppression arrangement is being monitored and has been found to be adequate in controlling air pollution within permissible limits.

Director (Mining)
Corporate Office,
WBPDCL

		Please Refer Annexure-14
xlii	Six monthly compliance report for EC dated 2022 and the monitoring data (except CAAQMS data) has not been uploaded after March 2023 in company's website **(Standard EC Condition: 4.1.c.ii, 4.1.j.iii as per EC dated 27.12.22)**	The project proponent acknowledges the lapse in updating the six-monthly compliance reports and water quality monitoring data on the official website post March 2023 which is now uploaded. The link is provided here for your kind reference. Link: https://www.wbpdcl.co.in/mines
xliii	Monitoring report of the canal water has not been submitted **(Standard EC Condition: 4.1.c.iv as per EC dated 27.12.22).**	The canal water quality monitoring report is being prepared and will be submitted as part of the upcoming Six-Monthly Environmental Clearance Compliance Report. Sampling and analysis are being conducted as per CPCB guidelines. Please Refer Annexure-7
xliv	Details of garland drains around the mine working area, coal heaps & OB dumps have not been provided **(Standard EC Condition: 4.1.c.vi as per EC dated 27.12.22).**	To mitigate water-related risks during monsoons, our coal mine has implemented the following measures: 1. Garland Drains: 1153 meters of garland drains have been constructed at critical locations, as per the approved Mining Plan and Environmental Management Plan (EMP). 2. Drainage Design: Garland drains, check dams, toe walls, and settling ponds have been designed and constructed in accordance with EC conditions 1.20 and 1.21. 3. Periodic Maintenance: Regular maintenance of garland drains, sumps, and siltation ponds is ensured before the onset of monsoons. 4. Profiling of Benches: Working benches of pits and dumps have been profiled to channelize water into garland drains and sumps. 5. Water Reuse: Collected water is reused for dust suppression and plantation purposes. 6. Native Species Plantation: Plantation of native species has been initiated between the OB dump toe and nearby sensitive areas to prevent soil erosion and enhance environmental stability. Monsoon Preparedness Measures:

Director (Mining)
Corporate Office,
WBPDCL

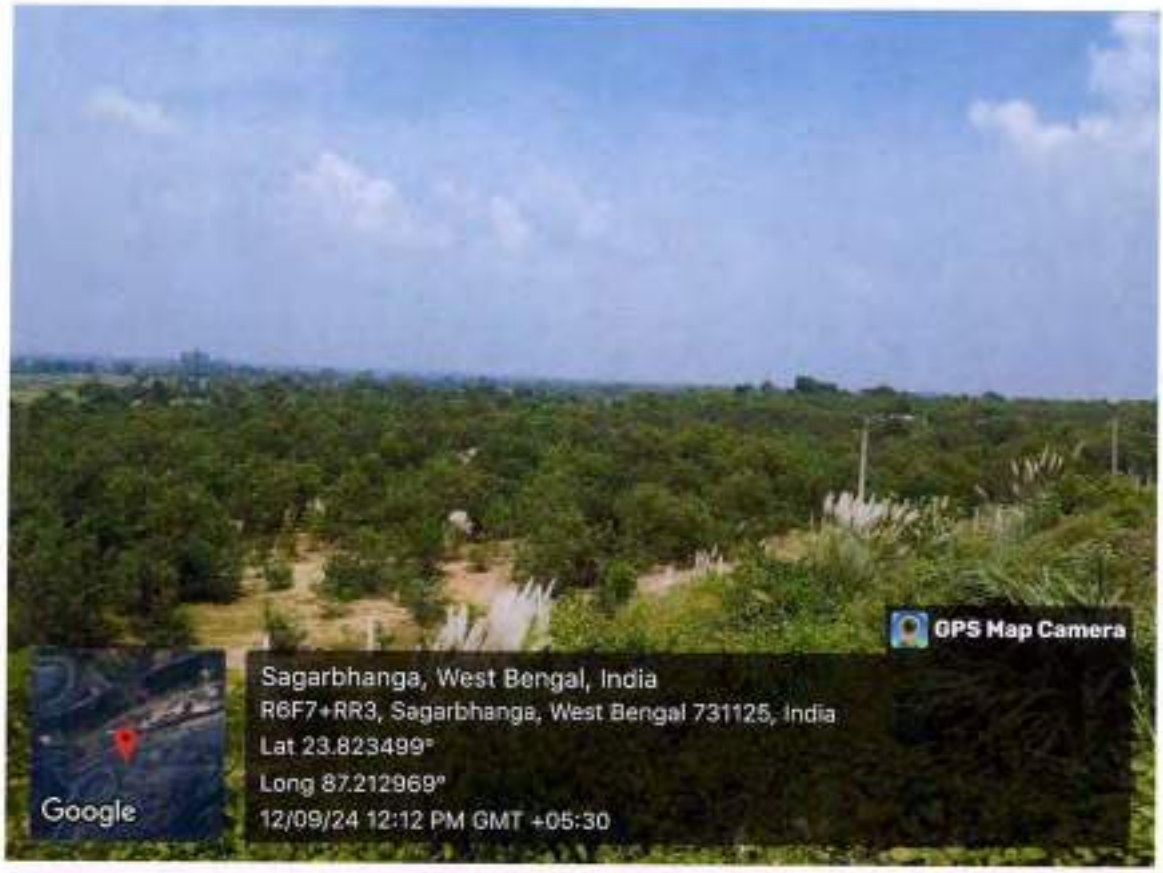
		1. Pre-monsoon maintenance of garland drains, sumps, and siltation ponds. 2. Regular cleaning and inspection of drains and sumps. 3. Monitoring of water levels and quality. 4. Implementation of water reuse systems. Attached as Annexure-4A Monsoon Preparation in accordance with mine plan & DGMS guideline Please Refer Annexure -4
xlv	Details of copies of the letter submitted BDO, Khayrasol Block, Birnhum and Gram Panchayat, Nakaraconda, Biirbhum wrt to EC dated 2022 has not been submitted **(Standard EC Condition: 4.1.j.ii as per EC dated 27.12.22)**	Copies of the Environmental Clearance (EC) dated 2022 have been submitted to the following local authorities in accordance with the condition: • Block Development Officer (BDO), Khayrasol Block, Birbhum, and • Gram Panchayat, Nakaraconda, Birbhum. These offices were requested to display the clearance for a minimum period of 30 days from the date of receipt, as per the stipulated requirement. Submission letters are attached as Annexure 25.
xlvi	Details of the dimension of the retaining wall based on the rainfall data has not been submitted **(Specific condition: vii as per EC dated 17.05.2007)**	The dimension of the retaining wall (597 meter) constructed at the toe of the dumps and OB benches within the mine has been designed and constructed based on site-specific rainfall data, in accordance with the stipulations of the approved Mining Plan and EMP. This has been complied with to ensure control of run-off and siltation, particularly during monsoon conditions. Please Refer Annexure – 4
	5. Further, wrt reported accident at the project site resulting in fatalities, injuries and alleged environmental damage; the outcome of the enquires under the Factories Act, 1948 and by Directorate General of Mine Safety (DGMS) is also not received	The accident is being enquired by DGMS officials as per Mines Act'1952. The enquiry report of DGMS is yet to obtain.

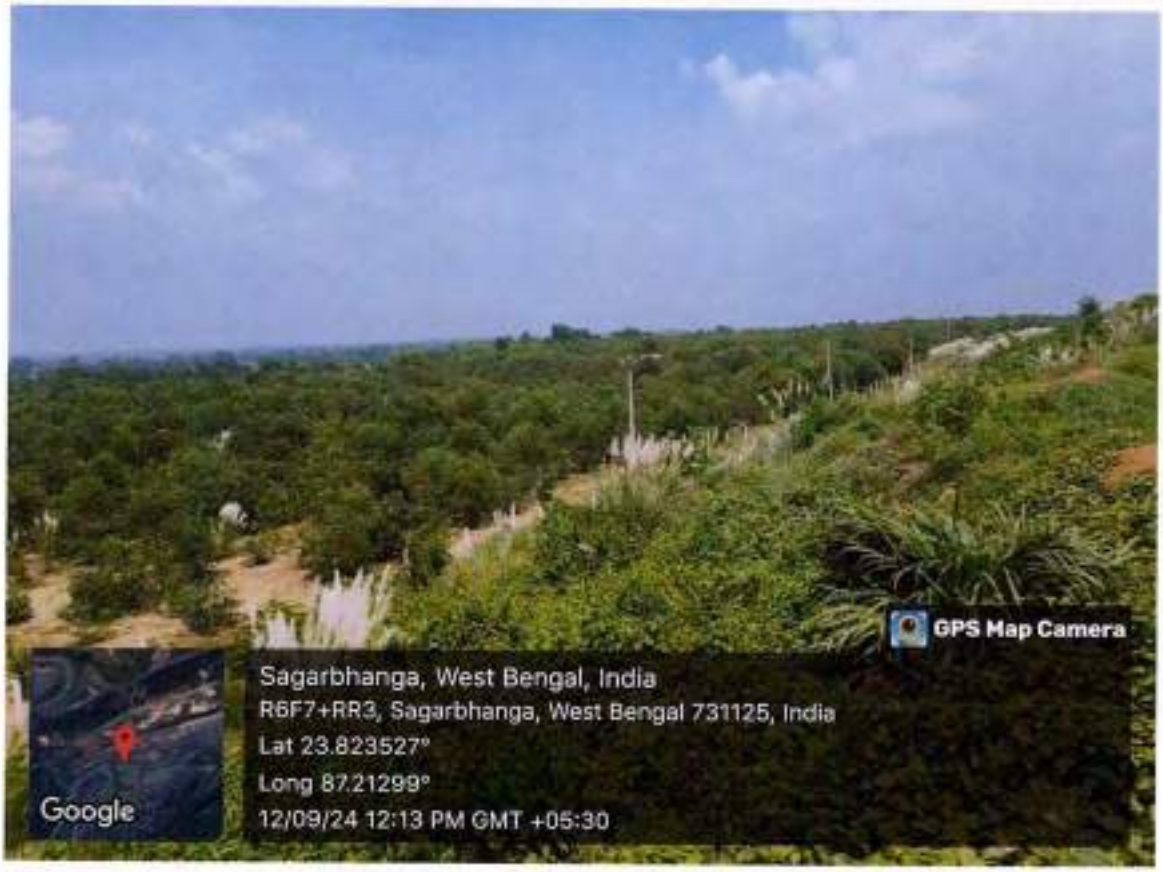
Director (Mining)
Corporate Office,
WBPDCL





Director (Mining)
Corporate Office,
WBPDCL





Director (Mining)
Corporate Office,
DCL





Director (Mining)
Corporate Office,
WBPDCL

GREEN BELT DEVELOPMENT IN SAFETY ZONE





Director (Mining)
Corporate Office,
WBPDCL





Director (Mining)
Corporate Office,
WBPDCL

Green Belt along the Transportation Road



Director (Mining)
Corporate Office,
WBPDCL

Green Belt along the Transportation Road



Director (Mining)
Corporate Office,
WBPDCL

Green Belt along the Transportation Road





Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-2

Gangaramchak & Gangaramchak-Bhadulia Coal Mine
Nakrakonda, Lokpur,Birbhum, West Bengal-731125
Category : Others- Mining
Industry code : NA

Data Report

Duration :07-04-2025 00:00 TO 29-05-2025 23:59 — Interval Time :1 Hour

Station Name		AADMS_1							
Sr.no	Date Time	CO(mg/Nm3)	CO2(mg/Nm3)	Humidity(%)	NO2(ppm)	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ppm)	Temperature(°C)
1	07-04-2025 00:00:00	1.90	950.00	72.00	3.00	43.00	39.00	4.26	32.80
2	07-04-2025 01:00:00	1.89	946.00	71.00	1.70	45.00	40.00	2.32	33.00
3	07-04-2025 02:00:00	1.91	954.00	74.00	1.20	50.00	45.00	1.69	32.00
4	07-04-2025 03:00:00	1.92	960.00	74.00	4.20	48.00	43.00	5.92	31.80
5	07-04-2025 04:00:00	1.94	969.00	75.00	3.70	55.00	49.00	5.18	31.50
6	07-04-2025 05:00:00	1.95	977.00	76.00	0.80	54.00	48.00	1.18	30.90
7	07-04-2025 06:00:00	1.97	983.00	75.00	0.80	74.00	62.00	1.11	31.20
8	07-04-2025 07:00:00	1.91	957.00	68.00	6.30	48.00	43.00	8.82	32.40
9	07-04-2025 08:00:00	1.87	933.00	63.00	7.40	53.00	47.00	10.35	34.10
10	07-04-2025 09:00:00	1.80	901.00	55.00	8.00	45.00	40.00	11.14	36.30
11	07-04-2025 10:00:00	1.79	894.00	51.00	8.00	49.00	45.00	11.17	37.60
12	07-04-2025 11:00:00	1.79	896.00	49.00	8.00	55.00	49.00	11.17	38.70
13	07-04-2025 12:00:00	1.76	881.00	45.00	8.00	54.00	48.00	11.14	41.10
14	07-04-2025 13:00:00	1.76	880.00	39.00	8.00	53.00	47.00	11.17	45.30
15	07-04-2025 14:00:00	1.76	879.00	36.00	8.00	67.00	58.00	11.17	46.60
16	07-04-2025 15:00:00	1.73	865.00	38.00	8.00	48.00	43.00	11.17	45.30
17	07-04-2025 16:00:00	1.73	863.00	39.00	8.00	46.00	41.00	11.17	43.80
18	07-04-2025 17:00:00	1.70	852.00	42.00	8.00	47.00	42.00	11.17	41.60
19	07-04-2025 18:00:00	1.73	863.00	47.00	8.00	45.00	40.00	11.17	39.90
20	07-04-2025 19:00:00	1.76	881.00	53.00	8.00	47.00	42.00	11.17	37.00
21	07-04-2025 20:00:00	1.77	885.00	57.00	7.90	45.00	40.00	11.07	35.60
22	07-04-2025 21:00:00	1.80	902.00	61.00	7.00	34.00	31.00	9.76	34.60
23	07-04-2025 22:00:00	1.86	931.00	65.00	6.30	37.00	33.00	8.62	33.80
24	07-04-2025 23:00:00	1.89	945.00	69.00	3.90	41.00	37.00	5.46	32.70
25	08-04-2025 00:00:00	1.93	967.00	72.00	1.00	37.00	33.00	1.33	32.00
26	08-04-2025 01:00:00	1.93	961.00	75.00	2.20	41.00	37.00	3.08	31.30
27	08-04-2025 02:00:00	1.91	957.00	77.00	0.90	30.00	27.00	1.20	31.10
28	08-04-2025 03:00:00	1.94	971.00	77.00	0.80	30.00	27.00	1.18	31.00
29	08-04-2025 04:00:00	1.90	951.00	78.00	0.90	35.00	32.00	1.19	30.80
30	08-04-2025 05:00:00	1.91	957.00	80.00	0.70	47.00	42.00	1.01	30.30
31	08-04-2025 06:00:00	1.93	967.00	78.00	0.60	43.00	39.00	0.78	31.40
32	08-04-2025 07:00:00	1.89	945.00	74.00	0.70	47.00	42.00	0.94	32.80
33	08-04-2025 08:00:00	1.82	909.00	64.00	1.90	41.00	37.00	2.72	34.30
34	08-04-2025 09:00:00	1.75	877.00	59.00	6.90	39.00	35.00	9.60	35.90
35	08-04-2025 10:00:00	1.73	867.00	54.00	7.90	34.00	30.00	10.99	37.10
36	08-04-2025 11:00:00	1.73	864.00	52.00	7.90	47.00	42.00	11.07	38.60
37	08-04-2025 12:00:00	1.69	844.00	46.00	8.00	38.00	34.00	11.17	40.70
38	08-04-2025 13:00:00	1.67	834.00	41.00	8.00	41.00	37.00	11.17	43.90
39	08-04-2025 14:00:00	1.66	832.00	38.00	8.00	39.00	35.00	11.17	44.30
40	08-04-2025 15:00:00	1.65	824.00	40.00	8.00	42.00	38.00	11.17	42.30
41	08-04-2025 16:00:00	1.68	839.00	39.00	8.00	42.00	38.00	11.17	45.20
42	08-04-2025 17:00:00	1.64	820.00	43.00	8.00	48.00	43.00	11.17	40.30
43	08-04-2025 18:00:00	1.67	835.00	48.00	8.00	55.00	49.00	11.17	38.50
44	08-04-2025 19:00:00	1.69	844.00	50.00	8.00	57.00	51.00	11.14	36.80
45	08-04-2025 20:00:00	1.74	869.00	53.00	7.80	62.00	56.00	10.98	36.00
46	08-04-2025 21:00:00	1.72	860.00	58.00	6.90	37.00	32.00	9.65	34.60
47	08-04-2025 22:00:00	1.77	887.00	62.00	1.90	30.00	27.00	2.69	33.10
48	08-04-2025 23:00:00	1.75	874.00	62.00	6.20	34.00	31.00	8.68	32.20
49	09-04-2025 00:00:00	1.78	890.00	65.00	4.90	34.00	31.00	6.87	31.60
50	09-04-2025 01:00:00	1.81	906.00	72.00	6.30	30.00	27.00	8.82	30.70
51	09-04-2025 02:00:00	1.84	922.00	74.00	3.40	25.00	23.00	4.76	30.50
52	09-04-2025 03:00:00	1.85	926.00	76.00	5.00	26.00	24.00	6.94	30.10
53	09-04-2025 04:00:00	1.92	961.00	76.00	1.00	27.00	25.00	1.33	30.30
54	09-04-2025 05:00:00	1.88	942.00	78.00	1.00	30.00	27.00	1.36	29.80
55	09-04-2025 06:00:00	1.92	958.00	75.00	0.70	51.00	46.00	1.02	30.80
56	09-04-2025 07:00:00	1.86	932.00	72.00	0.90	45.00	40.00	1.18	32.10
57	09-04-2025 08:00:00	1.82	910.00	67.00	3.90	42.00	38.00	5.40	33.10
58	09-04-2025 09:00:00	1.77	884.00	60.00	7.20	42.00	38.00	10.07	35.00
59	09-04-2025 10:00:00	1.71	856.00	52.00	6.50	28.00	26.00	9.10	36.60
60	09-04-2025 11:00:00	1.69	843.00	47.00	7.80	34.00	31.00	10.92	38.40
61	09-04-2025 12:00:00	1.66	830.00	41.00	7.90	28.00	26.00	11.09	40.60
62	09-04-2025 13:00:00	1.66	829.00	38.00	8.00	37.00	33.00	11.17	45.00
63	09-04-2025 14:00:00	1.66	830.00	36.00	0.00	31.00	27.00	0.00	45.60
64	09-04-2025 15:00:00	1.64	818.00	37.00	8.00	27.00	25.00	11.14	44.70
65	09-04-2025 16:00:00	1.64	819.00	38.00	8.00	25.00	23.00	11.17	43.60
66	09-04-2025 17:00:00	1.62	811.00	43.00	8.00	28.00	26.00	11.17	40.30
67	09-04-2025 18:00:00	1.64	820.00	47.00	8.00	29.00	26.00	11.17	38.10
68	09-04-2025 19:00:00	1.67	833.00	52.00	7.90	27.00	26.00	11.12	35.90
69	09-04-2025 20:00:00	1.69	847.00	54.00	7.70	32.00	28.00	10.81	35.10
70	09-04-2025 21:00:00	1.71	854.00	54.00	7.30	28.00	26.00	10.23	34.50
71	09-04-2025 22:00:00	1.73	865.00	61.00	7.20	33.00	30.00	10.07	32.70

Director (Mining)
Corporate Office,
WBPDCL

72	09-04-2025 23:00:00	1.76	881.00	63.00	5.20	28.00	26.00	7.28	32.10
73	10-04-2025 00:00:00	1.79	894.00	67.00	3.60	25.00	23.00	5.00	31.20
74	10-04-2025 01:00:00	1.80	900.00	68.00	5.60	28.00	26.00	7.88	30.80
75	10-04-2025 02:00:00	1.82	908.00	71.00	6.60	32.00	29.00	9.23	30.30
76	10-04-2025 03:00:00	1.84	918.00	72.00	6.40	32.00	29.00	9.02	30.10
77	10-04-2025 04:00:00	1.86	931.00	74.00	6.10	33.00	30.00	8.54	30.00
78	10-04-2025 05:00:00	1.86	930.00	75.00	6.20	33.00	30.00	8.65	29.60
79	10-04-2025 06:00:00	1.87	936.00	74.00	6.40	33.00	30.00	8.99	30.20
80	10-04-2025 07:00:00	1.82	912.00	71.00	6.60	37.00	33.00	9.23	31.30
81	10-04-2025 08:00:00	1.77	887.00	63.00	7.50	33.00	30.00	10.44	33.00
82	10-04-2025 09:00:00	1.72	858.00	58.00	7.90	34.00	31.00	11.02	35.40
83	10-04-2025 10:00:00	1.71	853.00	54.00	8.00	30.00	27.00	11.14	36.40
84	10-04-2025 11:00:00	1.69	845.00	49.00	7.80	27.00	25.00	10.96	38.10
85	10-04-2025 12:00:00	1.64	821.00	41.00	8.00	32.00	28.00	11.17	40.70
86	10-04-2025 13:00:00	1.62	809.00	38.00	8.00	34.00	31.00	11.17	42.60
87	10-04-2025 14:00:00	1.63	815.00	43.00	8.00	30.00	27.00	11.17	40.40
88	10-04-2025 15:00:00	1.65	825.00	41.00	8.00	30.00	27.00	11.17	42.80
89	10-04-2025 16:00:00	1.67	834.00	41.00	8.00	33.00	30.00	11.17	42.10
90	10-04-2025 17:00:00	1.66	829.00	46.00	8.00	32.00	28.00	11.14	38.40
91	10-04-2025 18:00:00	1.68	838.00	48.00	7.90	30.00	27.00	11.02	37.70
92	10-04-2025 19:00:00	1.73	867.00	95.00	8.00	28.00	26.00	11.17	23.60
93	10-04-2025 20:00:00	1.79	895.00	90.00	8.00	23.00	20.00	11.17	24.40
94	10-04-2025 21:00:00	1.80	902.00	87.00	8.00	22.00	19.00	11.14	25.20
95	10-04-2025 22:00:00	1.82	912.00	89.00	8.00	24.00	22.00	11.17	24.60
96	10-04-2025 23:00:00	1.83	913.00	82.00	0.00	30.00	27.00	0.00	26.50
97	11-04-2025 00:00:00	1.81	906.00	76.00	7.60	23.00	20.00	10.64	28.10
98	11-04-2025 01:00:00	1.86	930.00	76.00	0.00	26.00	24.00	0.00	28.00
99	11-04-2025 02:00:00	1.90	952.00	77.00	7.40	26.00	24.00	10.35	27.80
100	11-04-2025 03:00:00	1.98	992.00	77.00	0.70	47.00	43.00	0.99	28.10
101	11-04-2025 04:00:00	1.94	971.00	77.00	1.50	27.00	25.00	2.09	27.10
102	11-04-2025 05:00:00	1.95	976.00	83.00	1.00	34.00	31.00	1.39	25.70
103	11-04-2025 06:00:00	-	-	-	-	-	-	-	-
104	11-04-2025 07:00:00	-	-	-	-	-	-	-	-
105	11-04-2025 08:00:00	1.00	500.00	78.00	0.60	28.00	26.00	0.87	28.50
106	11-04-2025 09:00:00	-	-	-	-	-	-	-	-
107	11-04-2025 10:00:00	-	-	-	-	-	-	-	-
108	11-04-2025 11:00:00	-	-	-	-	-	-	-	-
109	11-04-2025 12:00:00	-	-	-	-	-	-	-	-
110	11-04-2025 13:00:00	1.64	819.00	49.00	8.00	34.00	31.00	11.14	39.90
111	11-04-2025 14:00:00	1.63	815.00	50.00	8.00	39.00	35.00	11.17	38.70
112	11-04-2025 15:00:00	1.67	833.00	47.00	8.00	43.00	37.00	11.14	40.70
113	11-04-2025 16:00:00	1.65	824.00	51.00	8.00	34.00	31.00	11.17	38.40
114	11-04-2025 17:00:00	1.64	821.00	56.00	8.00	32.00	29.00	11.17	35.80
115	11-04-2025 18:00:00	1.64	819.00	61.00	8.00	34.00	31.00	11.17	33.70
116	11-04-2025 19:00:00	1.71	857.00	66.00	0.00	36.00	32.00	0.00	32.00
117	11-04-2025 20:00:00	1.79	897.00	69.00	7.30	62.00	55.00	10.28	31.40
118	11-04-2025 21:00:00	1.81	907.00	72.00	7.30	43.00	39.00	10.15	30.80
119	11-04-2025 22:00:00	1.92	958.00	76.00	2.50	49.00	45.00	3.50	30.30
120	11-04-2025 23:00:00	1.97	984.00	79.00	0.90	53.00	47.00	1.19	29.80
121	12-04-2025 00:00:00	1.92	962.00	76.00	0.00	56.00	50.00	0.00	30.30
122	12-04-2025 01:00:00	1.98	992.00	76.00	5.40	61.00	54.00	7.52	30.10
123	12-04-2025 02:00:00	2.13	1066.00	79.00	0.90	59.00	53.00	1.25	29.80
124	12-04-2025 03:00:00	2.06	1031.00	81.00	4.40	54.00	48.00	6.15	29.40
125	12-04-2025 04:00:00	2.10	1049.00	81.00	0.00	51.00	46.00	0.00	29.50
126	12-04-2025 05:00:00	2.13	1067.00	82.00	0.80	55.00	49.00	1.13	29.20
127	12-04-2025 06:00:00	2.17	1084.00	80.00	0.70	60.00	53.00	1.04	29.90
128	12-04-2025 07:00:00	2.06	1030.00	78.00	1.00	57.00	51.00	1.39	30.90
129	12-04-2025 08:00:00	1.94	971.00	76.00	5.20	55.00	49.00	7.28	31.80
130	12-04-2025 09:00:00	1.89	944.00	74.00	5.90	69.00	59.00	8.29	32.80
131	12-04-2025 10:00:00	1.85	923.00	70.00	7.90	66.00	58.00	11.02	34.60
132	12-04-2025 11:00:00	1.80	898.00	64.00	8.00	61.00	54.00	11.17	36.70
133	12-04-2025 12:00:00	1.75	875.00	57.00	8.00	56.00	50.00	11.17	38.90
134	12-04-2025 13:00:00	1.70	848.00	48.00	8.00	55.00	49.00	11.17	42.40
135	12-04-2025 14:00:00	1.72	858.00	46.00	8.00	51.00	46.00	11.17	43.30
136	12-04-2025 15:00:00	1.72	860.00	48.00	8.00	53.00	47.00	11.17	43.20
137	12-04-2025 16:00:00	1.70	851.00	48.00	8.00	55.00	49.00	11.17	41.70
138	12-04-2025 17:00:00	1.71	855.00	53.00	8.00	48.00	43.00	11.17	39.40
139	12-04-2025 18:00:00	1.73	867.00	60.00	8.00	53.00	47.00	11.17	36.80
140	12-04-2025 19:00:00	1.78	891.00	66.00	0.00	53.00	47.00	0.00	35.00
141	12-04-2025 20:00:00	1.83	915.00	69.00	7.70	58.00	53.00	10.82	34.60
142	12-04-2025 21:00:00	1.87	935.00	72.00	7.70	55.00	49.00	10.78	34.10
143	12-04-2025 22:00:00	1.90	949.00	73.00	7.10	66.00	59.00	9.93	33.40
144	12-04-2025 23:00:00	1.95	975.00	75.00	3.50	70.00	62.00	4.84	33.10
145	13-04-2025 00:00:00	1.73	867.00	54.00	8.00	30.00	27.00	11.14	31.60
146	13-04-2025 01:00:00	1.73	864.00	54.00	8.00	28.00	26.00	11.17	30.60
147	13-04-2025 02:00:00	1.83	917.00	61.00	0.90	35.00	32.00	1.30	30.10
148	13-04-2025 03:00:00	1.90	952.00	64.00	3.70	37.00	33.00	5.19	29.60
149	13-04-2025 04:00:00	1.83	915.00	64.00	7.80	34.00	31.00	10.98	29.50
150	13-04-2025 05:00:00	1.83	916.00	68.00	6.20	34.00	31.00	8.62	28.20
151	13-04-2025 06:00:00	1.91	955.00	70.00	2.00	49.00	45.00	2.80	28.60

Director (Comm.)
Corporate Office,
WBPDCL

152	13-04-2025 07:00:00	1.76	879.00	62.00	8.00	34.00	31.00	11.17	30.40
153	13-04-2025 08:00:00	1.73	864.00	59.00	8.00	33.00	30.00	11.17	31.60
154	13-04-2025 09:00:00	1.70	852.00	56.00	8.00	33.00	30.00	11.17	34.20
155	13-04-2025 10:00:00	1.70	848.00	53.00	8.00	37.00	33.00	11.17	35.40
156	13-04-2025 11:00:00	1.68	842.00	52.00	8.00	35.00	32.00	11.17	36.40
157	13-04-2025 12:00:00	1.66	830.00	50.00	8.00	36.00	32.00	11.17	37.30
158	13-04-2025 13:00:00	1.65	825.00	43.00	8.00	33.00	30.00	11.17	39.80
159	13-04-2025 14:00:00	1.65	823.00	40.00	8.00	33.00	30.00	11.17	40.70
160	13-04-2025 15:00:00	1.68	839.00	42.00	8.00	38.00	34.00	11.17	40.80
161	13-04-2025 16:00:00	1.63	814.00	45.00	8.00	42.00	38.00	11.17	38.70
162	13-04-2025 17:00:00	1.72	860.00	54.00	8.00	47.00	42.00	11.17	36.20
163	13-04-2025 18:00:00	1.74	871.00	58.00	8.00	51.00	46.00	11.17	34.90
164	13-04-2025 19:00:00	-	-	-	-	-	-	-	-
165	13-04-2025 20:00:00	1.93	966.00	81.00	0.70	61.00	54.00	1.01	27.80
166	13-04-2025 21:00:00	1.94	969.00	73.00	6.30	70.00	62.00	8.82	30.70
167	13-04-2025 22:00:00	1.97	985.00	76.00	5.90	64.00	57.00	8.26	30.00
168	13-04-2025 23:00:00	2.04	1021.00	77.00	0.00	66.00	59.00	0.00	29.70
169	14-04-2025 00:00:00	2.10	1050.00	79.00	0.90	71.00	62.00	1.30	29.40
170	14-04-2025 01:00:00	2.15	1077.00	78.00	4.40	68.00	60.00	6.09	29.50
171	14-04-2025 02:00:00	2.18	1088.00	79.00	0.90	68.00	61.00	1.22	29.10
172	14-04-2025 03:00:00	2.34	1171.00	80.00	0.70	68.00	61.00	0.92	29.00
173	14-04-2025 04:00:00	2.08	1042.00	77.00	3.00	66.00	58.00	4.24	29.30
174	14-04-2025 05:00:00	2.12	1061.00	77.00	3.20	62.00	55.00	4.45	29.10
175	14-04-2025 06:00:00	1.96	981.00	75.00	3.20	58.00	53.00	4.42	29.80
176	14-04-2025 07:00:00	1.86	931.00	73.00	7.00	62.00	55.00	9.81	30.80
177	14-04-2025 08:00:00	1.80	901.00	68.00	7.70	51.00	46.00	10.82	32.40
178	14-04-2025 09:00:00	1.72	861.00	61.00	8.00	45.00	40.00	11.17	34.60
179	14-04-2025 10:00:00	1.70	849.00	58.00	8.00	44.00	39.00	11.17	35.90
180	14-04-2025 11:00:00	1.66	831.00	62.00	8.00	46.00	41.00	11.17	38.00
181	14-04-2025 12:00:00	1.67	834.00	49.00	8.00	43.00	39.00	11.17	39.20
182	14-04-2025 13:00:00	1.66	831.00	46.00	8.00	46.00	41.00	11.17	41.50
183	14-04-2025 14:00:00	1.64	820.00	42.00	8.00	49.00	45.00	11.17	43.10
184	14-04-2025 15:00:00	1.63	817.00	42.00	8.00	53.00	47.00	11.17	41.80
185	14-04-2025 16:00:00	1.66	828.00	41.00	8.00	47.00	42.00	11.17	41.80
186	14-04-2025 17:00:00	1.64	822.00	49.00	8.00	51.00	46.00	11.17	38.10
187	14-04-2025 18:00:00	1.64	821.00	57.00	8.00	33.00	30.00	11.17	30.90
188	14-04-2025 19:00:00	1.80	900.00	90.00	8.00	32.00	28.00	11.17	24.00
189	14-04-2025 20:00:00	1.83	917.00	89.00	8.00	33.00	30.00	11.17	24.40
190	14-04-2025 21:00:00	1.86	929.00	90.00	8.00	36.00	32.00	11.17	24.20
191	14-04-2025 22:00:00	1.86	932.00	87.00	8.00	38.00	34.00	11.13	25.10
192	14-04-2025 23:00:00	1.81	907.00	80.00	8.00	32.00	28.00	11.14	26.20
193	15-04-2025 00:00:00	1.83	916.00	77.00	7.80	35.00	32.00	10.88	26.60
194	15-04-2025 01:00:00	1.87	933.00	77.00	6.50	38.00	34.00	9.03	26.80
195	15-04-2025 02:00:00	1.92	959.00	81.00	4.00	47.00	42.00	5.56	26.30
196	15-04-2025 03:00:00	1.97	983.00	80.00	4.90	37.00	33.00	6.83	26.30
197	15-04-2025 04:00:00	1.97	987.00	84.00	7.70	54.00	48.00	10.82	25.80
198	15-04-2025 05:00:00	1.99	997.00	82.00	7.80	62.00	55.00	10.85	26.70
199	15-04-2025 06:00:00	1.86	929.00	77.00	8.00	37.00	33.00	11.17	26.40
200	15-04-2025 07:00:00	1.79	893.00	72.00	8.00	33.00	30.00	11.17	28.60
201	15-04-2025 08:00:00	1.77	884.00	70.00	8.00	36.00	33.00	11.17	29.90
202	15-04-2025 09:00:00	1.73	864.00	64.00	8.00	37.00	33.00	11.17	32.00
203	15-04-2025 10:00:00	1.70	851.00	62.00	8.00	37.00	33.00	11.17	32.70
204	15-04-2025 11:00:00	1.75	873.00	59.00	8.00	35.00	32.00	11.17	33.10
205	15-04-2025 12:00:00	1.68	842.00	58.00	8.00	38.00	34.00	11.17	35.30
206	15-04-2025 13:00:00	1.67	835.00	50.00	8.00	37.00	33.00	11.14	37.60
207	15-04-2025 14:00:00	1.72	859.00	51.00	7.90	43.00	39.00	11.03	36.40
208	15-04-2025 15:00:00	1.73	866.00	62.00	8.00	38.00	34.00	11.17	34.40
209	15-04-2025 16:00:00	1.75	873.00	58.00	8.00	34.00	31.00	11.14	35.70
210	15-04-2025 17:00:00	1.74	868.00	58.00	8.00	38.00	34.00	11.17	35.50
211	15-04-2025 18:00:00	1.77	887.00	63.00	7.70	45.00	40.00	10.77	33.50
212	15-04-2025 19:00:00	1.85	923.00	72.00	7.10	55.00	49.00	9.94	31.00
213	15-04-2025 20:00:00	1.88	940.00	73.00	7.50	68.00	61.00	10.46	31.20
214	15-04-2025 21:00:00	1.90	950.00	74.00	7.70	51.00	46.00	10.72	31.10
215	15-04-2025 22:00:00	2.01	1006.00	77.00	4.20	54.00	48.00	5.81	30.60
216	15-04-2025 23:00:00	2.20	1100.00	81.00	0.90	57.00	52.00	1.22	30.10
217	16-04-2025 00:00:00	2.07	1037.00	79.00	0.90	81.00	72.00	1.25	30.10
218	16-04-2025 01:00:00	2.08	1038.00	82.00	4.90	75.00	67.00	6.79	29.40
219	16-04-2025 02:00:00	2.05	1025.00	81.00	4.10	67.00	60.00	5.73	29.40
220	16-04-2025 03:00:00	2.12	1061.00	82.00	0.00	66.00	58.00	0.00	29.20
221	16-04-2025 04:00:00	2.25	1127.00	85.00	0.90	101.00	89.00	1.23	28.60
222	16-04-2025 05:00:00	2.04	1020.00	80.00	6.40	95.00	84.00	8.97	28.00
223	16-04-2025 06:00:00	2.07	1033.00	75.00	6.00	74.00	66.00	8.39	28.90
224	16-04-2025 07:00:00	1.96	979.00	71.00	7.60	69.00	61.00	10.65	30.40
225	16-04-2025 08:00:00	1.87	936.00	64.00	8.00	60.00	53.00	11.14	32.50
226	16-04-2025 09:00:00	1.83	916.00	61.00	8.00	61.00	54.00	11.14	34.30
227	16-04-2025 10:00:00	1.84	919.00	56.00	7.10	61.00	54.00	9.88	35.10
228	16-04-2025 11:00:00	1.79	895.00	51.00	8.00	64.00	57.00	11.14	36.10
229	16-04-2025 12:00:00	1.73	863.00	45.00	7.90	54.00	48.00	11.09	38.70
230	16-04-2025 13:00:00	1.70	848.00	40.00	8.00	45.00	40.00	11.17	41.50
231	16-04-2025 14:00:00	1.66	829.00	36.00	8.00	37.00	33.00	11.14	42.50

Director (Planning)
Corporate Office,
WBPDCL

232	18-04-2025 15:00:00	1.66	831.00	35.00	8.00	40.00	36.00	11.17	43.20
233	18-04-2025 16:00:00	1.66	830.00	37.00	8.00	35.00	32.00	11.14	41.40
234	18-04-2025 17:00:00	1.69	843.00	39.00	6.70	38.00	34.00	9.31	40.30
235	18-04-2025 18:00:00	1.78	889.00	48.00	4.80	50.00	45.00	6.71	37.70
236	18-04-2025 19:00:00	1.78	892.00	53.00	6.60	53.00	47.00	9.24	35.00
237	18-04-2025 20:00:00	2.00	999.00	60.00	0.60	93.00	78.00	0.88	34.30
238	18-04-2025 21:00:00	1.94	972.00	60.00	0.80	80.00	70.00	1.16	34.10
239	18-04-2025 22:00:00	1.81	906.00	68.00	5.20	45.00	40.00	7.28	32.90
240	18-04-2025 23:00:00	1.86	930.00	72.00	0.00	47.00	42.00	0.00	32.20
241	17-04-2025 00:00:00	1.91	956.00	71.00	1.80	43.00	39.00	2.58	31.60
242	17-04-2025 01:00:00	1.88	940.00	76.00	1.70	42.00	38.00	2.41	31.20
243	17-04-2025 02:00:00	1.92	961.00	80.00	0.00	63.00	56.00	0.00	30.90
244	17-04-2025 03:00:00	1.97	985.00	82.00	0.90	54.00	49.00	1.22	30.50
245	17-04-2025 04:00:00	1.98	990.00	83.00	0.80	56.00	50.00	1.16	30.40
246	17-04-2025 05:00:00	2.06	1029.00	88.00	0.70	56.00	50.00	0.94	30.30
247	17-04-2025 06:00:00	2.00	958.00	80.00	0.00	57.00	51.00	0.00	31.10
248	17-04-2025 07:00:00	1.96	981.00	77.00	0.70	72.00	62.00	0.95	32.20
249	17-04-2025 08:00:00	1.93	965.00	72.00	0.90	57.00	51.00	1.23	33.10
250	17-04-2025 09:00:00	1.87	935.00	67.00	3.20	55.00	49.00	4.48	35.10
251	17-04-2025 10:00:00	1.79	897.00	62.00	7.30	55.00	49.00	10.23	36.80
252	17-04-2025 11:00:00	1.77	885.00	55.00	7.40	55.00	49.00	10.35	38.60
253	17-04-2025 12:00:00	1.71	857.00	49.00	8.00	51.00	46.00	11.14	41.00
254	17-04-2025 13:00:00	1.69	847.00	43.00	8.00	48.00	43.00	11.14	43.10
255	17-04-2025 14:00:00	1.69	844.00	43.00	8.00	46.00	41.00	11.14	42.80
256	17-04-2025 15:00:00	1.72	862.00	42.00	8.00	49.00	45.00	11.14	42.60
257	17-04-2025 16:00:00	1.69	844.00	45.00	7.80	46.00	41.00	10.98	40.20
258	17-04-2025 17:00:00	1.69	847.00	56.00	8.00	49.00	45.00	11.17	36.10
259	17-04-2025 18:00:00	1.72	861.00	64.00	8.00	35.00	32.00	11.17	30.60
260	17-04-2025 19:00:00	1.78	888.00	66.00	8.00	46.00	41.00	11.17	29.70
261	17-04-2025 20:00:00	1.82	908.00	71.00	0.00	38.00	34.00	0.00	29.70
262	17-04-2025 21:00:00	1.81	906.00	74.00	7.80	47.00	42.00	10.96	28.50
263	17-04-2025 22:00:00	1.87	937.00	75.00	7.90	45.00	40.00	11.07	28.50
264	17-04-2025 23:00:00	1.89	945.00	75.00	0.00	41.00	37.00	0.00	28.50
265	18-04-2025 00:00:00	1.90	951.00	76.00	0.00	46.00	41.00	0.00	28.10
266	18-04-2025 01:00:00	1.91	953.00	78.00	0.00	48.00	43.00	0.00	27.60
267	18-04-2025 02:00:00	1.95	973.00	80.00	6.50	48.00	43.00	9.07	27.30
268	18-04-2025 03:00:00	2.03	1015.00	79.00	4.20	46.00	41.00	5.81	27.60
269	18-04-2025 04:00:00	1.94	969.00	78.00	7.60	46.00	41.00	10.70	27.80
270	18-04-2025 05:00:00	1.95	975.00	80.00	7.70	58.00	52.00	10.71	27.70
271	18-04-2025 06:00:00	1.91	957.00	77.00	7.70	47.00	42.00	10.82	28.90
272	18-04-2025 07:00:00	1.92	959.00	76.00	6.90	43.00	39.00	9.59	29.90
273	18-04-2025 08:00:00	1.99	997.00	82.00	7.80	54.00	48.00	10.98	28.00
274	18-04-2025 09:00:00	1.94	970.00	81.00	8.00	36.00	32.00	11.17	27.70
275	18-04-2025 10:00:00	1.93	964.00	79.00	8.00	37.00	33.00	11.17	28.00
276	18-04-2025 11:00:00	1.90	951.00	77.00	8.00	37.00	33.00	11.17	29.10
277	18-04-2025 12:00:00	1.80	900.00	87.00	8.00	24.00	22.00	11.17	29.20
278	18-04-2025 13:00:00	1.80	898.00	79.00	8.00	32.00	28.00	11.17	28.20
279	18-04-2025 14:00:00	1.72	858.00	68.00	8.00	27.00	25.00	11.17	31.40
280	18-04-2025 15:00:00	1.71	857.00	62.00	8.00	26.00	24.00	11.14	33.90
281	18-04-2025 16:00:00	1.70	851.00	62.00	8.00	26.00	24.00	11.17	33.50
282	18-04-2025 17:00:00	1.71	856.00	63.00	8.00	27.00	25.00	11.17	32.50
283	18-04-2025 18:00:00	1.75	877.00	70.00	8.00	33.00	30.00	11.17	30.20
284	18-04-2025 19:00:00	1.83	915.00	78.00	7.80	38.00	34.00	10.98	28.50
285	18-04-2025 20:00:00	1.88	941.00	80.00	8.00	38.00	34.00	11.17	28.40
286	18-04-2025 21:00:00	1.91	957.00	81.00	8.00	41.00	37.00	11.17	28.30
287	18-04-2025 22:00:00	1.95	974.00	81.00	0.00	41.00	37.00	0.00	28.20
288	18-04-2025 23:00:00	1.95	977.00	82.00	0.00	43.00	39.00	0.00	28.30
289	19-04-2025 00:00:00	1.97	986.00	82.00	7.90	42.00	38.00	10.99	28.00
290	19-04-2025 01:00:00	1.96	979.00	83.00	7.70	43.00	39.00	10.77	27.80
291	19-04-2025 02:00:00	1.99	993.00	84.00	1.00	48.00	43.00	1.37	27.00
292	19-04-2025 03:00:00	2.02	1008.00	85.00	3.90	48.00	43.00	5.52	27.00
293	19-04-2025 04:00:00	2.02	1008.00	85.00	5.90	51.00	46.00	8.29	27.10
294	19-04-2025 05:00:00	2.03	1013.00	84.00	7.60	46.00	41.00	10.60	27.50
295	19-04-2025 06:00:00	1.96	982.00	78.00	7.80	45.00	40.00	10.86	28.80
296	19-04-2025 07:00:00	1.87	935.00	75.00	8.00	45.00	40.00	11.17	30.10
297	19-04-2025 08:00:00	1.80	901.00	70.00	8.00	46.00	41.00	11.17	31.60
298	19-04-2025 09:00:00	1.79	897.00	68.00	8.00	45.00	40.00	11.17	32.90
299	19-04-2025 10:00:00	1.80	899.00	65.00	8.00	46.00	41.00	11.17	34.10
300	19-04-2025 11:00:00	1.77	886.00	63.00	7.90	49.00	45.00	11.02	35.70
301	19-04-2025 12:00:00	1.72	858.00	59.00	8.00	45.00	40.00	11.14	37.70
302	19-04-2025 13:00:00	1.66	831.00	56.00	8.00	42.00	38.00	11.14	38.00
303	19-04-2025 14:00:00	1.66	832.00	62.00	8.00	48.00	43.00	11.17	36.10
304	19-04-2025 15:00:00	1.68	840.00	59.00	7.60	45.00	40.00	10.67	38.00
305	19-04-2025 16:00:00	1.66	829.00	59.00	8.00	45.00	40.00	11.17	37.20
306	19-04-2025 17:00:00	1.71	857.00	62.00	8.00	46.00	41.00	11.17	36.20
307	19-04-2025 18:00:00	1.71	857.00	65.00	8.00	47.00	42.00	11.17	35.20
308	19-04-2025 19:00:00	1.74	868.00	70.00	7.50	48.00	43.00	10.51	33.10
309	19-04-2025 20:00:00	1.80	901.00	73.00	3.90	72.00	64.00	5.45	32.60
310	19-04-2025 21:00:00	1.83	917.00	75.00	2.30	53.00	47.00	3.16	32.00
311	19-04-2025 22:00:00	1.87	935.00	77.00	2.90	61.00	54.00	4.10	31.80

Director (Mining)
Corporate Office,
WBPDCL

312	19-04-2025 23:00:00	1.94	972.00	79.00	0.70	58.00	53.00	0.99	31.30
313	20-04-2025 00:00:00	1.98	990.00	81.00	0.90	88.00	79.00	1.26	30.80
314	20-04-2025 01:00:00	2.02	1009.00	81.00	0.00	66.00	58.00	0.00	30.80
315	20-04-2025 02:00:00	2.03	1013.00	85.00	3.90	66.00	59.00	5.45	29.50
316	20-04-2025 03:00:00	2.04	1022.00	85.00	0.90	64.00	57.00	1.29	29.90
317	20-04-2025 04:00:00	2.08	1041.00	85.00	2.10	75.00	67.00	3.00	30.00
318	20-04-2025 05:00:00	2.12	1060.00	86.00	0.00	78.00	69.00	0.00	29.90
319	20-04-2025 06:00:00	-	-	-	-	-	-	-	-
320	20-04-2025 07:00:00	1.99	997.00	82.00	4.50	71.00	63.00	6.31	31.60
321	20-04-2025 08:00:00	1.95	974.00	80.00	4.00	85.00	75.00	5.63	32.70
322	20-04-2025 10:00:00	1.88	938.00	72.00	7.50	95.00	82.00	10.43	35.70
323	20-04-2025 11:00:00	1.77	887.00	68.00	7.90	95.00	84.00	11.02	37.90
324	20-04-2025 12:00:00	1.70	849.00	60.00	8.00	72.00	63.00	11.17	40.10
325	20-04-2025 13:00:00	1.68	838.00	55.00	8.00	74.00	66.00	11.17	42.40
326	20-04-2025 14:00:00	1.66	828.00	49.00	0.00	79.00	70.00	0.00	44.40
327	20-04-2025 15:00:00	1.68	839.00	50.00	8.00	72.00	63.00	11.14	44.70
328	20-04-2025 16:00:00	1.67	834.00	55.00	8.00	69.00	62.00	11.14	42.10
329	20-04-2025 17:00:00	1.70	850.00	58.00	7.80	63.00	56.00	10.96	40.90
330	20-04-2025 18:00:00	1.70	852.00	65.00	8.00	73.00	64.00	11.17	38.60
331	20-04-2025 19:00:00	1.75	876.00	71.00	0.00	64.00	57.00	0.00	36.70
332	20-04-2025 20:00:00	1.80	899.00	73.00	7.60	73.00	64.00	10.67	36.30
333	20-04-2025 21:00:00	1.82	911.00	76.00	7.70	66.00	59.00	10.78	35.80
334	20-04-2025 22:00:00	1.87	935.00	78.00	0.90	63.00	56.00	1.32	35.00
335	20-04-2025 23:00:00	1.87	937.00	79.00	0.90	67.00	60.00	1.26	34.80
336	21-04-2025 00:00:00	1.86	931.00	81.00	0.90	56.00	50.00	1.25	34.20
337	21-04-2025 01:00:00	1.91	955.00	84.00	0.80	57.00	51.00	1.13	33.60
338	21-04-2025 02:00:00	1.86	928.00	83.00	3.70	63.00	56.00	5.18	32.60
339	21-04-2025 03:00:00	1.78	888.00	70.00	7.80	54.00	48.00	10.98	32.30
340	21-04-2025 04:00:00	1.84	922.00	74.00	6.10	48.00	43.00	8.51	32.70
341	21-04-2025 05:00:00	1.84	920.00	77.00	6.80	55.00	49.00	9.49	31.90
342	21-04-2025 06:00:00	1.86	928.00	74.00	2.10	55.00	48.00	2.90	32.90
343	21-04-2025 07:00:00	1.82	909.00	72.00	3.70	58.00	50.00	5.19	34.30
344	21-04-2025 08:00:00	1.82	906.00	69.00	6.80	68.00	59.00	9.51	35.70
345	21-04-2025 09:00:00	1.78	889.00	66.00	7.80	78.00	69.00	10.92	36.80
346	21-04-2025 10:00:00	1.74	870.00	61.00	7.80	72.00	63.00	10.98	38.10
347	21-04-2025 11:00:00	-	-	-	-	-	-	-	-
348	21-04-2025 12:00:00	1.68	841.00	53.00	8.00	66.00	59.00	11.14	42.60
349	21-04-2025 13:00:00	1.66	831.00	47.00	8.00	67.00	60.00	11.17	45.50
350	21-04-2025 14:00:00	1.79	897.00	75.00	0.90	62.00	55.00	1.26	35.80
351	21-04-2025 15:00:00	1.79	897.00	75.00	0.90	62.00	55.00	1.26	35.80
352	21-04-2025 16:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
353	21-04-2025 17:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
354	21-04-2025 18:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
355	21-04-2025 19:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
356	21-04-2025 20:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
357	21-04-2025 21:00:00	1.79	897.00	75.00	0.90	55.00	49.00	1.30	35.90
358	21-04-2025 22:00:00	1.79	897.00	75.00	0.90	56.00	50.00	1.29	36.00
359	21-04-2025 23:00:00	1.80	900.00	77.00	0.90	54.00	48.00	1.26	35.30
360	22-04-2025 00:00:00	1.82	912.00	80.00	0.90	62.00	55.00	1.26	34.60
361	22-04-2025 01:00:00	1.85	927.00	80.00	0.00	59.00	53.00	0.00	34.70
362	22-04-2025 02:00:00	1.85	925.00	82.00	0.90	57.00	51.00	1.29	33.90
363	22-04-2025 03:00:00	1.88	939.00	81.00	0.90	61.00	54.00	1.27	34.20
364	22-04-2025 04:00:00	1.91	956.00	82.00	0.80	55.00	49.00	1.18	34.10
365	22-04-2025 05:00:00	1.95	975.00	81.00	0.00	61.00	54.00	0.00	34.20
366	22-04-2025 06:00:00	1.91	957.00	78.00	0.70	63.00	56.00	0.94	35.00
367	22-04-2025 07:00:00	1.87	933.00	76.00	0.80	80.00	71.00	1.15	35.50
368	22-04-2025 08:00:00	1.79	895.00	74.00	5.90	74.00	66.00	8.30	36.10
369	22-04-2025 09:00:00	1.79	893.00	70.00	7.50	81.00	72.00	10.56	37.20
370	22-04-2025 10:00:00	1.78	888.00	66.00	7.90	78.00	69.00	11.09	38.50
371	22-04-2025 11:00:00	1.00	500.00	62.00	0.90	74.00	66.00	1.25	39.80
372	22-04-2025 12:00:00	1.70	852.00	56.00	8.00	81.00	72.00	11.17	42.60
373	22-04-2025 13:00:00	1.67	833.00	47.00	8.00	76.00	68.00	11.17	46.50
374	22-04-2025 14:00:00	1.58	792.00	38.00	8.00	55.00	49.00	11.17	49.60
375	22-04-2025 15:00:00	1.59	795.00	34.00	8.00	59.00	53.00	11.14	48.80
376	22-04-2025 16:00:00	1.59	794.00	41.00	8.00	54.00	48.00	11.17	45.40
377	22-04-2025 17:00:00	1.61	805.00	56.00	7.90	65.00	57.00	11.12	42.70
378	22-04-2025 18:00:00	1.67	834.00	61.00	8.00	69.00	62.00	11.17	41.00
379	22-04-2025 19:00:00	1.71	857.00	64.00	7.30	67.00	60.00	10.25	39.30
380	22-04-2025 20:00:00	1.74	872.00	68.00	8.00	72.00	63.00	11.14	38.10
381	22-04-2025 21:00:00	1.79	894.00	71.00	6.20	63.00	56.00	8.67	37.60
382	22-04-2025 22:00:00	1.76	878.00	76.00	6.60	54.00	48.00	9.24	36.10
383	22-04-2025 23:00:00	1.81	903.00	79.00	4.20	63.00	55.00	5.84	35.40
384	23-04-2025 00:00:00	1.84	919.00	82.00	1.00	55.00	49.00	1.37	34.60
385	23-04-2025 01:00:00	1.85	926.00	84.00	1.00	57.00	51.00	1.33	34.20
386	23-04-2025 02:00:00	1.90	950.00	86.00	0.90	61.00	54.00	1.22	33.60
387	23-04-2025 03:00:00	1.87	937.00	87.00	3.30	55.00	49.00	4.66	33.20
388	23-04-2025 04:00:00	1.89	944.00	89.00	1.60	58.00	60.00	2.17	32.80
389	23-04-2025 05:00:00	1.91	955.00	90.00	1.00	66.00	58.00	1.43	32.20
390	23-04-2025 06:00:00	1.92	961.00	85.00	0.90	68.00	61.00	1.20	33.40
391	23-04-2025 07:00:00	1.93	966.00	80.00	0.90	102.00	90.00	1.32	34.20

Director (Mining)
Corporate Office,
WBPDCL

392	23-04-2025 08:00:00	1.75	875.00	56.00	7.80	105.00	93.00	10.92	37.20
393	23-04-2025 09:00:00	1.63	817.00	42.00	7.90	70.00	62.00	11.09	39.10
394	23-04-2025 10:00:00	1.51	757.00	31.00	8.00	42.00	38.00	11.14	41.20
395	23-04-2025 11:00:00	1.45	727.00	28.00	7.90	35.00	32.00	11.09	42.60
396	23-04-2025 12:00:00	1.43	715.00	23.00	7.40	37.00	33.00	10.39	46.10
397	23-04-2025 13:00:00	1.42	710.00	19.00	7.70	32.00	28.00	10.77	48.00
398	23-04-2025 14:00:00	1.42	711.00	18.00	7.50	31.00	27.00	10.51	51.80
399	23-04-2025 15:00:00	1.44	720.00	17.00	7.90	35.00	32.00	11.09	50.40
400	23-04-2025 16:00:00	1.41	707.00	16.00	8.00	47.00	42.00	11.17	48.50
401	23-04-2025 17:00:00	1.43	716.00	17.00	7.60	34.00	31.00	10.60	46.90
402	23-04-2025 18:00:00	1.40	700.00	19.00	7.90	46.00	41.00	11.09	43.50
403	23-04-2025 19:00:00	1.49	744.00	22.00	7.40	67.00	59.00	10.35	41.20
404	23-04-2025 20:00:00	1.57	785.00	26.00	2.10	75.00	66.00	2.93	40.10
405	23-04-2025 21:00:00	1.56	779.00	27.00	3.40	74.00	62.00	4.76	39.50
406	23-04-2025 22:00:00	1.61	806.00	33.00	5.80	84.00	74.00	8.12	36.90
407	23-04-2025 23:00:00	1.64	818.00	39.00	7.30	48.00	43.00	10.28	35.50
408	24-04-2025 00:00:00	1.57	787.00	37.00	7.80	40.00	36.00	10.85	35.70
409	24-04-2025 01:00:00	1.67	833.00	49.00	6.60	63.00	56.00	9.25	35.10
410	24-04-2025 02:00:00	1.72	859.00	54.00	4.10	63.00	55.00	5.61	34.00
411	24-04-2025 03:00:00	1.80	901.00	64.00	1.00	61.00	53.00	1.39	32.40
412	24-04-2025 04:00:00	1.83	916.00	72.00	1.40	74.00	66.00	1.89	31.70
413	24-04-2025 05:00:00	1.87	934.00	74.00	0.90	73.00	64.00	1.30	31.60
414	24-04-2025 06:00:00	2.20	1100.00	72.00	0.50	64.00	57.00	0.66	31.40
415	24-04-2025 07:00:00	1.87	935.00	74.00	1.00	90.00	80.00	1.37	32.80
416	24-04-2025 08:00:00	1.83	916.00	73.00	0.00	106.00	93.00	0.00	35.30
417	24-04-2025 09:00:00	1.82	909.00	65.00	6.00	86.00	76.00	8.53	36.10
418	24-04-2025 10:00:00	1.65	827.00	49.00	8.00	76.00	68.00	11.17	38.60
419	24-04-2025 11:00:00	1.57	787.00	35.00	7.90	66.00	58.00	11.09	41.60
420	24-04-2025 12:00:00	1.51	757.00	26.00	8.00	56.00	50.00	11.14	44.80
421	24-04-2025 13:00:00	1.46	729.00	20.00	8.00	43.00	39.00	11.17	47.50
422	24-04-2025 14:00:00	1.43	715.00	18.00	8.00	41.00	37.00	11.17	51.00
423	24-04-2025 15:00:00	1.45	724.00	17.00	8.00	44.00	39.00	11.17	50.90
424	24-04-2025 16:00:00	1.47	735.00	19.00	5.50	44.00	39.00	7.71	49.10
425	24-04-2025 17:00:00	1.47	734.00	21.00	7.20	47.00	42.00	10.02	47.30
426	24-04-2025 18:00:00	1.54	770.00	40.00	7.70	47.00	42.00	10.73	43.30
427	24-04-2025 19:00:00	1.61	803.00	43.00	7.90	62.00	55.00	11.07	40.30
428	24-04-2025 20:00:00	1.65	827.00	46.00	6.40	72.00	63.00	8.96	39.30
429	24-04-2025 21:00:00	-	-	-	-	-	-	-	-
430	24-04-2025 22:00:00	-	-	-	-	-	-	-	-
431	24-04-2025 23:00:00	-	-	-	-	-	-	-	-
432	25-04-2025 00:00:00	-	-	-	-	-	-	-	-
433	25-04-2025 01:00:00	-	-	-	-	-	-	-	-
434	25-04-2025 02:00:00	-	-	-	-	-	-	-	-
435	25-04-2025 03:00:00	-	-	-	-	-	-	-	-
436	25-04-2025 04:00:00	-	-	-	-	-	-	-	-
437	25-04-2025 05:00:00	-	-	-	-	-	-	-	-
438	25-04-2025 06:00:00	-	-	-	-	-	-	-	-
439	25-04-2025 07:00:00	1.94	972.00	95.00	0.80	80.00	70.00	1.35	31.50
440	25-04-2025 08:00:00	1.80	901.00	76.00	3.90	75.00	67.00	5.45	35.90
441	25-04-2025 09:00:00	1.77	886.00	68.00	6.60	94.00	81.00	9.20	36.90
442	25-04-2025 10:00:00	1.70	848.00	58.00	7.60	84.00	74.00	10.65	38.90
443	25-04-2025 11:00:00	1.63	816.00	42.00	7.80	69.00	61.00	10.65	41.50
444	25-04-2025 12:00:00	1.51	753.00	31.00	8.00	58.00	52.00	11.14	44.90
445	25-04-2025 13:00:00	1.41	704.00	20.00	7.90	38.00	34.00	11.09	48.60
446	25-04-2025 14:00:00	1.39	695.00	17.00	8.00	42.00	38.00	11.13	51.40
447	25-04-2025 15:00:00	1.41	706.00	17.00	0.00	46.00	41.00	0.00	51.40
448	25-04-2025 16:00:00	1.42	709.00	15.00	0.00	47.00	42.00	0.00	50.50
449	25-04-2025 17:00:00	1.44	721.00	17.00	6.80	68.00	57.00	9.52	48.00
450	25-04-2025 18:00:00	1.45	725.00	35.00	7.90	43.00	39.00	11.03	41.90
451	25-04-2025 19:00:00	1.53	764.00	43.00	8.00	46.00	41.00	11.14	38.40
452	25-04-2025 20:00:00	1.56	779.00	43.00	6.30	53.00	47.00	8.82	38.50
453	25-04-2025 21:00:00	1.63	814.00	48.00	6.60	57.00	51.00	9.28	37.50
454	25-04-2025 22:00:00	1.73	866.00	57.00	0.90	72.00	63.00	1.19	36.10
455	25-04-2025 23:00:00	1.76	881.00	65.00	0.80	56.00	50.00	1.06	34.80
456	26-04-2025 00:00:00	1.78	891.00	71.00	0.00	62.00	55.00	0.00	33.80
457	26-04-2025 01:00:00	1.84	921.00	74.00	0.70	76.00	68.00	0.92	33.20
458	26-04-2025 02:00:00	1.92	961.00	78.00	0.60	67.00	60.00	0.81	33.40
459	26-04-2025 03:00:00	2.11	1057.00	80.00	0.50	67.00	60.00	0.66	32.90
460	26-04-2025 04:00:00	2.05	1024.00	81.00	0.60	69.00	61.00	0.78	33.10
461	26-04-2025 05:00:00	2.04	1019.00	83.00	0.70	67.00	60.00	0.98	32.70
462	26-04-2025 06:00:00	1.95	976.00	80.00	0.60	89.00	78.00	0.78	33.60
463	26-04-2025 07:00:00	1.88	939.00	79.00	0.90	95.00	84.00	1.22	34.30
464	26-04-2025 08:00:00	1.75	875.00	70.00	1.50	58.00	53.00	2.06	36.80
465	26-04-2025 09:00:00	1.78	892.00	68.00	4.50	73.00	64.00	5.23	37.20
466	26-04-2025 10:00:00	1.70	849.00	60.00	0.00	65.00	57.00	0.00	39.50
467	26-04-2025 11:00:00	1.66	832.00	55.00	7.80	62.00	55.00	10.93	41.30
468	26-04-2025 12:00:00	1.60	802.00	48.00	8.00	58.00	53.00	11.17	43.70
469	26-04-2025 13:00:00	1.59	794.00	41.00	8.00	57.00	51.00	11.17	46.90
470	26-04-2025 14:00:00	1.59	794.00	38.00	8.00	62.00	55.00	11.17	49.10
471	26-04-2025 15:00:00	1.58	792.00	39.00	8.00	66.00	58.00	11.17	48.30

Corporate Office,
APDCL

472	26-04-2025 16:00:00	1.53	764.00	48.00	0.00	58.00	52.00	0.00	43.50
473	26-04-2025 17:00:00	1.57	785.00	56.00	8.00	52.00	46.00	11.17	40.80
474	26-04-2025 18:00:00	1.61	804.00	58.00	8.00	49.00	45.00	11.14	39.90
475	26-04-2025 19:00:00	1.61	805.00	59.00	7.90	45.00	40.00	11.09	39.60
476	26-04-2025 20:00:00	1.65	824.00	63.00	7.20	50.00	45.00	10.09	38.60
477	26-04-2025 21:00:00	-	-	-	-	-	-	-	-
478	26-04-2025 22:00:00	-	-	-	-	-	-	-	-
479	26-04-2025 23:00:00	-	-	-	-	-	-	-	-
480	27-04-2025 00:00:00	-	-	-	-	-	-	-	-
481	27-04-2025 01:00:00	-	-	-	-	-	-	-	-
482	27-04-2025 02:00:00	-	-	-	-	-	-	-	-
483	27-04-2025 03:00:00	-	-	-	-	-	-	-	-
484	27-04-2025 04:00:00	-	-	-	-	-	-	-	-
485	27-04-2025 05:00:00	-	-	-	-	-	-	-	-
486	27-04-2025 06:00:00	-	-	-	-	-	-	-	-
487	27-04-2025 07:00:00	1.63	816.00	59.00	7.40	70.00	62.00	10.35	32.10
488	27-04-2025 08:00:00	1.68	841.00	61.00	7.90	61.00	53.00	11.03	33.30
489	27-04-2025 09:00:00	1.65	827.00	57.00	8.00	57.00	52.00	11.14	34.30
490	27-04-2025 10:00:00	1.63	814.00	56.00	8.00	54.00	48.00	11.17	35.00
491	27-04-2025 11:00:00	1.60	799.00	51.00	8.00	48.00	44.00	11.17	36.20
492	27-04-2025 12:00:00	1.62	811.00	55.00	8.00	52.00	46.00	11.14	34.70
493	27-04-2025 13:00:00	1.64	820.00	54.00	8.00	56.00	50.00	11.17	36.10
494	27-04-2025 14:00:00	1.65	823.00	55.00	8.00	58.00	53.00	11.17	36.20
495	27-04-2025 15:00:00	1.67	833.00	54.00	8.00	62.00	55.00	11.17	35.80
496	27-04-2025 16:00:00	1.68	842.00	58.00	8.00	58.00	53.00	11.14	35.60
497	27-04-2025 17:00:00	1.67	837.00	54.00	8.00	64.00	57.00	11.14	35.60
498	27-04-2025 18:00:00	1.70	851.00	57.00	8.00	62.00	55.00	11.17	35.00
499	27-04-2025 19:00:00	1.71	856.00	60.00	7.90	62.00	55.00	11.12	33.80
500	27-04-2025 20:00:00	1.77	884.00	65.00	7.80	77.00	68.00	10.88	32.90
501	27-04-2025 21:00:00	1.79	896.00	66.00	7.60	87.00	78.00	10.65	31.80
502	27-04-2025 22:00:00	1.75	873.00	65.00	8.00	72.00	63.00	11.14	31.80
503	27-04-2025 23:00:00	1.83	913.00	69.00	7.40	79.00	70.00	10.33	31.40
504	28-04-2025 00:00:00	1.84	922.00	69.00	5.00	89.00	79.00	7.00	31.10
505	28-04-2025 01:00:00	1.86	931.00	72.00	6.70	85.00	75.00	9.41	30.40
506	28-04-2025 02:00:00	1.87	933.00	72.00	7.20	85.00	75.00	10.07	30.00
507	28-04-2025 03:00:00	1.85	923.00	68.00	0.00	67.00	60.00	0.00	29.70
508	28-04-2025 04:00:00	1.83	913.00	65.00	6.60	53.00	47.00	9.17	29.80
509	28-04-2025 05:00:00	1.79	896.00	65.00	7.80	62.00	55.00	10.85	29.50
510	28-04-2025 06:00:00	1.75	875.00	70.00	7.80	60.00	53.00	10.91	30.50
511	28-04-2025 07:00:00	1.69	843.00	66.00	8.00	50.00	45.00	11.17	31.60
512	28-04-2025 08:00:00	1.68	841.00	68.00	8.00	38.00	34.00	11.17	30.20
513	28-04-2025 09:00:00	1.61	804.00	58.00	8.00	33.00	30.00	11.17	32.40
514	28-04-2025 10:00:00	-	-	-	-	-	-	-	-
515	28-04-2025 11:00:00	1.67	834.00	64.00	8.00	40.00	36.00	11.17	31.80
516	28-04-2025 12:00:00	1.59	796.00	57.00	8.00	38.00	34.00	11.17	34.60
517	28-04-2025 13:00:00	1.60	799.00	54.00	8.00	40.00	36.00	11.17	36.10
518	28-04-2025 14:00:00	1.54	772.00	49.00	8.00	40.00	36.00	11.17	39.60
519	28-04-2025 15:00:00	1.57	787.00	49.00	8.00	49.00	45.00	11.17	39.50
520	28-04-2025 16:00:00	1.58	789.00	49.00	8.00	46.00	41.00	11.17	39.20
521	28-04-2025 17:00:00	1.58	788.00	53.00	8.00	51.00	46.00	11.17	36.90
522	28-04-2025 18:00:00	1.59	797.00	57.00	8.00	51.00	46.00	11.17	34.00
523	28-04-2025 19:00:00	1.65	824.00	61.00	8.00	49.00	45.00	11.17	32.30
524	28-04-2025 20:00:00	1.68	841.00	65.00	8.00	54.00	47.00	11.17	31.60
525	28-04-2025 21:00:00	1.72	860.00	68.00	8.00	49.00	45.00	11.17	30.90
526	28-04-2025 22:00:00	1.74	871.00	74.00	7.90	56.00	50.00	11.06	30.00
527	28-04-2025 23:00:00	1.75	875.00	73.00	0.00	48.00	43.00	0.00	29.60
528	29-04-2025 00:00:00	1.76	879.00	72.00	7.80	57.00	52.00	10.92	29.40
529	29-04-2025 01:00:00	1.76	878.00	77.00	7.80	49.00	45.00	10.88	28.50
530	29-04-2025 02:00:00	1.82	908.00	78.00	0.00	52.00	46.00	0.00	28.10
531	29-04-2025 03:00:00	1.81	905.00	80.00	4.40	51.00	46.00	6.20	27.60
532	29-04-2025 04:00:00	1.86	928.00	80.00	2.40	53.00	47.00	3.35	27.40
533	29-04-2025 05:00:00	1.88	942.00	82.00	3.70	49.00	45.00	5.11	27.10
534	29-04-2025 06:00:00	-	-	-	-	-	-	-	-
535	29-04-2025 07:00:00	1.75	875.00	77.00	7.80	56.00	50.00	10.86	29.40
536	29-04-2025 08:00:00	1.70	850.00	71.00	8.00	56.00	50.00	11.17	31.30
537	29-04-2025 09:00:00	1.65	827.00	63.00	8.00	51.00	46.00	11.17	33.00
538	29-04-2025 10:00:00	1.62	810.00	55.00	8.00	43.00	39.00	11.17	34.80
539	29-04-2025 11:00:00	1.61	803.00	52.00	8.00	37.00	33.00	11.17	34.40
540	29-04-2025 12:00:00	1.60	802.00	49.00	8.00	35.00	32.00	11.17	35.90
541	29-04-2025 13:00:00	1.61	804.00	48.00	8.00	38.00	34.00	11.17	36.00
542	29-04-2025 14:00:00	1.54	768.00	43.00	8.00	33.00	30.00	11.17	39.20
543	29-04-2025 15:00:00	1.55	775.00	45.00	8.00	33.00	30.00	11.17	36.40
544	29-04-2025 16:00:00	1.55	777.00	42.00	8.00	34.00	31.00	11.17	38.50
545	29-04-2025 17:00:00	1.55	777.00	44.00	8.00	40.00	36.00	11.17	36.50
546	29-04-2025 18:00:00	1.55	777.00	48.00	8.00	38.00	34.00	11.17	33.60
547	29-04-2025 19:00:00	1.61	805.00	54.00	8.00	42.00	38.00	11.17	31.80
548	29-04-2025 20:00:00	1.73	864.00	59.00	7.30	63.00	56.00	10.19	31.40
549	29-04-2025 21:00:00	1.73	865.00	62.00	0.00	56.00	50.00	0.00	31.20
550	29-04-2025 22:00:00	1.77	885.00	63.00	7.20	57.00	51.00	10.14	31.00
551	29-04-2025 23:00:00	1.77	883.00	65.00	7.90	57.00	52.00	11.09	30.50

Director (Mining)
Corporate Office,
WBPDCL

552	30-04-2025 00:00:00	1.80	900.00	70.00	7.90	65.00	57.00	10.99	29.90
553	30-04-2025 01:00:00	1.83	915.00	73.00	7.10	69.00	61.00	9.87	29.70
554	30-04-2025 02:00:00	1.84	920.00	75.00	7.40	68.00	62.00	10.36	29.40
555	30-04-2025 03:00:00	1.82	909.00	76.00	7.90	57.00	51.00	11.12	29.00
556	30-04-2025 04:00:00	1.82	910.00	76.00	8.00	54.00	48.00	11.13	29.00
557	30-04-2025 05:00:00	1.81	906.00	77.00	8.00	54.00	49.00	11.14	28.60
558	30-04-2025 06:00:00	1.81	907.00	76.00	7.90	53.00	47.00	11.12	29.20
559	30-04-2025 07:00:00	1.75	876.00	72.00	8.00	49.00	45.00	11.14	30.50
560	30-04-2025 08:00:00	1.72	861.00	69.00	8.00	49.00	45.00	11.17	31.60
561	30-04-2025 09:00:00	1.66	829.00	62.00	8.00	50.00	45.00	11.17	33.80
562	30-04-2025 10:00:00	1.65	826.00	58.00	8.00	48.00	44.00	11.17	35.10
563	30-04-2025 11:00:00	1.64	819.00	56.00	8.00	49.00	45.00	11.17	36.60
564	30-04-2025 12:00:00	1.62	809.00	53.00	8.00	51.00	46.00	11.17	38.00
565	30-04-2025 13:00:00	1.60	801.00	50.00	8.00	49.00	45.00	11.17	39.40
566	30-04-2025 14:00:00	1.56	781.00	45.00	8.00	46.00	41.00	11.17	41.50
567	30-04-2025 15:00:00	1.59	793.00	44.00	8.00	46.00	41.00	11.17	41.60
568	30-04-2025 16:00:00	1.59	793.00	51.00	8.00	45.00	39.00	11.17	37.20
569	30-04-2025 17:00:00	1.68	838.00	61.00	8.00	49.00	43.00	11.14	32.30
570	30-04-2025 18:00:00	1.73	867.00	67.00	8.00	56.00	50.00	11.14	31.70
571	30-04-2025 19:00:00	1.72	861.00	65.00	8.00	47.00	42.00	11.17	31.50
572	30-04-2025 20:00:00	1.76	881.00	72.00	7.50	61.00	54.00	10.51	30.40
573	30-04-2025 21:00:00	1.84	922.00	72.00	0.00	62.00	55.00	0.00	30.60
574	30-04-2025 22:00:00	1.86	931.00	74.00	7.30	61.00	54.00	10.22	30.30
575	30-04-2025 23:00:00	1.88	941.00	75.00	6.70	63.00	56.00	9.31	29.50
576	01-05-2025 00:00:00	1.88	938.00	74.00	6.90	52.00	46.00	9.67	29.30
577	01-05-2025 01:00:00	1.89	943.00	75.00	5.00	53.00	47.00	7.04	28.70
578	01-05-2025 02:00:00	1.89	944.00	75.00	4.50	51.00	46.00	6.24	28.70
579	01-05-2025 03:00:00	1.94	969.00	76.00	4.80	51.00	46.00	6.72	28.50
580	01-05-2025 04:00:00	1.96	981.00	76.00	1.00	55.00	49.00	1.36	28.40
581	01-05-2025 05:00:00	1.98	988.00	77.00	2.20	61.00	54.00	3.05	28.20
582	01-05-2025 06:00:00	1.93	964.00	75.00	5.70	55.00	49.00	8.04	29.30
583	01-05-2025 07:00:00	1.82	912.00	70.00	7.80	56.00	50.00	10.88	30.90
584	01-05-2025 08:00:00	1.70	849.00	62.00	8.00	45.00	40.00	11.17	33.50
585	01-05-2025 09:00:00	-	-	-	-	-	-	-	-
586	01-05-2025 10:00:00	1.65	827.00	57.00	8.00	39.00	35.00	11.17	36.10
587	01-05-2025 11:00:00	1.61	807.00	52.00	8.00	34.00	31.00	11.17	37.90
588	01-05-2025 12:00:00	1.58	790.00	47.00	8.00	33.00	30.00	11.17	39.40
589	01-05-2025 13:00:00	-	-	-	-	-	-	-	-
590	01-05-2025 14:00:00	1.65	826.00	54.00	8.00	39.00	35.00	11.13	34.60
591	01-05-2025 15:00:00	1.65	826.00	54.00	8.00	39.00	35.00	11.13	34.60
592	01-05-2025 16:00:00	1.65	826.00	54.00	8.00	39.00	35.00	11.13	34.60
593	01-05-2025 17:00:00	1.65	826.00	54.00	8.00	39.00	35.00	11.13	34.60
594	01-05-2025 18:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
595	01-05-2025 19:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
596	01-05-2025 20:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
597	01-05-2025 21:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
598	01-05-2025 22:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
599	01-05-2025 23:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
600	02-05-2025 00:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
601	02-05-2025 01:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
602	02-05-2025 02:00:00	1.64	822.00	54.00	8.00	38.00	34.00	11.17	34.60
603	02-05-2025 03:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
604	02-05-2025 04:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
605	02-05-2025 05:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
606	02-05-2025 06:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
607	02-05-2025 07:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
608	02-05-2025 08:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
609	02-05-2025 09:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
610	02-05-2025 10:00:00	1.60	799.00	55.00	8.00	38.00	34.00	11.17	34.70
611	02-05-2025 11:00:00	1.58	790.00	56.00	8.00	38.00	34.00	11.17	34.70
612	02-05-2025 12:00:00	1.60	798.00	53.00	8.00	33.00	30.00	11.17	36.00
613	02-05-2025 13:00:00	1.60	799.00	49.00	8.00	37.00	33.00	11.17	37.50
614	02-05-2025 14:00:00	1.52	762.00	42.00	8.00	35.00	32.00	11.17	42.40
615	02-05-2025 15:00:00	1.54	768.00	39.00	8.00	37.00	33.00	11.17	42.60
616	02-05-2025 16:00:00	1.56	781.00	40.00	8.00	33.00	30.00	11.17	42.40
617	02-05-2025 17:00:00	1.55	774.00	41.00	8.00	33.00	30.00	11.17	40.70
618	02-05-2025 18:00:00	1.58	790.00	48.00	8.00	32.00	29.00	11.17	37.50
619	02-05-2025 19:00:00	1.65	826.00	53.00	7.90	32.00	29.00	10.99	35.80
620	02-05-2025 20:00:00	1.73	864.00	55.00	6.10	70.00	62.00	8.57	34.70
621	02-05-2025 21:00:00	1.80	900.00	61.00	6.20	80.00	71.00	8.71	33.20
622	02-05-2025 22:00:00	1.86	932.00	65.00	6.20	62.00	55.00	8.67	32.40
623	02-05-2025 23:00:00	1.90	949.00	65.00	7.70	68.00	61.00	10.78	31.90
624	03-05-2025 00:00:00	2.01	1005.00	68.00	5.10	61.00	54.00	7.20	31.50
625	03-05-2025 01:00:00	2.03	1013.00	70.00	0.90	72.00	63.00	1.32	31.20
626	03-05-2025 02:00:00	2.06	1031.00	71.00	0.90	73.00	65.00	1.29	31.00
627	03-05-2025 03:00:00	2.03	1017.00	71.00	0.90	81.00	72.00	1.25	30.70
628	03-05-2025 04:00:00	2.11	1054.00	71.00	0.80	73.00	65.00	1.09	30.90
629	03-05-2025 05:00:00	2.15	1073.00	75.00	0.80	74.00	66.00	1.18	29.50
630	03-05-2025 06:00:00	2.10	1051.00	74.00	5.30	69.00	62.00	7.42	30.10
631	03-05-2025 07:00:00	1.93	965.00	69.00	6.20	68.00	61.00	8.67	32.60



632	03-05-2025 08:00:00	1.89	947.00	65.00	6.00	73.00	64.00	8.46	34.50
633	03-05-2025 09:00:00	1.74	871.00	61.00	7.50	63.00	56.00	10.43	36.20
634	03-05-2025 10:00:00	1.68	841.00	53.00	7.90	58.00	53.00	11.12	37.20
635	03-05-2025 11:00:00	1.65	827.00	50.00	8.00	54.00	48.00	11.17	38.60
636	03-05-2025 12:00:00	1.69	846.00	50.00	7.80	51.00	46.00	10.86	40.10
637	03-05-2025 13:00:00	1.62	809.00	46.00	8.00	48.00	44.00	11.17	41.00
638	03-05-2025 14:00:00	1.58	792.00	45.00	8.00	46.00	41.00	11.17	42.60
639	03-05-2025 15:00:00	1.60	802.00	47.00	8.00	57.00	33.00	11.17	40.80
640	03-05-2025 16:00:00	1.60	802.00	46.00	8.00	42.00	38.00	11.17	41.10
641	03-05-2025 17:00:00	1.62	810.00	50.00	8.00	40.00	36.00	11.17	38.50
642	03-05-2025 18:00:00	1.63	815.00	52.00	8.00	45.00	40.00	11.17	37.40
643	03-05-2025 19:00:00	1.69	845.00	56.00	8.00	58.00	52.00	11.17	35.90
644	03-05-2025 20:00:00	1.66	829.00	62.00	8.00	34.00	31.00	11.17	30.90
645	03-05-2025 21:00:00	1.77	885.00	77.00	8.00	45.00	40.00	11.17	28.60
646	03-05-2025 22:00:00	1.74	869.00	73.00	8.00	47.00	42.00	11.17	29.60
647	03-05-2025 23:00:00	1.81	905.00	72.00	7.90	46.00	41.00	11.12	30.10
648	04-05-2025 00:00:00	1.85	924.00	76.00	7.90	48.00	44.00	11.02	29.00
649	04-05-2025 01:00:00	1.92	958.00	76.00	7.80	49.00	45.00	10.93	29.50
650	04-05-2025 02:00:00	1.93	954.00	76.00	7.50	56.00	50.00	10.43	29.40
651	04-05-2025 03:00:00	1.92	958.00	77.00	0.00	54.00	48.00	0.00	29.10
652	04-05-2025 04:00:00	1.92	960.00	77.00	7.20	58.00	53.00	10.12	28.90
653	04-05-2025 05:00:00	1.92	962.00	79.00	6.50	62.00	55.00	9.13	28.50
654	04-05-2025 06:00:00	1.91	953.00	76.00	7.10	61.00	54.00	9.88	29.40
655	04-05-2025 07:00:00	1.85	925.00	72.00	6.70	75.00	67.00	9.31	30.70
656	04-05-2025 08:00:00	1.79	895.00	69.00	7.80	90.00	79.00	10.96	31.80
657	04-05-2025 09:00:00	1.76	881.00	65.00	7.60	86.00	77.00	10.64	33.00
658	04-05-2025 10:00:00	1.74	868.00	61.00	8.00	75.00	67.00	11.14	34.80
659	04-05-2025 11:00:00	1.70	848.00	56.00	8.00	74.00	66.00	11.17	36.10
660	04-05-2025 12:00:00	1.65	827.00	50.00	8.00	63.00	56.00	11.17	38.40
661	04-05-2025 13:00:00	1.62	808.00	45.00	8.00	54.00	48.00	11.17	40.10
662	04-05-2025 14:00:00	1.59	794.00	41.00	8.00	47.00	42.00	11.17	43.20
663	04-05-2025 15:00:00	1.64	822.00	40.00	8.00	43.00	39.00	11.17	42.00
664	04-05-2025 16:00:00	1.63	813.00	42.00	8.00	45.00	40.00	11.17	41.10
665	04-05-2025 17:00:00	1.62	811.00	42.00	8.00	41.00	37.00	11.17	39.90
666	04-05-2025 18:00:00	1.62	811.00	48.00	8.00	55.00	47.00	11.17	37.90
667	04-05-2025 19:00:00	1.64	820.00	49.00	8.00	61.00	54.00	11.14	36.70
668	04-05-2025 20:00:00	1.71	853.00	56.00	7.30	68.00	61.00	10.18	35.30
669	04-05-2025 21:00:00	1.85	926.00	61.00	0.00	83.00	73.00	0.00	34.00
670	04-05-2025 22:00:00	1.84	918.00	61.00	2.60	61.00	54.00	3.58	34.00
671	04-05-2025 23:00:00	1.95	973.00	64.00	1.00	73.00	64.00	1.37	32.90
672	05-05-2025 00:00:00	1.94	972.00	67.00	0.80	79.00	69.00	1.16	32.50
673	05-05-2025 01:00:00	1.94	972.00	68.00	0.90	66.00	59.00	1.25	32.30
674	05-05-2025 02:00:00	2.03	1015.00	72.00	0.80	61.00	54.00	1.16	31.50
675	05-05-2025 03:00:00	1.96	978.00	71.00	0.90	74.00	66.00	1.27	31.90
676	05-05-2025 04:00:00	2.07	1035.00	73.00	0.90	66.00	58.00	1.23	31.60
677	05-05-2025 05:00:00	2.12	1061.00	74.00	0.90	73.00	64.00	1.22	31.50
678	05-05-2025 06:00:00	2.10	1048.00	74.00	1.00	72.00	63.00	1.34	32.10
679	05-05-2025 07:00:00	1.95	977.00	70.00	4.40	75.00	67.00	6.15	33.50
680	05-05-2025 08:00:00	1.83	915.00	63.00	7.60	78.00	69.00	10.70	35.40
681	05-05-2025 09:00:00	1.72	858.00	59.00	8.00	50.00	45.00	11.14	36.70
682	05-05-2025 10:00:00	1.67	835.00	55.00	8.00	54.00	48.00	11.17	38.30
683	05-05-2025 11:00:00	1.66	832.00	54.00	8.00	49.00	44.00	11.17	38.60
684	05-05-2025 12:00:00	1.62	810.00	49.00	8.00	56.00	50.00	11.17	40.40
685	05-05-2025 13:00:00	1.62	811.00	47.00	8.00	49.00	45.00	11.17	40.60
686	05-05-2025 14:00:00	1.60	801.00	43.00	8.00	56.00	50.00	11.17	43.20
687	05-05-2025 15:00:00	1.59	795.00	41.00	8.00	49.00	45.00	11.17	42.70
688	05-05-2025 16:00:00	1.59	795.00	40.00	0.00	51.00	46.00	0.00	42.40
689	05-05-2025 17:00:00	1.60	800.00	42.00	8.00	52.00	46.00	11.17	41.10
690	05-05-2025 18:00:00	1.64	820.00	47.00	7.60	56.00	50.00	10.60	39.50
691	05-05-2025 19:00:00	1.70	852.00	53.00	7.60	75.00	67.00	10.57	37.90
692	05-05-2025 20:00:00	1.72	858.00	55.00	0.00	71.00	62.00	0.00	37.20
693	05-05-2025 21:00:00	1.76	881.00	56.00	7.40	63.00	56.00	10.36	36.60
694	05-05-2025 22:00:00	1.72	862.00	57.00	6.60	68.00	61.00	9.28	36.10
695	05-05-2025 23:00:00	1.76	881.00	59.00	7.10	71.00	62.00	9.88	35.60
696	06-05-2025 00:00:00	1.75	875.00	63.00	7.80	69.00	56.00	10.98	34.20
697	06-05-2025 01:00:00	1.80	898.00	60.00	7.30	65.00	57.00	10.25	35.50
698	06-05-2025 02:00:00	1.90	950.00	62.00	2.90	66.00	57.00	4.06	35.30
699	06-05-2025 03:00:00	1.95	973.00	65.00	4.30	60.00	53.00	6.02	34.70
700	06-05-2025 04:00:00	1.87	934.00	65.00	0.00	64.00	57.00	0.00	33.90
701	06-05-2025 05:00:00	1.95	974.00	68.00	2.60	66.00	59.00	3.64	33.90
702	06-05-2025 06:00:00	1.67	833.00	59.00	8.00	45.00	40.00	11.17	32.30
703	06-05-2025 07:00:00	1.66	830.00	58.00	8.00	39.00	35.00	11.17	33.70
704	06-05-2025 08:00:00	1.64	822.00	54.00	8.00	37.00	33.00	11.17	35.10
705	06-05-2025 09:00:00	1.62	810.00	52.00	8.00	35.00	32.00	11.17	36.40
706	06-05-2025 10:00:00	1.69	845.00	55.00	8.00	54.00	48.00	11.17	36.70
707	06-05-2025 11:00:00	1.66	830.00	54.00	8.00	48.00	43.00	11.17	37.80
708	06-05-2025 12:00:00	1.64	819.00	53.00	8.00	52.00	46.00	11.17	38.90
709	06-05-2025 13:00:00	1.62	810.00	50.00	8.00	48.00	43.00	11.17	40.40
710	06-05-2025 14:00:00	1.57	783.00	43.00	0.00	54.00	48.00	0.00	43.60
711	06-05-2025 15:00:00	1.58	792.00	41.00	8.00	54.00	48.00	11.17	44.20

Director (Mining)
Corporate Office
HPPCL

712	06-05-2025 16:00:00	1.59	793.00	46.00	8.00	55.00	48.00	11.17	39.60
713	06-05-2025 17:00:00	1.59	798.00	46.00	8.00	50.00	45.00	11.17	41.00
714	06-05-2025 18:00:00	1.62	809.00	49.00	8.00	49.00	45.00	11.17	39.00
715	06-05-2025 19:00:00	1.66	830.00	56.00	8.00	54.00	48.00	11.14	36.50
716	06-05-2025 20:00:00	1.77	883.00	59.00	2.70	91.00	77.00	3.74	35.50
717	06-05-2025 21:00:00	1.73	866.00	63.00	7.90	61.00	54.00	11.12	34.50
718	06-05-2025 22:00:00	1.78	889.00	65.00	3.60	66.00	58.00	5.03	34.10
719	06-05-2025 23:00:00	1.79	893.00	67.00	2.60	67.00	60.00	3.68	33.10
720	07-05-2025 00:00:00	1.79	894.00	65.00	1.00	63.00	56.00	1.39	34.10
721	07-05-2025 01:00:00	1.81	907.00	65.00	3.20	56.00	50.00	4.48	33.60
722	07-05-2025 02:00:00	1.86	930.00	64.00	0.00	63.00	56.00	0.00	34.00
723	07-05-2025 03:00:00	1.82	910.00	66.00	3.10	69.00	61.00	4.40	33.10
724	07-05-2025 04:00:00	1.96	979.00	66.00	0.60	67.00	60.00	0.88	32.80
725	07-05-2025 05:00:00	2.02	1011.00	68.00	0.60	62.00	54.00	0.81	32.30
726	07-05-2025 06:00:00	1.98	991.00	67.00	0.40	76.00	68.00	0.60	33.50
727	07-05-2025 07:00:00	1.85	925.00	63.00	3.60	78.00	69.00	5.08	34.60
728	07-05-2025 08:00:00	1.80	900.00	56.00	7.80	75.00	67.00	10.96	36.10
729	07-05-2025 09:00:00	1.71	856.00	52.00	7.90	66.00	59.00	11.07	37.70
730	07-05-2025 10:00:00	1.59	797.00	44.00	8.00	56.00	50.00	11.17	40.00
731	07-05-2025 11:00:00	1.60	802.00	41.00	8.00	51.00	46.00	11.17	41.00
732	07-05-2025 12:00:00	1.72	858.00	48.00	7.60	74.00	66.00	10.57	40.80
733	07-05-2025 13:00:00	1.72	858.00	48.00	7.60	74.00	66.00	10.57	40.80
734	07-05-2025 14:00:00	1.72	858.00	48.00	7.60	74.00	66.00	10.57	40.80
735	07-05-2025 15:00:00	1.72	858.00	48.00	7.60	74.00	66.00	10.57	40.80
736	07-05-2025 16:00:00	1.72	858.00	48.00	7.60	74.00	66.00	10.57	40.80
737	07-05-2025 17:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
738	07-05-2025 18:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
739	07-05-2025 19:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
740	07-05-2025 20:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
741	07-05-2025 21:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
742	07-05-2025 22:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
743	07-05-2025 23:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
744	08-05-2025 00:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
745	08-05-2025 01:00:00	1.00	500.00	48.00	7.30	73.00	65.00	10.19	40.80
746	08-05-2025 02:00:00	1.00	500.00	47.00	0.90	67.00	59.00	1.23	41.00
747	08-05-2025 03:00:00	1.00	500.00	47.00	0.90	67.00	59.00	1.23	41.00
748	08-05-2025 04:00:00	1.00	500.00	47.00	0.90	67.00	59.00	1.23	41.00
749	08-05-2025 05:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
750	08-05-2025 06:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
751	08-05-2025 07:00:00	-	-	-	-	-	-	-	-
752	08-05-2025 08:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
753	08-05-2025 09:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
754	08-05-2025 10:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
755	08-05-2025 11:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
756	08-05-2025 12:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
757	08-05-2025 13:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
758	08-05-2025 14:00:00	1.72	860.00	47.00	7.70	71.00	62.00	10.75	40.90
759	08-05-2025 15:00:00	1.72	858.00	47.00	7.30	73.00	63.00	10.23	40.90
760	08-05-2025 16:00:00	1.72	858.00	47.00	7.30	73.00	63.00	10.23	40.90
761	08-05-2025 17:00:00	1.72	858.00	47.00	7.30	73.00	63.00	10.23	40.90
762	08-05-2025 18:00:00	1.71	857.00	47.00	7.20	72.00	63.00	10.04	40.90
763	08-05-2025 19:00:00	1.61	804.00	63.00	8.00	41.00	37.00	11.17	32.80
764	08-05-2025 20:00:00	-	-	-	-	-	-	-	-
765	08-05-2025 21:00:00	-	-	-	-	-	-	-	-
766	08-05-2025 22:00:00	-	-	-	-	-	-	-	-
767	08-05-2025 23:00:00	-	-	-	-	-	-	-	-
768	09-05-2025 00:00:00	-	-	-	-	-	-	-	-
769	09-05-2025 01:00:00	-	-	-	-	-	-	-	-
770	09-05-2025 02:00:00	-	-	-	-	-	-	-	-
771	09-05-2025 03:00:00	-	-	-	-	-	-	-	-
772	09-05-2025 04:00:00	-	-	-	-	-	-	-	-
773	09-05-2025 05:00:00	-	-	-	-	-	-	-	-
774	09-05-2025 06:00:00	-	-	-	-	-	-	-	-
775	09-05-2025 07:00:00	-	-	-	-	-	-	-	-
776	09-05-2025 08:00:00	-	-	-	-	-	-	-	-
777	09-05-2025 09:00:00	-	-	-	-	-	-	-	-
778	09-05-2025 10:00:00	-	-	-	-	-	-	-	-
779	09-05-2025 11:00:00	-	-	-	-	-	-	-	-
780	09-05-2025 12:00:00	-	-	-	-	-	-	-	-
781	09-05-2025 13:00:00	-	-	-	-	-	-	-	-
782	09-05-2025 14:00:00	-	-	-	-	-	-	-	-
783	09-05-2025 15:00:00	-	-	-	-	-	-	-	-
784	09-05-2025 16:00:00	-	-	-	-	-	-	-	-
785	09-05-2025 17:00:00	-	-	-	-	-	-	-	-
786	09-05-2025 18:00:00	-	-	-	-	-	-	-	-
787	09-05-2025 19:00:00	-	-	-	-	-	-	-	-
788	09-05-2025 20:00:00	-	-	-	-	-	-	-	-
789	09-05-2025 21:00:00	-	-	-	-	-	-	-	-
790	09-05-2025 22:00:00	-	-	-	-	-	-	-	-
791	09-05-2025 23:00:00	-	-	-	-	-	-	-	-

Director (Finance)
Corporate Office,
WBPDCL

792	10-05-2025 00:00:00	-	-	-	-	-	-	-	-
793	10-05-2025 01:00:00	-	-	-	-	-	-	-	-
794	10-05-2025 02:00:00	-	-	-	-	-	-	-	-
795	10-05-2025 03:00:00	-	-	-	-	-	-	-	-
796	10-05-2025 04:00:00	-	-	-	-	-	-	-	-
797	10-05-2025 05:00:00	-	-	-	-	-	-	-	-
798	10-05-2025 07:00:00	-	-	-	-	-	-	-	-
799	10-05-2025 08:00:00	-	-	-	-	-	-	-	-
800	10-05-2025 09:00:00	-	-	-	-	-	-	-	-
801	10-05-2025 10:00:00	-	-	-	-	-	-	-	-
802	10-05-2025 11:00:00	-	-	-	-	-	-	-	-
803	10-05-2025 12:00:00	-	-	-	-	-	-	-	-
804	10-05-2025 13:00:00	-	-	-	-	-	-	-	-
805	10-05-2025 14:00:00	-	-	-	-	-	-	-	-
806	10-05-2025 15:00:00	-	-	-	-	-	-	-	-
807	10-05-2025 16:00:00	-	-	-	-	-	-	-	-
808	10-05-2025 17:00:00	-	-	-	-	-	-	-	-
809	10-05-2025 18:00:00	-	-	-	-	-	-	-	-
810	10-05-2025 19:00:00	-	-	-	-	-	-	-	-
811	10-05-2025 20:00:00	-	-	-	-	-	-	-	-
812	10-05-2025 21:00:00	-	-	-	-	-	-	-	-
813	10-05-2025 22:00:00	-	-	-	-	-	-	-	-
814	10-05-2025 23:00:00	-	-	-	-	-	-	-	-
815	11-05-2025 00:00:00	-	-	-	-	-	-	-	-
816	11-05-2025 01:00:00	-	-	-	-	-	-	-	-
817	11-05-2025 02:00:00	-	-	-	-	-	-	-	-
818	11-05-2025 03:00:00	-	-	-	-	-	-	-	-
819	11-05-2025 04:00:00	-	-	-	-	-	-	-	-
820	11-05-2025 05:00:00	-	-	-	-	-	-	-	-
821	11-05-2025 06:00:00	-	-	-	-	-	-	-	-
822	11-05-2025 07:00:00	-	-	-	-	-	-	-	-
823	11-05-2025 08:00:00	-	-	-	-	-	-	-	-
824	11-05-2025 09:00:00	-	-	-	-	-	-	-	-
825	11-05-2025 10:00:00	-	-	-	-	-	-	-	-
826	11-05-2025 11:00:00	-	-	-	-	-	-	-	-
827	11-05-2025 12:00:00	-	-	-	-	-	-	-	-
828	11-05-2025 13:00:00	-	-	-	-	-	-	-	-
829	11-05-2025 14:00:00	-	-	-	-	-	-	-	-
830	11-05-2025 15:00:00	-	-	-	-	-	-	-	-
831	11-05-2025 16:00:00	-	-	-	-	-	-	-	-
832	11-05-2025 17:00:00	-	-	-	-	-	-	-	-
833	11-05-2025 18:00:00	-	-	-	-	-	-	-	-
834	11-05-2025 19:00:00	-	-	-	-	-	-	-	-
835	11-05-2025 20:00:00	-	-	-	-	-	-	-	-
836	11-05-2025 21:00:00	-	-	-	-	-	-	-	-
837	11-05-2025 22:00:00	-	-	-	-	-	-	-	-
838	11-05-2025 23:00:00	-	-	-	-	-	-	-	-
839	12-05-2025 00:00:00	-	-	-	-	-	-	-	-
840	12-05-2025 01:00:00	-	-	-	-	-	-	-	-
841	12-05-2025 02:00:00	-	-	-	-	-	-	-	-
842	12-05-2025 03:00:00	-	-	-	-	-	-	-	-
843	12-05-2025 04:00:00	-	-	-	-	-	-	-	-
844	12-05-2025 05:00:00	-	-	-	-	-	-	-	-
845	12-05-2025 06:00:00	-	-	-	-	-	-	-	-
846	12-05-2025 07:00:00	-	-	-	-	-	-	-	-
847	12-05-2025 08:00:00	-	-	-	-	-	-	-	-
848	12-05-2025 09:00:00	-	-	-	-	-	-	-	-
849	12-05-2025 10:00:00	-	-	-	-	-	-	-	-
850	12-05-2025 11:00:00	-	-	-	-	-	-	-	-
851	12-05-2025 12:00:00	-	-	-	-	-	-	-	-
852	12-05-2025 13:00:00	-	-	-	-	-	-	-	-
853	12-05-2025 14:00:00	-	-	-	-	-	-	-	-
854	12-05-2025 15:00:00	-	-	-	-	-	-	-	-
855	12-05-2025 16:00:00	-	-	-	-	-	-	-	-
856	12-05-2025 17:00:00	-	-	-	-	-	-	-	-
857	12-05-2025 18:00:00	-	-	-	-	-	-	-	-
858	12-05-2025 19:00:00	-	-	-	-	-	-	-	-
859	12-05-2025 20:00:00	-	-	-	-	-	-	-	-
860	12-05-2025 21:00:00	-	-	-	-	-	-	-	-
861	12-05-2025 22:00:00	-	-	-	-	-	-	-	-
862	12-05-2025 23:00:00	-	-	-	-	-	-	-	-
863	13-05-2025 00:00:00	-	-	-	-	-	-	-	-
864	13-05-2025 02:00:00	-	-	-	-	-	-	-	-
865	13-05-2025 03:00:00	-	-	-	-	-	-	-	-
866	13-05-2025 04:00:00	-	-	-	-	-	-	-	-
867	13-05-2025 05:00:00	-	-	-	-	-	-	-	-
868	13-05-2025 06:00:00	-	-	-	-	-	-	-	-
869	13-05-2025 07:00:00	-	-	-	-	-	-	-	-
870	13-05-2025 08:00:00	-	-	-	-	-	-	-	-
871	13-05-2025 09:00:00	-	-	-	-	-	-	-	-

Director (Mining)
Corporate Office,
DPDCL

872	13-05-2025 10:00:00	-	-	-	-	-	-	-	-
873	13-05-2025 11:00:00	-	-	-	-	-	-	-	-
874	13-05-2025 12:00:00	-	-	-	-	-	-	-	-
875	13-05-2025 13:00:00	-	-	-	-	-	-	-	-
876	13-05-2025 14:00:00	-	-	-	-	-	-	-	-
877	13-05-2025 15:00:00	-	-	-	-	-	-	-	-
878	13-05-2025 16:00:00	-	-	-	-	-	-	-	-
879	13-05-2025 17:00:00	-	-	-	-	-	-	-	-
880	13-05-2025 18:00:00	-	-	-	-	-	-	-	-
881	13-05-2025 19:00:00	-	-	-	-	-	-	-	-
882	13-05-2025 20:00:00	-	-	-	-	-	-	-	-
883	13-05-2025 21:00:00	-	-	-	-	-	-	-	-
884	13-05-2025 22:00:00	-	-	-	-	-	-	-	-
885	13-05-2025 23:00:00	-	-	-	-	-	-	-	-
886	14-05-2025 00:00:00	-	-	-	-	-	-	-	-
887	14-05-2025 01:00:00	-	-	-	-	-	-	-	-
888	14-05-2025 02:00:00	-	-	-	-	-	-	-	-
889	14-05-2025 03:00:00	-	-	-	-	-	-	-	-
890	14-05-2025 04:00:00	-	-	-	-	-	-	-	-
891	14-05-2025 05:00:00	-	-	-	-	-	-	-	-
892	14-05-2025 06:00:00	-	-	-	-	-	-	-	-
893	14-05-2025 07:00:00	-	-	-	-	-	-	-	-
894	14-05-2025 08:00:00	-	-	-	-	-	-	-	-
895	14-05-2025 09:00:00	-	-	-	-	-	-	-	-
896	14-05-2025 10:00:00	-	-	-	-	-	-	-	-
897	14-05-2025 12:00:00	-	-	-	-	-	-	-	-
898	14-05-2025 13:00:00	-	-	-	-	-	-	-	-
899	14-05-2025 14:00:00	-	-	-	-	-	-	-	-
900	14-05-2025 15:00:00	-	-	-	-	-	-	-	-
901	14-05-2025 16:00:00	-	-	-	-	-	-	-	-
902	14-05-2025 17:00:00	-	-	-	-	-	-	-	-
903	14-05-2025 18:00:00	-	-	-	-	-	-	-	-
904	14-05-2025 19:00:00	-	-	-	-	-	-	-	-
905	14-05-2025 20:00:00	-	-	-	-	-	-	-	-
906	14-05-2025 21:00:00	-	-	-	-	-	-	-	-
907	14-05-2025 22:00:00	-	-	-	-	-	-	-	-
908	14-05-2025 23:00:00	-	-	-	-	-	-	-	-
909	15-05-2025 00:00:00	-	-	-	-	-	-	-	-
910	15-05-2025 01:00:00	-	-	-	-	-	-	-	-
911	15-05-2025 02:00:00	-	-	-	-	-	-	-	-
912	15-05-2025 03:00:00	-	-	-	-	-	-	-	-
913	15-05-2025 04:00:00	-	-	-	-	-	-	-	-
914	15-05-2025 05:00:00	-	-	-	-	-	-	-	-
915	15-05-2025 06:00:00	-	-	-	-	-	-	-	-
916	15-05-2025 07:00:00	-	-	-	-	-	-	-	-
917	15-05-2025 08:00:00	-	-	-	-	-	-	-	-
918	15-05-2025 09:00:00	-	-	-	-	-	-	-	-
919	15-05-2025 10:00:00	-	-	-	-	-	-	-	-
920	15-05-2025 11:00:00	-	-	-	-	-	-	-	-
921	15-05-2025 12:00:00	-	-	-	-	-	-	-	-
922	15-05-2025 13:00:00	-	-	-	-	-	-	-	-
923	15-05-2025 14:00:00	-	-	-	-	-	-	-	-
924	15-05-2025 15:00:00	-	-	-	-	-	-	-	-
925	15-05-2025 16:00:00	-	-	-	-	-	-	-	-
926	15-05-2025 17:00:00	-	-	-	-	-	-	-	-
927	15-05-2025 18:00:00	-	-	-	-	-	-	-	-
928	15-05-2025 19:00:00	-	-	-	-	-	-	-	-
929	15-05-2025 20:00:00	-	-	-	-	-	-	-	-
930	15-05-2025 21:00:00	-	-	-	-	-	-	-	-
931	15-05-2025 22:00:00	-	-	-	-	-	-	-	-
932	15-05-2025 23:00:00	-	-	-	-	-	-	-	-
933	16-05-2025 00:00:00	-	-	-	-	-	-	-	-
934	16-05-2025 01:00:00	-	-	-	-	-	-	-	-
935	16-05-2025 02:00:00	-	-	-	-	-	-	-	-
936	16-05-2025 03:00:00	-	-	-	-	-	-	-	-
937	16-05-2025 04:00:00	-	-	-	-	-	-	-	-
938	16-05-2025 05:00:00	-	-	-	-	-	-	-	-
939	16-05-2025 06:00:00	-	-	-	-	-	-	-	-
940	16-05-2025 07:00:00	-	-	-	-	-	-	-	-
941	16-05-2025 08:00:00	-	-	-	-	-	-	-	-
942	16-05-2025 09:00:00	-	-	-	-	-	-	-	-
943	16-05-2025 10:00:00	-	-	-	-	-	-	-	-
944	16-05-2025 11:00:00	-	-	-	-	-	-	-	-
945	16-05-2025 12:00:00	-	-	-	-	-	-	-	-
946	16-05-2025 13:00:00	-	-	-	-	-	-	-	-
947	16-05-2025 14:00:00	-	-	-	-	-	-	-	-
948	16-05-2025 15:00:00	-	-	-	-	-	-	-	-
949	16-05-2025 16:00:00	-	-	-	-	-	-	-	-
950	16-05-2025 17:00:00	-	-	-	-	-	-	-	-
951	16-05-2025 18:00:00	-	-	-	-	-	-	-	-

Director (Mining)
Corporate Office,
WBPDCL

952	16-05-2025 19:00:00	-	-	-	-	-	-	-	-
953	16-05-2025 20:00:00	-	-	-	-	-	-	-	-
954	16-05-2025 21:00:00	-	-	-	-	-	-	-	-
955	16-05-2025 22:00:00	-	-	-	-	-	-	-	-
956	16-05-2025 23:00:00	-	-	-	-	-	-	-	-
957	17-05-2025 00:00:00	-	-	-	-	-	-	-	-
958	17-05-2025 01:00:00	-	-	-	-	-	-	-	-
959	17-05-2025 02:00:00	-	-	-	-	-	-	-	-
960	17-05-2025 03:00:00	-	-	-	-	-	-	-	-
961	17-05-2025 04:00:00	-	-	-	-	-	-	-	-
962	17-05-2025 05:00:00	-	-	-	-	-	-	-	-
963	17-05-2025 06:00:00	-	-	-	-	-	-	-	-
964	17-05-2025 07:00:00	-	-	-	-	-	-	-	-
965	17-05-2025 08:00:00	-	-	-	-	-	-	-	-
966	17-05-2025 09:00:00	-	-	-	-	-	-	-	-
967	17-05-2025 10:00:00	-	-	-	-	-	-	-	-
968	17-05-2025 11:00:00	-	-	-	-	-	-	-	-
969	17-05-2025 12:00:00	-	-	-	-	-	-	-	-
970	17-05-2025 13:00:00	-	-	-	-	-	-	-	-
971	17-05-2025 14:00:00	-	-	-	-	-	-	-	-
972	17-05-2025 15:00:00	-	-	-	-	-	-	-	-
973	17-05-2025 16:00:00	-	-	-	-	-	-	-	-
974	17-05-2025 18:00:00	-	-	-	-	-	-	-	-
975	17-05-2025 19:00:00	-	-	-	-	-	-	-	-
976	17-05-2025 20:00:00	-	-	-	-	-	-	-	-
977	17-05-2025 21:00:00	-	-	-	-	-	-	-	-
978	17-05-2025 22:00:00	-	-	-	-	-	-	-	-
979	17-05-2025 23:00:00	-	-	-	-	-	-	-	-
980	18-05-2025 00:00:00	-	-	-	-	-	-	-	-
981	18-05-2025 01:00:00	-	-	-	-	-	-	-	-
982	18-05-2025 02:00:00	-	-	-	-	-	-	-	-
983	18-05-2025 03:00:00	-	-	-	-	-	-	-	-
984	18-05-2025 04:00:00	-	-	-	-	-	-	-	-
985	18-05-2025 06:00:00	-	-	-	-	-	-	-	-
986	18-05-2025 07:00:00	-	-	-	-	-	-	-	-
987	18-05-2025 08:00:00	-	-	-	-	-	-	-	-
988	18-05-2025 09:00:00	-	-	-	-	-	-	-	-
989	18-05-2025 10:00:00	-	-	-	-	-	-	-	-
990	18-05-2025 11:00:00	-	-	-	-	-	-	-	-
991	18-05-2025 12:00:00	-	-	-	-	-	-	-	-
992	18-05-2025 13:00:00	-	-	-	-	-	-	-	-
993	18-05-2025 14:00:00	-	-	-	-	-	-	-	-
994	18-05-2025 15:00:00	-	-	-	-	-	-	-	-
995	18-05-2025 16:00:00	-	-	-	-	-	-	-	-
996	18-05-2025 17:00:00	-	-	-	-	-	-	-	-
997	18-05-2025 18:00:00	-	-	-	-	-	-	-	-
998	18-05-2025 19:00:00	-	-	-	-	-	-	-	-
999	18-05-2025 20:00:00	-	-	-	-	-	-	-	-
1000	18-05-2025 21:00:00	-	-	-	-	-	-	-	-
1001	18-05-2025 22:00:00	-	-	-	-	-	-	-	-
1002	18-05-2025 23:00:00	-	-	-	-	-	-	-	-
1003	19-05-2025 00:00:00	-	-	-	-	-	-	-	-
1004	19-05-2025 01:00:00	-	-	-	-	-	-	-	-
1005	19-05-2025 02:00:00	-	-	-	-	-	-	-	-
1006	19-05-2025 03:00:00	-	-	-	-	-	-	-	-
1007	19-05-2025 04:00:00	-	-	-	-	-	-	-	-
1008	19-05-2025 05:00:00	-	-	-	-	-	-	-	-
1009	19-05-2025 06:00:00	-	-	-	-	-	-	-	-
1010	19-05-2025 07:00:00	-	-	-	-	-	-	-	-
1011	19-05-2025 08:00:00	-	-	-	-	-	-	-	-
1012	19-05-2025 09:00:00	-	-	-	-	-	-	-	-
1013	19-05-2025 10:00:00	-	-	-	-	-	-	-	-
1014	19-05-2025 11:00:00	-	-	-	-	-	-	-	-
1015	19-05-2025 12:00:00	-	-	-	-	-	-	-	-
1016	19-05-2025 13:00:00	-	-	-	-	-	-	-	-
1017	19-05-2025 14:00:00	-	-	-	-	-	-	-	-
1018	19-05-2025 15:00:00	-	-	-	-	-	-	-	-
1019	19-05-2025 16:00:00	-	-	-	-	-	-	-	-
1020	19-05-2025 17:00:00	-	-	-	-	-	-	-	-
1021	19-05-2025 18:00:00	-	-	-	-	-	-	-	-
1022	19-05-2025 19:00:00	-	-	-	-	-	-	-	-
1023	19-05-2025 20:00:00	-	-	-	-	-	-	-	-
1024	19-05-2025 21:00:00	-	-	-	-	-	-	-	-
1025	19-05-2025 22:00:00	-	-	-	-	-	-	-	-
1026	19-05-2025 23:00:00	-	-	-	-	-	-	-	-
1027	20-05-2025 00:00:00	-	-	-	-	-	-	-	-
1028	20-05-2025 01:00:00	-	-	-	-	-	-	-	-
1029	20-05-2025 02:00:00	-	-	-	-	-	-	-	-
1030	20-05-2025 03:00:00	-	-	-	-	-	-	-	-
1031	20-05-2025 04:00:00	-	-	-	-	-	-	-	-

Director (Mining)
Corporate Office,
WBPDCL

1032	20-05-2025 05:00:00	-	-	-	-	-	-	-	-
1033	20-05-2025 06:00:00	-	-	-	-	-	-	-	-
1034	20-05-2025 07:00:00	-	-	-	-	-	-	-	-
1035	20-05-2025 08:00:00	-	-	-	-	-	-	-	-
1036	20-05-2025 09:00:00	-	-	-	-	-	-	-	-
1037	20-05-2025 10:00:00	-	-	-	-	-	-	-	-
1038	20-05-2025 11:00:00	-	-	-	-	-	-	-	-
1039	20-05-2025 12:00:00	-	-	-	-	-	-	-	-
1040	20-05-2025 13:00:00	-	-	-	-	-	-	-	-
1041	20-05-2025 14:00:00	-	-	-	-	-	-	-	-
1042	20-05-2025 15:00:00	-	-	-	-	-	-	-	-
1043	20-05-2025 16:00:00	-	-	-	-	-	-	-	-
1044	Minimum	1.00	500.00	15.00	0.00	22.00	19.00	0.00	23.60
1045	Maximum	2.34	1171.00	95.00	8.00	106.00	93.00	11.17	51.80
1046	Average	1.75	877.28	61.38	5.83	53.11	47.37	8.15	35.10
1047	Alarm Count	0	0	0	0	0	0	0	0
				* - Alert | D - Delay					

Director (Mining)
Corporate Office,
WBPDCL

Annexure-3

Gangaramchak & Gangaramchak-Bhaduia Coal Mine
Nakrakonda, Lokpur,Birbhum, West Bengal-731125
Category : Others- Mining
Industry code : NA

Data Report

Duration :07-04-2025 00:00 TO 29-06-2025 23:59

Interval Time :1 Hour

Station Name		AAQMS_2							
Sr.no	Date Time	CO(mg/Nm3)	CO2(mg/Nm3)	Humidity(%)	NO2(ppm)	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ppm)	Temparature(°C)
1	07-04-2025 00:00:00	1.20	621.00	73.00	3.20	64.00	57.00	4.70	32.90
2	07-04-2025 01:00:00	1.20	622.00	75.00	3.30	64.00	57.00	4.90	32.40
3	07-04-2025 02:00:00	1.30	630.00	77.00	3.00	73.00	64.00	4.50	31.90
4	07-04-2025 03:00:00	1.30	642.00	79.00	3.20	72.00	63.00	4.80	31.40
5	07-04-2025 04:00:00	1.30	644.00	78.00	3.30	72.00	63.00	4.90	31.30
6	07-04-2025 05:00:00	1.30	650.00	80.00	2.80	83.00	73.00	4.20	30.40
7	07-04-2025 06:00:00	1.30	668.00	78.00	2.10	89.00	79.00	3.10	30.90
8	07-04-2025 07:00:00	1.20	624.00	69.00	3.50	82.00	72.00	5.20	32.80
9	07-04-2025 08:00:00	1.10	539.00	60.00	3.50	68.00	61.00	5.30	36.60
10	07-04-2025 09:00:00	1.00	503.00	51.00	3.50	67.00	60.00	5.30	39.60
11	07-04-2025 10:00:00	1.00	492.00	46.00	3.50	63.00	56.00	5.30	42.10
12	07-04-2025 11:00:00	1.00	483.00	43.00	3.50	63.00	57.00	5.30	43.90
13	07-04-2025 12:00:00	1.00	491.00	40.00	3.50	64.00	57.00	5.30	45.40
14	07-04-2025 13:00:00	0.90	448.00	38.00	3.50	60.00	53.00	5.30	47.10
15	07-04-2025 14:00:00	0.90	454.00	38.00	3.50	61.00	54.00	5.30	46.50
16	07-04-2025 15:00:00	0.90	459.00	39.00	3.50	61.00	54.00	5.30	45.10
17	07-04-2025 16:00:00	0.90	472.00	41.00	3.50	66.00	58.00	5.30	43.60
18	07-04-2025 17:00:00	0.90	473.00	44.00	3.50	56.00	50.00	5.30	41.00
19	07-04-2025 18:00:00	1.00	489.00	50.00	3.50	78.00	69.00	5.30	38.50
20	07-04-2025 19:00:00	1.00	506.00	54.00	3.50	75.00	67.00	5.30	37.10
21	07-04-2025 20:00:00	1.00	512.00	58.00	3.50	54.00	48.00	5.30	36.00
22	07-04-2025 21:00:00	1.10	556.00	62.00	3.50	54.00	48.00	5.20	35.10
23	07-04-2025 22:00:00	1.20	585.00	67.00	3.40	53.00	47.00	5.10	33.60
24	07-04-2025 23:00:00	1.20	599.00	70.00	3.30	53.00	47.00	5.00	32.80
25	08-04-2025 00:00:00	1.20	616.00	73.00	2.70	57.00	51.00	4.00	32.20
26	08-04-2025 01:00:00	1.30	626.00	76.00	3.20	54.00	48.00	4.70	31.80
27	08-04-2025 02:00:00	1.30	654.00	78.00	0.80	42.00	38.00	1.20	31.30
28	08-04-2025 03:00:00	1.30	673.00	79.00	0.80	39.00	35.00	1.20	31.00
29	08-04-2025 04:00:00	1.30	657.00	80.00	1.00	45.00	40.00	1.40	30.80
30	08-04-2025 05:00:00	1.30	663.00	82.00	1.00	66.00	58.00	1.50	30.40
31	08-04-2025 06:00:00	1.40	684.00	82.00	0.90	63.00	56.00	1.30	30.60
32	08-04-2025 07:00:00	1.30	644.00	75.00	1.00	72.00	62.00	1.50	33.00
33	08-04-2025 08:00:00	1.10	547.00	61.00	3.30	57.00	52.00	5.00	36.80
34	08-04-2025 09:00:00	1.00	517.00	53.00	3.50	51.00	45.00	5.30	39.50
35	08-04-2025 10:00:00	1.00	499.00	47.00	3.50	46.00	41.00	5.30	42.20
36	08-04-2025 11:00:00	1.00	491.00	43.00	3.50	56.00	50.00	5.30	44.70
37	08-04-2025 12:00:00	1.00	478.00	40.00	3.50	47.00	42.00	5.30	45.60
38	08-04-2025 13:00:00	0.90	451.00	39.00	3.50	53.00	47.00	5.30	46.50
39	08-04-2025 14:00:00	0.90	459.00	38.00	3.50	45.00	40.00	5.30	45.90
40	08-04-2025 15:00:00	0.90	470.00	38.00	3.50	44.00	39.00	5.30	45.40
41	08-04-2025 16:00:00	1.00	475.00	39.00	3.50	50.00	45.00	5.30	43.80
42	08-04-2025 17:00:00	0.90	471.00	45.00	3.50	67.00	60.00	5.30	40.60
43	08-04-2025 18:00:00	1.00	488.00	49.00	3.50	75.00	66.00	5.30	38.20
44	08-04-2025 19:00:00	1.00	503.00	52.00	3.50	87.00	78.00	5.30	36.60
45	08-04-2025 20:00:00	1.10	527.00	55.00	3.50	87.00	78.00	5.30	35.70
46	08-04-2025 21:00:00	1.10	551.00	59.00	3.50	39.00	35.00	5.20	35.20
47	08-04-2025 22:00:00	1.20	584.00	62.00	0.80	38.00	34.00	1.20	33.70
48	08-04-2025 23:00:00	1.10	571.00	62.00	3.50	45.00	40.00	5.30	32.90
49	09-04-2025 00:00:00	1.20	589.00	66.00	3.50	32.00	28.00	5.30	31.90
50	09-04-2025 01:00:00	1.20	596.00	72.00	3.50	35.00	32.00	5.20	31.30
51	09-04-2025 02:00:00	1.20	622.00	74.00	2.30	34.00	31.00	3.40	30.80
52	09-04-2025 03:00:00	1.30	627.00	77.00	3.50	36.00	32.00	5.20	30.50
53	09-04-2025 04:00:00	1.30	641.00	78.00	2.30	35.00	32.00	3.50	30.10
54	09-04-2025 05:00:00	1.30	651.00	79.00	1.80	43.00	39.00	2.70	29.90
55	09-04-2025 06:00:00	1.40	675.00	78.00	0.90	50.00	45.00	1.40	30.40
56	09-04-2025 07:00:00	1.30	628.00	71.00	0.90	61.00	54.00	1.30	33.00
57	09-04-2025 08:00:00	1.20	595.00	62.00	3.40	54.00	48.00	5.10	35.80
58	09-04-2025 09:00:00	1.00	523.00	52.00	3.50	57.00	52.00	5.30	39.30
59	09-04-2025 10:00:00	1.00	478.00	43.00	3.50	45.00	39.00	5.30	43.10
60	09-04-2025 11:00:00	1.00	485.00	42.00	3.50	49.00	44.00	5.30	43.40
61	09-04-2025 12:00:00	0.90	444.00	36.00	3.50	34.00	31.00	5.30	46.40
62	09-04-2025 13:00:00	0.90	445.00	36.00	3.50	41.00	37.00	5.30	46.60
63	09-04-2025 14:00:00	0.90	444.00	36.00	3.50	28.00	26.00	5.30	46.70
64	09-04-2025 15:00:00	0.90	448.00	36.00	3.50	25.00	23.00	5.30	45.80
65	09-04-2025 16:00:00	0.90	462.00	40.00	3.50	24.00	22.00	5.30	43.10
66	09-04-2025 17:00:00	0.90	462.00	45.00	3.50	34.00	31.00	5.30	39.90
67	09-04-2025 18:00:00	1.00	480.00	49.00	3.50	49.00	45.00	5.30	37.50
68	09-04-2025 19:00:00	1.00	499.00	53.00	3.50	48.00	43.00	5.30	35.90
69	09-04-2025 20:00:00	1.10	539.00	56.00	3.50	46.00	41.00	5.20	35.10

70	09-04-2025 21:00:00	1.10	548.00	55.00	3.50	41.00	37.00	5.30	34.70
71	09-04-2025 22:00:00	1.10	564.00	61.00	3.50	42.00	38.00	5.20	33.50
72	09-04-2025 23:00:00	1.20	577.00	63.00	3.10	38.00	34.00	4.60	32.50
73	10-04-2025 00:00:00	1.20	587.00	67.00	3.30	35.00	32.00	4.90	31.60
74	10-04-2025 01:00:00	1.20	594.00	70.00	3.50	41.00	37.00	5.30	31.10
75	10-04-2025 02:00:00	1.20	608.00	72.00	3.50	42.00	38.00	5.20	30.50
76	10-04-2025 03:00:00	1.20	615.00	73.00	3.50	42.00	38.00	5.30	30.20
77	10-04-2025 04:00:00	1.30	631.00	76.00	3.50	44.00	39.00	5.20	29.90
78	10-04-2025 05:00:00	1.30	641.00	76.00	3.50	42.00	38.00	5.20	30.00
79	10-04-2025 06:00:00	1.30	641.00	75.00	3.30	48.00	44.00	4.90	30.40
80	10-04-2025 07:00:00	1.20	596.00	68.00	3.50	55.00	49.00	5.20	32.90
81	10-04-2025 08:00:00	1.10	503.00	59.00	3.50	43.00	39.00	5.30	36.00
82	10-04-2025 09:00:00	1.00	496.00	50.00	3.50	43.00	39.00	5.30	39.60
83	10-04-2025 10:00:00	1.00	486.00	46.00	3.50	41.00	37.00	5.30	41.00
84	10-04-2025 11:00:00	0.90	473.00	40.00	3.50	31.00	27.00	5.30	43.80
85	10-04-2025 12:00:00	0.90	436.00	35.00	3.50	26.00	24.00	5.30	46.50
86	10-04-2025 13:00:00	0.90	460.00	38.00	3.50	35.00	32.00	5.30	43.30
87	10-04-2025 14:00:00	0.90	467.00	41.00	3.50	38.00	34.00	5.30	42.80
88	10-04-2025 15:00:00	0.90	467.00	43.00	3.50	38.00	34.00	5.30	41.70
89	10-04-2025 16:00:00	0.90	472.00	44.00	3.50	38.00	34.00	5.30	41.40
90	10-04-2025 17:00:00	1.00	480.00	48.00	3.50	47.00	42.00	5.30	38.20
91	10-04-2025 18:00:00	1.00	498.00	50.00	3.50	68.00	61.00	5.20	37.60
92	10-04-2025 19:00:00	1.50	749.00	95.00	3.50	42.00	38.00	5.30	22.80
93	10-04-2025 20:00:00	1.50	727.00	95.00	3.50	151.00	139.00	5.30	23.20
94	10-04-2025 21:00:00	1.40	711.00	94.00	3.50	23.00	21.00	5.30	24.50
95	10-04-2025 22:00:00	1.40	694.00	88.00	3.50	28.00	26.00	5.30	25.20
96	10-04-2025 23:00:00	1.40	717.00	90.00	3.50	27.00	25.00	5.30	25.00
97	11-04-2025 00:00:00	1.50	753.00	91.00	3.50	37.00	33.00	5.30	25.10
98	11-04-2025 01:00:00	1.50	767.00	92.00	3.50	37.00	33.00	5.30	24.90
99	11-04-2025 02:00:00	1.60	797.00	93.00	3.40	37.00	33.00	5.10	24.70
100	11-04-2025 03:00:00	1.70	825.00	94.00	3.10	46.00	41.00	4.70	24.70
101	11-04-2025 04:00:00	1.70	827.00	94.00	3.40	41.00	37.00	5.00	24.70
102	11-04-2025 05:00:00	1.70	834.00	95.00	3.30	50.00	45.00	5.00	24.50
103	11-04-2025 06:00:00	1.50	760.00	88.00	3.50	85.00	75.00	5.30	26.90
104	11-04-2025 07:00:00	1.50	759.00	89.00	3.50	86.00	76.00	5.20	26.80
105	11-04-2025 08:00:00	1.40	681.00	81.00	3.50	49.00	45.00	5.30	29.40
106	11-04-2025 09:00:00	1.30	655.00	77.00	3.50	55.00	49.00	5.30	30.90
107	11-04-2025 10:00:00	1.20	615.00	70.00	3.50	54.00	48.00	5.30	33.70
108	11-04-2025 11:00:00	1.10	552.00	62.00	3.50	48.00	44.00	5.30	36.40
109	11-04-2025 12:00:00	1.00	524.00	56.00	3.50	51.00	46.00	5.30	38.20
110	11-04-2025 13:00:00	1.00	515.00	52.00	3.50	51.00	46.00	5.30	39.60
111	11-04-2025 14:00:00	1.00	512.00	53.00	3.50	55.00	49.00	5.30	39.30
112	11-04-2025 15:00:00	1.00	522.00	53.00	3.50	48.00	43.00	5.30	40.20
113	11-04-2025 16:00:00	1.00	524.00	56.00	3.50	52.00	46.00	5.30	38.30
114	11-04-2025 17:00:00	1.10	554.00	64.00	3.50	54.00	48.00	5.30	34.00
115	11-04-2025 18:00:00	1.20	576.00	67.00	3.50	42.00	38.00	5.30	32.90
116	11-04-2025 19:00:00	1.20	620.00	71.00	3.50	55.00	49.00	5.30	32.00
117	11-04-2025 20:00:00	1.30	638.00	74.00	3.50	68.00	61.00	5.30	31.20
118	11-04-2025 21:00:00	1.30	655.00	77.00	3.50	63.00	56.00	5.30	30.80
119	11-04-2025 22:00:00	1.40	680.00	78.00	3.20	64.00	57.00	4.70	30.60
120	11-04-2025 23:00:00	1.60	816.00	85.00	1.70	65.00	57.00	2.50	29.70
121	12-04-2025 00:00:00	1.80	877.00	86.00	0.90	78.00	68.00	1.30	29.50
122	12-04-2025 01:00:00	1.60	818.00	85.00	2.60	89.00	79.00	3.90	29.50
123	12-04-2025 02:00:00	1.50	738.00	82.00	3.30	73.00	64.00	5.00	29.90
124	12-04-2025 03:00:00	1.50	752.00	84.00	2.50	84.00	74.00	3.80	29.60
125	12-04-2025 04:00:00	1.60	777.00	84.00	0.90	76.00	67.00	1.40	29.60
126	12-04-2025 05:00:00	1.60	801.00	86.00	1.00	83.00	73.00	1.50	29.10
127	12-04-2025 06:00:00	1.60	818.00	86.00	0.90	134.00	126.00	1.40	29.40
128	12-04-2025 07:00:00	1.50	755.00	82.00	2.50	98.00	87.00	3.70	31.30
129	12-04-2025 08:00:00	1.40	684.00	78.00	3.50	103.00	91.00	5.20	32.20
130	12-04-2025 09:00:00	1.30	669.00	75.00	3.30	127.00	117.00	5.00	33.70
131	12-04-2025 10:00:00	1.10	558.00	60.00	3.50	102.00	90.00	5.30	39.40
132	12-04-2025 11:00:00	1.10	529.00	53.00	3.50	85.00	75.00	5.30	43.10
133	12-04-2025 12:00:00	1.00	500.00	49.00	3.50	49.00	44.00	5.30	44.70
134	12-04-2025 13:00:00	1.00	475.00	45.00	3.50	63.00	56.00	5.30	45.80
135	12-04-2025 14:00:00	1.00	491.00	46.00	3.50	62.00	55.00	5.30	44.00
136	12-04-2025 15:00:00	1.00	505.00	47.00	3.50	63.00	56.00	5.30	43.50
137	12-04-2025 16:00:00	1.00	500.00	48.00	3.50	65.00	57.00	5.30	42.20
138	12-04-2025 17:00:00	1.00	503.00	54.00	3.50	66.00	59.00	5.30	39.30
139	12-04-2025 18:00:00	1.10	533.00	62.00	3.50	72.00	63.00	5.30	36.60
140	12-04-2025 19:00:00	1.20	598.00	67.00	3.50	82.00	73.00	5.30	35.40
141	12-04-2025 20:00:00	1.20	620.00	70.00	3.50	69.00	62.00	5.30	34.60
142	12-04-2025 21:00:00	1.30	648.00	73.00	3.50	96.00	88.00	5.20	34.30
143	12-04-2025 22:00:00	1.30	654.00	75.00	3.50	98.00	87.00	5.30	33.60
144	12-04-2025 23:00:00	1.30	672.00	76.00	3.50	100.00	88.00	5.20	33.50
145	13-04-2025 00:00:00	1.20	575.00	55.00	3.50	41.00	37.00	5.30	32.30
146	13-04-2025 01:00:00	1.10	570.00	56.00	3.50	42.00	38.00	5.30	31.20

Corporate Office, WBPDCL

147	13-04-2025 02:00:00	1.20	585.00	61.00	3.50	54.00	47.00	5.30	30.40
148	13-04-2025 03:00:00	1.20	624.00	59.00	3.50	58.00	53.00	5.30	30.60
149	13-04-2025 04:00:00	1.20	605.00	62.00	3.50	51.00	46.00	5.30	29.70
150	13-04-2025 05:00:00	1.20	623.00	63.00	3.50	48.00	43.00	5.30	29.50
151	13-04-2025 06:00:00	1.30	634.00	66.00	3.50	56.00	50.00	5.30	29.00
152	13-04-2025 07:00:00	1.20	593.00	59.00	3.50	48.00	43.00	5.30	31.80
153	13-04-2025 08:00:00	1.10	570.00	57.00	3.50	42.00	38.00	5.30	32.80
154	13-04-2025 09:00:00	1.00	509.00	50.00	3.50	51.00	46.00	5.30	37.30
155	13-04-2025 10:00:00	1.00	494.00	46.00	3.50	57.00	51.00	5.30	40.10
156	13-04-2025 11:00:00	1.00	497.00	47.00	3.50	54.00	47.00	5.30	40.00
157	13-04-2025 12:00:00	1.00	488.00	44.00	3.50	54.00	48.00	5.30	40.40
158	13-04-2025 13:00:00	1.00	480.00	42.00	3.50	46.00	41.00	5.30	42.10
159	13-04-2025 14:00:00	1.10	554.00	60.00	3.50	64.00	57.00	5.30	35.30
160	13-04-2025 15:00:00	1.10	548.00	60.00	3.50	64.00	57.00	5.30	35.30
161	13-04-2025 16:00:00	1.10	548.00	60.00	3.50	64.00	57.00	5.30	35.30
162	13-04-2025 17:00:00	1.10	548.00	60.00	3.50	64.00	57.00	5.30	35.30
163	13-04-2025 18:00:00	1.20	585.00	63.00	3.50	84.00	74.00	5.30	33.90
164	13-04-2025 19:00:00	1.30	630.00	66.00	2.80	245.00	225.00	4.20	32.90
165	13-04-2025 20:00:00	1.30	658.00	71.00	3.30	96.00	84.00	5.80	32.10
166	13-04-2025 21:00:00	1.30	662.00	71.00	3.50	97.00	86.00	5.30	31.50
167	13-04-2025 22:00:00	1.40	686.00	72.00	3.50	104.00	93.00	5.20	31.50
168	13-04-2025 23:00:00	1.60	785.00	81.00	3.10	104.00	92.00	4.70	29.60
169	14-04-2025 00:00:00	1.60	819.00	79.00	1.00	107.00	95.00	1.50	29.90
170	14-04-2025 01:00:00	1.60	805.00	82.00	2.70	123.00	113.00	4.00	29.10
171	14-04-2025 02:00:00	1.60	787.00	79.00	2.40	121.00	108.00	3.60	29.70
172	14-04-2025 03:00:00	1.70	847.00	81.00	0.90	117.00	104.00	1.30	29.30
173	14-04-2025 04:00:00	1.70	841.00	81.00	1.00	123.00	114.00	1.40	29.50
174	14-04-2025 05:00:00	1.50	754.00	78.00	1.80	99.00	88.00	2.40	29.50
175	14-04-2025 06:00:00	1.40	714.00	78.00	3.30	90.00	81.00	4.90	29.60
176	14-04-2025 07:00:00	1.30	647.00	73.00	3.10	98.00	87.00	4.70	31.50
177	14-04-2025 08:00:00	1.20	609.00	66.00	3.50	74.00	66.00	5.20	33.60
178	14-04-2025 09:00:00	1.10	530.00	56.00	3.50	67.00	60.00	5.30	37.50
179	14-04-2025 10:00:00	1.00	504.00	49.00	3.50	58.00	53.00	5.30	40.40
180	14-04-2025 11:00:00	1.00	500.00	45.00	3.50	37.00	33.00	5.30	42.70
181	14-04-2025 12:00:00	1.00	488.00	43.00	3.50	57.00	51.00	5.30	43.30
182	14-04-2025 13:00:00	1.00	487.00	43.00	3.50	56.00	50.00	5.30	43.80
183	14-04-2025 14:00:00	1.00	491.00	42.00	3.50	57.00	52.00	5.30	44.00
184	14-04-2025 15:00:00	1.00	484.00	44.00	3.50	58.00	53.00	5.30	42.00
185	14-04-2025 16:00:00	1.00	483.00	44.00	3.50	63.00	56.00	5.30	41.30
186	14-04-2025 17:00:00	1.00	500.00	52.00	3.50	91.00	80.00	5.30	36.90
187	14-04-2025 18:00:00	1.20	575.00	64.00	3.50	62.00	55.00	5.30	28.40
188	14-04-2025 19:00:00	1.40	709.00	93.00	3.50	124.00	114.00	5.30	23.30
189	14-04-2025 20:00:00	1.50	733.00	93.00	3.50	43.00	39.00	5.30	23.60
190	14-04-2025 21:00:00	1.40	696.00	89.00	3.50	49.00	45.00	5.30	24.60
191	14-04-2025 22:00:00	1.40	689.00	85.00	3.50	45.00	40.00	5.30	25.50
192	14-04-2025 23:00:00	1.40	693.00	83.00	3.50	43.00	39.00	5.30	25.80
193	15-04-2025 00:00:00	1.40	705.00	83.00	3.50	45.00	40.00	5.30	25.70
194	15-04-2025 01:00:00	1.50	726.00	82.00	3.50	47.00	42.00	5.30	25.60
195	15-04-2025 02:00:00	1.50	739.00	85.00	3.50	62.00	55.00	5.30	25.80
196	15-04-2025 03:00:00	1.60	784.00	87.00	3.50	48.00	43.00	5.30	25.70
197	15-04-2025 04:00:00	1.60	779.00	88.00	3.50	95.00	84.00	5.30	25.20
198	15-04-2025 05:00:00	1.60	784.00	88.00	3.50	120.00	106.00	5.30	25.90
199	15-04-2025 06:00:00	1.20	624.00	71.00	3.50	54.00	48.00	5.30	30.00
200	15-04-2025 07:00:00	1.20	622.00	72.00	3.50	53.00	47.00	5.30	30.00
201	15-04-2025 08:00:00	1.20	615.00	69.00	3.50	51.00	46.00	5.30	30.60
202	15-04-2025 09:00:00	1.20	584.00	61.00	3.50	48.00	43.00	5.30	34.10
203	15-04-2025 10:00:00	1.10	547.00	58.00	3.50	48.00	43.00	5.30	35.40
204	15-04-2025 11:00:00	1.10	562.00	55.00	3.50	46.00	41.00	5.30	35.70
205	15-04-2025 12:00:00	1.00	502.00	46.00	3.50	60.00	53.00	5.30	39.60
206	15-04-2025 13:00:00	1.00	502.00	46.00	3.50	60.00	53.00	5.30	39.60
207	15-04-2025 14:00:00	1.00	508.00	49.00	3.50	54.00	48.00	5.30	39.40
208	15-04-2025 15:00:00	1.10	568.00	58.00	3.50	53.00	47.00	5.30	35.50
209	15-04-2025 16:00:00	1.20	577.00	57.00	3.50	54.00	48.00	5.30	36.30
210	15-04-2025 17:00:00	1.20	584.00	57.00	3.50	58.00	53.00	5.30	36.00
211	15-04-2025 18:00:00	1.20	586.00	63.00	3.50	55.00	49.00	5.30	33.60
212	15-04-2025 19:00:00	1.30	631.00	69.00	3.50	67.00	55.00	5.30	32.20
213	15-04-2025 20:00:00	1.30	644.00	72.00	3.50	74.00	66.00	5.30	32.10
214	15-04-2025 21:00:00	1.30	653.00	73.00	3.50	66.00	59.00	5.30	31.70
215	15-04-2025 22:00:00	1.40	681.00	76.00	3.50	72.00	63.00	5.30	31.20
216	15-04-2025 23:00:00	1.50	764.00	79.00	3.10	101.00	89.00	4.60	30.90
217	16-04-2025 00:00:00	1.50	761.00	81.00	3.30	98.00	87.00	5.00	30.20
218	16-04-2025 01:00:00	1.50	743.00	81.00	3.10	106.00	94.00	4.70	30.00
219	16-04-2025 02:00:00	1.40	718.00	82.00	3.50	87.00	78.00	5.30	29.70
220	16-04-2025 03:00:00	1.60	788.00	86.00	3.20	107.00	95.00	4.80	28.80
221	16-04-2025 04:00:00	1.70	835.00	85.00	1.00	130.00	122.00	1.40	28.80
222	16-04-2025 05:00:00	1.50	747.00	82.00	3.40	136.00	126.00	5.10	27.60
223	16-04-2025 06:00:00	1.50	769.00	81.00	3.40	130.00	122.00	5.20	27.90

224	16-04-2025 07:00:00	1.50	746.00	68.00	3.50	96.00	85.00	5.30	31.80
225	16-04-2025 08:00:00	1.30	636.00	58.00	3.50	109.00	97.00	5.30	35.60
226	16-04-2025 09:00:00	1.10	543.00	50.00	3.50	93.00	83.00	5.30	39.10
227	16-04-2025 10:00:00	1.10	533.00	45.00	3.50	78.00	69.00	5.30	41.80
228	16-04-2025 11:00:00	1.00	518.00	41.00	3.50	79.00	69.00	5.30	43.20
229	16-04-2025 12:00:00	1.00	494.00	38.00	3.50	73.00	64.00	5.30	44.60
230	16-04-2025 13:00:00	1.00	491.00	38.00	3.50	54.00	48.00	5.30	43.60
231	16-04-2025 14:00:00	0.90	472.00	34.00	3.50	40.00	36.00	5.30	45.00
232	16-04-2025 15:00:00	1.00	482.00	36.00	3.50	46.00	41.00	5.30	43.40
233	16-04-2025 16:00:00	0.90	472.00	37.00	3.50	43.00	39.00	5.30	41.40
234	16-04-2025 17:00:00	1.00	488.00	39.00	3.50	56.00	50.00	5.30	41.10
235	16-04-2025 18:00:00	1.00	504.00	46.00	3.50	54.00	48.00	5.30	38.40
236	16-04-2025 19:00:00	1.20	582.00	52.00	3.50	133.00	99.00	5.30	36.30
237	16-04-2025 20:00:00	1.10	558.00	56.00	3.40	126.00	117.00	5.10	35.40
238	16-04-2025 21:00:00	1.20	604.00	62.00	2.10	115.00	102.00	3.10	33.80
239	16-04-2025 22:00:00	1.10	558.00	68.00	3.50	68.00	61.00	5.30	33.60
240	16-04-2025 23:00:00	1.20	576.00	72.00	2.60	67.00	59.00	3.90	32.70
241	17-04-2025 00:00:00	1.20	589.00	71.00	0.90	55.00	49.00	1.30	32.20
242	17-04-2025 01:00:00	1.20	582.00	76.00	3.40	67.00	60.00	5.20	31.70
243	17-04-2025 02:00:00	1.20	610.00	79.00	3.00	92.00	80.00	4.50	31.40
244	17-04-2025 03:00:00	1.30	636.00	82.00	0.80	86.00	76.00	1.20	31.00
245	17-04-2025 04:00:00	1.30	638.00	82.00	2.20	89.00	79.00	3.30	30.90
246	17-04-2025 05:00:00	1.30	663.00	83.00	1.30	84.00	74.00	1.90	30.50
247	17-04-2025 06:00:00	1.30	661.00	83.00	0.80	82.00	72.00	1.20	31.00
248	17-04-2025 07:00:00	1.20	621.00	76.00	0.90	97.00	86.00	1.30	33.00
249	17-04-2025 08:00:00	1.20	594.00	69.00	0.90	91.00	80.00	1.40	35.20
250	17-04-2025 09:00:00	1.00	501.00	58.00	3.50	85.00	75.00	5.20	39.10
251	17-04-2025 10:00:00	0.90	468.00	51.00	3.50	67.00	60.00	5.30	43.00
252	17-04-2025 11:00:00	0.90	448.00	46.00	3.50	61.00	54.00	5.30	45.20
253	17-04-2025 12:00:00	0.90	434.00	43.00	3.50	63.00	56.00	5.30	45.60
254	17-04-2025 13:00:00	0.80	407.00	40.00	3.50	55.00	49.00	5.30	47.20
255	17-04-2025 14:00:00	0.90	439.00	41.00	3.50	54.00	48.00	5.30	45.00
256	17-04-2025 15:00:00	0.90	450.00	40.00	3.50	55.00	49.00	5.30	44.80
257	17-04-2025 16:00:00	0.90	447.00	47.00	3.50	56.00	50.00	5.30	43.50
258	17-04-2025 17:00:00	0.90	457.00	63.00	3.50	63.00	56.00	5.50	36.60
259	17-04-2025 18:00:00	1.00	515.00	64.00	3.50	54.00	48.00	5.30	30.70
260	17-04-2025 19:00:00	1.10	536.00	68.00	3.50	65.00	57.00	5.30	29.70
261	17-04-2025 20:00:00	1.10	562.00	74.00	3.50	45.00	41.00	5.30	29.30
262	17-04-2025 21:00:00	1.10	572.00	76.00	3.50	66.00	58.00	5.30	28.20
263	17-04-2025 22:00:00	1.20	590.00	75.00	3.50	58.00	52.00	5.30	28.40
264	17-04-2025 23:00:00	1.20	606.00	78.00	3.50	60.00	53.00	5.30	28.00
265	18-04-2025 00:00:00	1.00	500.00	78.00	1.00	31.00	28.00	1.50	28.10
266	18-04-2025 01:00:00	1.20	624.00	79.00	3.50	62.00	55.00	5.30	28.00
267	18-04-2025 02:00:00	1.40	675.00	80.00	3.50	119.00	105.00	5.20	28.00
268	18-04-2025 03:00:00	1.40	682.00	82.00	3.50	71.00	62.00	5.30	27.60
269	18-04-2025 04:00:00	1.30	654.00	80.00	3.50	76.00	68.00	5.30	27.80
270	18-04-2025 05:00:00	1.30	646.00	80.00	3.50	90.00	79.00	5.30	28.30
271	18-04-2025 06:00:00	1.30	627.00	80.00	3.50	70.00	62.00	5.30	28.90
272	18-04-2025 07:00:00	1.30	626.00	77.00	3.40	78.00	69.00	5.10	29.80
273	18-04-2025 08:00:00	1.30	668.00	82.00	3.50	72.00	63.00	5.30	28.30
274	18-04-2025 09:00:00	1.30	636.00	78.00	3.50	50.00	45.00	5.30	28.70
275	18-04-2025 10:00:00	1.20	606.00	77.00	3.50	51.00	46.00	5.30	29.50
276	18-04-2025 11:00:00	1.20	599.00	74.00	3.50	54.00	48.00	5.30	30.30
277	18-04-2025 12:00:00	1.20	609.00	85.00	3.50	34.00	31.00	5.30	27.20
278	18-04-2025 13:00:00	1.10	564.00	73.00	3.50	39.00	35.00	5.30	30.00
279	18-04-2025 14:00:00	1.00	505.00	61.00	3.50	37.00	33.00	5.30	34.30
280	18-04-2025 15:00:00	0.90	459.00	56.00	3.50	38.00	34.00	5.30	36.60
281	18-04-2025 16:00:00	1.00	506.00	60.00	3.50	34.00	31.00	5.30	34.40
282	18-04-2025 17:00:00	1.00	511.00	64.00	3.50	40.00	36.00	5.30	32.70
283	18-04-2025 18:00:00	1.10	549.00	72.00	3.50	47.00	42.00	5.30	30.20
284	18-04-2025 19:00:00	1.20	587.00	77.00	3.50	55.00	49.00	5.30	29.40
285	18-04-2025 20:00:00	1.20	601.00	77.00	3.50	53.00	47.00	5.30	29.30
286	18-04-2025 21:00:00	1.20	621.00	79.00	3.50	57.00	51.00	5.30	29.20
287	18-04-2025 22:00:00	1.30	631.00	80.00	3.50	57.00	52.00	5.30	29.00
288	18-04-2025 23:00:00	1.30	647.00	81.00	3.50	55.00	49.00	5.30	29.10
289	19-04-2025 00:00:00	1.30	641.00	81.00	3.50	61.00	54.00	5.30	28.70
290	19-04-2025 01:00:00	1.30	640.00	82.00	3.50	61.00	54.00	5.30	28.20
291	19-04-2025 02:00:00	1.30	657.00	82.00	3.50	68.00	61.00	5.30	28.00
292	19-04-2025 03:00:00	1.30	663.00	83.00	3.50	67.00	60.00	5.30	27.80
293	19-04-2025 04:00:00	1.30	670.00	83.00	3.50	73.00	64.00	5.30	28.00
294	19-04-2025 05:00:00	1.30	671.00	81.00	3.50	73.00	65.00	5.30	28.60
295	19-04-2025 06:00:00	1.30	670.00	79.00	3.50	66.00	59.00	5.30	28.80
296	19-04-2025 07:00:00	1.20	579.00	72.00	3.50	57.00	52.00	5.30	31.10
297	19-04-2025 08:00:00	1.10	546.00	65.00	3.50	63.00	56.00	5.30	33.50
298	19-04-2025 09:00:00	1.10	525.00	60.00	3.50	73.00	64.00	5.30	36.40
299	19-04-2025 10:00:00	1.00	478.00	56.00	3.50	67.00	60.00	5.30	39.10
300	19-04-2025 11:00:00	0.90	459.00	50.00	3.50	55.00	49.00	5.30	41.80

301	19-04-2025 12:00:00	0.90	453.00	49.00	3.50	50.00	45.00	5.30	43.20
302	19-04-2025 13:00:00	0.80	416.00	48.00	3.50	53.00	47.00	5.30	43.60
303	19-04-2025 14:00:00	0.80	416.00	55.00	3.50	62.00	55.00	5.30	38.80
304	19-04-2025 15:00:00	0.90	429.00	57.00	3.50	62.00	55.00	5.30	38.80
305	19-04-2025 16:00:00	0.90	426.00	55.00	3.50	69.00	61.00	5.30	38.90
306	19-04-2025 17:00:00	0.90	445.00	62.00	3.50	66.00	58.00	5.30	36.40
307	19-04-2025 18:00:00	1.00	485.00	65.00	3.50	65.00	57.00	5.30	35.40
308	19-04-2025 19:00:00	1.00	522.00	71.00	3.50	68.00	61.00	5.30	33.50
309	19-04-2025 20:00:00	1.10	551.00	73.00	3.40	106.00	94.00	5.20	33.00
310	19-04-2025 21:00:00	1.10	567.00	75.00	3.50	78.00	69.00	5.20	32.60
311	19-04-2025 22:00:00	1.10	570.00	77.00	3.50	75.00	67.00	5.20	32.10
312	19-04-2025 23:00:00	1.20	582.00	77.00	3.50	78.00	68.00	5.20	32.20
313	20-04-2025 00:00:00	1.20	604.00	81.00	1.30	97.00	86.00	2.00	31.30
314	20-04-2025 01:00:00	1.30	653.00	80.00	0.90	83.00	73.00	1.40	31.10
315	20-04-2025 02:00:00	1.30	646.00	81.00	3.50	83.00	73.00	5.30	31.10
316	20-04-2025 03:00:00	1.40	676.00	82.00	1.70	96.00	85.00	2.60	30.90
317	20-04-2025 04:00:00	1.40	678.00	84.00	0.90	96.00	85.00	1.40	30.60
318	20-04-2025 05:00:00	1.40	702.00	85.00	2.50	104.00	92.00	3.80	30.40
319	20-04-2025 06:00:00	1.40	698.00	85.00	2.60	106.00	93.00	3.90	30.90
320	20-04-2025 07:00:00	1.30	655.00	82.00	2.90	106.00	94.00	4.30	32.10
321	20-04-2025 08:00:00	1.20	607.00	78.00	3.40	121.00	108.00	5.20	33.50
322	20-04-2025 10:00:00	1.00	490.00	62.00	3.50	129.00	120.00	5.30	40.80
323	20-04-2025 11:00:00	0.90	452.00	54.00	3.50	129.00	120.00	5.30	44.40
324	20-04-2025 12:00:00	0.80	409.00	50.00	3.50	97.00	86.00	5.30	46.40
325	20-04-2025 13:00:00	0.80	406.00	47.00	3.50	94.00	84.00	5.30	47.00
326	20-04-2025 14:00:00	0.80	414.00	48.00	3.50	90.00	80.00	5.30	45.80
327	20-04-2025 15:00:00	0.80	407.00	48.00	3.50	85.00	74.00	5.30	46.90
328	20-04-2025 16:00:00	0.80	418.00	54.00	3.50	85.00	75.00	5.30	43.60
329	20-04-2025 17:00:00	0.90	439.00	58.00	3.50	83.00	73.00	5.30	41.60
330	20-04-2025 18:00:00	0.90	460.00	66.00	3.50	106.00	94.00	5.30	38.30
331	20-04-2025 19:00:00	1.00	514.00	71.00	3.50	100.00	88.00	5.30	37.30
332	20-04-2025 20:00:00	1.10	535.00	73.00	3.50	101.00	89.00	5.30	36.70
333	20-04-2025 21:00:00	1.10	550.00	75.00	3.50	96.00	85.00	5.30	36.20
334	20-04-2025 22:00:00	1.20	584.00	78.00	3.40	95.00	84.00	5.10	35.30
335	20-04-2025 23:00:00	1.20	596.00	79.00	3.30	95.00	84.00	5.00	35.00
336	21-04-2025 00:00:00	1.20	583.00	82.00	3.10	95.00	84.00	4.70	34.00
337	21-04-2025 01:00:00	1.20	609.00	83.00	2.90	90.00	79.00	4.30	33.70
338	21-04-2025 02:00:00	1.20	585.00	82.00	3.20	100.00	89.00	4.80	33.30
339	21-04-2025 03:00:00	1.10	560.00	74.00	3.50	69.00	62.00	5.30	32.70
340	21-04-2025 04:00:00	1.10	573.00	72.00	1.70	66.00	57.00	2.50	33.10
341	21-04-2025 05:00:00	1.20	580.00	77.00	3.50	81.00	70.00	5.30	32.30
342	21-04-2025 06:00:00	1.20	597.00	76.00	3.50	75.00	67.00	5.20	32.90
343	21-04-2025 07:00:00	1.10	545.00	69.00	3.40	92.00	81.00	5.10	35.70
344	21-04-2025 08:00:00	1.00	510.00	64.00	3.50	109.00	97.00	5.30	38.50
345	21-04-2025 09:00:00	0.90	461.00	57.00	3.50	110.00	98.00	5.30	41.70
346	21-04-2025 10:00:00	0.90	445.00	51.00	3.50	100.00	87.00	5.30	44.50
347	21-04-2025 11:00:00	0.90	437.00	47.00	3.50	83.00	73.00	5.30	46.20
348	21-04-2025 12:00:00	0.80	405.00	44.00	3.50	82.00	73.00	5.30	48.30
349	21-04-2025 13:00:00	0.80	400.00	41.00	3.50	79.00	70.00	5.30	49.40
350	21-04-2025 14:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
351	21-04-2025 15:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
352	21-04-2025 16:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
353	21-04-2025 17:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
354	21-04-2025 18:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
355	21-04-2025 19:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
356	21-04-2025 20:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
357	21-04-2025 21:00:00	1.10	555.00	77.00	3.30	86.00	76.00	5.00	36.00
358	21-04-2025 22:00:00	1.10	552.00	76.00	3.30	81.00	72.00	5.00	36.00
359	21-04-2025 23:00:00	1.10	561.00	78.00	3.20	83.00	73.00	4.90	35.60
360	22-04-2025 00:00:00	1.10	557.00	79.00	3.50	77.00	68.00	5.20	35.10
361	22-04-2025 01:00:00	1.10	570.00	79.00	3.10	79.00	69.00	4.60	35.30
362	22-04-2025 02:00:00	1.20	580.00	79.00	0.80	84.00	74.00	1.20	35.10
363	22-04-2025 03:00:00	1.20	590.00	79.00	0.80	83.00	73.00	1.20	35.10
364	22-04-2025 04:00:00	1.20	597.00	81.00	0.90	80.00	71.00	1.30	34.20
365	22-04-2025 05:00:00	1.20	621.00	80.00	0.80	87.00	78.00	1.10	34.60
366	22-04-2025 06:00:00	1.20	619.00	79.00	0.90	92.00	81.00	1.30	35.30
367	22-04-2025 07:00:00	1.10	569.00	75.00	2.20	123.00	109.00	3.20	36.50
368	22-04-2025 08:00:00	1.00	523.00	69.00	3.50	115.00	102.00	5.30	38.30
369	22-04-2025 09:00:00	1.00	482.00	61.00	3.50	103.00	91.00	5.30	41.70
370	22-04-2025 10:00:00	0.90	458.00	56.00	3.50	104.00	90.00	5.30	44.50
371	22-04-2025 11:00:00	0.90	448.00	52.00	3.50	94.00	84.00	5.30	45.70
372	22-04-2025 12:00:00	0.80	405.00	47.00	3.50	93.00	83.00	5.30	48.60
373	22-04-2025 13:00:00	0.80	407.00	46.00	3.50	94.00	84.00	5.30	48.60
374	22-04-2025 14:00:00	0.80	402.00	34.00	3.50	63.00	56.00	5.30	52.30
375	22-04-2025 15:00:00	0.80	404.00	34.00	3.50	56.00	50.00	5.30	50.30
376	22-04-2025 16:00:00	0.80	402.00	35.00	3.50	61.00	54.00	5.30	48.60
377	22-04-2025 17:00:00	0.80	422.00	55.00	3.50	87.00	78.00	5.30	43.60



378	22-04-2025 18:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
379	22-04-2025 19:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
380	22-04-2025 20:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
381	22-04-2025 21:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
382	22-04-2025 22:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
383	22-04-2025 23:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
384	23-04-2025 00:00:00	0.80	402.00	29.00	3.50	54.00	48.00	5.30	44.60
385	23-04-2025 01:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
386	23-04-2025 02:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
387	23-04-2025 03:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
388	23-04-2025 04:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
389	23-04-2025 05:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
390	23-04-2025 06:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
391	23-04-2025 07:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
392	23-04-2025 08:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
393	23-04-2025 09:00:00	0.80	402.00	32.00	3.50	61.00	54.00	5.30	44.60
394	23-04-2025 10:00:00	0.80	402.00	31.00	3.50	61.00	54.00	5.30	44.50
395	23-04-2025 12:00:00	0.80	401.00	21.00	3.50	33.00	30.00	5.30	47.40
396	23-04-2025 13:00:00	0.80	404.00	19.00	3.50	27.00	25.00	5.30	47.80
397	23-04-2025 14:00:00	0.80	402.00	17.00	3.50	30.00	27.00	5.30	49.30
398	23-04-2025 15:00:00	0.80	400.00	17.00	3.50	33.00	30.00	5.30	47.60
399	23-04-2025 16:00:00	0.80	403.00	21.00	3.50	34.00	31.00	5.30	47.00
400	23-04-2025 17:00:00	0.80	403.00	24.00	3.50	72.00	63.00	5.30	44.90
401	23-04-2025 18:00:00	0.80	402.00	27.00	3.50	80.00	69.00	5.30	41.50
402	23-04-2025 19:00:00	0.80	403.00	33.00	3.20	119.00	104.00	4.90	39.10
403	23-04-2025 20:00:00	0.90	428.00	35.00	1.90	127.00	119.00	2.80	38.00
404	23-04-2025 21:00:00	1.10	529.00	45.00	1.00	129.00	121.00	1.40	35.60
405	23-04-2025 22:00:00	1.00	503.00	41.00	3.20	115.00	99.00	4.80	35.50
406	23-04-2025 23:00:00	1.10	533.00	49.00	3.00	106.00	91.00	4.50	33.40
407	24-04-2025 00:00:00	1.00	510.00	46.00	2.60	120.00	105.00	3.90	33.40
408	24-04-2025 01:00:00	1.00	494.00	48.00	3.50	61.00	54.00	5.20	33.10
409	24-04-2025 02:00:00	1.00	502.00	55.00	3.50	77.00	68.00	5.20	32.40
410	24-04-2025 03:00:00	1.10	558.00	64.00	3.00	78.00	69.00	4.50	32.00
411	24-04-2025 04:00:00	1.20	582.00	72.00	2.60	106.00	94.00	4.00	31.20
412	24-04-2025 05:00:00	1.20	611.00	76.00	2.40	120.00	106.00	3.60	30.70
413	24-04-2025 06:00:00	1.60	816.00	78.00	0.90	98.00	87.00	1.30	29.60
414	24-04-2025 07:00:00	1.40	679.00	71.00	2.10	129.00	120.00	3.20	32.90
415	24-04-2025 08:00:00	1.10	549.00	67.00	2.90	131.00	123.00	4.30	37.20
416	24-04-2025 09:00:00	1.00	519.00	58.00	3.30	130.00	120.00	5.00	40.20
417	24-04-2025 10:00:00	0.80	414.00	41.00	3.50	86.00	77.00	5.30	44.40
418	24-04-2025 11:00:00	0.80	402.00	34.00	3.50	74.00	66.00	5.30	48.70
419	24-04-2025 12:00:00	0.80	402.00	24.00	3.50	60.00	53.00	5.30	50.50
420	24-04-2025 13:00:00	0.80	402.00	18.00	3.50	44.00	39.00	5.30	51.60
421	24-04-2025 14:00:00	0.80	404.00	16.00	3.50	52.00	46.00	5.30	49.50
422	24-04-2025 15:00:00	0.80	404.00	20.00	3.50	43.00	38.00	5.30	48.80
423	24-04-2025 16:00:00	0.80	402.00	20.00	3.50	46.00	41.00	5.30	48.60
424	24-04-2025 17:00:00	0.80	400.00	27.00	3.50	49.00	45.00	5.30	47.20
425	24-04-2025 18:00:00	0.80	406.00	43.00	3.50	105.00	94.00	5.30	40.70
426	24-04-2025 19:00:00	0.90	465.00	50.00	3.50	108.00	96.00	5.30	38.30
427	24-04-2025 20:00:00	0.90	471.00	52.00	3.50	101.00	89.00	5.30	37.30
428	24-04-2025 21:00:00	1.00	511.00	56.00	3.50	100.00	88.00	5.30	36.60
429	24-04-2025 22:00:00	1.10	537.00	62.00	3.10	87.00	76.00	4.60	36.40
430	24-04-2025 23:00:00	1.10	540.00	70.00	3.20	93.00	82.00	4.80	35.80
431	25-04-2025 00:00:00	1.10	562.00	74.00	2.90	98.00	87.00	4.40	35.00
432	25-04-2025 01:00:00	1.20	587.00	77.00	2.30	87.00	78.00	3.50	34.30
433	25-04-2025 02:00:00	1.20	605.00	79.00	0.70	93.00	82.00	1.10	34.00
434	25-04-2025 03:00:00	1.20	599.00	81.00	2.10	87.00	78.00	3.10	34.40
435	25-04-2025 04:00:00	1.20	604.00	80.00	2.50	92.00	81.00	3.70	34.60
436	25-04-2025 05:00:00	1.20	622.00	81.00	1.90	107.00	94.00	2.90	34.10
437	25-04-2025 06:00:00	1.20	618.00	82.00	2.20	97.00	86.00	3.30	33.80
438	25-04-2025 07:00:00	1.20	581.00	75.00	2.90	126.00	117.00	4.40	35.10
439	25-04-2025 08:00:00	1.00	519.00	65.00	3.40	97.00	86.00	5.10	39.30
440	25-04-2025 09:00:00	0.90	472.00	55.00	3.50	120.00	106.00	5.30	42.30
441	25-04-2025 10:00:00	0.90	446.00	46.00	3.50	104.00	92.00	5.30	45.60
442	25-04-2025 11:00:00	0.80	403.00	34.00	3.50	81.00	72.00	5.30	48.50
443	25-04-2025 12:00:00	0.80	404.00	26.00	3.50	55.00	50.00	5.30	50.40
444	25-04-2025 13:00:00	0.80	402.00	19.00	3.50	36.00	32.00	5.30	53.80
445	25-04-2025 14:00:00	0.80	402.00	17.00	3.50	41.00	37.00	5.30	52.40
446	25-04-2025 15:00:00	0.80	402.00	14.00	3.50	40.00	36.00	5.30	52.90
447	25-04-2025 16:00:00	0.80	404.00	16.00	3.50	41.00	37.00	5.30	51.00
448	25-04-2025 17:00:00	0.80	400.00	18.00	3.50	46.00	41.00	5.30	47.60
449	25-04-2025 18:00:00	0.80	403.00	35.00	3.50	90.00	80.00	5.30	41.40
450	25-04-2025 19:00:00	0.80	409.00	42.00	3.50	81.00	71.00	5.30	39.00
451	25-04-2025 20:00:00	0.80	423.00	46.00	3.50	84.00	74.00	5.30	37.60
452	25-04-2025 21:00:00	1.00	475.00	51.00	3.50	85.00	75.00	5.20	36.50
453	25-04-2025 22:00:00	1.00	520.00	57.00	3.20	92.00	81.00	4.80	36.80
454	25-04-2025 23:00:00	1.10	543.00	63.00	2.70	89.00	79.00	4.10	36.00

455	26-04-2025 00:00:00	1.40	691.00	73.00	0.70	87.00	77.00	1.00	33.40
456	26-04-2025 01:00:00	1.50	727.00	74.00	0.60	102.00	90.00	0.90	33.00
457	26-04-2025 02:00:00	1.50	760.00	76.00	0.60	97.00	86.00	1.00	32.60
458	26-04-2025 03:00:00	1.60	775.00	80.00	0.80	112.00	99.00	1.20	31.80
459	26-04-2025 04:00:00	1.50	739.00	81.00	0.60	96.00	85.00	1.00	32.30
460	26-04-2025 05:00:00	1.50	738.00	83.00	0.50	96.00	85.00	0.80	32.20
461	26-04-2025 06:00:00	1.30	653.00	82.00	0.80	132.00	122.00	0.90	33.00
462	26-04-2025 07:00:00	1.10	570.00	73.00	0.90	117.00	103.00	1.30	36.10
463	26-04-2025 08:00:00	1.00	500.00	63.00	3.40	74.00	66.00	5.10	39.10
464	26-04-2025 09:00:00	1.00	479.00	57.00	3.50	91.00	80.00	5.30	42.00
465	26-04-2025 10:00:00	0.90	448.00	50.00	3.50	77.00	68.00	5.30	45.20
466	26-04-2025 11:00:00	0.80	416.00	46.00	3.50	78.00	69.00	5.30	46.90
467	26-04-2025 12:00:00	0.80	404.00	40.00	3.50	76.00	68.00	5.30	49.90
468	26-04-2025 13:00:00	0.80	404.00	36.00	3.50	64.00	57.00	5.30	51.50
469	26-04-2025 14:00:00	0.80	404.00	35.00	3.50	70.00	62.00	5.30	50.90
470	26-04-2025 15:00:00	0.80	403.00	39.00	3.50	74.00	66.00	5.30	49.10
471	26-04-2025 16:00:00	0.80	408.00	45.00	3.50	67.00	60.00	5.30	43.90
472	26-04-2025 17:00:00	0.90	432.00	56.00	3.50	75.00	67.00	5.30	41.10
473	26-04-2025 18:00:00	0.90	443.00	58.00	3.50	73.00	64.00	5.30	39.80
474	26-04-2025 19:00:00	0.90	453.00	61.00	3.50	67.00	60.00	5.30	38.90
475	26-04-2025 20:00:00	1.00	483.00	66.00	3.50	79.00	70.00	5.30	37.60
476	26-04-2025 21:00:00	1.00	517.00	70.00	3.10	69.00	62.00	4.70	36.80
477	26-04-2025 22:00:00	1.00	515.00	63.00	3.50	80.00	71.00	5.30	33.80
478	26-04-2025 23:00:00	1.00	479.00	52.00	3.50	67.00	60.00	5.30	32.30
479	27-04-2025 00:00:00	0.90	471.00	53.00	3.50	51.00	46.00	5.30	31.60
480	27-04-2025 01:00:00	1.00	497.00	61.00	3.50	60.00	53.00	5.30	30.50
481	27-04-2025 02:00:00	1.00	508.00	64.00	3.50	63.00	56.00	5.30	29.80
482	27-04-2025 03:00:00	1.10	542.00	70.00	3.50	92.00	81.00	5.30	29.10
483	27-04-2025 04:00:00	1.10	570.00	74.00	3.50	83.00	74.00	5.30	28.30
484	27-04-2025 05:00:00	1.20	603.00	76.00	3.50	96.00	85.00	5.30	28.00
485	27-04-2025 06:00:00	1.20	578.00	71.00	3.50	89.00	79.00	5.30	30.00
486	27-04-2025 07:00:00	1.00	507.00	61.00	3.50	137.00	128.00	5.30	32.30
487	27-04-2025 08:00:00	1.00	504.00	60.00	3.50	116.00	102.00	5.30	33.70
488	27-04-2025 09:00:00	1.00	486.00	55.00	3.50	98.00	87.00	5.30	35.70
489	27-04-2025 10:00:00	0.90	447.00	53.00	3.50	86.00	77.00	5.30	36.90
490	27-04-2025 11:00:00	0.90	430.00	49.00	3.50	74.00	66.00	5.30	38.40
491	27-04-2025 12:00:00	0.90	465.00	53.00	3.50	78.00	69.00	5.30	35.90
492	27-04-2025 13:00:00	0.90	438.00	50.00	3.50	85.00	75.00	5.30	38.60
493	27-04-2025 14:00:00	0.90	441.00	51.00	3.50	83.00	73.00	5.30	37.30
494	27-04-2025 15:00:00	0.90	470.00	51.00	3.50	85.00	74.00	5.30	37.50
495	27-04-2025 16:00:00	1.00	491.00	57.00	3.50	98.00	87.00	5.30	36.00
496	27-04-2025 17:00:00	1.00	495.00	55.00	3.50	97.00	86.00	5.30	35.60
497	27-04-2025 18:00:00	1.00	501.00	55.00	3.50	91.00	80.00	5.30	35.60
498	27-04-2025 19:00:00	1.00	515.00	60.00	3.50	105.00	93.00	5.30	33.90
499	27-04-2025 20:00:00	1.10	550.00	69.00	3.50	119.00	104.00	5.30	31.50
500	27-04-2025 21:00:00	1.10	543.00	67.00	3.50	122.00	109.00	5.30	31.80
501	27-04-2025 22:00:00	1.10	541.00	66.00	3.50	106.00	94.00	5.30	32.00
502	27-04-2025 23:00:00	1.10	571.00	67.00	3.50	122.00	110.00	5.20	31.90
503	28-04-2025 00:00:00	1.20	585.00	72.00	2.00	129.00	121.00	3.00	30.70
504	28-04-2025 01:00:00	1.20	599.00	76.00	3.50	115.00	102.00	5.30	29.40
505	28-04-2025 02:00:00	1.20	605.00	75.00	3.50	122.00	111.00	5.30	29.20
506	28-04-2025 03:00:00	1.20	578.00	70.00	3.50	97.00	85.00	5.30	29.20
507	28-04-2025 04:00:00	1.00	520.00	63.00	3.50	75.00	67.00	5.30	30.00
508	28-04-2025 05:00:00	1.10	543.00	65.00	1.00	392.00	348.00	1.40	29.60
509	28-04-2025 06:00:00	1.10	535.00	70.00	3.50	86.00	76.00	5.30	30.70
510	28-04-2025 07:00:00	1.00	508.00	65.00	3.50	67.00	60.00	5.30	32.70
511	28-04-2025 08:00:00	1.00	500.00	66.00	3.50	56.00	50.00	5.30	30.80
512	28-04-2025 09:00:00	0.90	459.00	54.00	3.50	51.00	46.00	5.30	35.20
513	28-04-2025 10:00:00	1.00	486.00	58.00	3.50	62.00	55.00	5.30	32.50
514	28-04-2025 11:00:00	1.00	498.00	62.00	3.50	56.00	50.00	5.30	32.50
515	28-04-2025 12:00:00	0.80	420.00	51.00	3.50	55.00	49.00	5.30	38.20
516	28-04-2025 13:00:00	0.80	419.00	50.00	3.50	56.00	50.00	5.30	38.20
517	28-04-2025 14:00:00	0.80	409.00	47.00	3.50	57.00	51.00	5.30	40.60
518	28-04-2025 15:00:00	0.80	421.00	48.00	3.50	64.00	57.00	5.30	40.20
519	28-04-2025 16:00:00	0.90	426.00	49.00	3.50	80.00	71.00	5.30	39.00
520	28-04-2025 17:00:00	0.90	438.00	54.00	3.50	68.00	61.00	5.30	36.70
521	28-04-2025 19:00:00	1.00	488.00	61.00	3.50	73.00	64.00	5.30	32.70
522	28-04-2025 20:00:00	1.00	514.00	68.00	3.50	85.00	75.00	5.30	31.40
523	28-04-2025 21:00:00	1.00	517.00	68.00	3.50	81.00	72.00	5.30	31.20
524	28-04-2025 22:00:00	1.10	558.00	79.00	3.50	86.00	77.00	5.30	29.50
525	28-04-2025 23:00:00	1.10	546.00	74.00	3.50	66.00	59.00	5.30	29.50
526	29-04-2025 00:00:00	1.10	538.00	74.00	3.50	66.00	58.00	5.30	29.20
527	29-04-2025 01:00:00	1.10	551.00	79.00	3.50	69.00	61.00	5.30	28.20
528	29-04-2025 02:00:00	1.10	573.00	80.00	3.50	76.00	68.00	5.30	27.80
529	29-04-2025 03:00:00	1.20	579.00	82.00	3.50	72.00	63.00	5.30	27.40
530	29-04-2025 04:00:00	1.20	590.00	83.00	3.50	74.00	66.00	5.30	27.10
531	29-04-2025 05:00:00	1.20	594.00	84.00	3.50	74.00	65.00	5.20	26.90

532	29-04-2025 06:00:00	1.00	500.00	84.00	3.50	77.00	68.00	5.20	27.20
533	29-04-2025 07:00:00	1.10	547.00	75.00	3.50	104.00	92.00	5.30	30.10
534	29-04-2025 08:00:00	1.00	510.00	67.00	3.50	84.00	74.00	5.30	32.90
535	29-04-2025 09:00:00	1.00	487.00	59.00	3.50	68.00	61.00	5.30	36.10
536	29-04-2025 10:00:00	0.80	416.00	47.00	3.50	72.00	63.00	5.30	39.70
537	29-04-2025 11:00:00	0.80	423.00	48.00	3.50	54.00	48.00	5.30	36.70
538	29-04-2025 12:00:00	0.80	411.00	43.00	3.50	48.00	44.00	5.30	39.90
539	29-04-2025 13:00:00	0.80	413.00	43.00	3.50	61.00	54.00	5.30	39.10
540	29-04-2025 14:00:00	0.80	406.00	39.00	3.50	42.00	38.00	5.30	41.90
541	29-04-2025 15:00:00	0.80	408.00	43.00	3.50	54.00	48.00	5.30	38.30
542	29-04-2025 16:00:00	0.80	412.00	41.00	3.50	50.00	45.00	5.30	38.90
543	29-04-2025 17:00:00	0.80	408.00	45.00	3.50	56.00	50.00	5.30	36.50
544	29-04-2025 19:00:00	0.90	474.00	55.00	3.50	0.00	0.00	5.30	31.70
545	29-04-2025 20:00:00	1.00	498.00	59.00	3.50	71.00	62.00	5.30	31.50
546	29-04-2025 21:00:00	1.00	520.00	62.00	3.50	72.00	63.00	5.30	31.30
547	29-04-2025 22:00:00	1.10	536.00	64.00	3.50	84.00	74.00	5.30	30.80
548	29-04-2025 23:00:00	1.10	548.00	67.00	3.50	81.00	72.00	5.30	30.10
549	30-04-2025 00:00:00	1.10	561.00	71.00	3.50	92.00	81.00	5.30	29.60
550	30-04-2025 01:00:00	1.20	580.00	75.00	3.50	96.00	85.00	5.30	29.30
551	30-04-2025 02:00:00	1.20	586.00	77.00	3.50	96.00	85.00	5.30	29.20
552	30-04-2025 03:00:00	1.20	581.00	77.00	3.50	80.00	71.00	5.30	28.90
553	30-04-2025 04:00:00	1.20	576.00	77.00	3.50	75.00	67.00	5.30	29.00
554	30-04-2025 05:00:00	1.20	576.00	79.00	3.50	69.00	61.00	5.30	28.40
555	30-04-2025 06:00:00	1.20	577.00	78.00	3.50	80.00	71.00	5.30	29.00
556	30-04-2025 07:00:00	1.10	537.00	72.00	3.50	75.00	67.00	5.30	30.90
557	30-04-2025 08:00:00	1.00	510.00	66.00	3.50	70.00	62.00	5.30	33.00
558	30-04-2025 09:00:00	0.90	458.00	56.00	3.50	66.00	59.00	5.30	36.60
559	30-04-2025 10:00:00	0.90	425.00	49.00	3.50	73.00	65.00	5.30	40.00
560	30-04-2025 11:00:00	0.80	422.00	48.00	3.50	67.00	60.00	5.30	40.40
561	30-04-2025 12:00:00	0.80	415.00	46.00	3.50	68.00	62.00	5.30	41.80
562	30-04-2025 13:00:00	0.80	424.00	45.00	3.50	67.00	60.00	5.30	41.80
563	30-04-2025 14:00:00	0.80	407.00	42.00	3.50	67.00	60.00	5.30	44.00
564	30-04-2025 15:00:00	0.80	408.00	42.00	3.50	68.00	59.00	5.30	42.40
565	30-04-2025 16:00:00	0.80	414.00	51.00	3.50	55.00	49.00	5.30	37.70
566	30-04-2025 17:00:00	1.00	479.00	59.00	3.50	60.00	53.00	5.30	33.20
567	30-04-2025 18:00:00	1.10	536.00	74.00	3.50	96.00	86.00	5.30	30.40
568	30-04-2025 19:00:00	1.10	554.00	73.00	3.50	117.00	105.00	5.30	30.50
569	30-04-2025 20:00:00	1.10	564.00	74.00	3.50	104.00	92.00	5.30	30.30
570	30-04-2025 21:00:00	1.10	563.00	71.00	3.50	83.00	73.00	5.20	31.20
571	30-04-2025 22:00:00	1.20	603.00	78.00	3.50	93.00	82.00	5.20	29.40
572	30-04-2025 23:00:00	1.20	615.00	78.00	2.90	89.00	79.00	4.30	29.40
573	01-05-2025 00:00:00	1.20	604.00	77.00	3.50	70.00	62.00	5.30	28.90
574	01-05-2025 01:00:00	1.20	604.00	78.00	3.50	66.00	58.00	5.30	28.40
575	01-05-2025 02:00:00	1.20	620.00	76.00	3.40	68.00	60.00	5.10	28.70
576	01-05-2025 03:00:00	1.20	615.00	78.00	3.50	77.00	69.00	5.30	28.30
577	01-05-2025 04:00:00	1.30	626.00	77.00	2.80	67.00	60.00	4.20	28.80
578	01-05-2025 05:00:00	1.30	639.00	79.00	3.50	76.00	68.00	5.20	28.10
579	01-05-2025 06:00:00	1.20	624.00	75.00	3.50	88.00	79.00	5.20	29.30
580	01-05-2025 07:00:00	1.10	554.00	67.00	3.50	98.00	87.00	5.30	32.30
581	01-05-2025 08:00:00	1.00	493.00	57.00	3.50	75.00	67.00	5.30	36.60
582	01-05-2025 09:00:00	0.90	437.00	52.00	3.50	58.00	53.00	5.30	39.80
583	01-05-2025 10:00:00	0.80	423.00	46.00	3.50	51.00	46.00	5.30	42.40
584	01-05-2025 11:00:00	0.80	407.00	41.00	3.50	49.00	45.00	5.30	44.50
585	01-05-2025 12:00:00	0.80	402.00	38.00	3.50	42.00	38.00	5.30	46.30
586	01-05-2025 13:00:00	0.80	409.00	43.00	3.50	55.00	49.00	5.30	40.90
587	01-05-2025 14:00:00	0.80	409.00	43.00	3.50	55.00	49.00	5.30	40.90
588	01-05-2025 15:00:00	0.80	409.00	43.00	3.50	55.00	49.00	5.30	40.90
589	01-05-2025 16:00:00	0.80	409.00	43.00	3.50	55.00	49.00	5.30	40.90
590	01-05-2025 17:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
591	01-05-2025 18:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
592	01-05-2025 19:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
593	01-05-2025 20:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
594	01-05-2025 21:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
595	01-05-2025 22:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
596	01-05-2025 23:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
597	02-05-2025 00:00:00	0.80	411.00	44.00	3.50	54.00	48.00	5.30	40.90
598	02-05-2025 01:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
599	02-05-2025 02:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
600	02-05-2025 03:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
601	02-05-2025 04:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
602	02-05-2025 05:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
603	02-05-2025 06:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
604	02-05-2025 07:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
605	02-05-2025 08:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
606	02-05-2025 09:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
607	02-05-2025 10:00:00	0.80	416.00	44.00	3.50	53.00	47.00	5.30	40.90
608	02-05-2025 11:00:00	0.80	418.00	44.00	3.50	54.00	48.00	5.30	41.00

609	02-05-2025 12:00:00	0.80	409.00	43.00	3.50	47.00	42.00	5.30	41.70
610	02-05-2025 13:00:00	0.80	407.00	40.00	3.50	49.00	45.00	5.30	42.20
611	02-05-2025 14:00:00	0.80	403.00	39.00	3.50	42.00	38.00	5.30	42.70
612	02-05-2025 15:00:00	0.80	403.00	37.00	3.50	37.00	33.00	5.30	44.30
613	02-05-2025 16:00:00	0.80	405.00	37.00	3.50	41.00	37.00	5.30	43.00
614	02-05-2025 17:00:00	0.80	407.00	41.00	3.50	45.00	40.00	5.30	40.70
615	02-05-2025 18:00:00	0.80	412.00	49.00	3.50	47.00	42.00	5.30	37.40
616	02-05-2025 19:00:00	1.00	514.00	58.00	3.50	151.00	139.00	5.30	34.70
617	02-05-2025 20:00:00	1.00	517.00	58.00	3.50	138.00	128.00	5.30	33.80
618	02-05-2025 21:00:00	1.10	551.00	63.00	3.50	124.00	114.00	5.30	32.90
619	02-05-2025 22:00:00	1.20	579.00	67.00	3.50	113.00	99.00	5.30	31.70
620	02-05-2025 23:00:00	1.20	605.00	70.00	3.50	119.00	106.00	5.30	31.20
621	03-05-2025 00:00:00	1.20	602.00	71.00	3.50	97.00	86.00	5.30	30.80
622	03-05-2025 01:00:00	1.40	709.00	77.00	3.30	116.00	103.00	4.70	29.60
623	03-05-2025 02:00:00	1.60	806.00	82.00	1.10	115.00	102.00	1.60	28.70
624	03-05-2025 03:00:00	1.40	683.00	76.00	2.80	124.00	115.00	4.20	29.50
625	03-05-2025 04:00:00	1.60	819.00	82.00	0.80	113.00	99.00	1.20	28.60
626	03-05-2025 05:00:00	1.60	808.00	82.00	0.60	221.00	200.00	0.90	28.60
627	03-05-2025 06:00:00	1.40	675.00	76.00	1.50	116.00	102.00	2.30	30.00
628	03-05-2025 07:00:00	1.20	600.00	68.00	3.30	106.00	93.00	4.90	33.50
629	03-05-2025 08:00:00	1.10	563.00	60.00	3.50	128.00	119.00	5.20	37.60
630	03-05-2025 09:00:00	0.90	464.00	52.00	3.50	97.00	86.00	5.30	41.10
631	03-05-2025 10:00:00	0.80	421.00	45.00	3.50	80.00	71.00	5.30	43.40
632	03-05-2025 11:00:00	0.80	416.00	43.00	3.50	71.00	62.00	5.30	44.70
633	03-05-2025 12:00:00	0.80	406.00	40.00	3.50	68.00	61.00	5.30	46.00
634	03-05-2025 13:00:00	0.80	405.00	40.00	3.50	60.00	53.00	5.30	45.60
635	03-05-2025 14:00:00	0.80	407.00	40.00	3.50	55.00	49.00	5.30	45.10
636	03-05-2025 15:00:00	0.80	409.00	44.00	3.50	58.00	53.00	5.30	42.10
637	03-05-2025 16:00:00	0.80	407.00	45.00	3.50	49.00	45.00	5.30	41.80
638	03-05-2025 17:00:00	0.80	413.00	50.00	3.50	77.00	68.00	5.30	38.50
639	03-05-2025 18:00:00	0.90	435.00	55.00	3.50	68.00	61.00	5.30	37.10
640	03-05-2025 19:00:00	1.00	482.00	58.00	3.50	91.00	80.00	5.30	35.90
641	03-05-2025 20:00:00	1.00	508.00	68.00	3.50	48.00	43.00	5.30	29.20
642	03-05-2025 21:00:00	1.10	562.00	82.00	3.50	68.00	61.00	5.30	27.70
643	03-05-2025 22:00:00	1.20	586.00	81.00	3.50	62.00	55.00	5.30	27.70
644	03-05-2025 23:00:00	1.10	571.00	78.00	3.50	64.00	57.00	5.30	28.60
645	04-05-2025 00:00:00	1.20	594.00	78.00	3.50	72.00	63.00	5.30	28.70
646	04-05-2025 01:00:00	1.20	606.00	79.00	3.50	69.00	62.00	5.30	28.60
647	04-05-2025 02:00:00	1.20	613.00	81.00	3.50	88.00	78.00	5.30	28.00
648	04-05-2025 03:00:00	1.30	627.00	80.00	3.50	81.00	72.00	5.30	28.70
649	04-05-2025 04:00:00	1.30	636.00	81.00	3.50	82.00	73.00	5.30	28.40
650	04-05-2025 05:00:00	1.30	638.00	81.00	3.50	87.00	76.00	5.30	27.90
651	04-05-2025 06:00:00	1.30	627.00	79.00	3.50	87.00	78.00	5.30	29.00
652	04-05-2025 07:00:00	1.10	558.00	71.00	3.50	107.00	95.00	5.30	31.90
653	04-05-2025 08:00:00	1.00	519.00	62.00	3.50	123.00	111.00	5.30	35.40
654	04-05-2025 09:00:00	1.00	503.00	55.00	3.50	109.00	97.00	5.30	37.90
655	04-05-2025 10:00:00	0.90	444.00	48.00	3.50	104.00	92.00	5.30	41.30
656	04-05-2025 11:00:00	0.90	436.00	45.00	3.50	103.00	91.00	5.30	43.20
657	04-05-2025 12:00:00	0.80	421.00	40.00	3.50	85.00	75.00	5.30	45.00
658	04-05-2025 13:00:00	0.80	410.00	39.00	3.50	78.00	69.00	5.30	45.00
659	04-05-2025 14:00:00	0.80	406.00	37.00	3.50	60.00	53.00	5.30	45.80
660	04-05-2025 15:00:00	0.80	410.00	39.00	3.50	56.00	50.00	5.30	43.10
661	04-05-2025 16:00:00	0.80	418.00	40.00	3.50	53.00	47.00	5.30	43.10
662	04-05-2025 17:00:00	0.80	409.00	42.00	3.50	53.00	47.00	5.30	41.10
663	04-05-2025 18:00:00	0.80	416.00	49.00	3.50	74.00	66.00	5.30	37.60
664	04-05-2025 19:00:00	0.90	461.00	52.00	3.50	102.00	90.00	5.30	36.20
665	04-05-2025 20:00:00	1.00	507.00	57.00	3.50	86.00	76.00	5.30	35.40
666	04-05-2025 21:00:00	1.10	536.00	61.00	3.40	132.00	123.00	5.00	34.30
667	04-05-2025 22:00:00	1.10	558.00	65.00	3.50	105.00	93.00	5.30	32.80
668	04-05-2025 23:00:00	1.20	612.00	68.00	3.20	115.00	102.00	4.80	32.50
669	05-05-2025 00:00:00	1.20	596.00	68.00	1.00	109.00	96.00	1.50	32.40
670	05-05-2025 01:00:00	1.30	629.00	71.00	3.40	103.00	91.00	5.10	31.70
671	05-05-2025 02:00:00	1.30	643.00	72.00	0.80	92.00	80.00	1.20	31.80
672	05-05-2025 03:00:00	1.30	656.00	74.00	0.90	103.00	91.00	1.40	31.60
673	05-05-2025 04:00:00	1.40	680.00	75.00	1.00	100.00	89.00	1.50	31.50
674	05-05-2025 05:00:00	1.40	712.00	78.00	2.10	93.00	83.00	3.20	30.80
675	05-05-2025 06:00:00	1.30	647.00	75.00	3.10	114.00	101.00	4.70	32.10
676	05-05-2025 07:00:00	1.20	605.00	69.00	3.50	114.00	100.00	5.30	34.80
677	05-05-2025 08:00:00	1.10	545.00	58.00	3.50	96.00	85.00	5.30	38.40
678	05-05-2025 09:00:00	0.90	447.00	49.00	3.50	61.00	54.00	5.30	41.70
679	05-05-2025 10:00:00	0.90	439.00	47.00	3.50	66.00	57.00	5.30	43.30
680	05-05-2025 11:00:00	0.80	413.00	45.00	3.50	68.00	61.00	5.30	44.20
681	05-05-2025 12:00:00	0.80	418.00	43.00	3.50	67.00	60.00	5.30	44.70
682	05-05-2025 13:00:00	0.80	403.00	41.00	3.50	56.00	50.00	5.30	46.30
683	05-05-2025 14:00:00	0.80	407.00	40.00	3.50	64.00	57.00	5.30	45.10
684	05-05-2025 15:00:00	0.80	409.00	40.00	3.50	55.00	49.00	5.30	45.20
685	05-05-2025 16:00:00	0.80	409.00	40.00	3.50	55.00	49.00	5.30	43.90

686	05-05-2025 17:00:00	0.80	410.00	42.00	3.50	66.00	58.00	5.30	42.40
687	05-05-2025 18:00:00	0.90	427.00	48.00	3.50	88.00	79.00	5.30	39.50
688	05-05-2025 19:00:00	1.00	482.00	55.00	3.50	117.00	104.00	5.30	37.30
689	05-05-2025 20:00:00	1.00	499.00	59.00	3.50	97.00	86.00	5.30	36.30
690	05-05-2025 21:00:00	1.00	515.00	61.00	3.50	97.00	85.00	5.30	35.40
691	05-05-2025 22:00:00	1.10	532.00	63.00	3.50	96.00	85.00	5.30	34.80
692	05-05-2025 23:00:00	1.10	544.00	65.00	3.50	94.00	84.00	5.30	34.10
693	06-05-2025 00:00:00	1.10	531.00	66.00	3.50	88.00	79.00	5.30	33.60
694	06-05-2025 01:00:00	1.10	564.00	67.00	3.50	91.00	80.00	5.30	33.70
695	06-05-2025 02:00:00	1.20	604.00	68.00	3.50	84.00	74.00	5.30	33.60
696	06-05-2025 03:00:00	1.30	654.00	69.00	3.50	90.00	80.00	5.30	33.20
697	06-05-2025 04:00:00	1.20	611.00	71.00	3.50	96.00	85.00	5.30	32.50
698	06-05-2025 05:00:00	1.20	608.00	74.00	3.50	115.00	102.00	5.30	31.40
699	06-05-2025 06:00:00	1.00	510.00	63.00	3.50	225.00	206.00	5.30	31.40
700	06-05-2025 07:00:00	1.00	494.00	56.00	3.50	56.00	50.00	5.30	34.80
701	06-05-2025 08:00:00	0.90	446.00	51.00	3.50	47.00	42.00	5.30	37.30
702	06-05-2025 09:00:00	0.80	418.00	46.00	3.50	46.00	41.00	5.30	39.50
703	06-05-2025 10:00:00	0.90	444.00	49.00	3.50	63.00	56.00	5.30	39.70
704	06-05-2025 11:00:00	0.90	439.00	47.00	3.50	60.00	53.00	5.30	42.30
705	06-05-2025 12:00:00	0.80	423.00	45.00	3.50	63.00	56.00	5.30	43.80
706	06-05-2025 13:00:00	0.80	412.00	42.00	3.50	63.00	56.00	5.30	45.60
707	06-05-2025 14:00:00	0.80	406.00	39.00	3.50	68.00	61.00	5.30	46.30
708	06-05-2025 15:00:00	0.80	410.00	39.00	3.50	62.00	55.00	5.30	45.60
709	06-05-2025 16:00:00	0.80	421.00	47.00	3.50	155.00	142.00	5.30	39.40
710	06-05-2025 17:00:00	0.80	409.00	43.00	3.50	63.00	56.00	5.30	42.30
711	06-05-2025 18:00:00	0.90	438.00	53.00	3.50	74.00	66.00	5.30	37.60
712	06-05-2025 19:00:00	1.00	491.00	58.00	3.50	80.00	71.00	5.30	36.00
713	06-05-2025 20:00:00	1.00	516.00	59.00	3.50	91.00	81.00	5.30	35.80
714	06-05-2025 21:00:00	1.00	524.00	65.00	3.50	84.00	74.00	5.30	33.90
715	06-05-2025 22:00:00	1.10	560.00	69.00	3.50	94.00	83.00	5.30	33.20
716	06-05-2025 23:00:00	1.10	561.00	71.00	3.50	97.00	86.00	5.30	32.50
717	07-05-2025 00:00:00	1.10	571.00	73.00	3.50	105.00	92.00	5.30	31.70
718	07-05-2025 01:00:00	1.20	577.00	75.00	3.50	99.00	88.00	5.30	31.10
719	07-05-2025 02:00:00	1.20	613.00	75.00	3.50	110.00	97.00	5.30	31.00
720	07-05-2025 03:00:00	1.20	616.00	78.00	3.50	118.00	105.00	5.20	30.40
721	07-05-2025 04:00:00	1.30	631.00	78.00	3.20	112.00	99.00	4.80	30.50
722	07-05-2025 05:00:00	1.30	626.00	79.00	3.40	117.00	102.00	5.10	29.80
723	07-05-2025 06:00:00	1.30	662.00	77.00	2.80	127.00	118.00	4.20	31.00
724	07-05-2025 07:00:00	1.20	606.00	66.00	3.10	132.00	123.00	4.70	35.30
725	07-05-2025 08:00:00	1.00	507.00	53.00	3.50	134.00	125.00	5.30	38.50
726	07-05-2025 09:00:00	0.90	439.00	44.00	3.50	99.00	88.00	5.30	42.60
727	07-05-2025 10:00:00	0.80	410.00	41.00	3.50	81.00	72.00	5.30	44.30
728	07-05-2025 11:00:00	0.80	407.00	37.00	3.50	84.00	74.00	5.30	46.40
729	07-05-2025 12:00:00	0.80	401.00	32.00	3.50	58.00	53.00	5.30	48.80
730	07-05-2025 13:00:00	0.80	404.00	32.00	3.50	57.00	52.00	5.30	49.70
731	07-05-2025 14:00:00	0.80	404.00	32.00	3.50	61.00	54.00	5.30	48.60
732	07-05-2025 15:00:00	0.80	402.00	33.00	3.50	66.00	60.00	5.30	47.20
733	07-05-2025 16:00:00	0.80	405.00	38.00	3.50	94.00	84.00	5.30	45.00
734	07-05-2025 17:00:00	0.80	407.00	42.00	3.50	82.00	73.00	5.30	41.40
735	07-05-2025 18:00:00	1.00	511.00	83.00	3.50	72.00	63.00	5.30	27.50
736	07-05-2025 19:00:00	1.00	496.00	66.00	3.50	88.00	77.00	5.30	28.70
737	07-05-2025 20:00:00	1.10	564.00	82.00	3.50	66.00	58.00	5.30	27.90
738	07-05-2025 21:00:00	1.10	571.00	83.00	3.50	66.00	59.00	5.30	27.30
739	07-05-2025 22:00:00	1.30	626.00	83.00	3.50	121.00	108.00	5.30	27.70
740	07-05-2025 23:00:00	1.20	575.00	80.00	3.50	79.00	70.00	5.30	28.80
741	08-05-2025 00:00:00	1.30	629.00	85.00	3.50	139.00	129.00	5.30	28.20
742	08-05-2025 01:00:00	1.30	637.00	82.00	3.50	103.00	91.00	5.30	28.10
743	08-05-2025 02:00:00	1.30	659.00	84.00	3.50	124.00	115.00	5.30	28.00
744	08-05-2025 03:00:00	1.30	650.00	84.00	3.50	79.00	70.00	5.30	27.90
745	08-05-2025 04:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
746	08-05-2025 05:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
747	08-05-2025 06:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
748	08-05-2025 07:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
749	08-05-2025 08:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
750	08-05-2025 09:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
751	08-05-2025 10:00:00	0.80	410.00	41.00	3.50	67.00	60.00	5.30	44.70
752	08-05-2025 11:00:00	0.80	411.00	41.00	3.50	68.00	61.00	5.30	44.60
753	08-05-2025 12:00:00	0.80	412.00	41.00	3.50	67.00	60.00	5.30	44.80
754	08-05-2025 13:00:00	0.80	403.00	37.00	3.50	54.00	48.00	5.30	48.00
755	08-05-2025 14:00:00	0.80	402.00	36.00	3.50	56.00	50.00	5.30	49.10
756	08-05-2025 15:00:00	0.80	403.00	35.00	3.50	56.00	50.00	5.30	48.30
757	08-05-2025 16:00:00	0.80	404.00	36.00	3.50	54.00	48.00	5.30	48.20
758	08-05-2025 17:00:00	0.80	406.00	43.00	3.50	69.00	62.00	5.30	43.10
759	08-05-2025 18:00:00	0.90	450.00	52.00	3.50	125.00	115.00	5.30	39.60
760	08-05-2025 19:00:00	1.00	484.00	72.00	3.50	56.00	50.00	5.30	29.20
761	08-05-2025 20:00:00	1.10	563.00	80.00	3.50	63.00	56.00	5.30	28.60
762	08-05-2025 21:00:00	1.10	540.00	73.00	3.50	56.00	50.00	5.30	29.60

Superintending Engineer
Operation Circle
Corporate Office
WBPDCL

763	08-05-2025 22:00:00	1.10	574.00	73.00	3.50	72.00	69.00	5.30	30.40
764	08-05-2025 23:00:00	0.90	448.00	49.00	3.50	86.00	76.00	5.30	42.00
765	09-05-2025 00:00:00	0.90	448.00	49.00	3.50	86.00	76.00	5.30	42.00
766	09-05-2025 01:00:00	0.90	448.00	49.00	3.50	86.00	76.00	5.30	42.00
767	09-05-2025 02:00:00	0.90	448.00	49.00	3.50	86.00	76.00	5.30	42.00
768	09-05-2025 03:00:00	0.90	448.00	49.00	3.50	86.00	76.00	5.30	42.00
769	09-05-2025 04:00:00	0.90	448.00	49.00	3.50	84.00	74.00	5.30	42.00
770	09-05-2025 05:00:00	0.90	448.00	49.00	3.50	84.00	74.00	5.30	42.00
771	09-05-2025 06:00:00	0.90	448.00	49.00	3.50	84.00	74.00	5.30	42.00
772	09-05-2025 07:00:00	0.90	448.00	49.00	3.50	84.00	74.00	5.30	42.00
773	09-05-2025 08:00:00	0.90	448.00	49.00	3.50	84.00	74.00	5.30	42.00
774	09-05-2025 09:00:00	0.90	447.00	49.00	3.50	100.00	89.00	5.30	42.00
775	09-05-2025 10:00:00	0.90	440.00	49.00	3.50	87.00	78.00	5.30	43.00
776	09-05-2025 11:00:00	0.80	419.00	44.00	3.50	78.00	69.00	5.30	44.60
777	09-05-2025 12:00:00	0.80	407.00	39.00	3.50	62.00	55.00	5.30	46.40
778	09-05-2025 13:00:00	0.80	401.00	36.00	3.50	61.00	54.00	5.30	49.40
779	09-05-2025 14:00:00	0.80	403.00	31.00	3.50	50.00	45.00	5.30	49.00
780	09-05-2025 15:00:00	0.80	401.00	32.00	3.50	51.00	46.00	5.30	48.10
781	09-05-2025 16:00:00	0.80	402.00	34.00	3.50	47.00	42.00	5.30	48.20
782	09-05-2025 17:00:00	0.80	409.00	43.00	3.50	79.00	69.00	5.30	43.60
783	09-05-2025 18:00:00	0.80	423.00	48.00	3.50	110.00	98.00	5.30	40.50
784	09-05-2025 19:00:00	0.90	467.00	52.00	3.50	124.00	114.00	5.30	39.20
785	09-05-2025 20:00:00	1.20	577.00	61.00	3.50	121.00	108.00	5.30	36.70
786	09-05-2025 21:00:00	1.20	623.00	66.00	3.50	138.00	127.00	5.30	35.60
787	09-05-2025 22:00:00	1.20	582.00	64.00	3.50	120.00	107.00	5.30	35.30
788	09-05-2025 23:00:00	1.20	604.00	67.00	3.50	107.00	94.00	5.30	34.30
789	10-05-2025 00:00:00	1.20	579.00	66.00	3.50	91.00	80.00	5.30	33.80
790	10-05-2025 01:00:00	1.10	569.00	67.00	3.50	87.00	78.00	5.30	33.30
791	10-05-2025 02:00:00	1.20	611.00	69.00	3.50	90.00	80.00	5.30	32.90
792	10-05-2025 03:00:00	1.20	598.00	69.00	3.50	93.00	82.00	5.30	32.50
793	10-05-2025 04:00:00	1.30	628.00	72.00	3.50	105.00	93.00	5.30	31.70
794	10-05-2025 05:00:00	1.30	657.00	76.00	3.50	112.00	98.00	5.20	31.10
795	10-05-2025 07:00:00	1.30	635.00	68.00	3.40	194.00	177.00	5.20	34.90
796	10-05-2025 08:00:00	1.20	604.00	57.00	3.50	182.00	166.00	5.30	38.60
797	10-05-2025 09:00:00	1.00	485.00	47.00	3.50	148.00	137.00	5.30	43.20
798	10-05-2025 10:00:00	0.90	449.00	41.00	3.50	133.00	123.00	5.30	45.70
799	10-05-2025 11:00:00	0.80	402.00	35.00	3.50	87.00	78.00	5.30	48.40
800	10-05-2025 12:00:00	0.80	400.00	30.00	3.50	46.00	41.00	5.30	50.60
801	10-05-2025 13:00:00	0.80	403.00	30.00	3.50	51.00	46.00	5.30	52.20
802	10-05-2025 14:00:00	0.80	400.00	30.00	3.50	64.00	58.00	5.30	50.60
803	10-05-2025 15:00:00	0.80	402.00	32.00	3.50	79.00	70.00	5.30	46.80
804	10-05-2025 16:00:00	0.80	402.00	32.00	3.50	75.00	67.00	5.30	47.50
805	10-05-2025 17:00:00	0.80	406.00	40.00	3.50	76.00	66.00	5.30	45.60
806	10-05-2025 18:00:00	0.80	418.00	43.00	3.50	132.00	124.00	5.30	42.60
807	10-05-2025 19:00:00	0.90	444.00	48.00	3.50	122.00	110.00	5.30	39.90
808	10-05-2025 20:00:00	1.10	526.00	53.00	3.50	136.00	127.00	5.30	39.00
809	10-05-2025 21:00:00	1.10	553.00	55.00	2.90	141.00	131.00	4.30	37.80
810	10-05-2025 22:00:00	1.20	593.00	60.00	3.50	181.00	164.00	2.20	36.90
811	10-05-2025 23:00:00	1.20	577.00	59.00	3.50	143.00	131.00	5.30	36.60
812	11-05-2025 00:00:00	1.20	624.00	65.00	3.50	134.00	125.00	5.30	35.40
813	11-05-2025 01:00:00	1.20	605.00	63.00	3.50	118.00	104.00	5.30	35.70
814	11-05-2025 02:00:00	1.30	664.00	69.00	3.40	120.00	107.00	5.10	34.00
815	11-05-2025 03:00:00	1.10	536.00	62.00	3.50	114.00	101.00	5.30	33.60
816	11-05-2025 04:00:00	1.00	501.00	58.00	3.50	111.00	95.00	5.30	33.60
817	11-05-2025 05:00:00	1.00	489.00	59.00	3.50	86.00	76.00	5.30	32.50
818	11-05-2025 06:00:00	1.00	493.00	58.00	3.50	61.00	54.00	5.30	33.30
819	11-05-2025 07:00:00	1.00	502.00	57.00	3.50	80.00	71.00	5.30	35.50
820	11-05-2025 08:00:00	0.90	444.00	49.00	3.50	85.00	74.00	5.30	39.70
821	11-05-2025 09:00:00	0.90	431.00	44.00	3.50	97.00	85.00	5.30	40.70
822	11-05-2025 10:00:00	0.90	430.00	44.00	3.50	87.00	77.00	5.30	42.30
823	11-05-2025 11:00:00	0.80	407.00	38.00	3.50	66.00	58.00	5.30	46.10
824	11-05-2025 12:00:00	0.80	401.00	33.00	3.50	62.00	55.00	5.30	48.10
825	11-05-2025 13:00:00	0.80	402.00	31.00	3.50	55.00	49.00	5.30	50.20
826	11-05-2025 14:00:00	0.80	401.00	30.00	3.50	56.00	50.00	5.30	50.80
827	11-05-2025 15:00:00	0.80	402.00	30.00	3.50	50.00	45.00	5.30	50.50
828	11-05-2025 16:00:00	0.80	402.00	35.00	3.50	51.00	54.00	5.30	49.30
829	11-05-2025 17:00:00	0.80	405.00	39.00	3.50	94.00	84.00	5.30	45.40
830	11-05-2025 18:00:00	0.90	428.00	45.00	3.50	81.00	72.00	5.30	42.80
831	11-05-2025 19:00:00	0.90	429.00	46.00	3.50	91.00	80.00	5.30	41.00
832	11-05-2025 20:00:00	1.00	478.00	51.00	3.50	135.00	126.00	5.30	39.50
833	11-05-2025 21:00:00	1.00	524.00	53.00	3.50	144.00	134.00	5.30	38.60
834	11-05-2025 22:00:00	1.00	523.00	56.00	3.50	125.00	115.00	5.30	37.40
835	11-05-2025 23:00:00	1.20	618.00	63.00	3.00	149.00	138.00	4.50	36.50
836	12-05-2025 00:00:00	1.20	618.00	64.00	3.50	132.00	122.00	5.20	35.70
837	12-05-2025 01:00:00	1.20	579.00	63.00	3.50	105.00	93.00	5.30	35.60
838	12-05-2025 02:00:00	1.20	595.00	66.00	3.50	128.00	120.00	5.30	35.00
839	12-05-2025 03:00:00	1.20	599.00	64.00	3.50	108.00	99.00	5.30	35.30

Director (Finance)
Corporate Office,
WBPCL

840	12-05-2025 04:00:00	1.10	556.00	64.00	3.50	95.00	84.00	5.30	34.40
841	12-05-2025 05:00:00	1.20	610.00	72.00	3.40	114.00	102.00	5.10	33.40
842	12-05-2025 06:00:00	1.20	609.00	69.00	3.40	121.00	103.00	5.00	35.20
843	12-05-2025 07:00:00	1.20	575.00	63.00	3.20	133.00	124.00	4.80	37.30
844	12-05-2025 08:00:00	1.00	524.00	57.00	3.50	128.00	120.00	5.30	38.90
845	12-05-2025 09:00:00	1.00	475.00	52.00	3.50	135.00	126.00	5.30	41.30
846	12-05-2025 10:00:00	0.90	428.00	44.00	3.50	92.00	81.00	5.30	43.80
847	12-05-2025 11:00:00	0.80	410.00	40.00	3.50	69.00	61.00	5.30	44.70
848	12-05-2025 12:00:00	0.80	404.00	35.00	3.50	69.00	62.00	5.30	49.40
849	12-05-2025 13:00:00	0.80	402.00	35.00	3.50	66.00	59.00	5.30	49.40
850	12-05-2025 14:00:00	0.80	401.00	30.00	3.50	49.00	45.00	5.30	50.60
851	12-05-2025 15:00:00	0.80	404.00	30.00	3.50	53.00	47.00	5.30	49.80
852	12-05-2025 16:00:00	0.80	402.00	32.00	3.50	41.00	37.00	5.30	48.80
853	12-05-2025 17:00:00	0.80	403.00	37.00	3.50	46.00	41.00	5.30	47.50
854	12-05-2025 18:00:00	0.90	438.00	51.00	3.50	87.00	78.00	5.30	41.60
855	12-05-2025 19:00:00	1.00	503.00	67.00	3.50	63.00	56.00	5.30	33.00
856	12-05-2025 20:00:00	1.10	548.00	71.00	3.50	82.00	73.00	5.30	33.40
857	12-05-2025 21:00:00	1.00	524.00	67.00	3.50	73.00	64.00	5.30	34.10
858	12-05-2025 22:00:00	1.10	542.00	70.00	3.50	65.00	57.00	5.30	33.10
859	12-05-2025 23:00:00	1.10	543.00	69.00	3.50	72.00	63.00	5.30	32.00
860	13-05-2025 00:00:00	1.10	538.00	71.00	3.50	77.00	68.00	5.30	31.40
861	13-05-2025 02:00:00	1.20	587.00	77.00	3.50	111.00	98.00	5.30	30.60
862	13-05-2025 03:00:00	1.20	619.00	78.00	3.50	96.00	85.00	5.30	30.60
863	13-05-2025 04:00:00	1.30	657.00	79.00	3.50	86.00	76.00	5.30	30.70
864	13-05-2025 05:00:00	1.20	621.00	77.00	3.50	77.00	68.00	5.30	30.60
865	13-05-2025 06:00:00	1.20	583.00	73.00	3.50	106.00	94.00	5.30	32.30
866	13-05-2025 07:00:00	1.10	533.00	66.00	3.50	109.00	97.00	5.30	35.20
867	13-05-2025 08:00:00	1.00	492.00	56.00	3.50	144.00	134.00	5.30	38.80
868	13-05-2025 09:00:00	0.90	452.00	51.00	3.50	98.00	88.00	5.30	40.40
869	13-05-2025 10:00:00	0.90	442.00	50.00	3.50	91.00	80.00	5.30	42.00
870	13-05-2025 11:00:00	0.80	409.00	43.00	3.50	79.00	70.00	5.30	46.90
871	13-05-2025 12:00:00	0.80	407.00	43.00	3.50	78.00	69.00	5.30	47.70
872	13-05-2025 13:00:00	0.80	401.00	39.00	3.50	67.00	60.00	5.30	48.30
873	13-05-2025 14:00:00	0.80	404.00	38.00	3.50	64.00	57.00	5.30	48.00
874	13-05-2025 15:00:00	0.80	405.00	36.00	3.50	56.00	50.00	5.30	45.70
875	13-05-2025 16:00:00	0.80	410.00	43.00	3.50	61.00	54.00	5.30	41.30
876	13-05-2025 17:00:00	0.80	423.00	53.00	3.50	66.00	58.00	5.30	38.10
877	13-05-2025 18:00:00	0.90	452.00	57.00	3.50	85.00	75.00	5.30	37.00
878	13-05-2025 19:00:00	0.90	466.00	56.00	3.50	85.00	75.00	5.30	35.30
879	13-05-2025 20:00:00	1.00	497.00	58.00	3.50	78.00	69.00	5.30	34.60
880	13-05-2025 21:00:00	1.00	521.00	60.00	3.50	83.00	73.00	5.30	34.70
881	13-05-2025 22:00:00	1.10	525.00	62.00	3.50	80.00	71.00	5.30	35.70
882	13-05-2025 23:00:00	1.10	549.00	68.00	3.50	82.00	73.00	5.30	34.90
883	14-05-2025 00:00:00	1.10	567.00	72.00	3.40	82.00	73.00	5.20	34.20
884	14-05-2025 01:00:00	1.20	585.00	74.00	2.90	98.00	86.00	4.40	33.90
885	14-05-2025 02:00:00	1.20	621.00	77.00	2.40	108.00	96.00	3.60	33.20
886	14-05-2025 03:00:00	1.20	613.00	81.00	1.90	105.00	91.00	2.80	32.30
887	14-05-2025 04:00:00	1.30	628.00	84.00	3.10	121.00	110.00	4.70	31.80
888	14-05-2025 05:00:00	1.20	618.00	81.00	3.50	97.00	86.00	5.20	32.40
889	14-05-2025 06:00:00	1.20	606.00	76.00	3.50	111.00	98.00	5.30	33.40
890	14-05-2025 07:00:00	1.00	490.00	55.00	3.50	85.00	75.00	5.30	38.90
891	14-05-2025 08:00:00	1.00	490.00	55.00	3.50	90.00	80.00	5.30	39.20
892	14-05-2025 09:00:00	0.90	454.00	49.00	3.50	73.00	64.00	5.30	42.30
893	14-05-2025 10:00:00	0.90	441.00	45.00	3.50	87.00	76.00	5.30	44.80
894	14-05-2025 12:00:00	0.80	421.00	42.00	3.50	74.00	66.00	5.30	47.00
895	14-05-2025 13:00:00	0.80	403.00	40.00	3.50	75.00	67.00	5.30	48.40
896	14-05-2025 14:00:00	0.80	402.00	38.00	3.50	71.00	62.00	5.30	49.50
897	14-05-2025 15:00:00	0.80	403.00	38.00	3.50	62.00	55.00	5.30	48.70
898	14-05-2025 16:00:00	0.80	407.00	42.00	3.50	68.00	61.00	5.30	46.50
899	14-05-2025 17:00:00	0.90	427.00	45.00	3.50	63.00	56.00	5.30	44.00
900	14-05-2025 18:00:00	0.90	431.00	49.00	3.50	87.00	79.00	5.30	41.50
901	14-05-2025 19:00:00	0.90	455.00	54.00	3.50	104.00	92.00	5.30	39.70
902	14-05-2025 20:00:00	1.00	515.00	59.00	3.50	103.00	94.00	5.30	38.40
903	14-05-2025 21:00:00	1.10	586.00	66.00	3.50	86.00	77.00	5.30	37.90
904	14-05-2025 22:00:00	1.10	543.00	69.00	3.50	94.00	83.00	5.30	37.30
905	14-05-2025 23:00:00	1.10	549.00	74.00	3.50	79.00	70.00	5.30	36.20
906	15-05-2025 00:00:00	1.10	570.00	76.00	3.30	67.00	60.00	5.00	35.70
907	15-05-2025 01:00:00	1.10	571.00	77.00	3.40	73.00	64.00	5.10	35.50
908	15-05-2025 02:00:00	1.20	583.00	79.00	3.40	67.00	60.00	5.10	35.10
909	15-05-2025 03:00:00	1.20	594.00	79.00	3.40	78.00	69.00	5.10	35.00
910	15-05-2025 04:00:00	1.20	606.00	80.00	3.20	90.00	80.00	4.80	34.70
911	15-05-2025 05:00:00	1.20	609.00	81.00	3.40	80.00	71.00	5.10	34.30
912	15-05-2025 06:00:00	1.20	608.00	79.00	3.40	79.00	70.00	5.20	35.30
913	15-05-2025 07:00:00	1.10	568.00	71.00	3.50	97.00	86.00	5.20	37.70
914	15-05-2025 08:00:00	1.00	520.00	61.00	3.50	100.00	88.00	5.30	39.80
915	15-05-2025 09:00:00	0.90	466.00	56.00	3.50	103.00	91.00	5.30	41.70
916	15-05-2025 10:00:00	0.90	443.00	50.00	3.50	89.00	79.00	5.30	43.80

Corporate Office
WBPDCL

917	15-05-2025 11:00:00	0.80	408.00	43.00	3.50	88.00	79.00	5.30	47.60
918	15-05-2025 12:00:00	0.80	406.00	43.00	3.50	78.00	69.00	5.30	47.70
919	15-05-2025 13:00:00	0.80	410.00	44.00	3.50	85.00	75.00	5.30	47.10
920	15-05-2025 14:00:00	0.80	423.00	43.00	3.50	83.00	73.00	5.30	46.20
921	15-05-2025 15:00:00	0.80	406.00	41.00	3.50	86.00	76.00	5.30	48.20
922	15-05-2025 16:00:00	0.80	404.00	39.00	3.50	67.00	60.00	5.30	47.90
923	15-05-2025 17:00:00	0.80	417.00	42.00	3.50	85.00	75.00	5.30	45.20
924	15-05-2025 18:00:00	0.90	438.00	56.00	3.50	93.00	82.00	5.30	41.60
925	15-05-2025 19:00:00	0.90	464.00	60.00	3.50	72.00	62.00	5.30	35.40
926	15-05-2025 20:00:00	1.10	527.00	72.00	3.50	47.00	42.00	5.30	32.50
927	15-05-2025 21:00:00	1.10	543.00	75.00	3.50	53.00	47.00	5.30	31.90
928	15-05-2025 22:00:00	1.10	540.00	76.00	3.50	46.00	41.00	5.30	31.10
929	15-05-2025 23:00:00	1.10	556.00	75.00	3.50	38.00	34.00	5.30	31.30
930	16-05-2025 00:00:00	1.20	582.00	76.00	3.50	45.00	40.00	5.30	31.30
931	16-05-2025 01:00:00	1.10	563.00	72.00	3.50	51.00	46.00	5.30	32.50
932	16-05-2025 02:00:00	1.10	555.00	70.00	3.50	67.00	60.00	5.30	32.90
933	16-05-2025 03:00:00	1.20	579.00	74.00	3.50	74.00	66.00	5.30	33.00
934	16-05-2025 04:00:00	1.20	598.00	78.00	3.50	74.00	66.00	5.30	32.40
935	16-05-2025 05:00:00	1.20	603.00	79.00	3.50	86.00	77.00	5.30	32.70
936	16-05-2025 06:00:00	1.20	585.00	77.00	3.50	92.00	81.00	5.20	33.70
937	16-05-2025 07:00:00	1.10	565.00	73.00	3.50	112.00	99.00	5.30	35.50
938	16-05-2025 08:00:00	1.00	520.00	65.00	3.50	99.00	86.00	5.30	38.30
939	16-05-2025 09:00:00	0.90	468.00	57.00	3.50	98.00	86.00	5.30	41.60
940	16-05-2025 10:00:00	0.90	456.00	51.00	3.50	83.00	73.00	5.30	43.80
941	16-05-2025 11:00:00	0.90	435.00	48.00	3.50	75.00	67.00	5.30	45.70
942	16-05-2025 12:00:00	0.90	437.00	48.00	3.50	73.00	65.00	5.30	46.00
943	16-05-2025 13:00:00	0.90	428.00	47.00	3.50	71.00	63.00	5.30	46.60
944	16-05-2025 14:00:00	0.90	434.00	47.00	3.50	74.00	66.00	5.30	46.50
945	16-05-2025 15:00:00	0.90	437.00	46.00	3.50	61.00	54.00	5.30	46.00
946	16-05-2025 16:00:00	0.90	438.00	47.00	3.50	73.00	64.00	5.30	44.40
947	16-05-2025 17:00:00	0.90	441.00	52.00	3.50	78.00	69.00	5.30	42.90
948	16-05-2025 18:00:00	0.90	454.00	57.00	3.50	88.00	79.00	5.30	41.00
949	16-05-2025 19:00:00	0.90	462.00	62.00	3.50	86.00	76.00	5.30	39.10
950	16-05-2025 20:00:00	1.00	492.00	65.00	3.50	69.00	62.00	5.30	38.00
951	16-05-2025 21:00:00	1.00	523.00	68.00	3.50	60.00	53.00	5.30	37.20
952	16-05-2025 22:00:00	1.10	536.00	71.00	2.30	61.00	54.00	3.50	35.80
953	16-05-2025 23:00:00	1.10	543.00	74.00	3.50	61.00	54.00	5.30	35.00
954	17-05-2025 00:00:00	1.10	551.00	74.00	3.50	62.00	55.00	5.30	34.40
955	17-05-2025 01:00:00	1.10	557.00	70.00	3.50	71.00	62.00	5.30	34.40
956	17-05-2025 02:00:00	1.10	565.00	73.00	3.50	68.00	60.00	5.30	33.80
957	17-05-2025 03:00:00	1.10	565.00	75.00	3.50	52.00	46.00	5.30	33.50
958	17-05-2025 04:00:00	1.10	567.00	78.00	3.50	46.00	41.00	5.30	32.90
959	17-05-2025 05:00:00	1.20	578.00	80.00	3.50	47.00	42.00	5.30	32.70
960	17-05-2025 06:00:00	1.20	579.00	76.00	3.50	58.00	51.00	5.30	33.30
961	17-05-2025 07:00:00	1.10	564.00	71.00	3.50	73.00	64.00	5.30	34.60
962	17-05-2025 08:00:00	1.00	501.00	61.00	3.50	57.00	51.00	5.30	38.50
963	17-05-2025 09:00:00	0.90	451.00	55.00	3.50	66.00	59.00	5.30	41.60
964	17-05-2025 10:00:00	0.90	432.00	48.00	3.50	56.00	50.00	5.30	43.90
965	17-05-2025 11:00:00	0.90	437.00	46.00	3.50	59.00	53.00	5.30	45.50
966	17-05-2025 12:00:00	0.80	408.00	43.00	3.50	57.00	52.00	5.30	46.90
967	17-05-2025 13:00:00	0.80	404.00	43.00	3.50	55.00	49.00	5.30	48.20
968	17-05-2025 14:00:00	0.80	400.00	43.00	3.50	58.00	50.00	5.30	48.40
969	17-05-2025 15:00:00	0.80	406.00	44.00	3.50	61.00	54.00	5.30	47.20
970	17-05-2025 16:00:00	0.90	427.00	51.00	3.50	74.00	66.00	5.30	42.00
971	17-05-2025 18:00:00	1.30	667.00	95.00	3.50	53.00	47.00	5.30	26.30
972	17-05-2025 19:00:00	1.20	610.00	89.00	3.50	35.00	32.00	5.30	27.50
973	17-05-2025 20:00:00	1.20	617.00	88.00	3.50	45.00	40.00	5.30	27.90
974	17-05-2025 21:00:00	1.30	628.00	88.00	3.50	38.00	34.00	5.30	28.30
975	17-05-2025 22:00:00	1.30	636.00	88.00	3.50	42.00	38.00	5.30	28.30
976	17-05-2025 23:00:00	1.30	665.00	90.00	3.50	63.00	56.00	5.30	28.20
977	18-05-2025 00:00:00	1.40	675.00	92.00	3.50	66.00	58.00	5.30	27.90
978	18-05-2025 01:00:00	1.40	701.00	92.00	3.50	111.00	98.00	5.30	28.00
979	18-05-2025 02:00:00	1.30	669.00	92.00	3.50	86.00	76.00	5.30	28.60
980	18-05-2025 03:00:00	1.30	669.00	92.00	3.50	86.00	76.00	5.30	28.60
981	18-05-2025 04:00:00	1.30	669.00	92.00	3.50	86.00	76.00	5.30	28.60
982	18-05-2025 06:00:00	1.30	669.00	92.00	3.50	84.00	74.00	5.30	28.50
983	18-05-2025 07:00:00	1.30	642.00	87.00	3.50	75.00	67.00	5.30	29.50
984	18-05-2025 08:00:00	1.30	634.00	87.00	3.50	69.00	62.00	5.30	30.00
985	18-05-2025 09:00:00	1.20	605.00	84.00	3.50	68.00	61.00	5.30	31.10
986	18-05-2025 10:00:00	1.20	595.00	80.00	3.50	66.00	59.00	5.30	32.60
987	18-05-2025 11:00:00	1.10	549.00	71.00	3.50	73.00	64.00	5.30	36.60
988	18-05-2025 12:00:00	1.00	480.00	63.00	3.50	72.00	63.00	5.30	39.50
989	18-05-2025 13:00:00	0.90	467.00	60.00	3.50	74.00	66.00	5.30	40.80
990	18-05-2025 14:00:00	0.90	466.00	57.00	3.50	73.00	65.00	5.30	41.60
991	18-05-2025 15:00:00	0.90	447.00	54.00	3.50	57.00	52.00	5.30	42.30
992	18-05-2025 16:00:00	0.90	454.00	59.00	3.50	61.00	54.00	5.30	39.50
993	18-05-2025 17:00:00	0.90	461.00	61.00	3.50	58.00	53.00	5.30	38.60

994	18-05-2025 18:00:00	1.10	528.00	66.00	3.50	74.00	66.00	5.30	35.60
995	18-05-2025 19:00:00	1.10	547.00	70.00	3.50	95.00	83.00	5.30	35.80
996	18-05-2025 20:00:00	1.20	582.00	78.00	3.50	69.00	62.00	5.30	35.50
997	18-05-2025 21:00:00	1.10	563.00	75.00	3.50	51.00	46.00	5.30	34.30
998	18-05-2025 22:00:00	1.20	579.00	77.00	3.40	51.00	46.00	5.10	33.70
999	18-05-2025 23:00:00	1.20	594.00	78.00	1.90	55.00	49.00	2.90	33.30
1000	19-05-2025 00:00:00	1.20	590.00	80.00	3.30	44.00	39.00	5.00	32.70
1001	19-05-2025 01:00:00	1.20	598.00	82.00	3.30	39.00	34.00	5.00	32.20
1002	19-05-2025 02:00:00	1.20	612.00	84.00	3.00	36.00	32.00	4.80	31.50
1003	19-05-2025 03:00:00	1.30	627.00	86.00	2.80	41.00	37.00	4.20	31.10
1004	19-05-2025 04:00:00	1.30	636.00	87.00	1.80	45.00	41.00	2.70	31.10
1005	19-05-2025 05:00:00	1.30	650.00	87.00	1.00	52.00	46.00	1.50	31.30
1006	19-05-2025 06:00:00	1.30	628.00	84.00	1.20	45.00	40.00	1.80	32.60
1007	19-05-2025 07:00:00	1.20	592.00	80.00	1.90	47.00	42.00	2.90	33.90
1008	19-05-2025 08:00:00	1.20	578.00	75.00	2.90	51.00	46.00	4.30	35.70
1009	19-05-2025 09:00:00	1.10	551.00	71.00	3.20	61.00	54.00	4.90	36.60
1010	19-05-2025 10:00:00	0.90	467.00	59.00	3.50	47.00	42.00	5.30	41.00
1011	19-05-2025 11:00:00	0.90	446.00	53.00	3.50	32.00	28.00	5.30	43.70
1012	19-05-2025 12:00:00	0.90	442.00	52.00	3.50	35.00	32.00	5.30	43.30
1013	19-05-2025 13:00:00	0.80	420.00	51.00	3.50	32.00	28.00	5.30	43.80
1014	19-05-2025 14:00:00	0.90	428.00	48.00	3.50	29.00	26.00	5.30	44.90
1015	19-05-2025 15:00:00	0.80	419.00	48.00	3.50	29.00	26.00	5.30	45.50
1016	19-05-2025 16:00:00	0.80	421.00	49.00	3.50	25.00	23.00	5.30	45.00
1017	19-05-2025 17:00:00	0.90	438.00	51.00	3.50	34.00	31.00	5.30	41.70
1018	19-05-2025 18:00:00	1.00	502.00	67.00	3.50	43.00	39.00	5.30	33.70
1019	19-05-2025 19:00:00	1.10	538.00	70.00	3.50	53.00	47.00	5.30	33.70
1020	19-05-2025 20:00:00	1.10	537.00	73.00	3.50	42.00	38.00	5.30	32.70
1021	19-05-2025 21:00:00	1.10	570.00	76.00	3.50	43.00	39.00	5.30	32.70
1022	19-05-2025 22:00:00	1.10	555.00	76.00	3.50	42.00	38.00	5.30	32.20
1023	19-05-2025 23:00:00	1.10	569.00	80.00	3.50	39.00	35.00	5.30	31.50
1024	20-05-2025 00:00:00	1.20	594.00	82.00	3.50	41.00	37.00	5.30	31.30
1025	20-05-2025 01:00:00	1.30	626.00	83.00	3.50	43.00	39.00	5.30	30.90
1026	20-05-2025 02:00:00	1.30	628.00	82.00	3.50	49.00	45.00	5.30	31.00
1027	20-05-2025 03:00:00	1.30	637.00	82.00	3.50	54.00	48.00	5.30	30.90
1028	20-05-2025 04:00:00	1.30	637.00	80.00	3.50	52.00	46.00	5.30	30.90
1029	20-05-2025 05:00:00	1.30	638.00	79.00	3.20	61.00	54.00	4.80	31.50
1030	20-05-2025 06:00:00	1.30	658.00	79.00	3.20	55.00	49.00	4.80	32.00
1031	20-05-2025 07:00:00	1.20	600.00	75.00	3.30	75.00	67.00	4.90	33.70
1032	20-05-2025 08:00:00	1.10	554.00	68.00	2.90	79.00	70.00	4.40	37.40
1033	20-05-2025 09:00:00	1.00	479.00	63.00	3.50	48.00	44.00	5.30	40.20
1034	20-05-2025 10:00:00	0.90	458.00	57.00	3.50	36.00	32.00	5.30	42.60
1035	20-05-2025 11:00:00	0.90	441.00	52.00	3.50	33.00	30.00	5.30	44.30
1036	20-05-2025 12:00:00	0.90	445.00	51.00	3.50	33.00	30.00	5.30	45.00
1037	20-05-2025 13:00:00	0.90	428.00	49.00	3.50	34.00	31.00	5.30	45.50
1038	20-05-2025 14:00:00	0.80	411.00	48.00	3.50	34.00	31.00	5.30	46.40
1039	20-05-2025 15:00:00	0.90	427.00	48.00	3.50	31.00	27.00	5.30	44.90
1040	20-05-2025 16:00:00	0.80	408.00	48.00	3.50	40.00	36.00	5.30	37.50
1041	Minimum	0.80	400.00	14.00	0.50	0.00	0.00	0.80	22.80
1042	Maximum	1.80	877.00	95.00	3.50	392.00	348.00	5.30	53.80
1043	Average	1.06	530.64	60.41	3.28	75.61	67.44	4.96	36.85
1044	Alarm Count	0	0	0	0	0	0	0	0
* - Alert | 0 - Delay									





Toe wall at Gangaramchak & Gangaramchak Bhadulia Coal Mines

Director (Mining)
Corporate Office,
WBPDCL





Garland Drain at Gangaramchak & Gangaramchak Bhadulia Coal Mines

Director (Mining)
Corporate Office,
WBPDCL



Catch Drain at Gangaramchak & Gangaramchak Bhadulia Coal Mines

Director (Mining)
Corporate Office,
WBPDCL

SKILL DEVELOPMENT





Director (Finance)
Corporate Office,
WBPDCL

Oil & Grease Trap





Director (Finance)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Annexure-7

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02593A**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN,
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025

Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS CANAL WATER, 04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Sulphate as SO4	mg/l, Max	400	11.14	As per IS 2296:1982 Class C	APHA 24th Edition (4500-SO4-E): 2023
ii	Nitrate as NO3	mg/l, Max	50	1.0	As per IS 2296:1982 Class C	APHA 24th Edition (4500-NO3 -E):2023
iii	Fluoride as F	mg/l, Max	1.5	0.50	As per IS 2296:1982 Class C	APHA 24th Edition (4500-F -D,C):2023
iv	Chemical Oxygen Demand	mg/l	--	<5.0	--	APHA 24th Edition (5220-B):2023
v	Dissolved Oxygen	mg/l, Min	4	6.6	As per IS 2296:1982 Class C	APHA 24th Edition(4500-O-C):2023
vi	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	3.0	<1.0	As per IS 2296:1982 Class C	APHA 24th Edition 2012(5210 B):2023
vii	Total Hardness as CaCO3	mg/l	--	76	--	APHA 24th Edition (2340 C):2023
viii	Total Alkalinity	mg/l	--	106	--	APHA 24th Edition (2320 B):2023
ix	Chloride (as Cl)	mg/l, Max	600	<5.0	As per IS 2296:1982 Class C	APHA 24th Edition (4500-Cl-B):2023
x	Copper (as Cu)	mg/l,Max	1.5	<0.02	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 42):1992,RA 2014
xi	Iron (as Fe)	mg/l,Max	50	0.79	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025(Part-53):2003,RA:2014
xii	Manganese (as Mn)	mg/l	-	<0.05	--	Cl.5.0 of IS 3025 (Part 59):2006 RA 2012

Kalyani Laboratories Pvt. Ltd. BBSR

KLPL- 10020621B

Scanned with CamScanner

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/WATER/02593A

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
xiii	Zinc (as Zn)	mg/l, Max	15	<0.05	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 49):1994,RA 2014
xiv	Total Kjeldhal Nitrogen	mg/l	--	<1.0	--	APHA-24th Edition (4500-Norg-B):2023
xv	Total Chromium	mg/l, Max	0.05	<0.01	As per IS 2296:1982 Class C	APHA-24th Edition (3111-C):2023
PHYSICAL PARAMETER						
i	Electrical Conductivity	µs/cm	--	178.4	--	APHA 24th Edition (2510-B):2023
ii	Colour.	Hazen	300	<1.0	--	APHA 24th Edition (2120 B): 2023
iii	Turbidity	NTU	--	<0.1	--	APHA 24th Edition (2130-B):2023
iv	Total dissolved solids	mg/l, Max	1500	116	As per IS 2296:1982 Class C	APHA 24th Edition (2540 C):2023
v	pH Value.	--	6.5-8.5	8.82	As per IS 2296:1982 Class C	APHA 24th Edition (4500-H+ B):2023
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l	--	<0.001	--	Cl.5.0 of IS 3025 (Part 41):1992,RA 2014
ii	Lead (as Pb)	mg/l, Max	0.1	0.078	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025 (Part 47):1994,RA 2014
iii	Mercury (as Hg)	mg/l	--	<0.0005	--	Cl.5.0 of IS 3025 (Part 48):1994,RA 2014
iv	Nickel (as Ni)	mg/l	--	<0.01	--	Cl.7.0 of IS 3025 (Part 54):2003,RA 2009
v	Arsenic (as As)	mg/l, Max	0.2	0.005	As per IS 2296:1982 Class C	IS 3025 (Part 37):1988 RA 2009

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

D. Jena

Miss pravasini jena
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Kalyani Laboratories Pvt. Ltd. BBSR

Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Finance)
Corporate Office,
WR/DCL

KLPL- 10020619B

Scanned with CamScanner

Kalyani Laboratories

KALYANI LABORATORIES PVT.LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02593A**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN,
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025

Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS) CANAL WATER, DATE-03-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Total Organic Carbon	mg/l	-	<5.0	--	APHA-24th Eds:2023
ii	Cyanide (as CN)	mg/l	--	<0.03	--	IS 3025 (Part 27) :1986 RA 2003

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL

NIL

Confirmation statement as per decision rule , if applicable : --

Analysed By

P. Jena

Miss pravasini jena :
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Mines)
Corporate Office
WBPDCL

Scanned with CamScanner

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	: **KLPL/2/25/ENVN/00320**	*Issue Date*	: 23-Feb-2025
Amendment No	: -	*Amendment Date*	: -
Reference	: W.O NO-GMPL/DGP/WO/23-24/054		
Customer Name	: **GOQUEST SOLUTION PRIVATE LIMITED**		
Address	: CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL		
Date of receipt	: 20-Feb-2025 Commenced On : 20-Feb-2025	*Completion On:*	23-Feb-2025
Sample Name	: **AMBIENT AIR QUALITY MONITORING**		
Sample Condition	: FILTER PAPER SEALED IN ZIP LOCK POLYTHENE BAG		
Sample Collected By	: MR. MRUTYUNJAY DAS		
Ref.To Sampling Procedure	: KLPL/QSP-07		

Parameters	*Unit*	*Standard Value*	*Results*	*Test Method*
Location & Date :	***OFFICE CAMP & SECURITY BARACK DT-19.02.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***			
Arsenic (As)	ng/m³	06	<1.0	KLPL/SOP/AIR-10,Issue No.01: 2017
Nickel (Ni)	ng/m³	20	<5.0	KLPL/SOP/AIR-10,Issue No.01:2017
Cadmium (As Cd)	ug/m³	-	<0.07	KLPL/SOP/AIR-24,Issue No.01:2023
Chromium (as Cr)	mg/m³	--	<0.01	Guidelines for the Measurement of Ambient Air Pollutants Volume-I & II, CPCB

Remarks : -

Any unusual feature observed during determination :

Analysed By

P. Jena

Miss. pravasini jena
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory

Kalyani Laboratories Pvt. Ltd. BBSR

Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

Scanned with CamScanner

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02593B**
Issue Date	:	13-Feb-2025
Amendment No	:	-
Amendment Date	:	-
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN,
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025
Sample Description	:	**STP OUT LET**
Form|Shape|Appearance	:	SEALED IN HDPE BOTTLE
Sample Identification	:	**EFFLUENT WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	1 LTR X 4 NOS *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS STP OUT LET 03-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Total Suspended Solids.	mg/l,Max	200	3.0	General Standards for Discharge of environmental pollutants	APHA 24th Edition(2540 D): 2023
ii	Oil & Grease	mg/l, Max	10	<1.0	General Standards for Discharge of environmental pollutants	APHA 24th Edition, 5520 C: 2023
iii	Chemical Oxygen Demand	mg/l, Max	250	15	General Standards for Discharge of environmental pollutants	APHA 24th Edition (5220 B) :2023
iv	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l	-	4.0	--	APHA 24th Edition 2012(5210 B) :2023
PHYSICAL PARAMETER						
ii	pH Value.	--	5.5-9.0	7.20	General Standards for Discharge of environmental pollutants	APHA 24th Edition(4500-H+-B): 2023
i	Total dissolved solids	mg/l	-	232	--	APHA 24th Edition(2540 C): 2023

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer Information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

P. Jena

Miss pravasini jena
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Kalyani Laboratories Pvt. Ltd. BBSR

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

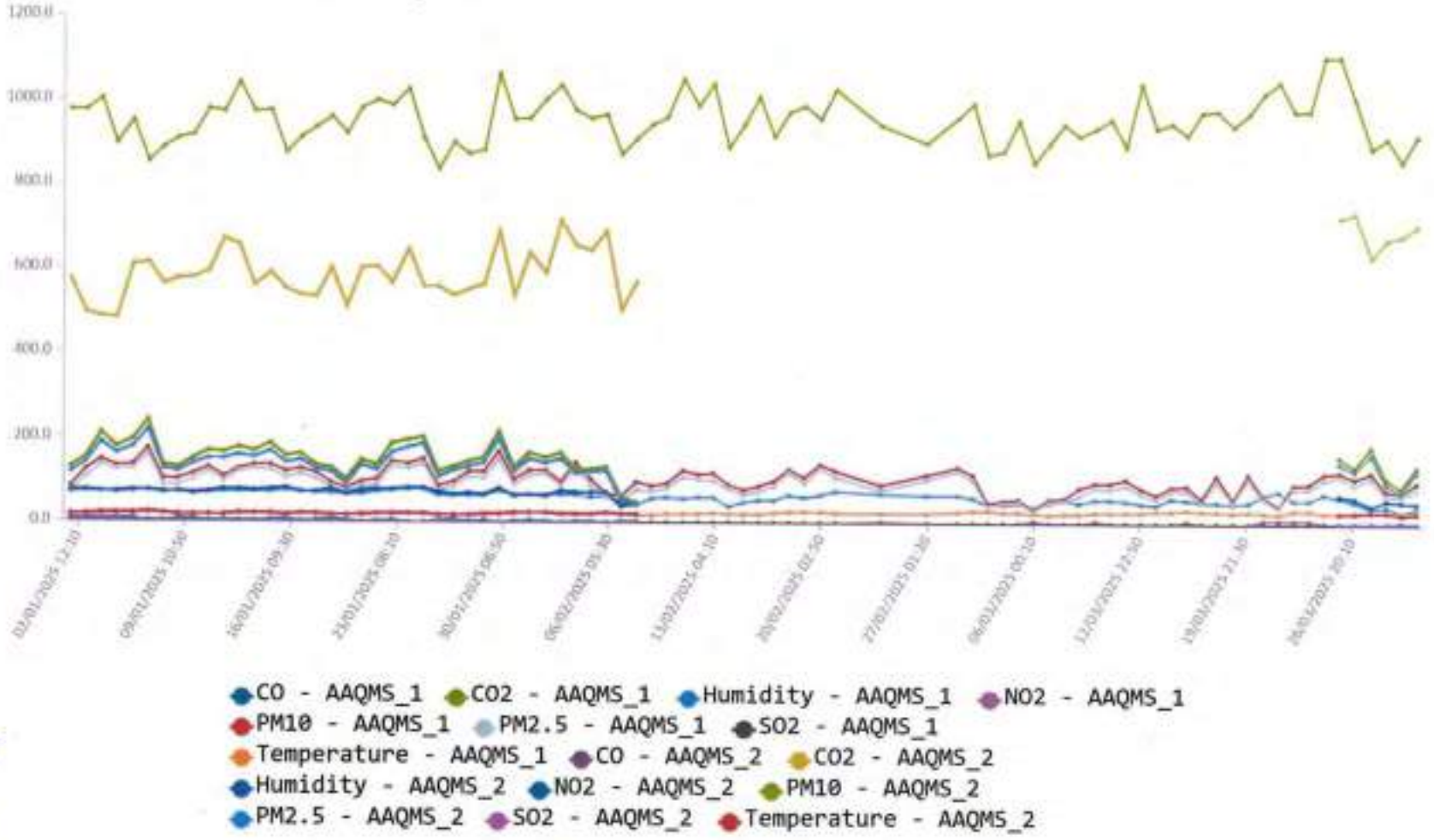
Director (Mining)
Corporate Office,
WBPDCL

KLPL- 10020618B

Scanned with CamScanner

Site Name:- Gangaramchak & Gangaramchak-Bhadulia Coal Mine,West Bengal Industry code:- NA Category:- Others- Mining

Address:- Nakrakonda, Lokpur,Birbhum, West Bengal-731125



Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Annexure-9.1

TEST REPORT

Test Report No	:	**KLPL/2/25/ENVN/00447**		*Issue Date*	: 06-Feb-2024
Amendment No	:	-		*Amendment Date*	: -
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**			
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	03-Feb-2024	Commenced On : 03-Feb-2024	*Completion On:*	06-Feb-2024
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**			
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/FILTER PAPER SEALED IN ZIP LOCK POLYTHENE BAG			
Sample Collected By		MR. MRUTYUNJAY DAS			
Ref.To Sampling Procedure:		KLPL/QSP-07			

Location & Date : ***OFFICE CAMP & SECURITY BARACK DT-03.02.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***

Total VOC	µg/m3	--	<0.1	KLPL/SOP/AIR-24/2023
Polyaromatic Hydrocarbon (11 Compounds)	ng/m3	--	<0.1	KLPL/SOP/AIR-07/2019

Remarks :

Any unusual feature observed during determination :

Analysed By

Mr. Paramesh Jena
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised Signatory

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-751201, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009104**
Test Report No	:	**KLPL/2/25/ENVN/00445**
Issue Date	:	07-Feb-2025
Amendment No	:	-
Amendment Date	:	-

TC-12963

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 Completion On: 06-Feb-2025
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/ FILTER PAPER SEALED IN ZIP LOCK
Sample Collected By	:	MR.MRUTYUNJAY DAS
Ref.To Sampling Procedure	:	KLPL/QSP-07

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
Location & Date : GANGAPUR VILLAGE ,DATE:-23.01.25, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)					
i Sulphur Dioxide	µg/m³	80	12.53	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
ii Nitrogen Dioxide	µg/m³	80	14.21	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
iii Particulate Matter (PM10)	µg/m³	100	67.28	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
iv Particulate Matter (PM2.5)	µg/m³	60	37.11	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
v Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.67	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : JUNCTION ROAD TOWARDS MINES DT-23.01.2025, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)					
vi Sulphur Dioxide	µg/m³	80	12.04	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
vii Nitrogen Dioxide	µg/m³	80	18.62	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
viii Particulate Matter (PM10)	µg/m³	100	71.07	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
ix Particulate Matter (PM2.5)	µg/m³	60	38.54	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No 01:2017
x Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.71	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : OFFICE CAMP & SECURITY BARACK DT-23.01.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)					
xi Sulphur Dioxide	µg/m³	80	8.57	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
xii Nitrogen Dioxide	µg/m³	80	13.81	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
xiii Particulate Matter (PM10)	µg/m³	100	60.52	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
xiv Particulate Matter (PM2.5)	µg/m³	60	35.32	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No 01:2017

Kalyani Laboratories Pvt. Ltd. BBSR

Director (Technical)
Corporate Office
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-2R/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/ENVN/00445

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
xv Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.60	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : WEIGH BRIDGE OF MINES DT-22.01.2025, Lat: 23°49'25.143"(N) Lon:87°12'38.996"(E)					
xvi Sulphur Dioxide	µg/m³	80	10.27	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
xvii Nitrogen Dioxide	µg/m³	80	17.28	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) : 2006
xviii Particulate Matter (PM10)	µg/m³	100	62.83	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) : 2006
xix Particulate Matter (PM2.5)	µg/m³	60	30.32	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
xx Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.62	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Mr. Paramesh Jena
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Tech)
Corporate Office,
WSPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M : kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009105**
Test Report No	:	**KLPL/2/25/ENVN/00446**
Issue Date	:	06-Feb-2025
Amendment No	:	-
Amendment Date	:	-

TC-13883

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 *Completion On:* 06-Feb-2025
Sample Name	:	**NOISE**
Sample Condition	:	--
Sample Collected By	:	Mr. MRUTYUNJAY DAS
Ref.To Sampling Procedure:		KLPL/NOISE/SOP-23

Parameters	*Unit*	*Requirement*	*Results*	*Standard Reference*	*Test Method*
Location & Date : GANGAPUR VILLAGE, DATE:-23.01.25, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)					
i Noise Level Indl. Area (Dey)	dB(A)	**75**	**53.7**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
ii Noise Level Indl. Area (Night)	dB(A)	**70**	**42.9**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : JUNCTION ROAD TOWARDS MINES DT-23.01.2025, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)					
iii Noise Level Indl. Area (Day)	dB(A)	**75**	**73.4**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
iv Noise Level Indl. Area (Night)	dB(A)	**70**	**65.3**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : OFFICE CAMP & SECURITY BARACK DT-23.01.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)					
v Noise Level Indl. Area (Day)	dB(A)	**75**	**68.4**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
vi Noise Level Indl. Area (Night)	dB(A)	**70**	**53.6**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : WEIGH BRIDGE OF MINES DT-22.01.2025, Lat: 23°49'25.143"(N) Lon:87°12'38.996"(E)					
vii Noise Level Indl. Area (Day)	dB(A)	**75**	**70.3**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
viii Noise Level Indl. Area (Night)	dB(A)	**70**	**63.5**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014

Director (Mining)
Corporate Office,
WBPDCL

Kalyani Laboratories Pvt. Ltd. BBSR

KLPL- 10021509B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-787944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/ENVN/00446

Parameters	Unit	Requirement	Results	Standard Reference	Test Method

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

Mr. Paramesh Jena
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director Authorised Signatory

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/981, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206324000002223**
Test Report No	:	**KLPL/2/25/SOIL/00100**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	03-Feb-2025	Commenced On :	03-Feb-2025	Completion On: 12-Feb-2025

Sample Description	:	**SOIL SAMPLE**		
Form|Shape|Appearance	:	SEALED IN POLYBAG		
Sample Identification	:	**SOIL**		
Batch No , Lot No	:	NA	MFG Date : NA	EXP Date: NA
Received Quantity	:	500 GM	Sample Collection Location, & Date	:
Sample Collected By	:	MR. MRUTYUNJAY DAS	INSIDE MINES, DATE-03.02.2025	
Sampling Procedure if Any	:	KLPL/QSP-07		

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Cadmium (as Cd)	mg/kg	--	**<0.2**	--	KLPL/SOP/SOIL- 33 : 2022
ii	Colour	--	--	**GREY**	--	KLPL/SOP/SOIL-28: 2022
iii	Copper (as Cu)	mg/kg	--	**19.5**	--	KLPL/SOP/SOIL-33 : 2022
iv	Lead (as Pb)	mg/kg	--	**<0.2**	--	KLPL/SOP/SOIL-33 : 2022
v	Manganese (as Mn)	mg/kg	--	**14.8**	--	KLPL/SOP/SOIL-33 : 2022
vi	Nickel (Ni)	mg/kg	--	**33.4**	--	KLPL/SOP/SOIL-33 : 2022
vii	Total Chromium	mg/kg	--	**42.6**	--	KLPL/SOP/SOIL-33 : 2022
viii	Zinc (as Zn)	mg/kg	--	**24**	--	KLPL/SOP/SOIL-33 : 2022
ix	Electrical Conductivity	µs/cm	--	**104**	--	IS 14767 : 2000
x	pH value	--	--	**5.7**	--	--
xi	Arsenic (as As)	mg/kg	--	**27**	--	KLPL/SOP - SOIL-33 : 2022
xii	Organic Carbon	%	--	**0.6**	--	KLPL/SOP/SOIL-09 : 2017

Kalyani Laboratories Pvt. Ltd. BBSR

Director/Authorised Signatory

Corporate Office

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/SOIL/00100

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : -
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

L - Senapati

Miss. Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/SOIL/00100**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 Completion On: 12-Feb-2025
Sample Description	:	**SOIL SAMPLE**
Form|Shape|Appearance	:	SEALED IN POLYBAG
Sample Identification	:	**SOIL**
Batch No , Lot No	:	NA MFG Date : NA EXP Date: NA
Received Quantity	:	500 GM Sample Collection Location, & Date :
Sample Collected By	:	MR. MRUTYUNJAY DAS INSIDE MINES, DATE-03.02.2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	cyanide	mg/kg	--	**<1.0**	--	KLPL/SOP/SOIL/36 : 2022
ii	Fluoride (as F)	mg/kg	--	**10.4**	--	KLPL/SOP/SOIL/34 : 2022
iii	Mercury (as Hg)	mg/kg	--	**<0.05**	--	KLPL/SOP/SOIL-33:2022

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

L Senapati

Miss. Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KLPL- 10021570B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ORISSA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009001**
Test Report No	:	**KLPL/2/25/WATER/02592**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12883

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	03-Feb-2025	Commenced On : 03-Feb-2025	Completion On:	12-Feb-2025

Sample Description	:	**DRINKING WATER (IS 10500:2012)**		
Form|Shape|Appearance	:	HDPE BOTTLE		
Sample Identification	:	**GROUND WATER**		
Batch No , Lot No	:	NOT APPLICABLE	MFG Date : NOT APPLICABLE	EXP Date: NOT APPLICABLE
Received Quantity	:	1 LTR	Sample Collection Location, & Date	:
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS	OFFICE BOREWELL, DATE-03-FEB-2025	
Sampling Procedure if Any	:	KLPL/QSP/07		

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Nitrate as NO3	mg/l, Max	45	**0.14**	IS : 10500 :2012	Cl.3.0 of IS 3025 (PART 34): 1988, RA 2019
ii	Chloride (as Cl)	mg/l, Max	250	**35.87**	IS : 10500 :2012	IS 3025 (Part 32):1988, RA 2019
iii	Copper (as Cu)	mg/l, Max	0.05	**<0.02**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 42):1992, RA 2019
iv	Fluoride (as F)	mg/l, Max	1	**0.55**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 60):2008, RA 2019
v	Iron (as Fe)	mg/l, Max	1	**<0.05**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 53):2003, RA 2019
vi	Magnesium (as Mg)	mg/l, Max	30	**25.46**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 46):1994, RA 2019
vii	Sulphate (as SO4)	mg/l, Max	200	**132.5**	IS : 10500 :2012	Cl.4.0 of IS 3025 (Part 24):1986, RA 2019
viii	Total alkalinity (as CaCO3),	mg/l, Max	200	**252**	IS : 10500 :2012	IS 3025 (Part 23):1986, RA 2019
ix	Total hardness (as CaCO3),	mg/l, Max	200	**454**	IS : 10500 :2012	IS 3025 (Part 21):2009, RA 2019
x	Zinc (as Zn)	mg/l, Max	5	**<0.05**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 49):1994, RA 2019
xi	Total Chromium	mg/l, Max	0.05	**<0.01**	IS : 10500 :2012	IS 3025 (PART-2) :2019
PHYSICAL PARAMETER						
i	Turbidity	NTU, Max	1	**<0.1**	IS : 10500 :2012	IS 3025 (Part 10):1984, RA 2017

Kalyani Laboratories Pvt. Ltd. BBSR

Director / Signatory
Corporate Office
WBIDCL

KLPL- 10021580B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-TB/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : **KLPL/2/25/WATER/02592**

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
ii	Total dissolved solids	mg/l, Max	500	**472**	IS : 10500 :2012	IS 3025 (Part 16):1984, RA 2017
iii	pH Value.	--	6.5-8.5	**6.8**	IS : 10500 : 2012	IS 3025 (Part-11):1983,RA:2012
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l, Max	0.003	**<0.001**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 41):1992, RA 2019
ii	Cyanide (as CN)	mg/l, Max	0.05	**ABSENT <0.02**	IS : 10500 :2012	IS 3025 (Part 27):1986, RA 2019
iii	Lead (as Pb)	mg/l, Max	0.01	**0.02**	IS : 10500 :2012	Cl.7.0 of IS 3025 (Part 47):1994, RA 2019
iv	Mercury (as Hg)	mg/l, Max	0.001	**<0.0005**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 48):1994, RA 2019
v	Total arsenic (as As)	mg/l, Max	0.01	**0.003**	IS : 10500 :2012	IS 3025 (Part 37):1988, RA 2019
vi	Pesticide Residue	mg/l, Max	0.0005	**<0.00005**	IS : 10500 :2012	USEPA
vii	Nickel (as Ni)	mg/l, Max	0.02	**<0.01**	IS : 10500 : 2012	Cl 7.0 of IS 3025 (Part 54):2005

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

L. Senapati

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-751001, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009002**
Test Report No	:	**KLPL/2/25/WATER/02593**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN,			
Date of receipt	:	04-Feb-2025	Commenced On :	04-Feb-2025	*Completion On:* 12-Feb-2025

Sample Description	:	**SURFACE WATER**		
Form|Shape|Appearance	:	HDPE BOTTLE		
Sample Identification	:	**SURFACE WATER**		
Batch No , Lot No	:	NOT APPLICABLE	*MFG Date :* NOT APPLICABLE	*EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR	*Sample Collection Location, & Date*	:
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS	HINDAL DAM, 04-FEB-2025	
Sampling Procedure if Any	:	KLPL/QSP-07		

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Sulphate as SO4	mg/l, Max	400	**11.14**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-SO4-E): 2023
ii	Nitrate as NO3	mg/l, Max	50	**1.0**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-NO3 -E):2023
iii	Fluoride as F	mg/l, Max	1.5	**0.50**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-F -D,C):2023
iv	Chemical Oxygen Demand	mg/l	--	**<5.0**	--	APHA 24th Edition (5220-B):2023
v	Dissolved Oxygen	mg/l, Min	4	**6.6**	As per IS 2296:1982 Class C	APHA 24th Edition(4500-O-C):2023
vi	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	3.0	**<1.0**	As per IS 2296:1982 Class C	APHA 24th Edition 2012(5210 B):2023
vii	Total Hardness as CaCO3	mg/l	--	**76**	--	APHA 24th Edition (2340 C):2023
viii	Total Alkalinity	mg/l	--	**106**	--	APHA 24th Edition (2320 B):2023
ix	Chloride (as Cl)	mg/l, Max	600	**<5.0**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-Cl-B):2023
x	Copper (as Cu)	mg/l,Max	1.5	**<0.02**	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 42):1992,RA 2014
xi	Iron (as Fe)	mg/l,Max	50	**0.79**	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025(Part-53):2003,RA:2014
xii	Manganese (as Mn)	mg/l	-	**<0.05**	--	Cl.5.0 of IS 3025 (Part 59):2006 RA 2012

KLPL- 10021504B

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/WATER/02593

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
xiii	Zinc (as Zn)	mg/l, Max	15	**<0.05**	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 49):1994,RA 2014
xiv	Total Kjeldhal Nitrogen	mg/l	--	**<1.0**	--	APHA-24th Edition (4500-Norg-B):2023
xv	Total Chromium	mg/l, Max	0.05	**<0.01**	As per IS 2296:1982 Class C	APHA-24th Edition (3111-C):2023
PHYSICAL PARAMETER						
i	Electrical Conductivity	us/cm	--	**178.4**	--	APHA 24th Edition (2510-B):2023
ii	Colour.	Hazen	300	**<1.0**	--	APHA 24th Edition (2120 B): 2023
iii	Turbidity	NTU	--	**<0.1**	--	APHA 24th Edition (2130-B):2023
iv	Total dissolved solids	mg/l, Max	1500	**116**	As per IS 2296:1982 Class C	APHA 24th Edition (2540 C):2023
v	pH Value.	--	6.5-8.5	**8.83**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-H+ B):2023
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l	--	**<0.001**	--	Cl.5.0 of IS 3025 (Part 41):1992,RA 2014
ii	Lead (as Pb)	mg/l, Max	0.1	**0.078**	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025 (Part 47):1994,RA 2014
iii	Mercury (as Hg)	mg/l	--	**<0.0005**	--	Cl.5.0 of IS 3025 (Part 48):1994,RA 2014
iv	Nickel (as Ni)	mg/l	--	**<0.01**	--	Cl.7.0 of IS 3025 (Part 54):2003,RA 2005
v	Arsenic (as As)	mg/l, Max	0.2	**0.005**	As per IS 2296:1982 Class C	IS 3025 (Part 37):1988 RA 2009

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

L Senapati

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

KLPL- 10021503B

Director (Technical)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02593**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN,
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025
Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS) HINDAL DAM, DATE-04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Total Organic Carbon	mg/l	-	**<5.0**	--	APHA-24th Eds:2023
ii	Cyanide (as CN)	mg/l	--	**<0.02**	--	IS 3025 (Part 27) :1986 RA 2003

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

L. Senapati

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KLPL- 10021582B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Annexure-9.2

TEST REPORT

Test Report No	:	**KLPL/2/25/ENVN/00450**	*Issue Date*	:	06-Feb-2024
Amendment No	:	-	*Amendment Date*	:	-
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**			
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	03-Feb-2024 Commenced On : 03-Feb-2024	*Completion On:*		06-Feb-2024
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**			
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/FILTER PAPER SEALED IN ZIP LOCK POLYTHENE BAG			
Sample Collected By		MR. MRUTYUNJAY DAS			
Ref.To Sampling Procedure:		KLPL/QSP-07			

Location & Date : ***OFFICE CAMP & SECURITY BARACK DT-23.01.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***

Total VOC	µg/m3	--	<0.1	KLPL/SOP/AIR-24/2023
Polyaromatic Hydrocarbon (11 Compounds)	ng/m3	--	<0.1	KLPL/SOP/AIR-07/2019

Remarks :

Any unusual feature observed during determination :

Analysed By

Mr. Paramesh Jena
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised Signatory

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

**** End of Test Report ****

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-730/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009106**
Test Report No	:	**KLPL/2/25/ENVN/00448**
Issue Date	:	07-Feb-2025
Amendment No	:	-
Amendment Date	:	-

TC-12083

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 *Completion On:* 06-Feb-2025
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/ FILTER PAPER SEALED IN ZIP LOCK
Sample Collected By	:	MR.MRUTYUNJAY DAS
Ref.To Sampling Procedure:		KLPL/QSP-07

Parameters	*Unit*	*Requirement*	*Results*	*Standard Reference*	*Test Method*
Location & Date : ***ENBANKMENT ROAD (BUFFER ZONE) ,DATE:-23.01.25, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)***					
i Sulphur Dioxide	µg/m³	80	12.65	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
ii Nitrogen Dioxide	µg/m³	80	15.62	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
iii Particulate Matter (PM10)	µg/m³	100	68.27	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
iv Particulate Matter (PM2.5)	µg/m³	60	32.51	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
v Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.68	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : ***BASTAVPUR (CORE ZONE)DT-23.01.2025, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)***					
vi Sulphur Dioxide	µg/m³	80	14.32	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
vii Nitrogen Dioxide	µg/m³	80	19.24	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
viii Particulate Matter (PM10)	µg/m³	100	73.21	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
ix Particulate Matter (PM2.5)	µg/m³	60	34.27	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
x Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.73	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : ***WBPDCL CAMP OFFICE (CORE ZONE) DT-23.01.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***					
xi Sulphur Dioxide	µg/m³	80	9.27	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
xii Nitrogen Dioxide	µg/m³	80	14.81	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
xiii Particulate Matter (PM10)	µg/m³	100	63.52	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
xiv Particulate Matter (PM2.5)	µg/m³	60	33.24	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017

Director (Admin)
Corporate Office,

Kalyani Laboratories Pvt. Ltd. BBSR

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/ENVN/00448

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
xv Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.63	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL

Customer information if any : *NIL*

Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Mr. Paramesh Jena
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009107**
Test Report No	:	**KLPL/2/25/ENVN/00449**
Issue Date	:	06-Feb-2025
Amendment No	:	-
Amendment Date	:	-

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED (BHADULIA)**
Address	:	CA-12, BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 *Completion On:* 06-Feb-2025
Sample Name	:	**NOISE**
Sample Condition	:	--
Sample Collected By	:	Mr. MRUTYUNJAY DAS
Ref.To Sampling Procedure:		KLPL/NOISE/SOP-23

Parameters	*Unit*	*Requirement*	*Results*	*Standard Reference*	*Test Method*
Location & Date : ***ENBANKMENT ROAD (BUFFER ZONE), DATE:-23.01.25, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)***					
i Noise Level Indl. Area (Day)	dB(A)	**75**	**54.32**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
ii Noise Level Indl. Area (Night)	dB(A)	**70**	**43.8**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : ***BASTAVPUR (CORE ZONE)DT-23.01.2025, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)***					
iii Noise Level Indl. Area (Day)	dB(A)	**75**	**74.28**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
iv Noise Level Indl. Area (Night)	dB(A)	**70**	**64.27**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : ***WBPDCL CAMP OFFICE (CORE ZONE) DT-23.01.2025, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***					
v Noise Level Indl. Area (Day)	dB(A)	**75**	**68.64**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
vi Noise Level Indl. Area (Night)	dB(A)	**70**	**51.57**	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL

Customer information if any : NIL

Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Mr. Paramesh Jena

For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal

For Kalyani Laboratories Pvt. Ltd.

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02594**
Issue Date	:	12-Feb-2025
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	04-Feb-2025 *Commenced On :* 04-Feb-2025 *Completion On:* 11-Feb-2025
Sample Description	:	**DRINKING WATER (IS 10500:2012)**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**GROUND WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS WBPDCL OFFICE CAMP, DATE-04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Chemical Oxygen Demand	mg/l, Max	-	**<5.0**	---	APHA 24th Edition-2023 (5220 B)
ii	Total Kjeldhal Nitrogen	mg/l	-	**<1.0**	IS : 10500 : 2012	APHA-24th Edition-2023 (4500-Norg-B)
iii	Total Suspended Solids.	mg/l, Max	-	**<2.5**	IS : 10500 :2012	APHA 24th Edition-2023 (2540 D)
iv	Total Organic Carbon	mg/l	-	**<5.0**	IS : 10500 : 2012	APHA 24th Edition-2023 (5310-B)
v	Electrical Conductivity	ms/cm	-	**329.4**	--	APHA 24th Edition (2510 B): 2023

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

L. Senapati

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KLPL- 10021583B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-7&8/944, MILLENNIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009003**
Test Report No	:	**KLPL/2/25/WATER/02594**
Issue Date	:	12-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 Completion On: 11-Feb-2025

Sample Description	:	**DRINKING WATER (IS 10500:2012)**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**GROUND WATER**
Batch No , Lot No	:	NOT APPLICABLE MFG Date : NOT APPLICABLE EXP Date: NOT APPLICABLE
Received Quantity	:	2 LTR Sample Collection Location, & Date :
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS) WBPDCL OFFICE CAMP, DATE-04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Nitrate as NO3	mg/l, Max	45	**0.08**	IS : 10500 :2012	Cl.3.0 of IS 3025 (PART 34): 1988, RA 2019
ii	Chloride (as Cl)	mg/l, Max	250	**13.21**	IS : 10500 :2012	IS 3025 (Part 32):1988, RA 2019
iii	Copper (as Cu)	mg/l, Max	0.05	**<0.02**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 42):1992, RA 2019
iv	Fluoride (as F)	mg/l, Max	1	**0.7**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 60):2008, RA 2019
v	Iron (as Fe)	mg/l, Max	1	**<0.05**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 53):2003, RA 2019
vi	Magnesium (as Mg)	mg/l, Max	30	**12.15**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 46):1994, RA 2019
vii	Sulphate (as SO4)	mg/l, Max	200	**5.0**	IS : 10500 :2012	Cl.4.0 of IS 3025 (Part 24):1986, RA 2019
viii	Total alkalinity (as CaCO3),	mg/l, Max	200	**230**	IS : 10500 :2012	IS 3025 (Part 23):1986, RA 2019
ix	Total hardness (as CaCO3),	mg/l, Max	200	**140**	IS : 10500 :2012	IS 3025 (Part 21):2009, RA 2019
x	Zinc (as Zn)	mg/l, Max	5	**<0.05**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 49):1994, RA 2019
xi	Total Chromium	mg/l, Max	0.05	**<0.01**	IS : 10500 :2012	IS 3025 (PART-2) :2019
PHYSICAL PARAMETER						
i	Turbidity	NTU, Max	1	**<0.1**	IS : 10500 :2012	IS 3025 (Part 10):1984, RA 2017

Kalyani Laboratories Pvt. Ltd. BBSR

Director (Technical) Corporate Office, WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

305

Test Report No : KLPL/2/25/WATER/02594

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
ii	Total dissolved solids	mg/l, Max	500	**250**	IS : 10500 :2012	IS 3025 (Part 16):1984, RA 2017
iii	pH Value.	--	6.5-8.5	**7.53**	IS : 10500 : 2012	IS 3025 (Part-11):1983,RA:2012
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l, Max	0.003	**<0.001**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 41):1992, RA 2019
ii	Cyanide (as CN)	mg/l, Max	0.05	**<0.02**	IS : 10500 :2012	IS 3025 (Part 27):1986, RA 2019
iii	Lead (as Pb)	mg/l, Max	0.01	**<0.005**	IS : 10500 :2012	Cl.7.0 of IS 3025 (Part 47):1994, RA 2019
iv	Mercury (as Hg)	mg/l, Max	0.001	**<0.0005**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 48):1994, RA 2019
v	Total arsenic (as As)	mg/l, Max	0.01	**0.005**	IS : 10500 :2012	IS 3025 (Part 37):1988, RA 2019
vi	Pesticide Residue	mg/l, Max	0.0005	**<0.00005**	IS : 10500 :2012	USEPA
vii	Nickel (as Ni)	mg/l, Max	0.02	**<0.01**	IS : 10500 : 2012	Cl 7.0 of IS 3025 (Part 54):2005

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

L. Senapati
Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Technical)
Corporate Office,
WBPDCL

KLPL- 10021586B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-7B/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000009004**
Test Report No	:	**KLPL/2/25/WATER/02595**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025

Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date :*
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS) NEAR BASTAVPUR PLAYGROUND, DATE-04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	*Parameters*	*Unit*	*Requirement*	*Result*	*Standard Specification*	*Test Method*
CHEMICAL PARAMETER						
i	Sulphate as SO4	mg/l, Max	400	**7.0**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-SO4-E): 2023
ii	Nitrate as NO3	mg/l, Max	50	**0.05**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-NO3 -E):2023
iii	Fluoride as F	mg/l, Max	1.5	**0.92**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-F -D,C):2023
iv	Chemical Oxygen Demand	mg/l	--	**<5.0**	--	APHA 24th Edition (5220-B):2023
v	Dissolved Oxygen	mg/l, Min	4	**6.5**	As per IS 2296:1982 Class C	APHA 24th Edition(4500-O-C):2023
vi	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	3.0	**<1.0**	As per IS 2296:1982 Class C	APHA 24th Edition 2012(5210 B):2023
vii	Total Hardness as CaCO3	mg/l	--	**43**	--	APHA 24th Edition (2340 C):2023
viii	Total Alkalinity	mg/l	--	**84**	--	APHA 24th Edition (2320 B):2023
ix	Chloride (as Cl)	mg/l, Max	600	**35.87**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-Cl-B):2023
x	Copper (as Cu)	mg/l,Max	1.5	**<0.02**	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 42):1992,RA 2014
xi	Iron (as Fe)	mg/l,Max	50	**0.26**	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025(Part-53):2003,RA:2014
xii	Manganese (as Mn)	mg/l	-	**<0.05**	--	Cl.5.0 of IS 3025 (Part 59):2006 RA 2012

Kalyani Laboratories Pvt. Ltd. BBSR

Director (Technical) Corporate Office, WBPDCL

KLPL- 10021591B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/WATER/02595

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
xiii	Zinc (as Zn)	mg/l, Max	15	**<0.05**	As per IS 2296:1982 Class C	Cl.6.0 of IS 3025 (Part 49):1994,RA 2014
xiv	Total Kjeldhal Nitrogen	mg/l	--	**<1.0**	--	APHA-24th Edition (4500-Norg-B):2023
xv	Total Chromium	mg/l, Max	0.05	**<0.01**	As per IS 2296:1982 Class C	APHA-24th Edition (3111-C):2023
PHYSICAL PARAMETER						
i	Electrical Conductivity	µs/cm	--	**212.9**	--	APHA 24th Edition (2510-B):2023
ii	Colour.	Hazen	300	**,1.0**	--	APHA 24th Edition (2120 B): 2023
iii	Turbidity	NTU	--	**8.0**	--	APHA 24th Edition (2130-B):2023
iv	Total dissolved solids	mg/l, Max	1500	**130**	As per IS 2296:1982 Class C	APHA 24th Edition (2540 C):2023
v	pH Value.	--	6.5-8.5	**7.22**	As per IS 2296:1982 Class C	APHA 24th Edition (4500-H+ B):2023
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l	--	**<0.001**	--	Cl.5.0 of IS 3025 (Part 41):1992,RA 2014
ii	Lead (as Pb)	mg/l, Max	0.1	**0.009**	As per IS 2296:1982 Class C	Cl.7.0 of IS 3025 (Part 47):1994,RA 2014
iii	Mercury (as Hg)	mg/l	--	**<0.0005**	--	Cl.5.0 of IS 3025 (Part 48):1994,RA 2014
iv	Nickel (as Ni)	mg/l	--	**<0.01**	--	Cl.7.0 of IS 3025 (Part 54):2003,RA 2009
v	Arsenic (as As)	mg/l, Max	0.2	**0.007**	As per IS 2296:1982 Class C	IS 3025 (Part 37):1988 RA 2009

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Director (Technical) Corporate Office, BBSR

End of Test Report

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/WATER/02595**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	04-Feb-2025 Commenced On : 04-Feb-2025 *Completion On:* 12-Feb-2025
Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	HDPE BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NOT APPLICABLE *MFG Date :* NOT APPLICABLE *EXP Date:* NOT APPLICABLE
Received Quantity	:	2 LTR *Sample Collection Location, & Date* :
Sample Collected By	:	By KLPL (MR. MRUTYUNJAY DAS) NEAR BASTAVPUR PLAYGROUND, DATE-04-FEB-2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Total Organic Carbon	mg/l	-	**<5.6**	--	APHA-24th Eds:2023
ii	Cyanide (as CN)	mg/l	--	**<0.02**	--	IS 3025 (Part 27) :1986 RA 2003

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

L. Senapati

Miss Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

KLPL- 10021584B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206324000002224**
Test Report No	:	**KLPL/2/25/SOIL/00101**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	03-Feb-2025	Commenced On : 03-Feb-2025	*Completion On:*	12-Feb-2025

Sample Description	:	**SOIL SAMPLE**			
Form|Shape|Appearance	:	SEALED IN POLYBAG			
Sample Identification	:	**SOIL**			
Batch No , Lot No	:	NA	*MFG Date :* NA	*EXP Date:*	NA
Received Quantity	:	500 GM	*Sample Collection Location, & Date*	:	
Sample Collected By	:	MR. MRUTYUNJAY DAS	INSIDE MINES, DATE-03.02.2025		
Sampling Procedure if Any	:	KLPL/QSP-07			

Sl	*Parameters*	*Unit*	*Requirement*	*Result*	*Standard Specification*	*Test Method*
i	Cadmium (as Cd)	mg/kg	--	**<0.2**	--	KLPL/SOP/SOIL- 33 : 2022
ii	Colour-	--	--	**GREY**	--	KLPL/SOP/SOIL-28: 2022
iii	Copper (as Cu)	mg/kg	--	**24.2**	--	KLPL/SOP/SOIL-33 : 2022
iv	Lead (as Pb)	mg/kg	--	**<0.2**	--	KLPL/SOP/SOIL-33 : 2022
v	Manganese (as Mn)	mg/kg	--	**12.4**	--	KLPL/SOP/SOIL-33 : 2022
vi	Nickel (Ni)	mg/kg	--	**29.2**	--	KLPL/SOP/SOIL-33 : 2022
vii	Total Chromium	mg/kg	--	**41.3**	--	KLPL/SOP/SOIL-33 : 2022
viii	Zinc (as Zn)	mg/kg	--	**21**	--	KLPL/SOP/SOIL-33 : 2022
ix	Electrical Conductivity	µs/cm	--	**114**	--	IS 14767 : 2000
x	pH value	--	--	**5.7**	--	--
xi	Arsenic (as As)	mg/kg	--	**27.1**	--	KLPL/SOP - SOIL-33 : 2022
xii	Organic Carbon	%	--	**0.2**	--	KLPL/SOP/SOIL-09 : 2017

Director (Mining)
Corporate Office,
WBPDCL

Kalyani Laboratories Pvt. Ltd. BBSR

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/2/25/SOIL/00101

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : -
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

L. Senapati

Miss. Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of the report

Director (Admin)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/2/25/SOIL/00101**
Issue Date	:	13-Feb-2025
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**M/S. GOQUEST SOLUTION PVT.LTD (BHADULIA)**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	03-Feb-2025 Commenced On : 03-Feb-2025 *Completion On:* 12-Feb-2025
Sample Description	:	**SOIL SAMPLE**
Form|Shape|Appearance	:	SEALED IN POLYBAG
Sample Identification	:	**SOIL**
Batch No , Lot No	:	NA *MFG Date :* NA *EXP Date:* NA
Received Quantity	:	500 GM *Sample Collection Location, & Date :*
Sample Collected By	:	MR. MRUTYUNJAY DAS INSIDE MINES, DATE-03.02.2025
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	cyanide	mg/kg	--	**<1.0**	--	KLPL/SOP/SOIL/36 : 2022
ii	Fluoride (as F)	mg/kg	--	**12.4**	--	KLPL/SOP/SOIL/34 : 2022
iii	Mercury (as Hg)	mg/kg	--	**<0.05**	--	KLPL/SOP/SOIL-33:2022

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

L. Senapati
Miss. Liza Senapati
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Annexure-9.3

TEST REPORT

NABL ULR NO	:	**TC1206324000007037**
Test Report No	:	**KLPL/10/24/ENVN/00320**
Issue Date	:	04-Nov-2024
Amendment No	:	-
Amendment Date	:	-

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 Completion On: 04-Nov-2024
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/ FILTER PAPER SEALED IN ZIP LOCK
Sample Collected By	:	MR.MRUTYUNJAY DAS
Ref.To Sampling Procedure	:	KLPL/QSP-07

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
Location & Date : GANGAPUR VILLAGE ,DATE:-18.10.24, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)					
i Sulphur Dioxide	µg/m³	80	12.05	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
ii Nitrogen Dioxide	µg/m³	80	13.81	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
iii Particulate Matter (PM10)	µg/m³	100	68.44	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
iv Particulate Matter (PM2.5)	µg/m³	60	37.98	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
v Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.68	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : JUNCTION ROAD TOWARDS MINES DT-19.10.2024, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)					
vi Sulphur Dioxide	µg/m³	80	11.39	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
vii Nitrogen Dioxide	µg/m³	80	17.98	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
viii Particulate Matter (PM10)	µg/m³	100	70.49	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
ix Particulate Matter (PM2.5)	µg/m³	60	38.47	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
x Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.70	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : OFFICE CAMP & SECURITY BARACK DT-20.10.2024, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)					
xi Sulphur Dioxide	µg/m³	80	8.10	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
xii Nitrogen Dioxide	µg/m³	80	13.92	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
xiii Particulate Matter (PM10)	µg/m³	100	62.26	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
xiv Particulate Matter (PM2.5)	µg/m³	60	34.05	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017

Director / Authorised Signatory
Corporate Office
WRPDCL

Kalyani Laboratories Pvt. Ltd. BBSR

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/10/24/ENVN/00320

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
xv Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.62	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019
Location & Date : WEIGH BRIDGE OF MINES DT-21.10.2024, Lat: 23°49'25.143"(N) Lon:87°12'38.996"(E)					
xvi Sulphur Dioxide	µg/m³	80	9.48	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-2) : 2001
xvii Nitrogen Dioxide	µg/m³	80	16.59	Requirement is as per standard specification NAAQS:2009	IS 5182 (PART 6) :2006
xviii Particulate Matter (PM10)	µg/m³	100	69.91	Requirement is as per standard specification NAAQS:2009	IS 5182(PART-23) :2006
xix Particulate Matter (PM2.5)	µg/m³	60	32.05	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-02,Issue No.01:2017
xx Carbon Monoxide (CO) (01 Hrs.)	mg/m³	04	0.69	Requirement is as per standard specification NAAQS:2009	KLPL/SOP/AIR-19:2019

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL
Customer information if any : *NIL*
Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/10/24/ENVN/00320**	*Issue Date*	:	04-Nov-2024
Amendment No	:	-	*Amendment Date*	:	-
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	31-Oct-2024	Commenced On : 31-Oct-2024	*Completion On:*	04-Nov-2024
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**			
Sample Condition	:	FILTER PAPER SEALED IN ZIP LOCK POLYTHENE BAG			
Sample Collected By	:	MR. MRUTYUNJAY DAS			
Ref.To Sampling Procedure	:	KLPL/QSP-07			

Parameters	*Unit*	*Standard Value*	*Results*	*Test Method*
Location & Date :	***OFFICE CAMP & SECURITY BARACK DT-19.10.2024, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)***			
Arsenic (As)	ng/m³	06	<1.0	KLPL/SOP/AIR-10,Issue No.01: 2017
Nickel (Ni)	ng/m³	20	<4.0	KLPL/SOP/AIR-10,Issue No.01:2017
Cadmium (As Cd)	µg/m³	-	<0.08	KLPL/SOP/AIR-24,Issue No.01:2023
Chromium (as Cr)	mg/m³	--	<0.01	Guidelines for the Measurement of Ambient Air Pollutants Volume-I & II, CPCB

Remarks : -

Any unusual feature observed during determination :

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised Signatory

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/10/24/ENVN/00322**	*Issue Date*	:	03-Nov-2024
Amendment No	:	-	*Amendment Date*	:	-
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024	*Completion On:*		03-Nov-2024
Sample Name	:	**AMBIENT AIR QUALITY MONITORING**			
Sample Condition	:	GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED/FILTER PAPER SEALED IN ZIP LOCK POLYTHENE BAG			
Sample Collected By		MR. MRUTYUNJAY DAS			
Ref.To Sampling Procedure:		KLPL/QSP-07			

Parameters	*Unit*	*Standard Value*	*Results*	*Test Method*
Location & Date : OFFICE CAMP & SECURITY BARACK DT-18.10.2024, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)				
Total VOC	µg/m3	--	<0.1	KLPL/SOP/AIR-24/2023
Polyaromatic Hydrocarbon (11 Compounds)	ng/m3	--	<0.1	KLPL/SOP/AIR-07/2019

Remarks :

Any unusual feature observed during determination :

Analysed By

D Arukha

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised Signatory

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206324000007038**
Test Report No	:	**KLPL/10/24/ENVN/00321**
Issue Date	:	04-Nov-2024
Amendment No	:	-
Amendment Date	:	-

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	31-Oct-2024	Commenced On : 31-Oct-2024	Completion On:	04-Nov-2024
Sample Name	:	**NOISE**			
Sample Condition	:	--			
Sample Collected By	:	Mr. MRUTYUNJAY DAS			
Ref.To Sampling Procedure:		KLPL/NOISE/SOP-23			

Parameters	Unit	Requirement	Results	Standard Reference	Test Method
Location & Date : GANGAPUR VILLAGE, DATE:-18.10.24, Lat: 23°48'30.71"(N) Lon:87°12'35.43"(E)					
i Noise Level Indl. Area (Day)	dB(A)	75	52.7	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
ii Noise Level Indl. Area (Night)	dB(A)	70	41.5	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : JUNCTION ROAD TOWARDS MINES DT-19.10.2024, Lat: 23°49'24.438"(N) Lon:87°12'39.667"(E)					
iii Noise Level Indl. Area (Day)	dB(A)	75	72.4	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
iv Noise Level Indl. Area (Night)	dB(A)	70	64.3	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : OFFICE CAMP & SECURITY BARACK DT-21.10.2024, Lat: 23°49'26.538"(N) Lon:87°12'36.721"(E)					
v Noise Level Indl. Area (Day)	dB(A)	75	67.4	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
vi Noise Level Indl. Area (Night)	dB(A)	70	52.6	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
Location & Date : WEIGH BRIDGE OF MINES DT-21.10.2024, Lat: 23°49'25.143"(N) Lon:87°12'38.996"(E)					
vii Noise Level Indl. Area (Day)	dB(A)	75	69.3	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014
viii Noise Level Indl. Area (Night)	dB(A)	70	64.5	Standard Specification Noise Rule 2000	IS 9989:1981 (RA 2014):2014

Director (Mining)
Corporate Office,
WBPDCL

Kalyani Laboratories Pvt. Ltd. BBSR

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/10/24/ENVN/00321

Parameters	Unit	Requirement	Results	Standard Reference	Test Method

Opinion & Interpretation: -

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : —

To view "Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WRPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000008228**
Test Report No	:	**KLPL/10/24/SOIL/00063**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054			
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**			
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL			
Date of receipt	:	31-Oct-2024	Commenced On :	31-Oct-2024	Completion On: 08-Nov-2024

Sample Description	:	**SOIL SAMPLE**		
Form|Shape|Appearance	:	SEALED IN POLYBAG		
Sample Identification	:	**SOIL**		
Batch No , Lot No	:	NA	MFG Date : NA	EXP Date: NA
Received Quantity	:	500 GM	Sample Collection Location, & Date	:
Sample Collected By	:	MR. MRUTYUNJAY DAS	INSIDE MINES,	
Sampling Procedure if Any	:	KLPL/QSP-07		

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Cadmium (as Cd)	mg/kg	--	<0.2	--	KLPL/SOP/SOIL- 33 : 2022
ii	Colour-	--	--	DARK GREY	--	KLPL/SOP/SOIL-28: 2022
iii	Copper (as Cu)	mg/kg	--	22.6	--	KLPL/SOP/SOIL-33 : 2022
iv	Lead (as Pb)	mg/kg	--	<0.2	--	KLPL/SOP/SOIL-33 : 2022
v	Manganese (as Mn)	mg/kg	--	18.5	--	KLPL/SOP/SOIL-33 : 2022
vi	Nickel (Ni)	mg/kg	--	33.8	--	KLPL/SOP/SOIL-33 : 2022
vii	Total Chromium	mg/kg	--	46.0	--	KLPL/SOP/SOIL-33 : 2022
viii	Zinc (as Zn)	mg/kg	--	26.4	--	KLPL/SOP/SOIL-33 : 2022
ix	Electrical Conductivity	µs/cm	--	42	--	IS 14767 : 2000
x	pH value	--	--	6.0	--	--
xi	Arsenic (as As)	mg/kg	--	29.1	--	KLPL/SOP - SOIL-33 : 2022
xii	Organic Carbon	%	--	0.60	--	KLPL/SOP/SOIL-09 : 2017

Director (Mining)
Corporate Office,

Kalyani Laboratories Pvt. Ltd. BBSR KLPL- 10021509B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/10/24/SOIL/00063

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view *Terms & Conditions & NABL certificate of accreditation click **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Admin)
Corporate Office,
WRPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-787/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/10/24/SOIL/00063**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 *Completion On:* 08-Nov-2024
Sample Description	:	**SOIL SAMPLE**
Form|Shape|Appearance	:	SEALED IN POLYBAG
Sample Identification	:	**SOIL**
Batch No , Lot No	:	NA *MFG Date :* NA *EXP Date:* NA
Received Quantity	:	500 GM *Sample Collection Location, & Date :*
Sample Collected By	:	MR. MRUTYUNJAY DAS INSIDE MINES, DATE-21.10.2024
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	cyanide	mg/kg	--	**<1.0**	--	KLPL/SOP/SOIL/36 : 2022
ii	Fluoride (as F)	mg/kg	--	**7.8**	--	KLPL/SOP/SOIL/34 : 2022
iii	Mercury (as Hg)	mg/kg	--	**<0.05**	--	KLPL/SOP/SOIL-33:2022

Opinion & Interpretation: ---

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

********** End of Test Report **********

Director (Mining)
Corporate Office,
WRPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000008222**
Test Report No	:	**KLPL/10/24/WATER/01889**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 Completion On: 08-Nov-2024

Sample Description	:	**DRINKING WATER (IS 10500:2012)**
Form|Shape|Appearance	:	SEALED IN PET BOTTLE
Sample Identification	:	**GROUND WATER**
Batch No , Lot No	:	NOT APPLICABLE MFG Date : NOT APPLICABLE EXP Date: NOT APPLICABLE
Received Quantity	:	1L X 2 NO Sample Collection Location, & Date :
Sample Collected By	:	MR. MRUTYUNJAY DAS NEAR OFFICE BOREWELL, DATE-20.10.2024
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
CHEMICAL PARAMETER						
i	Nitrate as NO3	mg/l, Max	45	**4.2**	IS : 10500 :2012	Cl.3.0 of IS 3025 (PART 34): 1988, RA 2019
ii	Chloride (as Cl)	mg/l, Max	250	**44**	IS : 10500 :2012	IS 3025 (Part 32):1988, RA 2019
iii	Copper (as Cu)	mg/l, Max	0.05	**<0.02**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 42):1992, RA 2019
iv	Fluoride (as F)	mg/l, Max	1	**0.58**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 60):2008, RA 2019
v	Iron (as Fe)	mg/l, Max	1	**0.21**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 53):2003, RA 2019
vi	Manganese (as Mn)	mg/l, Max	0.1	**<0.05**	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 59):2006, RA 2017
vii	Sulphate (as SO4)	mg/l, Max	200	**23**	IS : 10500 :2012	Cl.4.0 of IS 3025 (Part 24):1986, RA 2019
viii	Total alkalinity (as CaCO3),	mg/l, Max	200	**230**	IS : 10500 :2012	IS 3025 (Part 23):1986, RA 2019
ix	Total hardness (as CaCO3),	mg/l, Max	200	**440**	IS : 10500 :2012	IS 3025 (Part 21):2009, RA 2019
x	Zinc (as Zn)	mg/l, Max	5	**<0.05**	IS : 10500 :2012	Cl.6.0 of IS 3025 (Part 49):1994, RA 2019
xi	Total Chromium	mg/l, Max	0.05	**<0.01**	IS : 10500 :2012	IS 3025 (Part 02):2019
PHYSICAL PARAMETER						
i	pH value	--	6.5-8.5	**7.0**	IS : 10500 : 2012	IS 3025 (Part-11):1983, RA 2017

Director (Technical)
Corporate Office
WBPDCL

Kalyani Laboratories Pvt. Ltd. BBSR KLPL-10021512B

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PATIA, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/10/24/WATER/01889

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
ii	Turbidity	NTU, Max	1	0.9	IS : 10500 :2012	IS 3025 (Part 10):1984, RA 2017
iii	Total dissolved solids	mg/l, Max	500	490	IS : 10500 :2012	IS 3025 (Part 16):1984, RA 2017
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 41):1992, RA 2019
ii	Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS : 10500 :2012	IS 3025 (Part 27):1986, RA 2019
iii	Lead (as Pb)	mg/l, Max	0.01	<0.005	IS : 10500 :2012	Cl.7.0 of IS 3025 (Part 47):1994, RA 2019
iv	Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS : 10500 :2012	Cl.5.0 of IS 3025 (Part 48):1994, RA 2019
v	Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS : 10500 :2012	IS 3025 (Part 37):1988, RA 2019
vi	Pesticide Residue	mg/l	--	<0.00005	IS : 10500 :2012	USEPA
vii	Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS : 10500 : 2012	Cl 7.0 of IS 3025 (Part 54):2005

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

*To view *Terms & Conditions & NABL certificate of accreditation click* **report.kalyanilaboratories.com/images/NACNTC.pdf**

Analysed By

Mr. Digambar Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

***

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-787944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/10/24/WATER/01889**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 Completion On: 08-Nov-2024
Sample Description	:	**DRINKING WATER (IS 10500:2012)**
Form|Shape|Appearance	:	SEALED IN PET BOTTLE
Sample Identification	:	**GROUND WATER**
Batch No , Lot No	:	NA MFG Date : NA EXP Date: NA
Received Quantity	:	1L X 2 NO Sample Collection Location, & Date :
Sample Collected By	:	MR. MRUTYUNJAY DAS NEAR OFFICE BOREWELL, date-20.10.2024
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Chemical Oxygen Demand	mg/l	-	**<5.0**	---	APHA 24th Edition-2023 (5220 B)
ii	Total Kjeldhal Nitrogen	mg/l	-	**<0.1**	IS : 10500 : 2012	APHA-24th Edition-2023 (4500-Norg-B)
iii	Total Suspended Solids.	mg/l	-	**<2.5**	IS : 10500 :2012	APHA 24th Edition-2023 (2540 D)
iv	Total Organic Carbon	mg/l	-	**<5.0**	IS : 10500 : 2012	APHA 24th Edition-2023 (5310-B)
v	Electrical Conductivity	µs/cm	--	**700**	IS : 10500 :2012	APHA 24th Edition (2510-B)

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director Authorised
Corporate Office,
WBPDCL

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

NABL ULR NO	:	**TC1206325000008223**
Test Report No	:	**KLPL/10/24/WATER/01890**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--

TC-12063

Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 *Completion On:* 08-Nov-2024

Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	SEALED IN PET BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NA *MFG Date :* NA *EXP Date:* NA
Received Quantity	:	1L X 2 NO *Sample Collection Location, & Date :*
Sample Collected By	:	MR. MRUTYUNJAY DAS HINDOL DAM, DATE-20.10.2024
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	*Parameters*	*Unit*	*Requirement*	*Result*	*Standard Specification*	*Test Method*
CHEMICAL PARAMETER						
i	Sulphate as SO4	mg/l, Max	400	**18**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (4500-SO4-E): 2023
ii	Nitrate as NO3	mg/l, Max	50	**0.4**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (4500-NO3 -E):2023
iii	Fluoride as F	mg/l, Max	1.5	**0.19**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (4500-F -D,C):2023
iv	Total Dissolved Solid	mg/l, Max	1500	**82**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (2540 C):2023
v	Chemical Oxygen Demand	mg/l	-	**10**	--	APHA 24th Edition (5220-B):2023
vi	Dissolved Oxygen	mg/l, Min	4	**6.5**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition(4500-O-C):2023
vii	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	3.0	**2.5**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition 2012(5210 B):2023
viii	Total Hardness as CaCO3	mg/l	-	**60**	--	APHA 24th Edition (2340 C):2023
ix	Total Alkalinity	mg/l	-	**56**	--	APHA 24th Edition (2320 B):2023
x	Chloride (as Cl)	mg/l, Max	600	**10**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (4500-Cl-B):2023
xi	Copper (as Cu)	mg/l	--	**<0.02**	--	Cl.6.0 of IS 3025 (Part 42):1992,RA 2014
xii	Iron (as Fe)	mg/l	--	**0.45**	--	Cl.7.0 of IS 3025(Part-53):2003,RA:2014

Director Kalyani Laboratories Pvt. Ltd. BBSR

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

Test Report No : KLPL/10/24/WATER/01890

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
xiii	Manganese (as Mn)	mg/l	--	**<0.05**	--	Cl.5.0 of IS 3025 (Part 59):2006 RA 2012
xiv	Zinc (as Zn)	mg/l	--	**<0.05**	--	Cl.6.0 of IS 3025 (Part 49):1994,RA 2014
xv	Total Kjeldhal Nitrogen	mg/l	--	**<0.1**	--	APHA-24th Edition (4500-Norg-B):2023
PHYSICAL PARAMETER						
i	pH Value	--	6.5-8.5	**7.0**	Requirement is as per standard specification by CPCB,1979:CLASS-C	APHA 24th Edition (4500-H+ B):2023
ii	Electrical Conductivity	µs/cm	--	**120**	--	APHA 24th Edition (2510-B):2023
iii	Colour.	Hazen,Max	300	**<1.0**	--	APHA 24th Edition (2120 B): 2023
iv	Turbidity	NTU	--	**4.2**	--	APHA 24th Edition (2130-B):2023
TOXIC SUBSTANCES						
i	Cadmium (as Cd)	mg/l	--	**<0.001**	--	Cl.5.0 of IS 3025 (Part 41):1992,RA 2014
ii	Lead (as Pb)	mg/l, Max	0.1	**<0.005**	Requirement is as per standard specification by CPCB,1979:CLASS-C	Cl.7.0 of IS 3025 (Part 47):1994,RA 2014
iii	Mercury (as Hg)	mg/l	--	**<0.0005**	--	Cl.5.0 of IS 3025 (Part 48):1994,RA 2014
iv	Pesticide Residue	mg/l	-	**<0.00005**	--	USEPA
v	Nickel (as Ni)	mg/l	-	**<0.01**	--	Cl.7.0 of IS 3025 (Part 54):2003,RA 2005
vi	Arsenic (as As)	mg/l, Max	0.2	**<0.001**	Requirement is as per standard specification by CPCB,1979:CLASS-C	IS 3025 (Part 37):1988 RA 2009

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

To view "Terms & Conditions & NABL certificate of accreditation click ***report.kalyanilaboratories.com/images/NACNTC.pdf***

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

KALYANI LABORATORIES PVT.LTD.

Kalyani Laboratories
PLOT NO-7B/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA
+91 9861463904 M: kalyanilab@yahoo.co.in

TEST REPORT

Test Report No	:	**KLPL/10/24/WATER/01890**
Issue Date	:	08-Nov-2024
Amendment No	:	--
Amendment Date	:	--
Reference	:	W.O NO-GMPL/DGP/WO/23-24/054
Customer Name	:	**GOQUEST SOLUTION PRIVATE LIMITED**
Address	:	CA-12 BENGAL AMBUJA COMPLEX, PHASE-II, CITY CENTER, DURGAPUR-713216, PASCHIM BARDHAMAN, WEST BENGAL
Date of receipt	:	31-Oct-2024 Commenced On : 31-Oct-2024 Completion On: 08-Nov-2024
Sample Description	:	**SURFACE WATER**
Form|Shape|Appearance	:	SEALED IN PET BOTTLE
Sample Identification	:	**SURFACE WATER**
Batch No , Lot No	:	NA MFG Date : NA EXP Date: NA
Received Quantity	:	1L X 2NO Sample Collection Location, & Date :
Sample Collected By	:	MR. MRUTYUNJAY DAS HINDOL DAM, DATE-20.10.2024
Sampling Procedure if Any	:	KLPL/QSP-07

Sl	Parameters	Unit	Requirement	Result	Standard Specification	Test Method
i	Total Chromium	mg/l	--	**<0.01**	--	IS 3025 (Part 02) :2019
ii	Total Organic Carbon	mg/l	--	**5.0**	--	APHA-24th Edition (5310-B) -2023
iii	Cyanide (as CN)	mg/l	--	**<0.02**	--	IS 3025 (Part 27) :1986 RA 2003

Opinion & Interpretation: --

Any unusual feature observed during determination : NIL
Customer information if any : NIL
Confirmation statement as per decision rule , if applicable : --

Analysed By

Mr. Digamber Arukha
For Kalyani Laboratories Pvt. Ltd.

Kalyani Laboratories Pvt. Ltd. BBSR

Authorised By

Dr. Debasis Biswal
For Kalyani Laboratories Pvt. Ltd.

End of Test Report

Director (Mining)
Corporate Office,
WBPDCL

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor
Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.: +91-8882196167
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to :- SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025001
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025001

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	GANGPUR VILLAGE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Chromium (as Cr)	$\mu g/m^3$	<0.01	------	SOP/ASPL/01
2.	Cadmium(as Cd)	$\mu g/m^3$	0.055	------	SOP/ASPL/01
3.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

(Director (Mining)
Corporate Office,
WBPDCL)

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor,
Sector-10, Noida-201301, U.P.(INDIA)
Tel: 0120-4320319 Mob.: +91-8882196197
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to :- SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025002
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025002

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	BASTABPUR VILLAGE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Chromium (as Cr)	$\mu g/m^3$	<0.01	------	SOP/ASPL/01
2.	Cadmium(as Cd)	$\mu g/m^3$	0.06	------	SOP/ASPL/01
3.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office,
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor,
Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.: +91-8882196197
Email: info@alkom.in www.alkomsynergy.com

TEST REPORT

Issued to : SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025003
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025003

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	EMBANKMENT ROAD

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Chromium (as Cr)	µg/m³	<0.01	------	SOP/ASPL/01
2.	Cadmium(as Cd)	µg/m³	0.05	------	SOP/ASPL/01
3.	Mercury (as Hg)	µg/m³	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office,
WBPDCL

ALKOM SYNERGY PVT. LTD. NOIDA

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory : C-212, 2nd & 3rd Floor,
Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.:+91-8882196187
E-mail: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to - SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025004
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025004

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	JUNCTION ROAD TOWARDS MINE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Chromium (as Cr)	$\mu g/m^3$	<0.01	------	SOP/ASPL/01
2.	Cadmium(as Cd)	$\mu g/m^3$	0.042	------	SOP/ASPL/01
3.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

AUTHORISED SIGNATORY

Director (Mining)
Corporate Office
WBPDCL

ALKOM SYNERGY PVT LTD

Laboratory:- C-212, 2nd & 3rd Floor
Sector-10, Noida-201301, U.P.(INDIA)
Tel: 0120-4320319 Mob: +91-8882196157
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to - SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025005
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025005

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	WEIGH BRIDGE OF MINE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification /Requirement	Test Method
1.	Chromium (as Cr)	$\mu g/m^3$	0.012	------	SOP/ASPL/01
2.	Cadmium(as Cd)	$\mu g/m^3$	0.036	------	SOP/ASPL/01
3.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel. : 0120-4320319 Mob. +91-8882196167
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to : SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Test Report No. : ASPL/13062025006
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025006

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	WBPDCL CAMP OFFICE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Chromium (as Cr)	$\mu g/m^3$	0.011	------	SOP/ASPL/01
2.	Cadmium(as Cd)	$\mu g/m^3$	0.032	------	SOP/ASPL/01
3.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor
Sector-10, Noida-201301, U.P (INDIA)
Tel.: 0120-4320318 Mob.:+91-8882196187
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Test Report No. : ASPL/13062025007
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025007

Issued to :- SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

Site Location - Gangaramchak & Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	OFFICE CAMP & SECURITY BARRACK

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/ Requirement	Test Method
1.	Mercury (as Hg)	$\mu g/m^3$	<0.005	------	Methods of Air sampling &Analysis 3rd Ed.

Note:-
* The results listed refer only to the tested sample and applicable parameter
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law
* This report cannot be reproduced, except when in full, without the written permission of the Director
* The sample will be destroyed after one week from the date of issue of the test report

ANALYST

Director (Mining)
Corporate Office,
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.:+91-8882196187, 9818493979, 9354009115
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

*Issued to:-*SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000686
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025001

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	GANGPUR VILLAGE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m^3	<1.0	6.0 ng/m^3	IS :5182 P-22
2.	Nickel (as Ni)	ng/m^3	3.0	20.0 ng/m^3	IS :5182 P-26

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

AUTHORISED SIGNATORY

Director (Mining)
Corporate Office,
WBPDCL

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel : 0120-4320319 Mob. +91-8882198187, 9818493979, 9354009115
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to -SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000687
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025002

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	BASTABPUR VILLAGE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m^3	<1.0	6.0 ng/m^3	IS :5182 P-22
2.	Nickel (as Ni)	ng/m^3	2.6	20.0 ng/m^3	IS :5182 P-26

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office,
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT. LTD.

ALKOM SYNERGY PVT LTD

Laboratory:- C-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel. 0120-4320319 Mob. +91-8882196187
9818493979, 9354009115
E-mail: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to -SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000688
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025003

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	EMBANKMENT ROAD

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m^3	<1.0	6.0 ng/m^3	IS :5182 P-22
2.	Nickel (as Ni)	ng/m^3	4.2	20.0 ng/m^3	IS :5182 P-26

Note:-
- The results listed refer only to the tested sample and applicable parameter.
- This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
- This report cannot be reproduced, except when in full, without the written permission of the Director.
- The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

Director (Mining)
Corporate Office,
WBPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory :- L-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.:+91-8882196187
9818493979, 9354009115
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to -SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000689
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025004

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	JUNCTION ROAD TOWARDS MINE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m^3	1.2	6.0 ng/m^3	IS :5182 P-22
2.	Nickel (as Ni)	ng/m^3	4.5	20.0 ng/m^3	IS :5182 P-26

Note:-
* The results listed refer only to the tested sample and applicable parameter
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law
* This report cannot be reproduced, except when in full, without the written permission of the Director
* The sample will be destroyed after one week from the date of issue of the test report

ANALYST

Director (Mining)
Corporate Office
WEPDCL

AUTHORISED SIGNATORY

ALKOM SYNERGY PVT LTD

Laboratory:- C-212, 2nd & 3rd Floor
Sector-10, Noida-201301, U.P.(INDIA)
Tel.: 0120-4320319 Mob.:+91-8882196187
9818493979, 9354009115
Email: info@alkom.in, www.alkomsynergy.com

TEST REPORT

Issued to -SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000690
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025005

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	WEIGH BRIDGE OF MINE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m³	1.0	6.0 ng/m³	IS :5182 P-22
2.	Nickel (as Ni)	ng/m³	3.5	20.0 ng/m³	IS :5182 P-26

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

AUTHORISED SIGNATORY

Director (Mining)
Corporate Office,
WBPDCL

ALKOM SYNERGY PVT LTD

Laboratory - C-212, 2nd & 3rd Floor, Sector-10, Noida-201301, U.P.(INDIA)
Tel. 0120-4320319 Mob. +91-8882196187, 9818493979, 9354009115
Email. info@alkom.in, www.alkomsynergy.com

339

TEST REPORT

Issued to -SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
MADOPUR JHARKHAND

ULR NO. : TC958025000000691
Date of Issue : 13.06.2025
Sample I.D. : ASPL06062025006

Site Location - Gangaramchak&Gangaramchak-Bhadulia Coal Mine

SAMPLE PARTICULARS

Name of sample: Ambient Air

Details of Sample	
Date of Sample received	06.06.2025
Testing Protocol	IS: 5182
Period of analysis	: 06.06.2025 to 13.06.2025
Sample Submitted By	SABZ CARE ENVIRONMENTAL CONSULTANCY PVT. LTD
Sampling Location/Marked	WBPDCL CAMP OFFICE

TEST RESULTS

S. No.	Parameters	Units	Results	Specification/Requirement	Test Method
1.	Arsenic (as As)	ng/m^3	1.01	6.0 ng/m^3	IS :5182 P-22
2.	Nickel (as Ni)	ng/m^3	2.8	20.0 ng/m^3	IS :5182 P-26

Note:-
* The results listed refer only to the tested sample and applicable parameter.
* This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
* This report cannot be reproduced, except when in full, without the written permission of the Director.
* The sample will be destroyed after one week from the date of issue of the test report.

ANALYST

AUTHORISED SIGNATORY

Director (Mining)
Corporate Office,
WBPDCL

Study Report

on

Hydrololgical study of Gangaramchak & Gangaramchak Bhadualia Coal Mine, Birbhum, West Bengal of M/s West Bengal Power Development Corporation Ltd.

Project No: SSP/830/2024-25



Sponsored by

Gangaramchak Mining Private Ltd,
Chakraberia Road (N), Kolkata, West Bengal

Water Resource Management Group

CSIR-Central Institute of Mining & Fuel Research
CSIR-CIMFR BARWA ROAD, DHANBAD - 826001, JHARKHAND

Director (Mines)
Corporate Office,
WBPDCL

Study Report

Hydrological Study of Gangaramchak & Gangaramchak Bhadulia Coal Mine, Birbhum District, West Bengal of M/s West Bengal Power Development Corporation Ltd.

Project No: SSP/830/2024-25

DISCLAIMER

1. *This report is meant for the internal use of your organization only and it should not be published in full or part by your organization. It should not be communicated/circulated to outside parties except the concerned government department. However, CSIR-CIMFR reserves the right to publish the results of research for the benefit of the industry. The conclusions and recommendations are based on the results of investigations. It is helped that the recommendations will be implemented to make mining operation eco-friendly.*
2. *Since the day-to-day mining operations and implementation of controlling measures are not under the control of CSIR-CIMFR, the research team will not be held responsible for violation of statutory norms.*

Signature Project Leader & Coordinator

26/09/2024

(Gautam C. Mondal)
Sr. Principal Scientist & Project Leader

A Singh 26/09/24

(Abhay Kumar Singh)
Chief Scientist & Project Coordinator

CSIR-CIMFR

Water Resource Management Group

CSIR-Central Institute of Mining & Fuel Research
BARWA ROAD, DHANBAD - 826001, JHARKHAND

Director (Mining)
Corporate Office,
WBPDCL

Project Team

S.N.	Name & Designation	Role/Contribution
1.	Dr. Abhay Kumar Singh, Chief Scientist	Project Leader/Coordinator
2.	Dr. G. C. Mondal, Sr. Principal Scientist	Project Leader
3.	Dr. Pallabi Das, Sr. Scientist	Team Member
4.	Dr. Apurba Sinhamahapatra, Sr. Scientist	Project Leader
5.	Dr. Mukul R. Mondal, Sr. Technical Officer	Team Member
6.	Dr. K. K. Singh, Sr. Technical Officer	Team Member
7.	Mr. Ranjit S. Rangari, Technical Assistant	Team Member



CONTENTS

S. No.	Description	Page No.
1.0	**Introduction**	1
2.0	**Description of the Study Area**	3
2.1	Project Location	3
2.2	Geology of the Area	5
2.3	Climate and Metrology	8
2.4	Physiography and Drainage	9
2.5	Land Use Pattern	11
3.0	**Hydrogeology and Aquifer Characterization**	12
3.1	Groundwater Level and Water Level Fluctuations	14
3.2	Groundwater Resource Assessment of the Area	19
4.0	**Impact Assessment of Mining Activities on Water Resources and its Remedial Measures**	25
5.0	**Conclusions**	31

Director (Mining)
Corporate Office,
NMDC

LIST OF FIGURES

Figure No.	Figure Description	Page No.
1	Location Map of Location map of Gangaramchak and Gangaramchak-Bhadulia coal block	4
2	Average monthly rainfall distribution in Bhirbhum District	9
3	Drainage Map of the 10 km Buffer Zone	10
4	Land Use Land Cover Map of the 10 km Buffer Zone	12
5	Water level monitoring sites in the 10 km Buffer Zone	15
6	Field photograph during water level monitoring in pre-monsoon season	16
7	Groundwater level contour for post- and pre-monsoon season	18-19
8	Flow chart showing Water Balance Statement for the buffer zone by rainfall filtration factor (10 km)	24
9	Gully plug and contour bunds for artificial recharge	27
10	Gabion structure for augmentation of groundwater recharge	28
11	Schematic diagram for recharge shaft well for groundwater recharge	29
12	General design for rainwater harvesting to recharge groundwater	32

Director (Mining)
Corporate Office,
WBPDCL

LIST OF TABLES

Table No.	Table Description	Page No.
1.	Stratigraphic Sequence of the Study Area	6
2.	Land use cover area in different classes and its share %	11
3.	Groundwater level and seasonal fluctuation in Buffer Zone Gangaramchak and Gangaramchak-Bhadulia Coal Block	17
4.	Estimated water balance for the Buffer Zone Area	23

Director (Mining)
Corporate Office,
WBPDCL

1.0 INTRODUCTION

Coal is the primary source of energy in India and a crucial driver of the country's industrial growth. Coal accounts for 55% of India's energy needs and is likely to remain a major source of primary energy due to its adequate reserves, limited hydroelectric project potential, geo-political considerations, and economic factors. India is the second-largest coal producer globally, producing 937 million metric tonnes, and has significant coal reserves, although it accounts for only 6% of the world's total proven coal reserves. It is anticipated that coal demand in India will increase at a faster rate in the future than it is currently, driven by the country's economic growth. The majority of India's coal reserves (62%) occur within 300 meters depth and are accessible for open-cast mining. Open-cast coal mining accounts for 96% of India's total annual coal production, while underground mines produce 4%. Open-cast mines are preferred due to their large capacity, competitive economics, shorter gestation period, assured production, and better safety and conservation. Increased production of power-grade coal has come primarily from Singruali, Korba, IB, Talcher, Rajmahal, Singareni, Damodar, and Wardha Valley coalfields. To meet the growing demand for power-grade coal, more higher-capacity open-cast mines need to be developed in these coalfields.

The exploitation of any natural resource, including coal, has the potential to produce adverse environmental effects. Mining affects all components of the environment and can have both temporary and permanent, beneficial and harmful impacts on water resources. Mining activities can have significant impacts on water resources, including disruption of hydrological pathways, seepage of contaminated leachates into aquifers, discharge of saline mine water into fresh water bodies, and depression of the water table around dewatered zones. The impacts of mining on water resources depend on factors such as mine location, hydrology and climate, physical and chemical properties of the coal and associated strata, and reject materials.

M/s Gangaramchak Mining Private Limited, Kolkata, approached CSIR-Central Institute of Mining and Fuel Research, Dhanbad, for conducting a hydrological study of the Gangaramchak and Gangaramchak-Bhadulia coal mine.

Director
Corporate Office,
WBPDCL

block in Birbhum District, West Bengal. The Gangaramchak and Gangaramchak-Bhadulia coal mine block was reallocated to M/s West Bengal Power Development Corporation (WBPDCL) from M/s Bengal Emta Coal Mines Ltd. by the Ministry of Coal (vide letter no. 103/8/2015/NA dated 31.03.2015). The mine is currently operating at a rated capacity of 3.00 MTPA, with M/s Gangaramchak Mining Private Limited working as the Managing Director for WBPDCL. The Environmental Clearance and other statutory approvals were obtained in May 2007 for a production capacity of 1.00 MTPA. M/s WBPDCL has decided to increase the mining capacity from 1.00 MTPA to 3.00 MTPA, and approval of the Mining Plan for the rated capacity was obtained from the Ministry of Coal.

The Gangaramchak & Gangaramchak Bhadulia Block Opencast Coal Mining Project comprises both forest and non-forest lands. Forest clearance was obtained by WBPDCL from MoEF&CC vide letter no. 8-45/2018-FC dated 29th October 2018 (Stage I) & F.No-8-45/2018 dated 10th April 2019 (Stage II). Estimated gross geological reserve of the mine is about 13.68 million tonnes, and net geological reserve is 10.58 million tonnes. Out of which, mineable as well as extractable reserve is 9.15 million tonnes, and remaining reserve is 5.725 million tonnes (as on 1st April, 2022). Around 3.425 million tonnes of coal reserve already depleted during FY2019-20, FY2020-21, FY2021-22, and FY2022-23 (Till 1st April, 2022). Thus, remaining extractable reserve is 5.725 million tonnes. With the rated production capacity of 3.0 MTPA of coal, the life of the mine shall be around 3 years. Coal produced from this project is linked to Santaldih Thermal Power Station (Purulia district), Kolaghat Thermal Power Station (Medinipur district), Bakreswar Thermal Power Plant (Birbhum district), Bandel Thermal Power Station (Hoogly district), and Sagardigh Thermal Power (Murshidabad district) of West Bengal.

The present mining method is opencast mechanized mining, with overburden materials excavated using conventional drilling and blasting methods, while coal is extracted through environment-friendly surface miner. However, due to operational restrictions, occasional drilling and blasting may also be used for coal extraction. Removal of overburden is done through hydraulic shovel in

Director (Mining)
Corporate Office
WBPDCL

conjunction with rear dumpers, while coal removal and transportation to the stock yard will be done using pay loader and tippers. At the end of the mine life, an area of around 14 Ha will remain as mined out void while an area of 127.90 Ha will be reclaimed. Dumping of overburden is planned as concurrent back filling within the mined-out pit. The ultimate depth of the mine as envisaged in the approved mining plan is 90 meters from the average ground level.

The present study aims to conduct a hydrological and water balance study of the Gangaramchak and Gangaramchak-Bhadulia coal mine project area to assess the groundwater potential and possible impacts of mining activities on water resources in the region. The study will also suggest management plans to ensure sustainability of groundwater resources in this region.

2.0 Description of the Study Area

2.1 Project Location

The Gangaramchak and Gangaramchak Bhadulia Coal Mine is spread over an area of 186.42 Ha in the Birbhum district of West Bengal. Birbhum is the northernmost District of the Burdwan Division (**Fig. 1**). District Birbhum is bounded by 23°32'30" and 24°35'00" north latitude and 88°01'40" and 87°05'25" east longitude. It looks like an isosceles triangles in shape, the apex is situated at the northern extremity where the Ganges River and the hills of the Santhal Paraganas begin to diverge, while the river Ajay forms the base of this triangle. Birbhum is bounded on the north and west by Santhal Paraganas, on the east by the districts of Murshidabad and Burdwan and on the south by Burdwan, from which it is separated by the Ajay River. Administratively, the district is divided into 19 blocks i.e. Suri-I, Suri-II, Sainthia, Md. Bazar, Rajnagar, Khoyrasole, Dubrajpur, Bolpurbolpur-Sriniketan, Illambazar, Nanoor, Labpur, Nalhat i-I&II, Rampurhat-I&II, Mayureswar-I&II, Murarai-I&II and three sub-divisions i.e. Suri Sadar, Bolpur and Rampurhat and. Gangaramchak and Gangaramchak-Bhadulia coal mine project area are situated in the Khoyrasole Block and the total lease area (186.42 Ha) covered within the six villages namely Gangarampur, Bastabpur, Bhadulia, Sahepur, Sagarbhanga and Ahmedpur.

Corporate Office,
WBFDCL

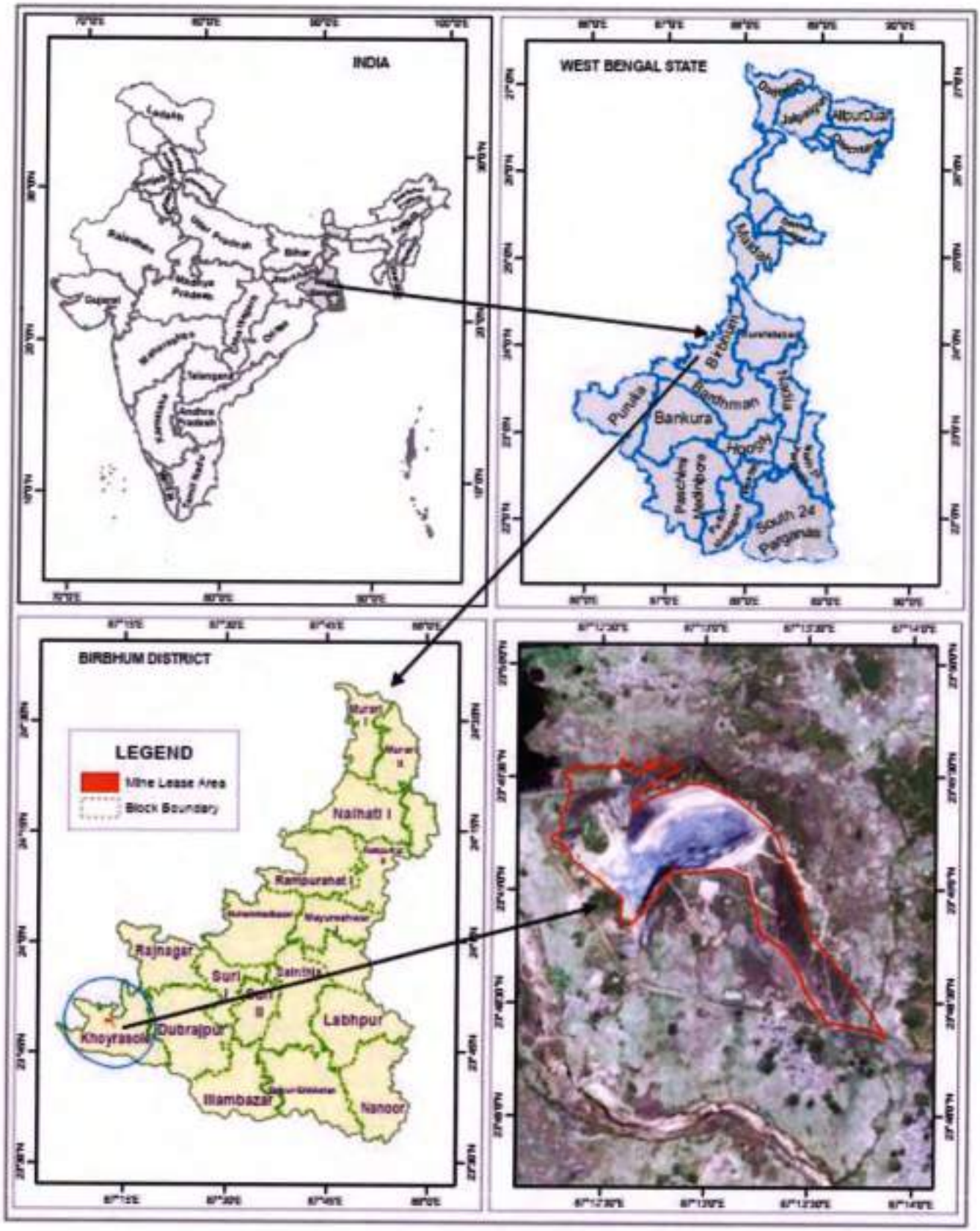


Fig. 1: Location map of Gangaramchak and Gangaramchak-Bhadulia coal block

Director (Mining)
Corporate Office,
WBPDCL

Out of 186.42 Ha lease area, 149.42 Ha is allocated for Project Area and additional 37 Ha for OB and other infrastructural development. The Gangaramchak Block represents an isolated narrow elongated strip of coal bearing sediments of about 9 km in length in Trans-Hingla area of the Raniganj Coalfield in the district of Birbhum, West Bengal. The block is defined by the latitudes 23°48'20.812"N to 23°49'28.016"N and longitudes 87°12'20.292"E to 87°13'52.172"E. It is included in the Survey of India Toposheet No. 73M/1. The area is approachable by road only. The Khayrasole-Panchra road connects the block with the Raniganj - Suri Road, (NH-14) at Panchra. Another un-metalled road connects both Gangaramchak and Bhadulia Collieries, at Khayrasole. Raswan Railway Station, on the Andal-Palasthali section of the Eastern Railway is located about 4 km south west of the block. Kazi Nazrul Islam Airport is the nearest airport, about 22 km (aerial distance) away from the project site. The district head quarter is at Suri which is located about 45 km away (aerial distance).

2.2 Geology of the Area

(a) Regional Geology

Birbhum district shows the development of Archean hard rock, Gondwana sedimentary with Rajmahal traps, sub-recent laterites and Sub-recent to Recent Alluvium. General geological succession of Birbhum district is tabulated in the following **Table1**. The crystalline metamorphic rocks of Archean to Proterozoic age occupy the South western part of the Birbhum District. The Gondwana Supergroup, overlying this basement, is represented by thick piles of pelitic and psamitic sedimentary rocks containing coal seams belonging to Barakar, Barren Measure, Raniganj and Dubrajpur Formations ranging from Permian to Jurassic in age. Patchy occurrences of Gondwana formation are exposed mainly along the Ajoy River in Khyrasol-Dubrajpur-Ilambazar tract and Md. Bazar area. The Gondwana is overlain by Rajmahal trap (basalt) occurring in the northern and north-western part of the district. The north and also the central part of the rest of the area is occupied by laterite and lateritic soil. Hard clay impregnated with caliche nodules of Rampurahat formation occupy the area in the north-east and also in the east and is overlain by alternating layers of sand, silt and clays of Kandi

Corporate Office, WBPDCL

formation of Quaternary age.

Table 1: Stratigraphic Sequence of the Study Area

Geological Age	Major Litho-units
Recent	Alluvium unconsolidated sand, silt, clay etc.
Plio-Pleistocene	Laterites and lateritic gravel with fossil wood
Tertiary	Clay beds, ferruginous and felspathic sandstone
Gondwana	Rajmahal Traps, Dubrajpur beds, Flaggy shales, clay and compact sandstone
	Barakar Sanstone, Shales with Coal Seams
.....	**Unconformity** .....
Archean	Granites, granite-gneisses, biotite-schists, calc-granulities with quartz and pegmatite veins.

Major portion of the area is covered by the older alluvium & recent alluvium in the east and north east of the study area. In addition the area has also the development of middle to upper Jurassic Rajmahal traps. The traps are fine grained, weathering of these trap rocks has resulted in lateralization which is hard and thick. Laterites in some places occur interbeded with white and purplish derived from basalt and represents intertrappean layer.

(b) Local Geology

In the Gangaramchak & Gangaramchak-Bhadulia Coal Block the lone workable Kasta seam occurs as a single composite section of thickness varying from 0.95 m in GRC-12 to 8.90 m in GRC- 28. The seam, however, splits in two sections in the adjoining Kasta East Block. The strike has an arcuate pattern with convexity towards north-east. The strike of the beds is NE-SW in the north-western part of block but gradually swings to nearly E-W in the north, then to NW-SE in the north-east and becomes almost NNW-SSE in the south- eastern fringe of the block with minor variations locally. The structure depicts a basinal configuration, the south-western half of which is truncated by the fault. The dip usually varies between 4° and 6° towards south-east in the north- western and gradually swings to south in the northern area, then to

Corporate Office, WBPDCL

west in the eastern and south-west in south-eastern part of the block. In general the dip is gentler in the fringe area of the basin. The in crop of the seam has been interpreted after taking into account the floor of the seam as well as the floor of the weathered mantle and further supplemented by the presence of the quarries along this zone. The arcuate and dissected pattern of the in-crop is mainly because of the swinging nature of the strike and the displacement of seam due to faulting. Altogether 2 normal faults have been deciphered within the block. The faults have been designated as F1-F1 and F2-F2 from west to east. Fault F1-F1 has a general NW-SE trend and runs sub- parallel to fault F2-F2 near GRC-10 and further continuation of this fault southward is not precisely known. It has a throw of 55 m. near GRC-61. The absence of Kasta Seam in GRC-61 and steepening of the beds are indicative of the presence of this fault. This fault brings metamorphics in juxtaposition with Barakars. Fault F2-F2 also has a general NW-SE trend with throw of around 30 m. towards north but possibly increases southward. It has been intersected in GRC-10, GRC-11 and GRC- 30 resulting in the omission of Kasta seam and reduction of the overall thickness of the Barakar sediments. The stratigraphic succession of the formation is summarised as follows:

Archeans: The metamorphics exposed all around the block dominantly consist of gneisses, mica-schist and quartzites. Megascopically gneiss is massive in nature and consists mainly of quartz, feldspar and mica. Quartzite wherever exposed is highly joined. During drilling of boreholes metamorphic occur immediately after the Barakar Formation, suggesting overlapping of the Archeans by the Barakars.

Talchir Formation: The Talchir Formation is not exposed anywhere in the block, however, the same has been intersected in only one borehole namely GRC-3. It is represented by greenish shale.

Barakar Formation: The Barakar overlie the Talchirs and Archaeans and are represented by pebbly to coarse grained ferruginous sandstones in the outcrop region. Usually it consists of coarse to fine grained grey sandstone, shales, carbonaceous shales and their intercalations besides coal seams. Only one persistent coal horizon locally named as Kasta seam is developed in this block.

Corporate Office, WBPDCL

However a thin coal band is found to be developed occasionally below the seam in the western part of the block. The seam incrops are in an arcuate pattern to the north and east of the block. In the north-western part incrop is disturbed by a fault.

Barren Measures: Overlying the Barakar Formations are the Barren Measures, represented by dark to black sideritic shales with occasional thin bands of fine grained sandstone. The formation is not exposed anywhere in the block nut occurs in small patch in the western fringe of the block around boreholes.

Quaternary & Recent Formation: The blanket of soil that covers the block ranges in thickness from 1.50 m to 14.00 m. Lateritic soil occurs in a number of isolated patches of various dimensions usually restricted to central and eastern part of the block. Quaternary deposits mostly consisting of clayey soil/alluvium of yellowish gray colour with sandy sludge along with pebbles can be observed along the river courses.

Weathered Mantle: The detail or weathered mantle consists of alluvium, sandy soil, lateritic soil, running sand, clays and weathered Barren measures and Barakar Formation. Its thickness varies from 5.00 m to 22.50 m.

2.3 Climate and Metrology

The district of Birbhum experiences dry and hot summers with temperatures often rising above normal. The climatic conditions in the western and eastern side of the district are different. While the western side is dry and extreme, it is relatively milder on the eastern side. The summers in Birbhum usually start from middle of March and lasts till the middle of June. During summers, the mercury rises well above 40°C. The arrival of the month of June marks the onset of monsoon and it is observed that the western region of the Birbhum district receives higher rainfall as compared to the eastern region. The difference between the annual average rainfall in Rajnagar (1,405 mm) and Nanoor (1,212 mm) is an example of this. Monsoon in Birbhum lasts till the middle of the month of October. Winters in Birbhum are pleasant and enjoyable, with mercury dropping to about 10°C. While the day time is

Corporate Office, WBPDCL

pleasingly cool, with the fall of evening temperature lowers further, making the nights chilly and cold. During winters, wind usually blows from the north-west direction. The winter starts from December and last till the month of February. Due to such favorable conditions, winters is deemed as the best time to visit this historic and significant district in West Bengal.

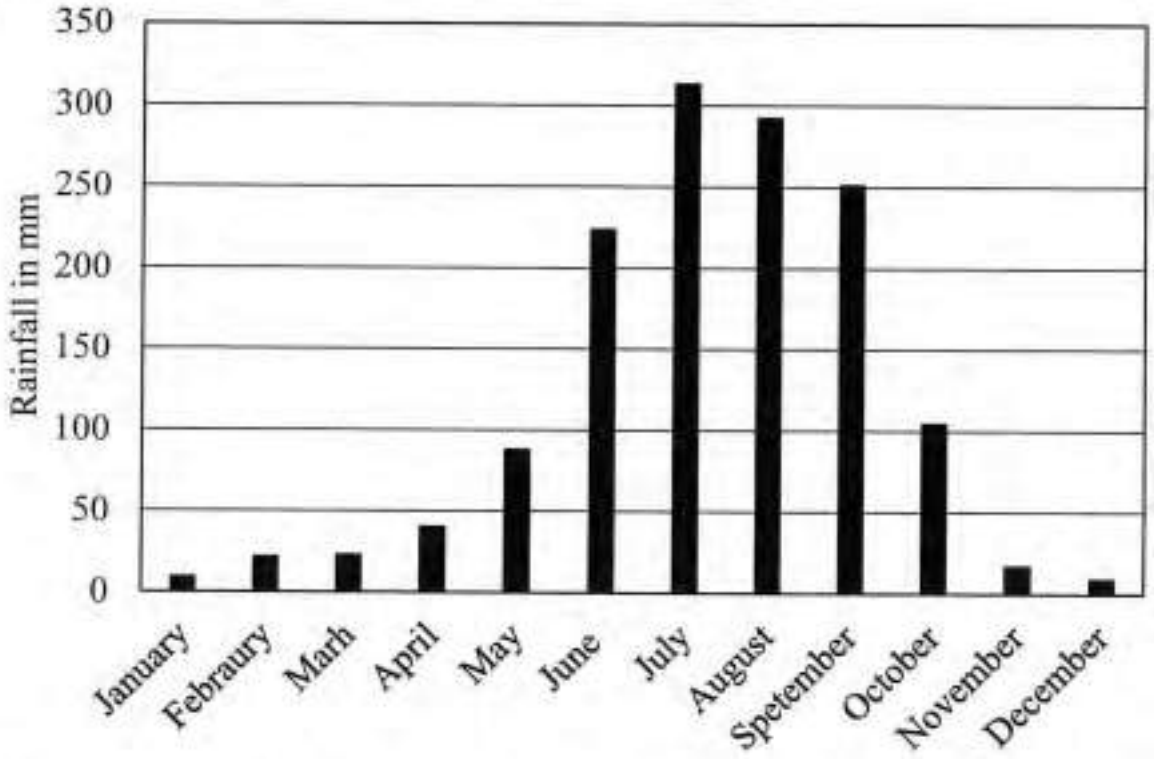


Fig. 2: Average monthly rainfall distribution in Bhirbhum District

Major rainfall occurs by south-west monsoon and 90% of the annual rainfall occurred only in the four monsoonal months (June to September) with a maximum rainfall in the months of July-August (**Fig. 2**). The average rainfall in the area is reported to be 1400 mm and in general the number of rainy days in this area varied from 65 t0 72 days in a year. The temperature rises up to 41.3 to 44.7°C during summer months, while in the winter it fall down to 10-12°C. The area experiences average annual relative humidity of about 67%. In summer months the relative humidity (RH) varies between 55 and 66%.

2.4 Physiography and Drainage

The drainage pattern of the region is dentritic in nature exhibiting gently undulating topography with elevation ranging from 94 m to 121 m above mean

Director (Mining)
Corporate Office,
WBPDCL

sea level. The general slope of the area is towards southwest. The ground slope is rather steep both towards east and west. The main drainage of the buffer zone area is controlled by the Ajay and Hingla Rivers (**Fig. 3**).

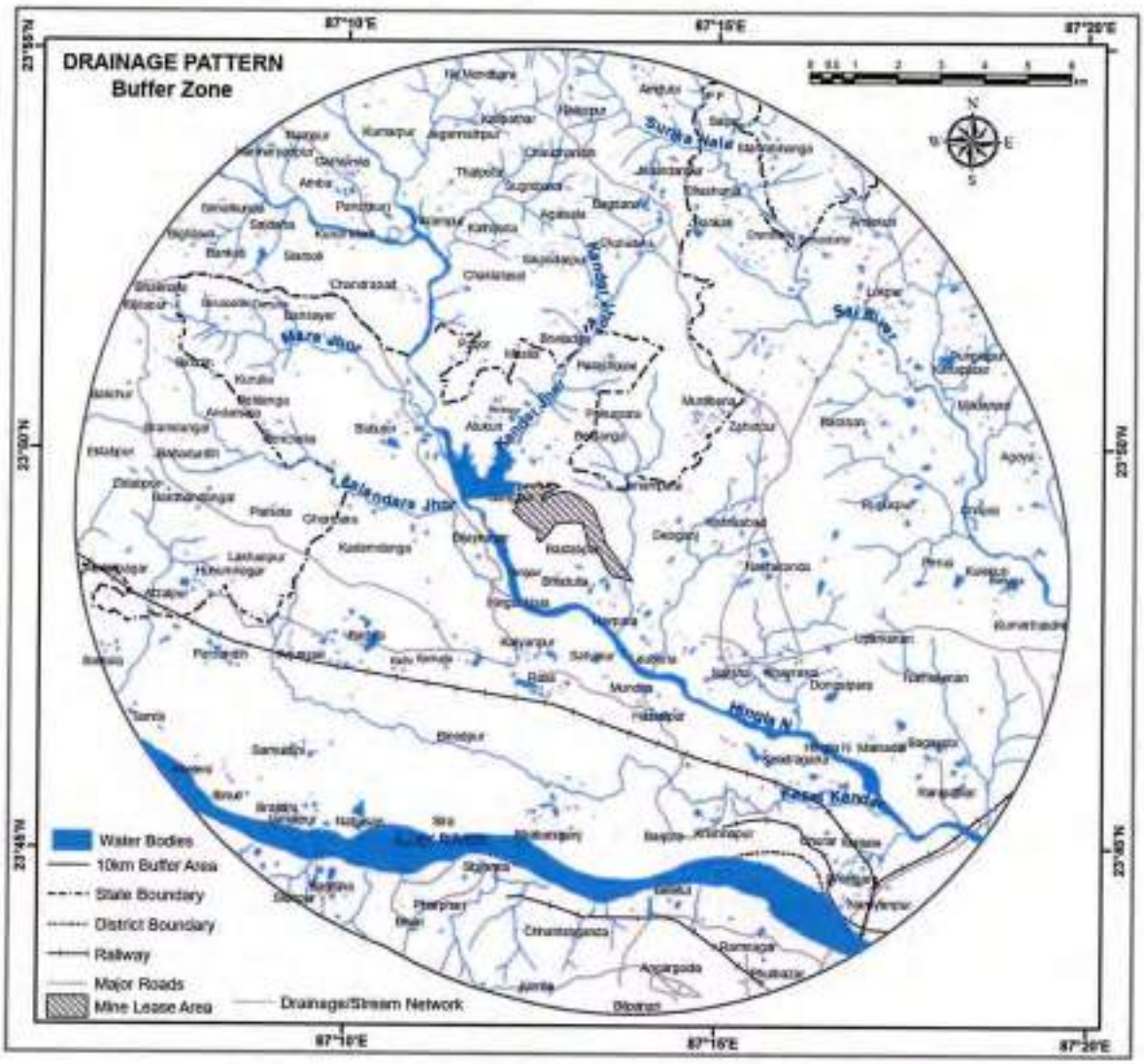


Fig. 3: Drainage Map of the 10 km Buffer Zone

The Hingla River flowing from North-West to South-East direction at the distance 2-3 km south of lease area. Kandar Jhore flowing from north to south direction joined the Hingla River at the western side of the Gangaramchak & Gangaramchak-Bhadulia coal block. Ajay River flows at a distance of 8 km south of the lease area and flows west to east direction. Despite of these two rivers, few numbers of ephemeral Jhor (nalla) i.e. Kandar jhor, Kalandar Jhor, Mara Jhore, Surika nalla and Sai River and some other seasonal drain also flows in the northern side of the coal block and joined the Hingla River flowing

Director (Mining)
Corporate Office,
WBPDCL

to the west and south of the block boundary. The Hingla reservoir is situated a distance of 1.1 km west of the mine lease boundary. Apart from these a number of small ponds are also distributed throughout the buffer zone and coal block area.

2.5 Land Use Pattern

Land use pattern in and around 10 km buffer zone of Gangaramchak and Gangaramchak - Bhadulia Coal Mine project site has been delineated through satellite imagery of National Remote Sensing Agency (NRSA) and given in **Fig. 4**. The area has been categorized into different land use categories and their percentage shares to the total buffer zone area under different land use classes are summarized in **Table 2**. Forest, degraded forest, plantation land and natural vegetation constitutes 2.57%, 2.26% and 1.0% of total buffer zone area of 39.339 Ha respectively. Agricultural land constitutes approximately 76.93% of the total buffer zone area. 3.33% of the total buffer area can be categorized under different categories like land with scrub (2.28%), land without scrub (0.1.05%). Mining activities cover about 502.56 Ha i.e. 1.28% of the total buffer zone area. This include both the active and non-active mines like Barjora, situated south of the Ajay Rive, about 9 km away from the leasehold area. The water bodies included river, resrvoirs and ponds constituting 6.73% of the total 10 km buffer zone. The human settlement area in the buzzer zone is covering 2317 Ha i.e. 5.89%.

Table 2: Land use cover area in different classes and its share %

CLASS	AREA (Ha)	% Contribution
Forest	1,012.29	2.57
Degraded Forest	890.26	2.26
Forest Plantation	2.87	0.01
Plantation & Natural Vegetation	390.85	0.99
Agriculture Land	30,265.25	76.93
Land with Scrub	896.28	2.28
Land without Scrub	411.28	1.05
Mining Activity	502.56	1.28
River	1,633.50	4.15
Reservoir/Pond	1,016.76	2.58
Settlement	2,317.05	5.89
Total	**39,338.95**	**100**

Director (Mining)
Corporate Office,
WBPDCL

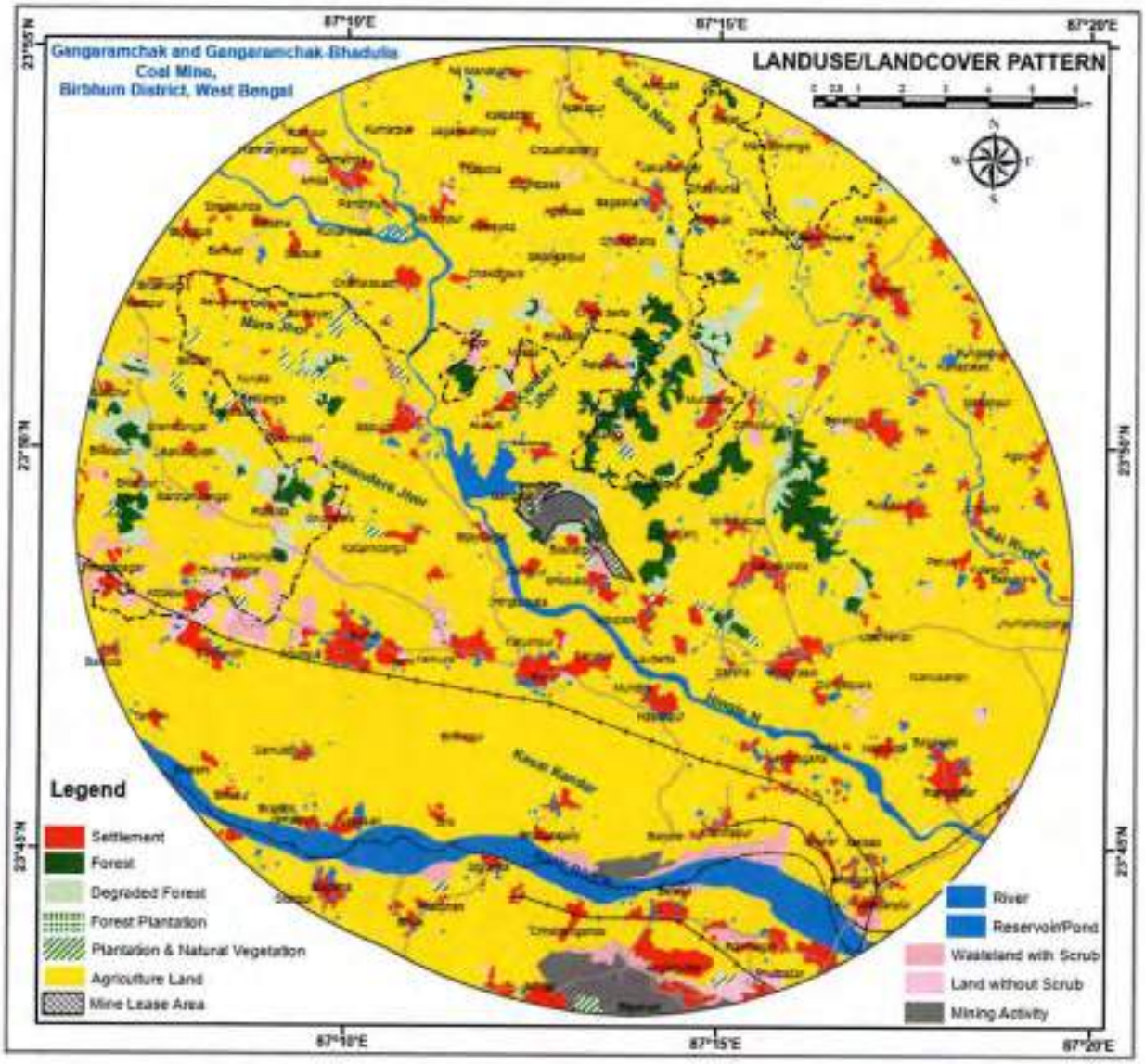


Fig. 4: Land Use Land Cover Map of the 10 km Buffer Zone

3.0 Hydrogeology and Aquifer Characterization

Groundwater occurrences and storage in and around the mining blocks are mainly controlled by the geological set up of the area. The ability of geological formation to store and transmit water is dependent on its formation parameters, such as porosity and hydraulic conductivity. Based on these two parameters, the rock formation of the area may be classified as hard and soft rocks. Hard rocks, mainly crystalline and consolidated sedimentary is characterized by very little porosity. Groundwater in such rocks circulated to a limited extent through the secondary openings represented by joints, cracks, fissures and such other planes of discontinuity. Soft rocks represented by sandstone, pebbles and loose sand,

Director (Admin)
Corporate Office,
WBPDCL

possess higher degree of primary porosity and as such characterized by higher water storage capacity. As greater part of the study area is underlain by Precambrian crystalline rocks. The weathered residual of the hard rock as well as the fractures, joints, fissures, faults and other zones of discontinuity are the principle repositories of groundwater in the area. The weathered zone is usually of limited thickness, fractures and joints generally close up with depth.

Groundwater occur both in confined and water table conditions and general flow direction is from west to east or south-east direction. Groundwater under water table condition occur in both alluvium and hard rock terrains whereas a confined conditions occur under deep alluvium aquifer. In the areas underlain by hard rocks groundwater occurs under water table condition in the zone of weathering and in the zone of secondary porosities like fractures, joints etc. at shallow depth. In the alluvium covered area groundwater occurs under unconfined condition in the near surface aquifer and under confined condition in deeper aquifer. Groundwater is generally being developed through open wells in the weathered zone and the available discharges can only meet the domestic needs but is not sufficient enough for any large scale development of groundwater. However, groundwater from the zone of secondary porosities is being developed through bore wells and yield to the tune of 60-150 lpm, which, at places, goes as high as 330 lpm. There are scopes for development of ground water through bore wells in suitably selected hydrogeological sites.

Groundwater occurs under unconfined conditions in the shallow aquifers in the area underlain by alluvium. At deeper depths it occurs under semi-confined to confined conditions. The shallow aquifers is underlain by a zone of fine to medium grained, gray colored sand which is occasionally coarse grained and at places gravelly and is separated from the shallow aquifer zone by a layer of clay/ sandy clay. This sand zone splits up into several sand layers separated by clay/sandy clay layers and constitute the deeper aquifers, which are persistent throughout the area. In the Birbhum district the water level in major part of the district varied in range of 2.00 to 20.0 mbgl during Pre-monsoon and 2-5 m during post-monsoon season. In general, alluvium possess moderate to high porosity and

Director (Geology)
Corporate Office,
WBPDCL

infiltration factor. The groundwater potential is generally moderate to high in alluvium while it is poor in metamorphic rocks. In the unconfined aquifer, groundwater moves laterally through the inter-granular spaces in the sandstone. The water table in the unconfined aquifer is conforming to the local topography. A water table with a gradient slopping towards south eastern region i.e. has been observed in the buffer zone i.e. towards the Hingla and Ajay River. This aquifer becomes the sources of drinking water in this region and tapped in dug wells, hand pumps and tube-wells.

The Gondwana sediments form the semi-consolidated formations and are better water potential zone. The splintery shales of Talchir and basal pebbles bed, the variegated Barren Measure shales and the sandstones are the major lithounits of the Gondwana Formations. In the coal bearing areas the permeable formations like sand and sandstone of Gondwana Formation constitute good aquifers at many places whereas the coal seams and associated shale act as aquiclude i.e. impermeable beds. The proposed mine area is mostly covered by Barakar Formation consisting of shale, sandstone and coal seams along with Recent soil and alluvium.

3.1 Groundwater Level and Water Level Fluctuations

To collect the groundwater level data in the study area, a monitoring network of total 46 wells (dug wells) were established in and around the project area, covering most of the villages falling within the core and buffer zone. The detailed information about the water level monitoring sites is provided in **Table 3 and Fig. 5)**. The measurement of groundwater levels and water level fluctuations has been carried out in these selected wells during post-monsoon (14-16 November, 2023) and pre-monsoon (20-22 May 2024) seasons with the help of water level meter. Field photographs during the post-monsoon season are depicted in **Fig. 6**. The water level measurement in the 46 monitoring wells show that groundwater water level in the study area ranged from 2.29 mbgl to 13.14 mbgl during pre-monsoon and 0.99 mbgl m to 7.94 mbgl during the post-monsoon with an average water level of 5.59 mbgl (pre-monsoon) and 3.09 mbgl (post-monsoon). The water level stretches deeper depth in the pre-monsoon season, while it rises due to recharge

Director (Mining)
Corporate Office,
WBPDCL

during the monsoonal months and become shallow during post-monsoon. The average water table fluctuation between pre-monsoon and post-monsoon season for the study area was observed between 0.11 mbgl to 8.89 mbgl with average water level fluctuation of 2.78 mbgl (**Table 3**). In general, water levels in most part of the area are found to be shallow except for two wells which are dried in pre-monsoon season. Water table contours for the study area have been prepared based on the post-monsoon and pre-monsoon season's water level data using GIS software **(Fig 7 a&b).** It is observed from the map that the ground water flow is towards east to south-east direction.

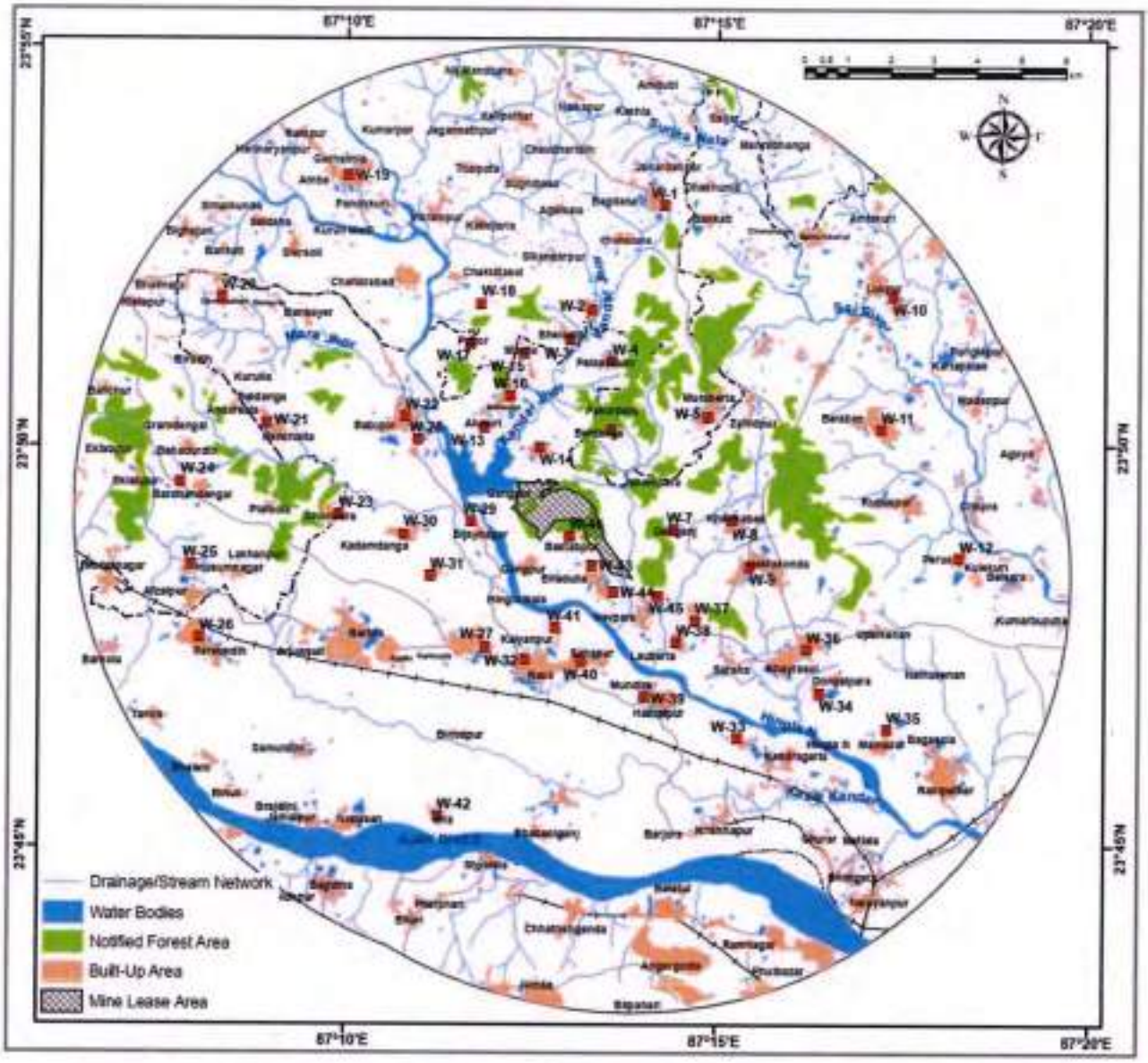


Fig. 5: Water level monitoring sites in the 10 km Buffer Zone

Director (Tech.)
Corporate Office,
WBPDCL



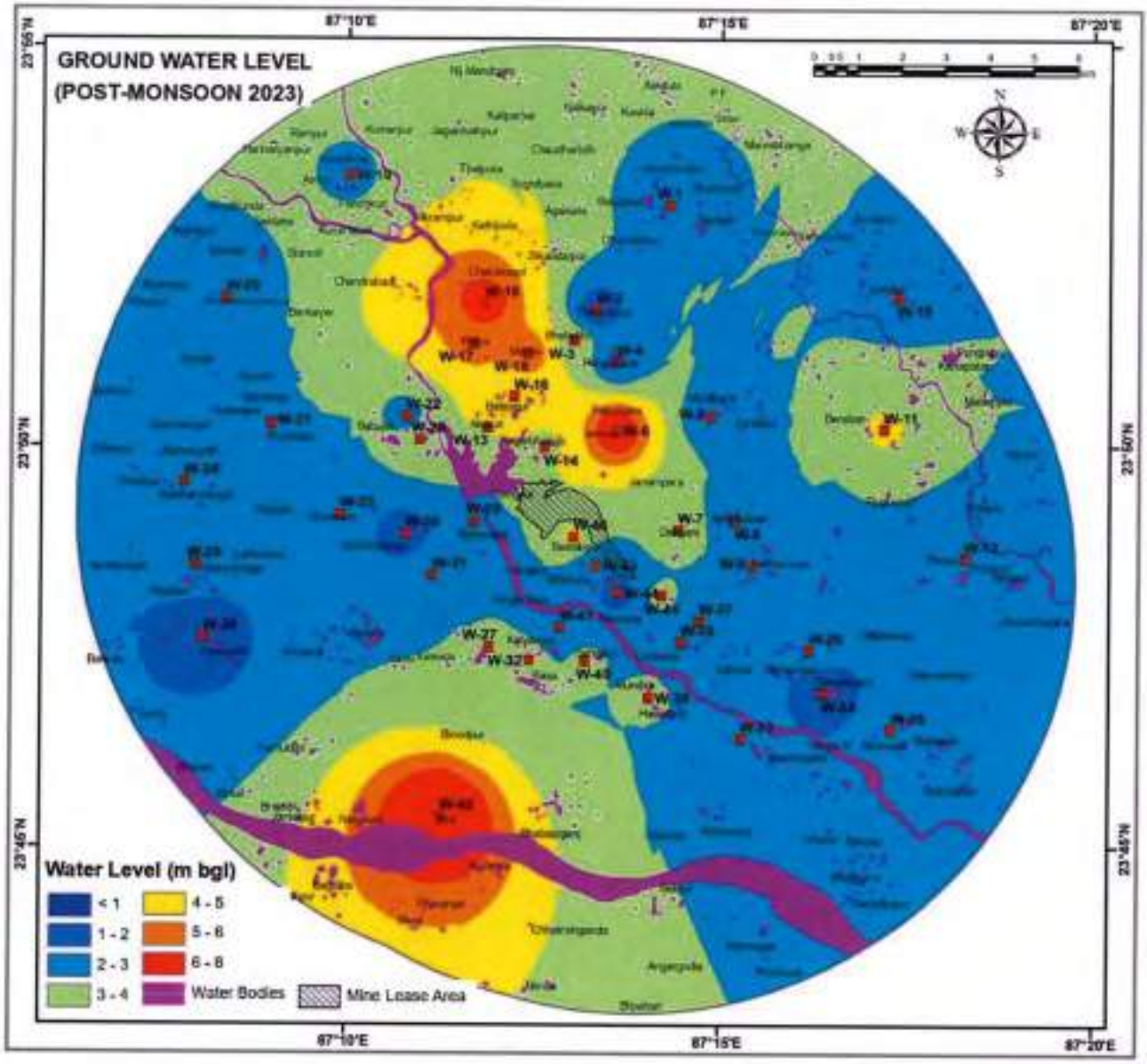
Fig. 6: Field photograph during water level monitoring

Table 3: Groundwater level and seasonal fluctuation in Buffer Zone Gangaramchak and Gangaramchak-Bhadulia Coal Block

Well No.	Monitoring Location	Well Owner	Latitude	Longitude	Water level Pre-monsoon (m)	Water level (Post-monsoon) (m)	Water level Fluctuation (m)
W-1	Bagdori	Govt. Well	23°53.013'	87°14.287'	4.37	2.24	2.13
W-2	Chhola Beria	Govt. Well	23°51.704'	87°13.322'	2.35	0.99	1.36
W-3	Bheladi	Govt. Well	23°51.319'	87°13.028'	3.47	3.32	0.15
W-4	Palashbuni	Govt. Well	23°51.060'	87°13.592'	4.17	1.78	2.39
W-5	Muraberia	Govt. Well	23°50.367'	87°14.876'	4.2	2.21	1.99
W-6	Bel Danga	Govt. Well	23°50.201'	87°13.587'	Dry	7.3	7.3
W-7	Debganja	Govt. Well	23°48.951'	87°14.419'	6.2	3.96	2.24
W-8	Kharikabad	Tapas Datto	23°49.066'	87°15.20'	4.43	2.17	2.26
W-9	Nakraconda	Govt. Well	23°48.497'	87°15.437'	5.19	2.62	2.57
W-10	Lokepur	Govt. Well	23°51.870'	87°17.373'	6.87	2.73	4.14
W-11	Barabon	Govt. Well	23°50.216'	87°17.213'	6.52	4.11	2.41
W-12	Perua	Govt. Well	23°48.599'	87°18.277'	4.06	2.42	1.64
W-13	Aalupudi, Bataspur	Shivnarayan Das	23°50.234'	87°11.873'	7.39	3.98	3.41
W-14	Hanulia (Batashpur)	Govt. Well	23°49.991'	87°12.622'	4.5	3.82	0.68
W-15	Muslia	Govt. Well	23°51.163'	87°12.404'	9.2	5.95	3.25
W-16	Batashpur Muslia	Govt. Well	23°50.626'	87°12.225'	6.85	4.20	2.65
W-17	Gaharakuri	Govt. Well	23°51.278'	87°11.673'	7.49	5.41	2.08
W-18	Jambad	Govt. Well	23°51.781'	87°11.824'	10.78	6.91	3.87
W-19	Kaliganj, Amba	Nirml Chakravart	23°53.387'	87°10.012'	5.47	2.84	2.63
W-20	Geruapahari	Primary School	23°51.855'	87°08.336'	5.75	2.12	3.63
W-21	Penchali	Nishir Mondal	23°50.280'	87°08.950'	7.55	2.95	4.6
W-22	Babuijore	Govt. Well	23°50.375'	87°10.791'	5.98	2.52	3.46
W-23	Ghoramara	Govt. Well	23°49.137'	87°09.909'	6.8	2.17	4.63
W-24	Bardhandangal	Jiten Mondal	23°49.550'	87°07.795'	5.81	2.47	3.34
W-25	Lakchmanpur	Govt. Well	23°48.514'	87°07.943'	5.44	2.39	3.05
W-26	Parsundi	Govt. Well	23°47.611'	87°08.058'	4.17	1.35	2.82
W-27	Kankartala	Shek Ismail	23°47.490'	87°11.896'	8.77	3.25	5.52
W-28	Belgaria	Govt. Well	23°50.082'	87°10.963'	6.07	3.81	2.26
W-29	Islamkuri	Deependra	23°49.059'	87°11.694'	5.62	2.37	3.25
W-30	Kadamdanga	Aashram	23°48.903'	87°10.778'	3.5	1.29	2.21
W-31	Hariektala	Shek Bashirudin	23°48.387'	87°11.147'	6.12	2.77	3.35
W-32	Rasa	Govt. Well	23°47.329'	87°12.432'	3.8	3.52	0.28
W-33	Purba Barkola	Mukul	23°46.352'	87°15.279'	4.08	2.24	1.84
W-34	Pansiuri	Govt. Well	23°46.919'	87°16.379'	4.16	1.49	2.67
W-35	Moynadal	Govt. Well	23°46.469'	87°17.303'	2.6	2.25	0.35
W-36	Khoyrasole	Gangaramchak Guest house	23°47.452'	87°16.206'	6.00	2.22	3.78
W-37	Tarapur	Govt. Well	23°47.819'	87°14.720'	2.38	2.12	0.26
W-38	Louberia	Devshalok	23°47.551'	87°14.467'	3.91	2.62	1.29

Corporate Office, WBPDCL

W-39	Hazaratpur	Govt. Well	23°46.861'	87°14.036'	6.46	3.27	3.19
W-40	Sahapur	Govt. Well	23°47.316'	87°13.189'	4.2	3.25	0.95
W-41	Kalyanpur	Nimai Bauri	23°47.737'	87°12.845'	3.42	2.06	1.36
W-42	Sira	Govt. Well	23°45.382'	87°11.258'	Dry	7.94	7.94
W-43	Aam Bagan	Shyam Das Rui	23°48.520'	87°13.327'	2.29	2.18	0.11
W-44	Bhadulia	Govt. Well	23°48.179'	87°13.618'	3.17	1.3	1.87
W-45	Dompara	Anshrul	23°48.133'	87°14.215'	5.07	3.29	1.78
W-46	Bastabpur	Govt. Well	23°48.869'	87°13.025'	13.14	4.15	8.99
		Minimum			2.29	0.99	0.11
		Maximum			13.14	7.94	8.99
		Average			5.45	3.09	2.78



Director (Mining)
Corporate Office,
WBPDCL

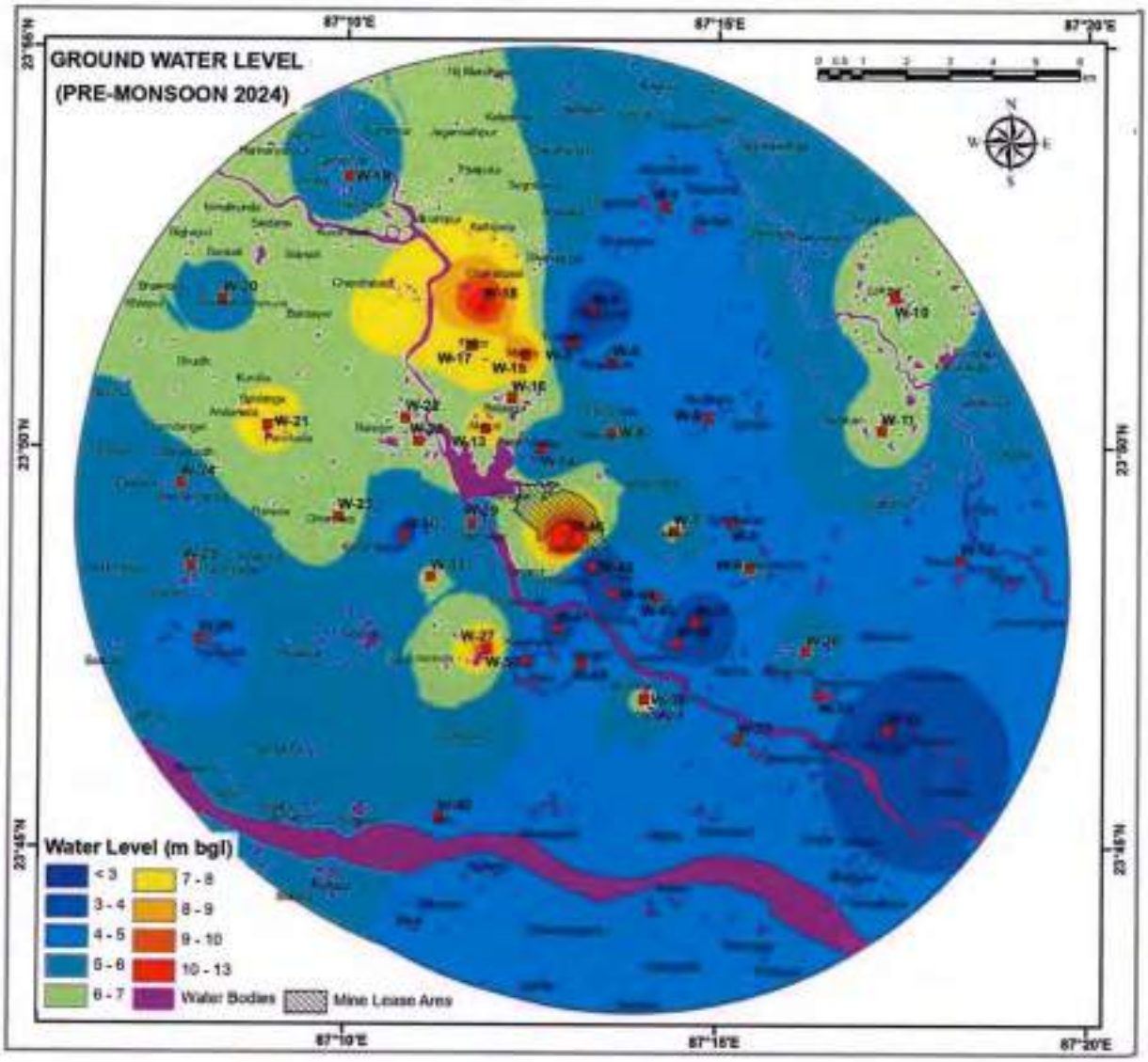


Fig. 7: Groundwater level contour for post- and pre-monsoon season

3.2 Groundwater Resource Assessment of the Area

Rainfall is the principal recharge source to groundwater in this area. The area experiences an average annual rainfall of about 1400 mm. Besides rainfall, the mine water discharge from the local mining areas and existing water bodies and small diameter hand operated tube wells for domestic and tube wells are used for water supply and irrigation purposes. The tube wells are most often deeper (19m–58m) than the dug wells and tap the aquifer below the weathered mantle. As the area is being located in the hot-tropical belt, the temperature regime is very high, the daily maximum reaches to over 44^{0}C. Due to excessive heat, the loss of moisture through evaporation is considerably high (60%). During the wet

monsoon seasons, the net evaporation is less than the precipitation, resulting in surplus water which loss through either surface runoff or being part of the subsurface storage. The surface runoff and subsurface storage of water depends upon various factors including the amount of rainfall, topography of the area, land use pattern, soil type, slope, physiographic, drainage pattern and hydrogeomorphology of the catchment/sub-catchment. The study area is having gentle slope towards east and south east. Water received on the slopes, gets collected in low-lying area and is thus ultimately absorbed in the top soil cover and become part of the groundwater flow according to the slope to form seasonal streams/nallas.

Population of the considered area, water level and water level fluctuation, cropping pattern, annual rainfall, mine water discharge and geological setup and geomorphology of the area are the basic input data required for the assessment of water budget of any area. In the mining area, the water levels are bound to be affected and the permeability of individual geological units are spatially variable and depend on lithology, fracturing and attenuation with depth. The porous and more open-jointed sandstone members tend to form aquifers, the shaly members are aquitards, which may be leaky but are poorly permeable and form the poor permeable barriers to the vertical groundwater movement. The groundwater recharge potential for the 10 km buffer zone of Gangaramchak and Gangaramchak-Bhadulia block area was estimated by using rainfall-infiltration and water table fluctuation methods. As reported in the GEC Report 1997, for semi-consolidated sandstones and weathered and fractured hard rock terrains, a rainfall infiltration factor of 10-15 % of normal rainfall. Here, we have considered an average 12% rainfall infiltration factor for calculating annual recharge potential of the area. The total annual groundwater replenishable recharge (TARR) for the 10 km buffer zone of the project areas was estimated as *67.443 million* m^3 by rainfall infiltration factor whereas by the annual recharge estimated following the groundwater fluctuation method was 54.681 million m^3. The recharge estimate by water table fluctuation is less than the recharge estimate by rainfall infiltration method, therefore the average annual recharge values of 61.062 million m^3 of these two methods has been considered for further calculation.

The water withdrawal for the purposes for domestic uses, irrigation, and mine water discharge are the major components of the total annual groundwater draft in the area. Following the Groundwater Assessment Report-1997 prepare by CGWB, irrigation annual draft in the buffer zone was estimated as 9.698 million m^3. For calculating the domestic water consumption, population of 1,79,432 at the consumption rate of 60 liter per day per person was considered. The water withdrawal for domestic (3.929 million m^3) and cattle uses (0.3929 million m^3) was estimated as 4.3219 million m^3. The consumption by cattle population was projected as 10% of domestic consumption. The total annual mine makeup water and seepage from the surrounding area are estimated as 1.604 million m^3. Thus the net water withdrawal from all sources in the buffer zone area are projected as 9.698 million m^3.

I. Total Average Annual Replenishable Recharge (TARR) = *61.062 million m^3*

(a) By Rainfall Infiltration Factor = 67.443 million m^3

(i) Recharge through rainfall in geographical area (393.39 km^2) :

Rg = Area X rainfall X infiltration factor

393.39 km^2 X 1.400 m X 12% = 66.089 million m^3

(ii) Recharge from surface water bodies (ponds/reservoirs: 2.65 km^2)

2.65 km^2 X 0.0014m/day X 365) = 1.354 million m^3

Net Annual Groundwater Recharge (i+ii) = *67.443 million m^3*

(b) By groundwater Table Fluctuation Method* = *54.681 million m^3

Total annual replenishable recharge (TAAR) **= 54.681 million m^3**

= Area X Average water table fluctuation X Specific Yield

Total Area = 393.39 km^2

Average water table fluctuation = 2.78 m

Specific Yield = 0.05

Total annual replenishable recharge = 393.39 km^2 X 2.78 X 0.05

= *54.681 million m^3*

(c) Average Annual Groundwater Recharge of (a and b) = 61.062 million m^3

(II) Annual Groundwater Draft = 9.4363 *million m^3*

(a) Annual groundwater withdrawal for irrigation uses = 3.5104 million m^3

(i) Net irrigation draft derived from groundwater in the total agricultural land of 302.65 km^2 @145m^3/km^2/Year

302.65 x 145 = 4.338 million m^3

Director Geology
Corporate Office,
WBPDCL

(ii) Return flow from irrigation to groundwater (-20%) = -0.8776 million m³

Net water withdrawal for irrigation use (i-ii) = *3.5104 million m³*

(b) Annual water withdrawal for domestic uses = ***4.3219 million m³***

(i) Annual domestic consumption = Population X 60 Liter X 365 days

179432 X 60 liter X 365 days = 3.929 million m³

(ii) For cattle population (10% of the domestic uses) = 0.3929 million m³

Total domestic annual water withdrawal (i+ii) = *4.3219 million m³*

(c) Estimated annual draft through mine water discharge = 1.604 million m³

- Total Mine Lease Area : 186.42 Ha
- Total Excavated Area : 149.90 Ha
- Area for infrastructural development : 37 Ha

(i) Total estimated water accumulated from excavated area@60% runoff:

= 1.499 x 0.60 x 1.40 = 1.259 million m³

(ii) Total estimated water accumulated from infrastructural area@15% runoff:

= 0.37 x 0.15 x 1.40 = 0.0777 million m³

(iii) Total accumulated water = 1.3367 million m³

(iv) Excess accumulated water from sub-surface seepage @20% of (iii) = 0.2673 million m³

Maximum annual accumulated mine water available for internal uses (i+ii+iii+iv)

= *1.604 million m³*

(d) *Net Annual Groundwater Draft (a+b+c)* = ***9.4363 million m³***

= 3.5104 + 4.3219 + 1.604 = 9.4363 million m³

(III) Net Annual Available Groundwater (I-II) = **51.626 million m³**

= *(61.062 - 9.436)* = 51.626 **million m³**

(IV) Stage of groundwater development (%) = Annual Draft/Annual Recharge X 100

= 9.4363/61.062 X 100

= **15.5% (Safe Category)**

The net groundwater recharge and draft for buffer zone are estimated as 61.062 million m³ and 9.698 million m³ respectively. Thus the projected balance groundwater resource available in the buffer zone area is estimated as 51.364 million m³. The calculated stage of groundwater development for the buffer zone area is 15.5%. As per GEC'97, if the stage of development is below 70%, then it is considered as 'safe'. The stage of development in the study area as calculated above is coming around 15%, so the present study area fall under "SAFE" category. The details about the calculation methods and the calculated values are

Director (Mining)
Corporate Office,
WBPDCL

summarized in the following paragraph and in **Table 4**. Flow Chart showing Water Balance Statement for the buffer zone (10 km radius) is presented in **Fig. 8.**

Table 4: Estimated water balance for the Buffer Zone Area

1.0	**Total Annual Replenishable Recharge (TARR)**	**Estimated Quantity**
1.1	**A. Rainfall infiltration method**	
	Total Area	393.39 km^2
	Average annual Rainfall	1400 mm
	Rainfall Filtration Factor	12%
	Rainfall Recharge by infiltration factor	66.089 million m^3
	Recharge from surface water bodies (ponds/reservoirs: 2.65 km^2)	1.354 million m^3
	Gross Rainfall Recharge	**67.443 million m^3**
	B. Ground Water Recharge by Water Table Fluctuation Method	
	Total Area	393.39 km^2
	Average water table fluctuation	2.78 m
	Specific Yield	5%
1.2	**Total Ground Water Recharge**	**54.681 million m^3**
1.3	**Average Rainfall Recharge (A+B/)2**	**61.062 million m^3**
2.0	**Groundwater Draft**	
2.1	a. Net irrigation draft derived from groundwater in the total agricultural land of 302.65 km^2 @145 m^3/Ha /Year b. Return flow from irrigation to groundwater (@20%) c. Net water withdrawal for irrigation use	4.388 million m^3 0.8776 million m^3 3.5104 million m^3
2.2	Annual Domestic Consumption = Population X 60 Liter X 365 days (179432 Population) Annual water used for cattle population (@10% of the domestic uses) Total withdrawal for domestic uses	3.929 million m^3 0.3929 million m^3 4.3219 million m3
2.3	Annual available mine water for internal use purposes	1.604 million m^3
2.4	Total Annual Draft for all uses in Buffer zone	9.4363 million m^3
3.0	Total Available Groundwater Resource in the area	51.6257 million m^3
4.0	**% Groundwater Development**	**15.5% million m^3**

Director (Mining)
Corporate Office,
WBPDCL

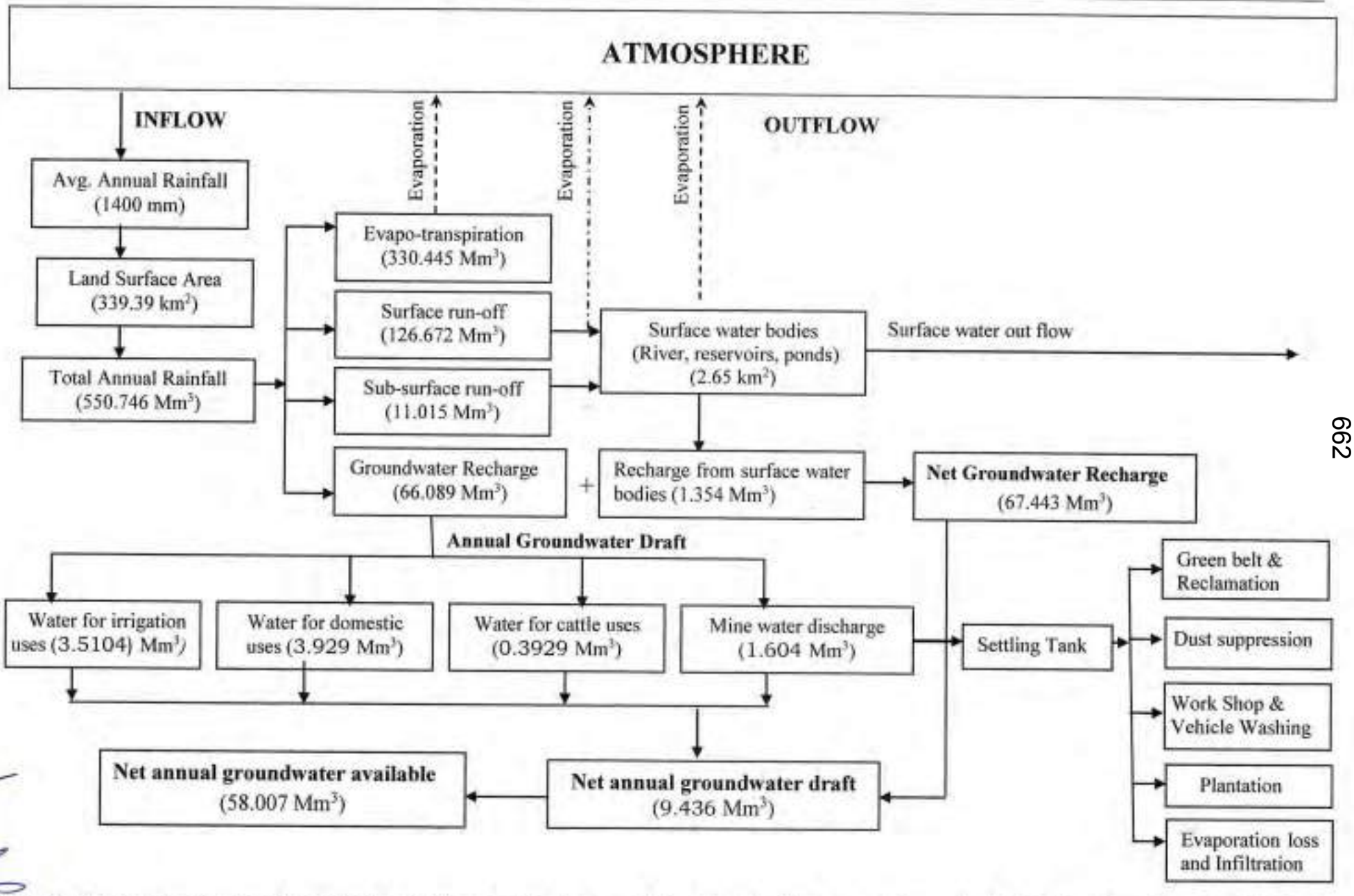


Fig. 8: Flow chart showing Water Balance Statement for the buffer zone by rainfall filtration factor (10 km)

662

4.0 Impact Assessment of Mining Activities on Water Resources and its Remedial Measures

The impact of mining on local ground water regime depends on mine depth, rate of mine expansion and hydraulic parameters of the aquifers intercepted in the mine. The long-term open pit mining and dewatering activities in this area are likely to alter the physical and chemical characteristics of the aquifer system. Open pit mining may destroy the natural aquifer system due to overburden removal and create steep hydraulic gradients around the mine excavation area, significantly affecting the flow path of groundwater. The major impacts of the mining activities include the groundwater levels depletion which may cause shallow dug wells and tube wells in the affected area either to be dried or reduced the yield. In many cases the existing drainage divides between two catchments may also be altered. The blasting in the mining area enhances the secondary porosity of the associated hard rock, resulting the higher percolation and water recharge rates.

The study reveals that the stage of groundwater development in the 10 km buffer zone is 15%, suggesting that the area is fall in 'safe zone' as per the CGWB norms. The measured water levels and estimation of the hydrological parameters suggest that there is no dearth of groundwater potential in the area, and proper technology can be adopted to identify and tap the resource to meet growing water demands in buffer zone areas as well as for mining purposes. In the present case, maximum mine water will be utilized for the mining related activities such as water spraying for dust suppression, plantation and green belt, workshop and equipment washing. Mine effluent water will not be discharge outside the mine lease hold area. If required treated mine water may be provided for irrigation and other societal uses as per the demands of the population residing in the mining areas or can be used for groundwater recharge purposes in nearby villages. The mine water discharge into local ponds/tanks converts them into as a recharge pits and augments the source availability. The supply of surplus treated mine water for irrigational use not only improves the irrigation potential but also increase the groundwater recharge in the area.

Director (Mining)
Corporate Office,
WBPDCL

The mine will progressed with concurrent back-filling, resulting minimum effects on water resources. Concurrent back-filling provide a good media for high groundwater recharge due to high permeability. Further, the final void would store substantial quantity of rainwater, which can be utilized for mining related activities and for recharging the groundwater sources. It also helping in compensating the groundwater loss/deficit created during active mining stage especially in the post mining stages.

Mine water discharge and drainage in the core zone has been planned to be regulated in a manner so that impact on surface and other water bodies of the area will be minimum. No diversion of any surface drainage channel is required, as other than civil constructions, surface land will not be affected. Expected increase of suspended solids due to surface handling of coal shall be controlled by:

- Construction of garland drain around the dump and coal yard area
- Construction of settling tanks of adequate size for removal of particulate matters
- Provision for small stone barriers across the drain to check water current and to arrests solids
- Stone pitching will be made at suitable places to regulate water flow
- Desilting of settling ponds and drains at regular intervals

As part environmental protection all possible measures to be taken to increase the groundwater recharge potential of the nearby villages. By nature, mine is act as big rainwater harvesting and artificial recharge structure. Artificial recharge to groundwater is a process by which the groundwater reservoir is augmented at a rate exceeding that under natural condition of replenishment. The basic requirements of artificial recharge to groundwater are:

- Availability of adequate quantity of water from rainfall or surface runoff or surface water canals.
- Availability of suitable sites for construction of recharge structure at low cost

- Three most important factors, which need to be evaluated to design the artificial recharge structure, are as under: hydrogeology of the area including nature and extent of aquifer, soil cover, topography, depth to water levels and chemical quality of groundwater.
- Catchment area contributing to runoff hydro-meteorological character viz. rainfall duration, general pattern and intensity of rainfall.
- Quantity of rainwater available for recharge.

Groundwater from top aquifer is generally being used by local people. Considering the local condition of the area, following methods of artificial recharge to groundwater storage can be considered for buffer zone villages. The exact design and locations of the recharge structures is to be decided after detail survey and discussion with local habitants.

(I) Surface runoff harvesting: In mining and industrial area larger part of rainwater flows away as surface runoff. This runoff could be caught and used for recharging aquifers by adopting appropriate surface runoff harvesting methods such as:

Gully plug and contour bund: Gully plugs can be built using local stones, clay and bushes across small gullies and streams running down the hill slopes carrying drainage to tiny catchments during rainy season. Gully plugs help in conservation of soil and moisture. The sites for gully plugs may be chosen whenever there is a local break in slope to permit accumulation of adequate water behind the bunds.

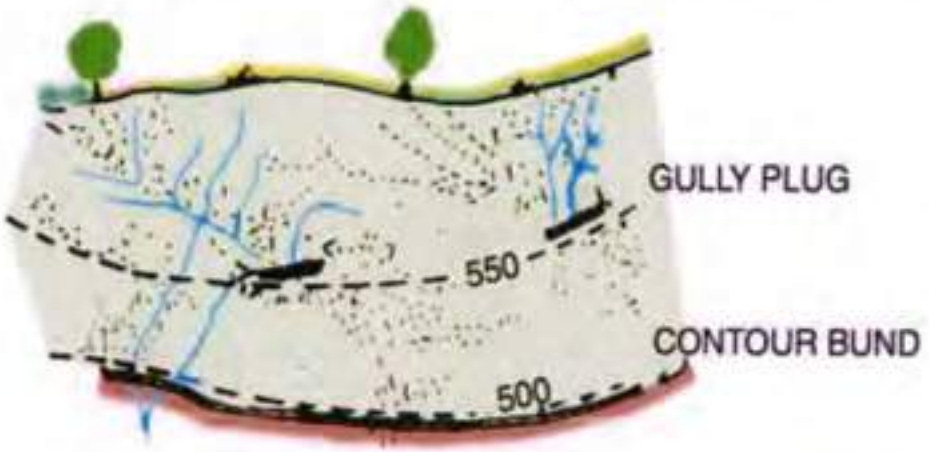


Fig. 9: Gully plug and contour bunds for artificial recharge

Corporate Office, WBPDCL

Contour bunds are effective methods to conserve soil moisture in watershed for long duration. These are suitable in low rain fall areas where monsoon run off can be impounded by constructing bunds on the sloping ground all along the contour of equal elevation. Flowing water is intercepted before it attains the erosive velocity by keeping suitable spacing between bunds. Spacing between two contour bunds depends on the slope, the area and the permeability of the soil. Lesser the permeability of soil, the close should be spacing of bunds. Contour bunding is suitable for lands with moderate slopes without involving terracing (**Fig. 9**).

Gabion structure: This is a kind of check dam commonly constructed across small streams to conserve stream flows with practically no submergence beyond stream course. A small bund across the stream can be made by putting locally available boulders in a mesh of steel wires and anchored to the stream banks. The height of such structures is around 0.5 m and is normally used in the streams with width of less than 10 m. The excess water over flows this structure storing some water to serve as source of recharge (**Fig. 10**). The silt content of stream water in due course is deposited in the interstices of the boulders. With the growth of vegetation, the bund becomes quite impermeable and helps in retaining surface water run off for sufficient time after rains to recharge the groundwater body.



Fig. 10: Gabion structure for augmentation of groundwater recharge

Corporate Office
WBPDCL

Percolation tank: Percolation tanks are water storage tanks with highly porous material so that water percolates into ground very rapidly. Percolation tank shall be constructed preferably on second to third order steams, located on highly fractured and weathered rocks, which have lateral continuity downstream. The recharge area downstream should have sufficient number of wells and cultivable land to benefit from the augmented groundwater. The size of percolation tank shall be governed by percolation capacity of strata in the tank bed. Normally percolation tanks are designed for storage capacity of 0.1 to 0.5 MCM. It is necessary to design the tank to provide a ponded water column generally between 3 and 4.5 m. The percolation tanks are mostly earthen dams with masonry structure only for spillway. The purpose of the percolation tanks is to recharge the groundwater storage and hence seepage below the seat of the bed is permissible.

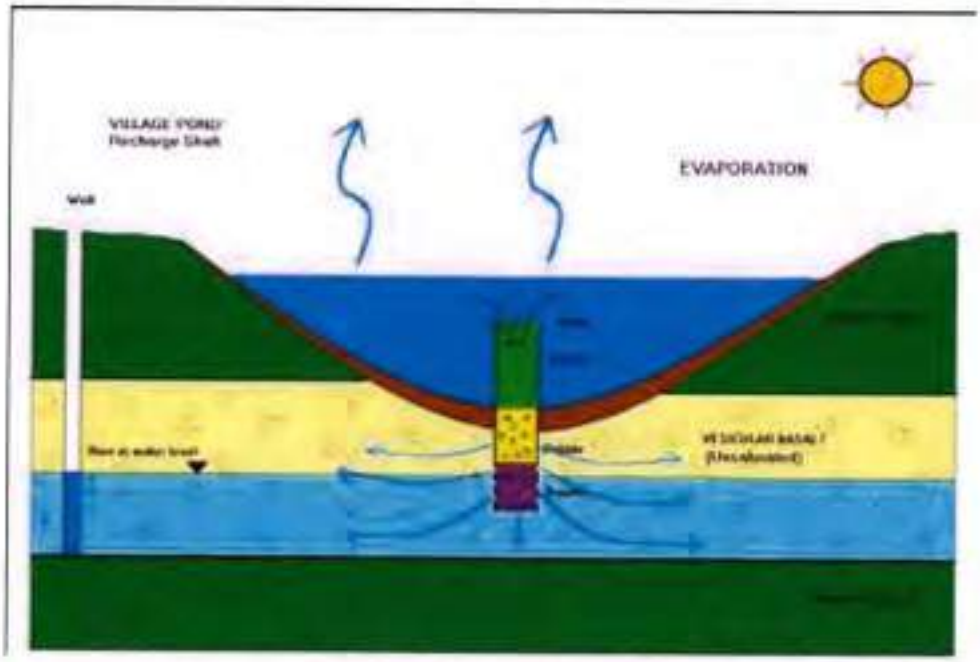


Fig. 11: Schematic diagram for recharge shaft well for groundwater recharge

Recharge shaft: This is the most efficient and cost effective technique to recharge unconfined aquifer overlain by poorly permeable strata. Recharge shaft may be dug manually if the strata is of non-caving nature (**Fig. 11**). The diameter of shaft is normally more than 2 m. The shaft should end in more permeable strata below the top impermeable strata. It may not touch water table. The unlined shaft should be backfilled, initially with boulders/cobbles followed by gravel and coarse sand. In case of lined shaft the recharge water may be fed through a smaller conductor

Director (Mining)
Corporate Office,
WBPDCL

pipe reaching up to the filter pack. These recharge structures are very useful for village ponds where shallow clay layer impedes the infiltration of water to the aquifer. It is seen that in rainy season village tanks are fully filled up but water from these tanks does not percolate down due to siltation and tubewell and dugwells located nearby remains dried up. The water from village tanks get evaporated and is not available for the beneficial use. By constructing recharge shaft in tanks, surplus water can be recharged to groundwater.

Check Dams: The surface water which flows through streams/nallas can be conserved with the help of check dams, giving due considerations to the surrounding farmers' lands, local hydrogeological conditions and terrain conditions. Check dams constructed across small stream and nallas enhanced the water percolation. The design of check should be based on stream/nalla width and excess water is allowed to flow over the wall. To harness the maximum run off in the stream, series of such check dams may be constructed to have recharge on regional scale. Clay filled cement bags arranged as a wall can also be used as a barrier across small nallas.

(II) Roof top rainwater harvesting

It is a system of catching rainwater where it falls. In rooftop harvesting, the roof becomes the catchments, and the rainwater is collected from the roof of the house/building. It can either be stored in a cementing tank or diverted to artificial recharge system. This method is less expensive and very effective and if implemented properly helps in augmenting the groundwater. The surface that receives rainfall directly is the catchment of rainwater harvesting system. It may be terrace, courtyard, or paved or unpaved open ground. The terrace may be flat RCC/stone roof or sloping roof. Therefore the catchment is the area, which actually contributes rainwater to the harvesting system. There are two methods of roof top (i) storage of direct use (ii) recharge groundwater aquifer.

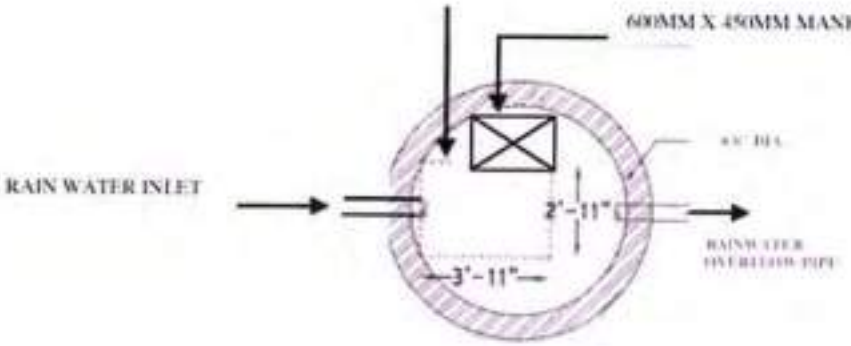
Rainwater harvesting is a system of catching rainwater where it falls. In rooftop harvesting, the roof becomes the catchments, and the rainwater is collected from the roof of the house/building. It can either be stored in a tank or

Corporate Office, WBPDCL

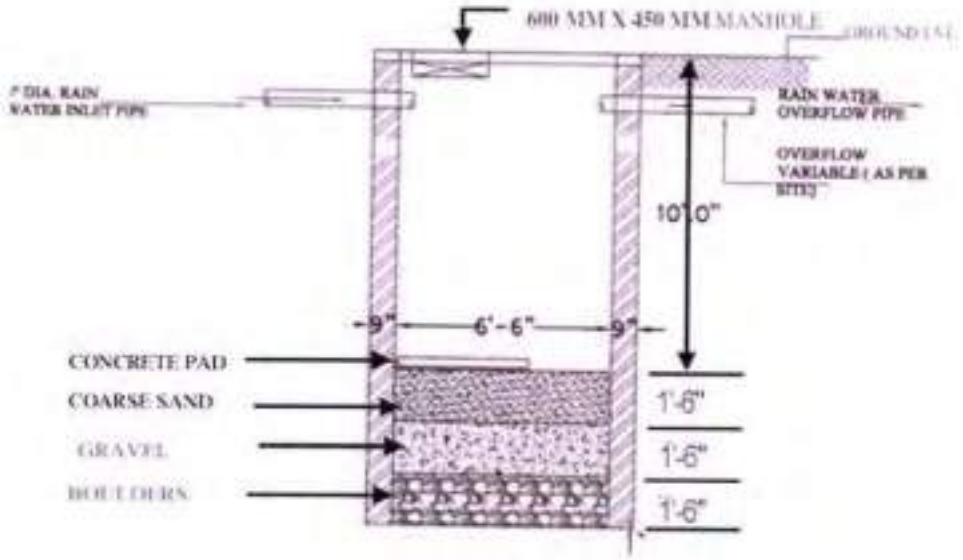
diverted to artificial recharge system. This method is less expensive and very effective and if implemented properly helps in augmenting the groundwater. The surface that receives rainfall directly is the catchment of rainwater harvesting system. It may be terrace, courtyard, or paved or unpaved open ground. The terrace may be flat RCC/stone roof or sloping roof. Therefore the catchment is the area, which actually contributes rainwater to the harvesting system. The following are the general design which may be implemented for rain water harvesting at selected sites in buffer zone or at mine site office:

i. Earthwork excavation 15 feet deep and 10 feet in diameter for each Recharge pit unit.
ii. Brick work 9" thick with common burnt clay bricks of class designation 7.5 in 1:6 ratios for construction of circular shape brick wall having internal diameter 6'6".
iii. Filling, spreading and leveling stone boulders of size range 5cm to 20cm inside the recharge pits to make a 1'6" thick bed of boulders.
iv. Filling, spreading and leveling gravels of size range 5mm to 10mm inside the recharge pits to make a 1'6" thick bed of gravels over boulders.
v. Filling, spreading and leveling coarse sand of size range 1.5 mm to 2.0 mm inside the recharge pits to make a 1'6" thick bed of sand over gravels.
vi. Placing R.C.C. pads of rectangular size 4' x 3' inside recharge pits over sand bed.
vii. Covering of Recharge pits with R.C.C. slabs of 6" thickness with provision of manhole of rectangular size 600mm x 450mm internal dimensions.
viii. Fixing precast R.C.C. manhole covers of rectangular size 600mm x 450mm internal dimensions.
ix. Construction of drains and installation of rain water pipes
x. Earthwork in excavation nearly 3.0 feet wide trenches for drains.
xi. Laying Plain Cement Concreting slab of cross section 3 feet x 4 inches in 1:2:4 ratios for base of drain.
xii. Brickwork 9" thick and 1 feet height with common burnt clay bricks of class designation 7.5 in 1:6 ratios for walls of drain.
xiii. 12 mm cement plastering and finishing with a floating coat of neat cement of mix 1:4 for drain.

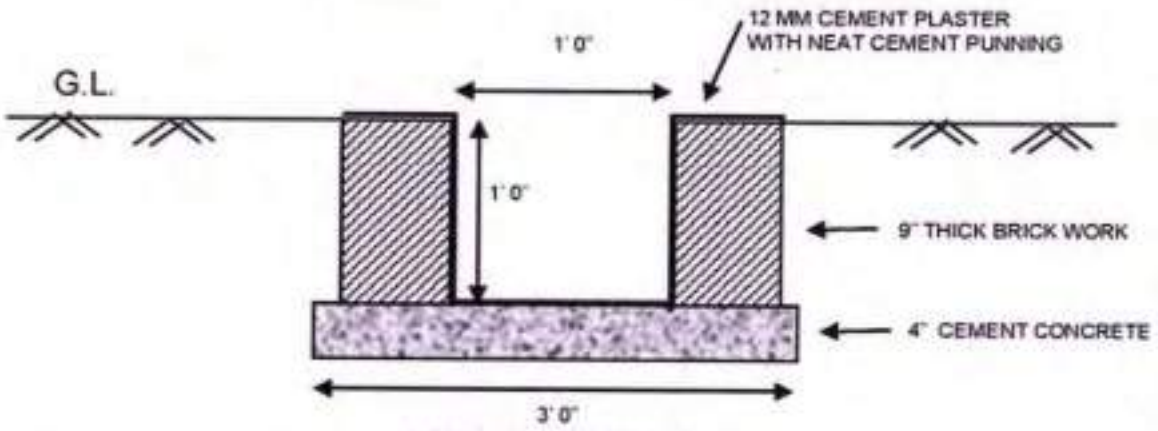
xiv. Fixing on wall face unplasticised rigid PVC rain water pipes of 110mm dia size with all fittings/accessories.



PLAN OF RECHARGE PIT



DETAILS OF RECHARGE PIT UNIT



DETAILS OF DRAIN

Fig. 12: General design for rainwater harvesting to recharge groundwater

Director Operations
Corporate Office,
WBPDCL

5. Conclusions

The phreatic water level in the buffer area varied between 2.29 and 13.14 meters below ground level (mbgl) during the pre-monsoon season and between 0.11 and 8.99 mbgl during the post-monsoon season. The total annual replinishable recharge (TARR) for the buffer zone was estimated to be 67.443 million cubic meters using the rainfall infiltration factor method and 54.681 million cubic meters using the groundwater fluctuation method. The total annual draft, including mine water discharge, was estimated as 9.4363 million cubic meters. The total annual available balance groundwater resource, considering total annual recharge and water draft, was estimated as 51.6257 million cubic meters. Groundwater development percentage of the buffer area was estimated as 15.5%, which falls within the safe zone category as per the guidelines of the Central Ground Water Board (CGWB). Only mine water/treated water will be used for all mining-related activities, including water spraying for dust suppression, plantation, and in green belt, and there are no plans to extract water from groundwater sources at the mine site. The surplus mine water may be provided after treatment for irrigation or other societal purposes for nearby villages. Local ponds/tanks can also be used as recharge pits and augment source availability by using treated mine water.

Utilization of surplus treated mine water in agricultural fields will improve irrigation potential and also contribute to groundwater recharge. As the mining will be conducted with concurrent backfilling, significant impacts on water bodies in the area are not expected. Rather, mine backfilled areas will provide a good medium for high groundwater recharge due to high permeability. The final void created at the end of mine closure will have sufficient capacity to store rainwater, which can be used for domestic and agricultural purposes, and also contribute to recharging groundwater source. These steps will not only help provide required quantity of water at mine site but also help compensate temporary groundwater losses caused during active mining stages and regain groundwater level at pre-mining stage.

Director (Mining)
Corporate Office,
WBPDCL

The following are the major recommendation for monitoring and management of the water resources in this area. These recommendations aim to ensure effective monitoring and management of water resources in the area, taking into account the potential impacts of mining activities on groundwater levels and quality:

1. Installation and maintenance of the piezometer both upstream and downstream of the mine to collect data on groundwater level fluctuations or decline due to mine dewatering.
2. Regular monitoring of water quality parameters is necessary to assess the impact of mining activities on water resources.
3. Accurate records of mine water discharge should be kept to track inflow into mines and identify potential solutions.
4. Implement and promote the adaptation of artificial groundwater recharge techniques to augment sub-surface water storage and mitigate water level depletion in buffer zone areas.

Director (Mining)
Corporate Office,
PDCL

Bibliography

Adyalkar PG (1983) Groundwater survey and exploration technique in Karstic Regions. Proc. Seminar on Assessment, development and management of ground water resources. CGWB, New Delhi. 45-56.

CGWB (2022) Aquifer mapping and management plan in parts of Birbhum district, West Bengal, Central Ground Water Board, Kolkata. P. 146

Balakrishna S, Subramanayam K, Gogte BS and Shama S (1983) Ground water investigation in the union territory of Dadra and Nagar Haveli. Geophys. Res. Bull. 21, 347-359.

Basu GC, and Basu SK (1999) An approach for estimation of hydrological water budget for its significant role in water resource management. Indian J. Eng. 28, 39-43.

Biswas AK (1876) System approach to water management McGraw-Hill Book Com. New York 429p.

Brawner CO (1986) Ground water and coal mining. Mining Sci. Technol. 3, 187-198.

Chakraborty MK, Chaulaya SK, Ahmad M, Singh KKK, Singh RS, Tewary BK, and Gupta PK (2001) Hydrogeological conditions around on an open cast mine. Minetech 22, 41-53.

Chaulaya SK (2004) Water resource accounting for a mining areas in India, Environ. Mon. Ass. 93, 69-89.

Chaulaya SK, Chakraborty MK, Ahmad M, Singh KKK, Singh RS, Tewary BK, and Gupta PK (2000) Water resource accounting for an iron ore mining area in India. Environ. Geol. 39, 1155-1162.

Down CG, And Stocks L (1977) Environmental Impact of Mining, Applied Sci. Pub.London, 131p.

Garg S K (1982) Water resource and hydrology, Khanna Publ. New Delhi 489p.

GWREC (1997) Groundwater resource estimation methodology. Ministry of Water Res. GOI, 105p.

Karnath K R (1987) Ground water assessment, development and management, Tata McGraw-Hill Pub. Comp. Ltd. New Delhi.

Keys WS and Mac Cary LM (1971) Application of bore hole geophysics to water resource investigation In "Techniques of water resource investigation, USGS Book. 126p.

Director (Mining)
Corporate Office,
WBPDCL

Rao K (1970) Hydrometer logical aspects of estimating groundwater potential. In : Seminar on ground water potential in hard rock areas. GSI, Bangalore. 1-18.

Satish Chandra (1983) Hydrological investigation in ground water resource evaluation In: Proc. Seminar on Assessment, development and management of ground water resources. CGWB, New Delhi. 19-34

Saxena R S (1980) Assessment of groundwater recharge in irrigated areas in India – Present studies and scope of future research. Proc. Third Afro-Asian Regional Conf. ICAD, New Delhi, 212-227.

Singh VS, Krishnan V, Sharma, MRK, Gupta CP, and Dhar R L (1999) Hydrogeology of limited aquifer in a granitic terrain. Environ. Geol. 32, 90-95.

Todd DK (1980) Ground water hydrology, John Wiley and Sons. 535p.

Thapa R, Gupta S, Guin S and KaurH (2017) Assessment of groundwater potential zone using multi-spectral-influencing factor and GIS: a case study from Birbhum district, West Bengal. Applied Water Science 7: 4117-4131.

Director (Mining)
Corporate Office,
ECL

ANNEXURE 11

CSR & CD Expenditure i.r.o Gangaramchak-Gangaramchak- Bhadulia Coal Mine.

Sl.No	Year	Amount Expence by WBPDCL	Amount Expence by MDO	Total
1	2020-21		917260	917260
2	2021-22	408000	3175721	3583721
3	2022-23	4586971	3891500	8478471
4	2023-24	432000	12969596.65	13401596.7
5	2024-25	5049433	20404050.32	25453483.3
Total		**10476404**	**41358127.97**	**51834532**

Director (Mining)
Corporate Office,
WBPDCL

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)

Corporate Identity No: U40104WB1985SGC039154

: Registered & Corporate Office :

"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector-III, Salt Lake, Kolkata-700 106.

• Phone: (033) 2335-0571/2339-3100 • Fax: (033) 23393186/23393286

• Email: wbpdcl&wbpdcl.co.in • Website: www.wbpdcl.co.in .

WBPDCL

Ref. No. WBPDCL/AG(G)/25/133 **Date:06.05.2025**

To,
The Block Development Officer,
Khoyrasole Development Block,
Khoyrasole, Birbhum.

Sub: Status report of approved CSR projects for the FY_2024-25 & new proposal for FY_2025-26.

Sir,

First of all, this office is thankful for arranging time to have a meet with you amid of your daily tight schedule.

Please find enclosed herewith one self-explanatory letter of General Manager (HR&A), WBPDCL received by this office on 21. 04.2025 and recall the meet with you on appointment followed by the presence of the Welfare officer and the Mines Manager of this Coal Mine at your office on 02.05.2025.

You are aware that WBPDCL has approved Rs. 55,35,000/- towards CSR activities in the FY_2024-25, out of which phase wide payment have already been released to your designated account in two phases. In 1st phase of Rs. 16, 60. 500/- and in 2nd phase Rs. 22.14,000 but the last phase disbursement amounting Rs. 16,60,500/- is waiting for want of Utilization Certificate against the 2nd phase released amount.

In view of the above, you are requested to expedite action regarding the Utilization Certificate, which may kindly be sent to this end for onward transmission to our corporate office, paving the way for new CSR proposal for the FY_2025-26.

Apart from the above you are further requested to make necessary arrangement for preparing and sending new CSR proposal for the FY_2025-26. The estimated amount of budgetary fund stands Rs. 60 lakhs subject to the approval of the CSR Board level committee of WBPDCL.

In the above context, it would not be out of place to mention of your Memo No. 1631/KDB, dated 18.07.2024 attached with one letter of the principal SFS Mahavidyalaya, Khayrasole, Birbhum, please find attached herein the copies, for your ready reference and inclusion in the new CSR proposal.

With thanks,

06-05-2025

(Santresh Kumar)
Agent/ Project Officer,
G&&GB Coal Mine, WBPDCL.

Agent
Gangaramchak & Gangaramchak-Bhadulia Coal Mine, WBPDCL

Encl: - As stated above.

CC to: -

Director(Mining), Corporate office, WBPDCL,
GM(HR&A), Corporate office, WBPDCL,
GM(Mining), MROD, Durgapur.

Director (Mining)
Corporate Office,
WBPDCL

Address:
Gangaramchak & Gangaramchak-Bhadulia Coal Mine
Office of the Agent/Project Officer,
Bhadulia, Birbhum-713325

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)

WBPDCL

Corporate Identity No. : U40104WB1985SGC039154
: Registered & Corporate Office :
'Bidyut Unnayan Bhaban', Plot No. 3/C, LA-Block, Sector III, Bidhannagar, Kolkata - 700 106
• Phone : (033) 2339-3200 / 3300 • Fax : (033) 2339-3186 / 2339-3286 / 2339-3197
• Website : www.wbpdcl.co.in

Ref. No.: COHRA6210001/ 770(i-ii) Dated: 11.04.25

To,

The General Manager (Mining),
Pachhwara (N)/WBPDCL, Amrapada, Dist.-
Pakur, Jharkhand, Pin - 814111

The General Manager (Mining),
MROD, WBPDCL,
DPL Twonship, Dr. B.C.Roy Avenue, Durgapur,
Dist. – Paschim Barddhaman, W.B., Pin–713202.

Sub: Status report of approved CSR Projects for the F.Y. 2024-25 & new proposals for F.Y. 2025-26.

Sir,

With reference to the above, you are requested to arrange for forwarding a present status report for execution of CSR Project as sanctioned on the financial year 2024-25 and also arrange to send the proposed projects for the financial year 2025-26 to this end after necessary recommendation of Mines Level CSR Committee within 15th May, 2025.

Thanking you,

Yours faithfully,
(Sd/-)
(P.S. Chatterjee)
General Manager (HR&A)

Memo No.: COHRA6210001/ 770(i-iv) Dated: 11.04.25

Copy forwarded for kind information to:-

1. The Director, (F&A) & Co. Secretary/ (Mining)/ Chief Vigilance Officer & Director (HR), WBPDCL.
2. The Agent, Barjora (North)/ Gangaramchak & Gangaramchak Bhadulia/ Tara (E&W), WBPDCL.

(P.S. Chatterjee)
General Manager (HR&A)

Director (Mining)
Corporate Office,
WBPDCL

Bandel Thermal Power Station
GM - (033) 2684 6369
E-mail : gmbtps@wbpdcl.co.in
Fax : 2684 6151

Santaldih Thermal Power Station
GM - (03251) 260 227 / 250 / 341
E-mail : gmstps@wbpdcl.co.in
Fax : 260 217, PBX : 260 197

Kolaghat Thermal Power Station
GM - (03228) 231 110
E-mail : gmktps@wbpdcl.co.in
Fax : 231 280

Bakreswar Thermal Power Station
GM - (03462) 220 201
E-mail : gmbktpp@wbpdcl.co.in
Fax : 220 214, 220 346

Sagardighi Thermal Power Project
GM - (03483) 237 099, E-mail : gmsgtpp@wbpdcl.co.in
Fax : (03483) 237 002

GOVERNMENT OF WEST BENGAL
OFFICE OF THE BLOCK DEVELOPMENT OFFICER
KHOYRASOLE DEVELOPMENT BLOCK
P.O. – Khoyrasole; Dist. – Birbhum, PIN – 731125 Tele-Fax: (03462) 240221

Memo No: 1631/KDB Date: 18/07/2024

To
The Agent/Project Officer,
Gangaramchak Coal Mines
WBPDCL
Khoyrasole, Birbhum

Sub:- Request for providing fund for up gradation of infrastructure in SFS Mahavidyalaya

In reference to the above mentioned subject, enclosed please find herewith the application of the Principal of S.F.S. Mahavidyalaya, Kaoyrasole, Birbhum, requesting for arrangement of fund needed for infrastructural up gradation of the College, as described in her letter.
You are requested to look into the matter and explore the provisions for mitigating the demand from CSR Fund, on urgent basis.
This is for your information and taking necessary action on immediate basis.

Enclo:- As stated.

Block Development Officer,
Khoyrasole Dev. Block, Birbhum

Memo No: 1631/1(3)/KDB Date: 18/07/2024

Copy forwarded for information & taking necessary action to:-

1) The Sub-Divisional Officer, Suri Sadar.
2) The Savapati, Khoyrasole Panvhayat Samiti
3) The Principal, SFS Mahavidyalaya

Block Development Officer,
Khoyrasole Dev. Block, Birbhum

Director (Mining)
Corporate Office,
WBPDCL

Sailajananda Falguni Smriti Mahavidyalaya

(Estd. - 1998)

NAAC Accredited

A Government Aided Degree College

P.O. - KHAYRASOLE ✡ DIST. - BIRBHUM ✡ PIN - 731125

Ref. No. 16/misc.(Gen.)/135/2024.... Date...12/07/2024.....

To
The B.D.O
Khoyrasole Development Block
Khoyrasole, Birbhum

Subject: Request for fund for up gradation of college infrastructure

Dear Sir,

I am writing on behalf of S.F.S. Mahavidyalaya to request financial support for up gradation of the existing infrastructure of our institution.

Our college is located in a remote area at Khoyrasole block in southwestern part of Birbhum district. Sharing boundary with Dumka and Jamtara districts of Jharkhand state on the western and northern parts, the only college of the Khoyrasole block dig up students from neighbouring state as well. The eastern and southern periphery of the college is extended as far as Suri, Dubrajpur, Illambazar blocks of Birbhum district and Pandaveshwar block of Paschim Bardhaman district.

However, with due regret this is to inform you that in spite of completing 25 years of age the college cannot step out from the stage of its infancy. Sir, as you know that infrastructure acts as a foundation pillar on which the subsequent progress of an institution depends. Due to lack of adequate infrastructure, the college cannot provide the minimum required service to the students and staff of the college. As a result, from the developmental point of view the college remains in a stagnant situation.

At this very backdrop I would like to draw your kind attention regarding the following infrastructural requirement of our college:

- Solar panel for power supply (10 KB)
- Rainwater Harvesting infrastructure
- Renovation of Girls' common room with toilet and sanitary napkin vending machine with disposal system
- Completion of toilet and classroom of 2nd floor
- Renovation and repairing of college building: college office, library and Principal's chamber
- Completion of A.C. Seminar hall of 1st floor

Sir, on behalf of the college, I invite your team to visit our college and inspect the actual situation. This is my earnest request to kindly go through the matter with due sympathy and do the needful in this regard.

Thanks and regards,

Dr. Bhaswati Ghosh 12.07.2024
Principal
S.F.S. Mahavidyalaya
Khayrasole, Birbhum

Director (Mining)
Directorate Office,

CSR ACTIVITIES AT GANAGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINE AND BARJORA COAL MINE BY WBPDCL.

1. Re-excavation of "Madrasa Pukur" under Hazratpur Gram Panchayat (G&GB Coal Mine)- Amount Rs.- 29,46,441/- utilization certificate Memo No. 760/KDB, Dated- 10/05/2022 of the BDO Khayrasole Block.

2. Construction of Temple at Kestopur village under Kendragoria Gram Panchayat (Barjora Coal Mine)- Amount Rs.- 12,08,530/- utilization certificate Memo No. 2443/KDB, Dated- 12/12/2022 of the BDO Khayrasole Block.

3. Daily supply of drinking water to nearby villages viz. i) Palpai, ii) Hazratpur, iii) Bhabaniganj, iv) Rasa and v) Krishnapur- Amount- Rs.- 36,000/- Per month.

Director (Mining)
Corporate Office,
WBPDCL

CSR ACTIVITIES AT GANAGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINE BY MDO(GMPL).

Bastabpur village	Construction of road from Bastabpur village to main road Kali Mandir.
Bastabpur village	Payment of Rs.3000/- (each) per month to 51 ladies as stipend... to be continued.
Bastabpur village	Boring for drinking water near Primary school.
Debganj village	Payment of Rs.1500/- (each) per month to 39 ladies as stipend... to be continued.
Bastabpur village	Street light 7 Nos.
Bastabpur village	Pond cutting Bastabpur village.
Bastabpur village	Construction of road from EMTA quarry to Bastabpur village .
Bastabpur village	Construction of statu of Sidhu-Kanu.
From Bhadulia Chanditala Mandir to Sarsa village road.	Road development at South side of Canal Bank area.
Bastabpur village	Football ground at Bastabpur village.
Near weigh bridge & double storeyed building in Bhadulia village.	New pond cutting.
Hazratpur Bus stand and surrounding market.	39 Nos. 100WT LED light installation.
Bhadulia village	8 Nos. 50WT LED fittings in Bhadulia village.
Sagarbhanga village	Renovation of Pond in Sagarbhanga northen side of mines.
Sagarbhanga village	New road construction from Sagarbhanga village to pond bank area about 300 mt.
Sagarbhanga village	Road repairing in the side bank of pond .
Hazratpur market	Installation of 5 Nos. Street light.
Bhadulia village	Installation of 50 Nos. lights to village.
Bastabpur village	Construction of Temple at Bastabpur village.
Bastabpur village	Books distribution in Primary School.
Gangpur Village	Gangpur to Sagarbhanga village road repairing beside OB dumping.
Bastabpur, Sagarbhanga, Bhadulia, Noapara, Sahapur Village	Supply of drinking water.

Director (Mining)
Corporate Office,
WBPDCL

CSR ACTIVITIES AT GANAGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINE AND BARJORA COAL MINE BY WBPDCL.

1. Re-excavation of "Madrasa Pukur" under Hazratpur Gram Panchayat (G&GB Coal Mine)- Amount Rs.- 29,46,441/- utilization certificate Memo No. 760/KDB, Dated- 10/05/2022 of the BDO Khayrasole Block.

2. Construction of Temple at Kestopur village under Kendragoria Gram Panchayat (Barjora Coal Mine)- Amount Rs.- 12,08,530/- utilization certificate Memo No. 2443/KDB, Dated- 12/12/2022 of the BDO Khayrasole Block.

3. Daily supply of drinking water to nearby villages viz. i) Palpai, ii) Hazratpur, iii) Bhabaniganj, iv) Rasa and v) Krishnapur- Amount- Rs.- 36,000/- Per month.

Director (Mining)
Corporate Office,
WBPDCL

GOVERNMENT OF WEST BENGAL
OFFICE OF THE BLOCK DEVELOPMENT OFFICER
KHOYRASOLE DEVELOPMENT BLOCK
P.O.-Khoyrasole, Dist-Birbhum,PIN-731125
Email: bdokdb@gmail.com

Memo No: 638 **/KDB** **Dated – 13 .03.2025**

NOTICE INVITING E– TENDER

(TWO COVER SYSTEM)
For the fund CSR (WBPDCL) (2024-25)
e-NIT No: 06/KDB/ 2024-25

For and on behalf of Panchayats and Rural Development Department, Govt. of West Bengal, Khoyrasole Development Block invites **E-Tender in percentage rates for each of the following works under *CSR (WBPDCL)* by two cover system.** Resourceful and Bona-fide contractors of Government/Semi Government/Undertaking/Autonomous Bodies/Statuary Bodies and Local Bodies who satisfy the terms and conditions set out in pre-qualification document and having registration in e-procurement portal (www.wbtenders.gov.in) under Govt. of West Bengal **may submit their bids. The intending contractors must have completed at least one work of similar nature in a single contract & single unit as a prime contractor within last 3 (three) Financial years**& current financial year (i.e.,2021-22,2022-23,2023-24) from the date of issue of this NIT**, value of which is not less than 50% of the amount put to tender.** The pre-qualification documents are to be uploaded in two separate folders. One of the folders shall contain Technical documents. Financial Bids are to be uploaded in another folder. The Tenders shall be available for viewing in our website www.wbtenders.gov.in

Prospective bidders have to submit their bid on-line through http://etender.wb.nic.in. Earnest money and tender processing fees of bidders have to pay in e-procurement portal of e-tender. **Self attested receipt copies of online payment should be uploaded to the respective packet**

No Tender Processing Fee shall be refunded to the bidder if he/she submit for this purpose.

Table- 1: List of Works

Sl. No	*Name of the Scheme*	*Name of Fund*	*Tendered amount (In Rs.)*	*Earnest Money in Rs.(2% of the estimated amount put to tender)*	Tender Processing Fee (Rs.)	*Time Allowed for completion*
1	Chatal Dhalai at Sarsa Natsala	*CSR (WBPDCL)*	299852	5997	1000	30 Days
2	Construction of Community Hall at Kharikabad	*CSR (WBPDCL)*	349924	6998	2000	90 Days
3	Construction of AWC road from Budur Pukur Pahar towards Do Math Chanak with Culvert at Nowpara	*CSR (WBPDCL)*	399657	7993	2000	45 Days

1) Intending bidders may download tender documents from e-procurement portal of our website: www.wbtenders.gov.in **from 13/03/2025 18:50:00 Hours to 25/03/2025 (upto 18:45 Hours).**The pre-qualification bid documents duly filled and digitally signed in all respect may be submitted online before **18:55 hrs (as per server clock) on 25/03/2025.**

2) Tender Inviting Authority will not take any responsibility for the delay caused due to non-availability of internet connection or traffic jam etc. for on-line bidding.

3) **Earnest Money /Bid Security and Tender Processing Fee:** Cost of Bid Security/Earnest Money and Tender Processing **Fee** for **all bidders** should be deposited

a)Through Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment Gateway to the Account No -052801001752, IFSC Code-ICIC0000528, in favour of "EXECUTIVE OFFICER, KHOYRASOLE PANCHAYAT SAMITY.
Prequalification, Technical & Financial Bid is to be submitted concurrently duly digitally signed at desired documents in the Website http://etender.wb.nic.in Tender document may be downloaded from website & submission of Prequalification Bid/ Technical Bid/ Financial Bid is to follow the stipulated date & time Schedule

Director (Training)
Corporate Office
WBPDCL

4) The pre-qualification (Technical Bids) documents will be opened on **28/03/2025 at 11:00** hours by the authorized officers.

5) Tender Inviting authority reserves the right to call for original document for verification from successful bidder(s) as and when required .

6) The results of the technical evaluation shall be made public on e-procurement systems following which there will be a period of 48 hrs during which any bidder may submit **complaint** which shall be considered for resolution before opening the financial bid.

7) The Financial bid of the technically qualified bidders will be opened for evaluation and the financial bid of non-qualified bidders will remain unopened. No separate intimation will be given for this, unless the above date is changed. In case of change of date, due intimation will be given on-line only. No individual intimation will be given.

8) Tender Inviting authority reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any point of time prior to the issuance of work order, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the authority's action.

9) Acceptance of Tender (AOT)/ LOA will be issued after approval of competent authority.

10) GST, Cess, Taxes and Duties etc. if any at applicable rates will be deducted from the bill of the contractor.

11) Work order to qualified bidder shall be issued after fund is placed from the concerned department at the disposal of the undersigned . work should start in field within 7 working days from the date of receipt of this work order. Failure to do so shall result in an ex-parte decision from this end without any further intimation.

12) **Additional Performance Security**

The Additional Performance Security shall be obtained and released from successful bidder, if the accepted bid value is more than or equal to 20% less than the estimated amount put to tender, vide order no 4608-F(Y) dated 18-07-2018 of finance dept. Govt. of West Bengal. **The Bidder who will bid financially less at the rate of 10 % or above of the estimated cost of a particular scheme shall furnish declaration in NON-JUDICIAL stamp paper of the value not less an amount of Rs.50.00 swearing in on how the concerned agency or contractor shall implement the scheme without deteriorating the quality of work. The said declaration shall be attested by the Notary Public or as prescribed and be submitted on the date of receiving AOC.**

In addition to the above provision and in pursuance of G.O No. 4608-F(Y), Dated: 18/07/2018 from Govt. of West Bengal, Finance Department (Audit Branch), if the accepted bid value is 80% or less of the estimate put to tender then an additional performance security @10% of the tendered amount shall be submitted by the successful bidder in the form of Bank Guarantee from any scheduled Bank before issuance of work order. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of letter of Acceptance, his Earnest money shall be forfeited and blacklisting of the contractor will be done. The Bank Guarantee shall have to be valid up to end of the contract period and shall be renewed accordingly, if required. The Bank Guarantee shall be returned immediately on successful completion of the contract. If the bidder fails to complete the work successfully the Additional Performance Security shall be forfeited at any time during the pendency of the contract period after serving proper notice to the contractor. Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract shall in no way be altered/ affected by provision of this Additional Performance Security. The prescribed format of Bank Guarantee is enclosed in Annexure-A.

13) **The Security Deposit** money of successful bidders will be released full or in part after the completion of 1(one) year from the actual date of completion of the work as per norms stated in "Other Instruction", Instruction to Bidder (ITB).

Any damages occurred during security period will have to be done by the contractor at his own cost. in this respect Clause 17 of the General condition of contract in the Standard Bidding document following west Bengal form no 2911 shall be substituted with the following **vide Memo No. 5784-PW/L&A/2M-175/2017 Dt- 12.09.2017 of Law & Arbitration cell, Public Work Department, Govt. of West Bengal.**

Clause 17 - If the contractor or his workmen or servants or authorized representatives shall break, deface ,injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires ,trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent init at any time whether during its execution or within a period of three months or one year or three years or five years, as the case may be(depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the security Period, from the actual date of

completion of work as per completion certificate issued by the Engineer-in-Charge, the contractor shall make the same good at his own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-Charge shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the Government or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of the Engineer-in-Charge (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.

14) The intending Bidders should satisfy himself about the alignment of the proposed road site and other site condition by visiting the site before quoting their rates.

A) The eligibility criteria are given below:

The following self attested documents are to be produced at the time of submission of tenders through e-tendering Process. (The following original documents will be produced at the time of financial bidding opening)

1. The applicant in the same name and style should have achieved annual turnover in any of the year over the last five years (excluding current FY) (50% of which is from civil engineering construction works and equivalent).

   a) 60% of amount put to bid, in case the amount put to bid is Rs.200 lakhs and less.

   b) 75% of amount put to bid, in case the amount put to bid is more than Rs. 200 lakhs.

2. The applicant in the same name and style as prime contractor should have successfully completed at least one contract of **similar nature in a single contract & single unit** of **work at least 50% value of the proposed contract within the last 3 (three) Financial years&** current financial year (i.e. 2021-22,2022-23,2023-24) **from date of Publication of this NIT.**

The contractor should have sufficient technical manpower, tools and plants to complete the work. Evidence of ownership of major items of construction equipment such as Concrete Mixer Machine etc are essentially required. All these relevant equipments should be arranged by bidders on hire/ lease/ buying as required as per the quantity scheduled in Annexure-B

The Number of Technical personnel, Qualifications and Experience will be as follows:

I.The Technical Personnel are:

Technical Personnel	Number	Experience in Multistoried building/ Road Works
A. Degree Holder in Civil Engineering	1 No	At least 3 (Three) yrs. Experience similar type of work
B. Diploma Holder in Civil Engineering	1 No	At least 5 (Five) yrs. Experience similar type of work
C. Others (Specify) Supervisor	1 No	At least 4 (Four) yrs. Experience

3. The prime contractor should have necessary bid capacity to execute the work. (Bid capacity will be calculated for work valued more than 1 Cr.)
4. Annual Profit & Loss Account & Balance Sheet from chartered accountant for 3 (three) financial years.(F.Y.: 2020-21, 2021-2022 & 2022-23)
5. Income Tax return should be submitted for last 3 assessment years (2021-22,2022-23,2023-24)
6. a) GST registration Certificate along with up to date GST return ,**PAN** Card No, Professional Tax registration certificate, IT Return challan for assessment year 2023-24, Trade license for the year 2023-24 should be furnished.

   b) **Thirty percent (30 %) bank solvency certificate of the total amount of a particular bid (scheme) shall have to be produced by the bidder concerned. The same certificate shall contain the NIT no. and the serial no. of the work which the bank solvency produced. This is applicable for works valued more than Rs-10 lakh only .**

Director (Admin)
Corporate Office,
WBPDCL

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES

BANK CERTIFICATE

This is to certify that M/s ..... is a reputed company with a good financial standing bearing account no..... with our branch.

If the contract for the work, namely....., **NIT No.** ..... Dated ....., Sl. No..... is awarded to the above firm, we shall be able to provide over draft/ credit facilities to the extent of (.....%) Rs..... (Rupees.....) only to meet their working capital requirements for executing the above contract, if he fulfill our terms & condition of Loan/ O.D.

Signature of Bank Manager (with seal)

N.B.:- Certificate should be on the letter head of the bank.
Certificate should be issued on date after publication of Tender.

c) i) Affidavit on non judicial stamp paper regarding the Bidder will be able to invest 30% (Thirty percent) Cash during implementation of the work.

ii) Affidavit regarding correctness of certificates.

iii) Affidavit regarding non - employment of any Govt. Office, Panchayat Samity Office, & Zilla Parishad Office in West Bengal under him.

iv) Affidavit regarding non - employment of retired (within 2 years) Departmental /Govt. Officers / Engineers under him.

7. Joint venture will not be allowed
8. Proposal for sub-contracting is not allowed
9. No CONDITIONAL/INCOMPLETE TENDER will be accepted under any circumstances.
10. **The bid of Any Black listed agency will not be accepted.**
11. Arbitration will not be allowed in any case.
12. Prospective applicants are advised to note carefully the **documents to be uploaded** for qualification as mentioned in the "Instruction to Bidder' before bidding.

The amount of **earnest money** is 2% of the estimated cost of construction or Rs. 10.00 lakhs whichever is lower (cl.11.1 of GCC form no 2911)

All duties, GST, taxes, royalties, cess, [including 1% cess under W.B. Road/Building and other Construction Workers (Regulation of Employments & Condition of Service) Act, 1996], toll, taxes and other levies payable by the Contractor under the Contract to the State / Central Government for any other cause, shall be included in the rates, prices and total Bid price submitted by the bidder.

To keep the constructed road/building in good condition during the security period after the completion of the construction if any work is required for routine maintenance, the same will be treated as defect liability and the Contractor has to do the maintenance work at his own cost.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

(i) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and / or record of submission of any false / fake document(s).

(ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

Director (Mining)
Corporate Office,
WBPDCL

B) List of Important Dates of Bids:

Sl No.	Particulars		Date	Time
1	Published Date		13 /03/2025	18:45 Hrs
2	Documents Download / Sale Start Date	From	13/03/2025	18:50 Hrs (as per Server Clock)
3	Documents Download / Sale End Date	To	25/03/2025	18:45 Hrs (as per Server Clock)
4	Bid Submission Start Date		13/03/2025	18:55 Hrs (as per Server Clock)
5	Bid Submission End Date		25/03/2025	18:55Hrs (as per Server Clock)
6	Bid Opening Date (Technical)		28/03/2025	11:00 Hrs (as per Server Clock)
7	Bid Opening Date (Financial)		After Evaluation of technical Bid	
8	Place of Opening Bid	Office of the Block Development Officer		
9	Officer Inviting Bid	Block Development Officer, Khoyrasole Development Block		
10	Last Date of Bid Validity	90 days from the date of opening of Financial Bid		

No separate intimation will be given for this, unless the above date is changed. In case of change of date, due intimation will be given on-line. No individual intimation will be given.

Instructions to Bidders (ITB)

A. Scanned copies of the following documents to be up-loaded in PDF format in e-portal website https://www.wbtenders.gov.in

1. Copy of Earnest money deposit challan with clearly written UTR and tender processing fees deposit challan
2. GST registration certificate (GSTIN) with up to date GST return.
3. Pan card (IT)
4. Trade license for the year 2023-24
5. Income tax return for last 3 assessment years(2021-22,2022-23,2023-24)
6. Professional Tax registration certificate
7. Annual Profit & Loss Account & Balance Sheet from chartered accountant for 3 (three) financial years.(F.Y.: 2020-2021 , 2021-22 & 2022-23)
8. Payment certificates (Signed by Competent Authority)/self attested**26AS** to be uploaded in support of Turnover. The turnover will be indexed at the rate of 8 percent simple interest for a year.**26AS must be submitted for identifying the payment certificate.**
9. Credentials for successful completion (certificates from the officer not below the rank of Executive Officer / or equivalent) of at least one contract of **similar nature in a single contract & single unit** of work in the same name and style as prime contractor having a magnitude of at least **50% of the amount put to tender** of the proposed contract within **last 3 (three) Financial years** & current financial year (i.e. 2021-22,2022-23,2023-24) from the date of publication of this NIT.

Corporate Office,
WBPDCL

10. All tools and plants required for the work will have to be supplied by the contractor at his own cost. The list of machineries as indicated in clause (B1 of ITB) possessed by own/ arranged through lease deed along with Authenticated copy of invoice/ Challan as per ITB.
11. List of ongoing works in hand and the Physical and financial progress of those works as per **Annexure-C.**
12. Scanned copy of Bid Capacity calculation in his/her own letter head. (Calculation to be done as prescribed **annexure -B)**
13. Tender form and NIT with all addendum and corrigendum to be uploaded will be (download and digitally signed. Quoting rate will only encrypted in the B.O.Q under financial bid. In case quoting any rate in printed tender form, the tender will be summarily rejected)
14. Special terms and conditions and specifications of work
15. Partnership firm shall furnish **partnership deed** and company shall furnish the Article of Association and Memorandum.
16. The registered cooperative societies should submit the registration certificate.
17. Power of attorney (in case of Partnership firm /Registered Co-Operative Society/company) to be uploaded.
18. No taried Affidavit in non judicial stamp paper regarding non employment of any Government official under him, deployment of machineries, laboratory equipment; technical personnel, correctness of certificates, and investment of minimum cash up to 30% of estimated cost etc. as per **annexure-A.**
19. Letter head of the agency/contractor containing Name addresses and contact details. During the currency of the project and after completion if the address of the agency/contractor changes, it will be the responsibility of the contractor to intimate the authority regarding such changes.
20. Work program in terms of bar chart to be submitted. **(For work valued more than 1 Cr.)**
21. Bank Credit Certificate of 30% of the Amount put to tender should be provided as per format given above.
22. Job card holder shall be mandatorily be engaged in the work as rural unskilled workers. The contractor/agency executing the work shall also furnish a certificate after completion of work that only Job Card holder were engaged for unskilled works during execution. Scrutiny of such certificate will be done by departmental official before making payment against the work .
23. Others (if any)
24. **Annexture-1 & Section B (Form I, II, III, IV) must be uploaded as per given format, otherwise bid will be rejected. .**

B. Bare Minimum requirements of machineries for road construction works is as follows. (For work valued more than 1 Cr.)

This list is only indicative. The bidder shall have to arrange for every necessary machineries, tools & plants for the intended job to the full satisfaction of Engineer in charge (to be mentioned in the affidavit).

Sl. No	Name of Machineries	Required Minimum number (For work value above Rs 1.00 Cr.)
1	Light-Duty Mobile HMP with separate heating &mixing drum (for Bituminous work only)	1
2	Smooth Wheeled Roller (8-10 Tone) (for Bituminous work/for earth work only)	1
3	Concrete Mixer (in case of concrete pavement)	1

C. Other instructions

1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
2. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.
3. No Mobilization Advance and Advance against purchase of equipments will be paid for the work.
4. No Advance of any kind will be paid for the work under any circumstances.

Director (Mining)
Corporate Office,
WBPDCL

5. Under no circumstances Escalation in prices in materials, labour charges, cost of P.O.L.& arbitration will be entertained.
6. The Employer requires the bidders / Contractors to strictly observe the laws against fraud and corruption in force in India, namely, Prevention of Corruption Act, 1988.
7. There will be no price preference to any bidder.
8. No interest claim will be admissible during refund of earnest money and security deposit.
9. Uploaded documents of valid successful bidders may be verified with the original in due course. The valid successful bidders have to show the originals to the concerned authority as and when required.
10. Any bill (running account/final) payment of proposed executed work may be made to Agency as per availability of fund.
11. Bid of any Black listed bidder will be rejected.
12. The engaged contractor will have to get registered under BOCW (RECS) act and shall have to contribute towards " The West Bengal Building and other Construction Workers' welfare fund" @ 1% (One percent) of the gross amount of the work by way of deduction from Running and /or final bill.
13. **Earnest Money & Security Deposit:** The Earnest Money (2% of amount put to tender) will be converted to Security deposit. The Balance amount of Security Deposit (as per Govt. order in force during pendency of the contract) money will be deducted from running and final bill.
14. **The Security Deposit will be released to the contractor as stated below.**

    (a) For work with one year security Period:

    i) Full security deposit shall be refunded to the contractor on expiry of one year from the actual date of completion of the work.

15. Time allowed for completion of work will be measured from the date of issue of work order
16. If any erroneous printing found after agreement or any time in the SOQ (Schedule of Quantity) Quantity or Rate, the Tender Inviting authority reserve the rights to correct the same as per approved original estimate.
17. Bidding documents (NIT and SBD) is to be uploaded by the bidder. The bidder has to only agree/ disagree on the conditions in the bidding document. The bidders who disagree on the conditions of bidding document cannot participate in the tender and his /their bid will be treated as informal.
18. ***Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:***

    (i) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and / or record of submission of any false / fake document(s).

    (ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

    (iii) Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the Employer.

19. Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value. The available bid capacity will be calculated as per **annexure–B.**
20. The successful bidder shall have to abide by all the labour related and other rules, regulations and laws of the land and the Tender Inviting Authority in no way shall be held responsible for financial or any other consequences arising out of non his noncompliance of the same.
21. **Intending Bidder should read carefully read the Cl No 41 of GCC regarding the suspension and debarment policy before participating the tender.**
22. **Tax Invoice needs to be issued by the agency**/contractor for raising claim showing separately the tax charged in accordance with the provisions of GST Act, 2017.
23. **Priority of Documents:** The documents forming the contract are to be taken as mutually explanatory of one another. For purpose of interpretation, the priority of the documents shall be in accordance with the following sequence.

    a. Form No. 2911
    b. Notice to Proceed with the works;
    c. Letter of acceptance;
    d. Notice Inviting Tender
    e. Special Conditions of Contract and General Conditions of Contract (as per Form2911)
    f. Specifications;

Director (Mining)
Corporate Office,
WBPDCL

g. Drawings;

h. Bill of Quantities; and

i. Any other document listed in the Contract Data as forming part of the Contract.

Block Development Officer
Khoyrasole Development Block
Khoyrasole :: Birbhum

Block Development Officer
Khoyrasole Development Block
Khoyrasole,Birbhum

Memo No. 638 /1(30)/KDB Dated: 13 /03/2025

Copy forwarded for information & taking necessary action.

1) The Sabhadhipati, Birbhum Zilla Parishad,Suri,Birbhum.
2) The District Magistrate, Birbhum
3) The A.E.O, Birbhum Zilla Parishad
4) The S.D.O., (Sadar), Suri.
5) The D.P. & R.D.O., Birbhum, Suri.
6) The D.P.L.O, Birbhum, Suri
7) The District Engineer, Birbhum Zilla Parishad. Suri,
8) The DIO, NIC, Birbhum with a request to publish the notice in Birbhum District's website https://birbhum.gov.in
9-10) The Savapati /SahakariSavapati Khoyrasole Panchayat Samity.
11) The Karmadhakshaya, PKOPSS, Khoyrasole Panchayat Samity.
12)The BL & LRO, Khoyrasole
13) The SAE , Khoyrasole Dev Block
14-23)TheProdhan (All) _____ Gram Panchayat.
24-26) The Officer-in-charge, Khoyrasole/Kankartala/Lokepur PS
27) The Office Notice Board
28-29)The H.C. in-charge, Khoyrasole Development Block/Khoyrasole Panchayat samity
30)Members of Tender committee with a request to attained as per tender schedule.

Block Development Officer
Khoyrasole Development Block
Khoyrasole :: Birbhum

Block Development Officer
Khoyrasole Development Block
Khoyrasole,Birbhum

Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-A

SAMPLE FORMAT OF AFFIDAVIT (To be submitted in Non-Judicial Stamp Paper and to be Notarised)

I, Sri.....,S/o Sri.....aged.....years, Residing at.....Proprietor/Partner/Director of.....,do hereby solemnly affirm and declare in connection with the scheme.....

.....is as follows :

1. That I, the undersigned do certify that all the information furnished & statements made in the bid documents are true and correct to the best of my knowledge and belief.
2. That the undersigned also hereby verifies that neither any near relations of staff and officers of the department nor any retired gazetted officers are in our employment.
3. The undersigned would authorize and request any bank, person, firm or corporation to furnish pertinent information as deemed necessary and or as requested by the department to verify this statement.
4. The undersigned understands and agrees that the bid shall remain open for Acceptance 90 days from the date of opening of financial bid.
5. The undersigned agrees to invest 30% of the contract price of works by cash during the implementation of the works.
6. The undersigned agrees to authorize the authority to seek references from the bankers of the undersigned.
7. If the contract is awarded to us, we will deploy at site all necessary T&P and equipments immediately on receipt of the work order. We would commence the work only on deployment of machineries at site to the full satisfaction of the Engineer-in-Charge. We would be duty bound to use those equipments at site to achieve the best result as per requirement of the contract. We would upkeep and maintain those equipments in running condition till completion of the Project. Any breakdown of any equipment will be replaced immediately. No part of equipment will be shifted to another site without the written permission of the E.I.C.
8. We would establish a site laboratory with minimum testing equipments/ apparatus to conduct the various tests on soil, aggregates and cement, concrete to maintain the quality at site. We will upkeep the laboratory set-up in good condition of the project.
9. We would deploy at site all necessary technical personnel for efficient contract management and supervision of works to the full satisfaction of the Engineer in Charge with a view to achieving best quality of works at site.
10. We would carry out all necessary tests of all major items at frequency spelled out in the contract document to the full satisfaction of the Engineer in Charge to achieve the best quality work at site. We will be contract bound to bring to the notice of the EIC any non-compliance of test results along with the action taken report.
11. Any departure whatsoever in any form will be considered as breach of contract. In such situation the department at his liberty may withhold our payment till we rectify the defects or fulfill our contractual obligation. In this connection, Departmental decision will be final and binding.
12. The undersigned also certifies that neither we have abandoned any work awarded to us, nor any penal action was taken against us by any department. The undersigned also declares that we do not have any running litigation with any department.

Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-B

BANK GURANTEE FOR ADDITIONAL PERFORMANCE SECURITY DEPOSIT

To
Blcok Development Officer
Khoyrasole Development Block

	Account Details
Account Name	
Beneficiary Bank Account No	
IFSC Code	
MICR Code	
Branch Address	

WHEREAS ..... [NAME AND ADDRESS OF CONTRACTOR] (here after called "The Contractor") has undertaken, in pursuance of to execute..... (hereinafter called "The Contract").

AND WHEREAS it has been stipulated by you in the said contract that the contractor shall furnish you with a Bank Guarantee by a scheduled commercial bank for the sum specified therein for 'ADDITIONAL PERFORMANCE SECURITY DEPOSIT' for compliance with his obligation in accordance with the Contract.

AND WHEREAS we ..... (indicate the name of the bank branch) have agreed to give the contractor such a Bank Guarantee.

NOW THEREFORE we ..... (indicate the name of the bank & branch) hereby affirm that we are the Guarantor and responsible to you on behalf of the contractor , up-to a total of Rs..... [amount of guarantee].....(in words). We undertaken to pay you, upon your first written demand and without cavil or argument, a sum within the, limits of .....

[amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein to the above beneficiary bank account.

We .....(indicate the name of the bank & branch) hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We .....(indicate the name of the bank & branch) further agree to pay to you any money so demanded not withstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto. Our liability under this present guarantee is absolute and unequivocal.

The payment / so make by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

We ..... (indicate the name of the bank & branch) further agree that no change or addition to or other modification of the terms of the contract or of the works to be performed there under or of any of the contract documents, which may be made between you and the contractor, shall, in anyway, release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

We, ... (indicate the name of the bank & branch) also undertake not to revoke this guarantee except with your prior written consent.

The Guarantee shall be valid up to ..... It comes into force with immediate effect and shall remain in force and valid for a period of .....(Construction period claim period of six months). Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. .....(Rs.....) and unless a claim in writing is lodged with us within the validity period of this Guarantee, i.e. up to ..... , all our liabilities under this Guarantee shall cease to exist.

Director (Planning)
Corporate Office,
WBPDCL

Signed and sealed this day of 20.....at

SIGNED, SEALD AND DELIVERED
For and on behalf of the BANK by
(Signature)
(Name)
(Designation)
(Code Number)
(Address)

NOTES :

(i) The bank guarantee should contain the name, designation and code number of the officer (s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B

FORM-I

PRE-QUALIFICATION APPLICATION

To:
Blcok Development Officer
Khoyrasole Development Block

Ref: - Tender for

Name of work:

eNITNo. :**WBBIR/KHOYRASOLE-DEVELOPMENT BLOCK /eNIT- 06 /KDB/2024-25** Block Development Officer,
Khoyrasole Development Block
Dear Sir,

Having examined the Statutory, Non statutory & eNIT documents, I / we hereby submit all the necessary information and relevant documents for evaluation.

The application is made by me / us on behalf of _____ In the capacity _____ duly authorized to submit the offer. The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this letter.
We understand that:

(a) Tender Inviting & Accepting Authority/ Engineer-in-Charge can amend the scope & value of the contract bid under this project.

(b) Tender Inviting & Accepting Authority/Engineer – in-Charge reserve the right to reject any application without assigning any reason.

Enclo :-e-Filling:

1 Statutory Documents

2 Non Statutory Documents

Signature of applicant including title and capacity in which application is made

Date :-

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B
FORM-II
FINANCIAL STATEMENT

1 Name of Applicant:

2 Annual Turn Over for the last consecutive 3 (three) audited financial years:

	Year – I (Rs. in Lakh)	Year – II (Rs. in Lakh)	Year – III (Rs. in Lakh)
Annual Turn Over			

N.B: *(i) Submit authentic documents in support of Annual Turn Over*
(ii) Indicate year at time of submission

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

SECTION – B
FORM-III

DETAIL OF ORGANIZATION

1. Name of Applicant: (Indicate whether proprietary firm,) Partnership, Limited Company, Corporation/Others)

2 Office address:

3 Telephone No. :

4 Fax No. :

5 E-mail address:

6 Name and address of Banker:

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B

FORM- IV

Working Certificate

List of Project completed/ ongoing with work order value as stated in Serial No. 1 of the e-NIT

Name of Employer	*Name, Location and nature of work*	*Reference of work order (Memo No. & Date)*	*Contract value in TNR*	*Date of start of work*	*Present status (if completed, indicate date of completion)*

Note: Copy of work order and /or certificate from employer to be attached.

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

GOVERNMENT OF WEST BENGAL
OFFICE OF THE BLOCK DEVELOPMENT OFFICER
KHOYRASOLE DEVELOPMENT BLOCK
P.O.-Khoyrasole, Dist-Birbhum,PIN-731125
Email: bdokdb@gmail.com

Memo No: 610 **/KDB** **Dated – 11 .03.2025**

NOTICE INVITING E– TENDER

(TWO COVER SYSTEM)
For the fund CSR (WBPDCL) (2024-25)
e-NIT No: 05/KDB/ 2024-25

For and on behalf of Panchayats and Rural Development Department, Govt. of West Bengal, Khoyrasole Development Block invites **E-Tender in percentage rates for each of the following works under *CSR (WBPDCL)* by two cover system.** Resourceful and Bona-fide contractors of Government/Semi Government/Undertaking/Autonomous Bodies/Statuary Bodies and Local Bodies who satisfy the terms and conditions set out in pre-qualification document and having registration in e-procurement portal (www.wbtenders.gov.in) under Govt. of West Bengal **may submit their bids. The intending contractors must have completed at least one work of similar nature in a single contract & single unit as a prime contractor within last 3 (three) Financial years**& current financial year (i.e.,2021-22,2022-23,2023-24) from the date of issue of this NIT, **value of which is not less than 50% of the amount put to tender.** The pre-qualification documents are to be uploaded in two separate folders. One of the folders shall contain Technical documents. Financial Bids are to be uploaded in another folder. The Tenders shall be available for viewing in our website www.wbtenders.gov.in

Prospective bidders have to submit their bid on-line through http://etender.wb.nic.in. Earnest money and tender processing fees of bidders have to pay in e-procurement portal of e-tender. **Self attested receipt copies of online payment should be uploaded to the respective packet**

No Tender Processing Fee shall be refunded to the bidder if he/she submit for this purpose.

Table- 1: List of Works

Sl. No	*Name of the Scheme*	*Name of Fund*	*Tendered amount (In Rs.)*	*Earnest Money in Rs.(2% of the estimated amount put to tender)*	Tender Processing Fee (Rs.)	*Time Allowed for completion*
1	Installation of Solar street light at South Nakrakonda	*CSR (WBPDCL)*	3,93,778	7876	2000	30 Days
2	Installation of Solar street light at Debganj Ghosh Para	*CSR (WBPDCL)*	1,31,259	2625	1000	30 Days
3	Installation of Solar street light at East Bhadulia	*CSR (WBPDCL)*	3,93,778	7876	2000	30 Days
4	Installation of Mini Solar High Mast light near Bagdipara at North Nakrakonda	*CSR (WBPDCL)*	1,31,259	2625	1000	30 Days
5	Installation of High Mast light at Sagarbhanga More	*CSR (WBPDCL)*	1,31,259	2625	1000	30 Days

1) Intending bidders may download tender documents from e-procurement portal of our website: www.wbtenders.gov.in **from 11/03/2025 18:50:00 Hours to 21/03/2025 (upto 18:45 Hours).**The pre-qualification bid documents duly filled and digitally signed in all respect may be submitted online before **18:55 hrs (as per server clock) on 21/03/2025.**

2) Tender Inviting Authority will not take any responsibility for the delay caused due to non-availability of internet connection or traffic jam etc. for on-line bidding.

3) **Earnest Money /Bid Security and Tender Processing Fee:** Cost of Bid Security/Earnest Money and Tender Processing **Fee** for **all bidders** should be deposited

a)Through Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment

Director
Corporate Office,
WBPDCL

through ICICI Bank Payment Gateway to the Account No -052801001752, IFSC Code-ICIC0000528, in favour of "EXECUTIVE OFFICER, KHOYRASOLE PANCHAYAT SAMITY.

406

Prequalification, Technical & Financial Bid is to be submitted concurrently duly digitally signed at desired documents in the Website http://etender.wb.nic.in Tender document may be downloaded from website & submission of Prequalification Bid/ Technical Bid/ Financial Bid is to follow the stipulated date & time Schedule

4) The pre-qualification (Technical Bids) documents will be opened on **24/03/2025 at 11:00** hours by the authorized officers.

5) Tender Inviting authority reserves the right to call for original document for verification from successful bidder(s) as and when required .

6) The results of the technical evaluation shall be made public on e-procurement systems following which there will be a period of 48 hrs during which any bidder may submit **complaint** which shall be considered for resolution before opening the financial bid.

7) The Financial bid of the technically qualified bidders will be opened for evaluation and the financial bid of non-qualified bidders will remain unopened. No separate intimation will be given for this, unless the above date is changed. In case of change of date, due intimation will be given on-line only. No individual intimation will be given.

8) Tender Inviting authority reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any point of time prior to the issuance of work order, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the authority's action.

9) Acceptance of Tender (AOT)/ LOA will be issued after approval of competent authority.

10) GST, Cess, Taxes and Duties etc. if any at applicable rates will be deducted from the bill of the contractor.

11) Work order to qualified bidder shall be issued after fund is placed from the concerned department at the disposal of the undersigned . work should start in field within 7 working days from the date of receipt of this work order. Failure to do so shall result in an ex-parte decision from this end without any further intimation.

12) **Additional Performance Security**

The Additional Performance Security shall be obtained and released from successful bidder, if the accepted bid value is more than or equal to 20% less than the estimated amount put to tender, vide order no 4608-F(Y) dated 18-07-2018 of finance dept. Govt. of West Bengal. **The Bidder who will bid financially less at the rate of 10 % or above of the estimated cost of a particular scheme shall furnish declaration in NON-JUDICIAL stamp paper of the value not less an amount of Rs.50.00 swearing in on how the concerned agency or contractor shall implement the scheme without deteriorating the quality of work. The said declaration shall be attested by the Notary Public or as prescribed and be submitted on the date of receiving AOC.**

In addition to the above provision and in pursuance of G.O No. 4608-F(Y), Dated: 18/07/2018 from Govt. of West Bengal, Finance Department (Audit Branch), if the accepted bid value is 80% or less of the estimate put to tender then an additional performance security @10% of the tendered amount shall be submitted by the successful bidder in the form of Bank Guarantee from any scheduled Bank before issuance of work order. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of letter of Acceptance, his Earnest money shall be forfeited and blacklisting of the contractor will be done. The Bank Guarantee shall have to be valid up to end of the contract period and shall be renewed accordingly, if required. The Bank Guarantee shall be returned immediately on successful completion of the contract. If the bidder fails to complete the work successfully the Additional Performance Security shall be forfeited at any time during the pendency of the contract period after serving proper notice to the contractor. Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract shall in no way be altered/ affected by provision of this Additional Performance Security. The prescribed format of Bank Guarantee is enclosed in Annexure-A.

13) **The Security Deposit** money of successful bidders will be released full or in part after the completion of 1(one) year from the actual date of completion of the work as per norms stated in "Other Instruction", Instruction to Bidder (ITB).

Any damages occurred during security period will have to be done by the contractor at his own cost. in this respect Clause 17 of the General condition of contract in the Standard Bidding document following west Bengal form no 2911 shall be substituted with the following **vide Memo No. 5784-PW/L&A/2M-175/2017 Dt- 12.09.2017 of Law & Arbitration cell, Public Work Department, Govt. of West Bengal.**

Clause 17 - If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water

pipes, cables, drains, electric or telephone posts or wires ,trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent init at any time whether during its execution or within a period of three months or one year or three years or five years, as the case may be(depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the security Period, from the actual date of completion of work as per completion certificate issued by the Engineer-in-Charge, the contractor shall make the same good at his own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-Charge shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the Government or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of the Engineer-in-Charge (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.

14) The intending Bidders should satisfy himself about the alignment of the proposed road site and other site condition by visiting the site before quoting their rates.

A) The eligibility criteria are given below:

The following self attested documents are to be produced at the time of submission of tenders through e-tendering Process. (The following original documents will be produced at the time of financial bidding opening)

1. The applicant in the same name and style should have achieved annual turnover in any of the year over the last five years (excluding current FY) (50% of which is from civil engineering construction works and equivalent).

   a) 60% of amount put to bid, in case the amount put to bid is Rs.200 lakhs and less.

   b) 75% of amount put to bid, in case the amount put to bid is more than Rs. 200 lakhs.

2. The applicant in the same name and style as prime contractor should have successfully completed at least one contract of **similar nature in a single contract & single unit** of **work at least 50% value of the proposed contract within the last 3 (three) Financial years**& current financial year (i.e. 2021-22,2022-23,2023-24) **from date of Publication of this NIT.**

The contractor should have sufficient technical manpower, tools and plants to complete the work. Evidence of ownership of major items of construction equipment such as Concrete Mixer Machine etc are essentially required. All these relevant equipments should be arranged by bidders on hire/ lease/ buying as required as per the quantity scheduled in Annexure-B

The Number of Technical personnel, Qualifications and Experience will be as follows:

I.The Technical Personnel are:

Technical Personnel	Number	Experience in Multistoried building/ Road Works
A. Degree Holder in Civil Engineering	1 No	At least 3 (Three) yrs. Experience similar type of work
B. Diploma Holder in Civil Engineering	1 No	At least 5 (Five) yrs. Experience similar type of work
C. Others (Specify) Supervisor	1 No	At least 4 (Four) yrs. Experience

3. The prime contractor should have necessary bid capacity to execute the work. (Bid capacity will be calculated for work valued more than 1 Cr.)
4. Annual Profit & Loss Account & Balance Sheet from chartered accountant for 3 (three) financial years.(F.Y.: 2020-21, 2021-2022 & 2022-23)
5. Income Tax return should be submitted for last 3 assessment years (2021-22,2022-23,2023-24)
6. a) GST registration Certificate along with up to date GST return ,**PAN** Card No, Professional Tax registration certificate, IT Return challan for assessment year 2023-24, Trade license for the year 2023-24 should be furnished.

b) **Thirty percent (30 %) bank solvency certificate of the total amount of a particular bid (scheme) shall have to be produced by the bidder concerned. The same certificate shall contain the NIT no. and the serial no. of the work which the bank solvency produced. This is applicable for works valued more than Rs-10 lakh only .**

Director (Mining)
Corporate Office,
WBPDCL

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES

BANK CERTIFICATE

This is to certify that M/s ..... is a reputed company with a good financial standing bearing account no..... with our branch.

If the contract for the work, namely....., **NIT No.** ..... Dated ....., Sl. No..... is awarded to the above firm, we shall be able to provide over draft/ credit facilities to the extent of (.....%) Rs..... (Rupees.....) only to meet their working capital requirements for executing the above contract, if he fulfill our terms & condition of Loan/ O.D.

Signature of Bank Manager (with seal)

N.B.:- Certificate should be on the letter head of the bank.
Certificate should be issued on date after publication of Tender.

c) i) Affidavit on non judicial stamp paper regarding the Bidder will be able to invest 30% (Thirty percent) Cash during implementation of the work.

ii) Affidavit regarding correctness of certificates.

iii) Affidavit regarding non - employment of any Govt. Office, Panchayat Samity Office, & Zilla Parishad Office in West Bengal under him.

iv) Affidavit regarding non - employment of retired (within 2 years) Departmental /Govt. Officers / Engineers under him.

7. Joint venture will not be allowed
8. Proposal for sub-contracting is not allowed
9. No CONDITIONAL/INCOMPLETE TENDER will be accepted under any circumstances.
10. **The bid of Any Black listed agency will not be accepted.**
11. Arbitration will not be allowed in any case.
12. Prospective applicants are advised to note carefully the **documents to be uploaded** for qualification as mentioned in the "Instruction to Bidder' before bidding.

The amount of **earnest money** is 2% of the estimated cost of construction or Rs. 10.00 lakhs whichever is lower (cl.11.1 of GCC form no 2911)

All duties, GST, taxes, royalties, cess, [including 1% cess under W.B. Road/Building and other Construction Workers (Regulation of Employments & Condition of Service) Act, 1996], toll, taxes and other levies payable by the Contractor under the Contract to the State / Central Government for any other cause, shall be included in the rates, prices and total Bid price submitted by the bidder.

To keep the constructed road/building in good condition during the security period after the completion of the construction if any work is required for routine maintenance, the same will be treated as defect liability and the Contractor has to do the maintenance work at his own cost.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
(i) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and / or record of submission of any false / fake document(s).

Director (Tech.)
Corporate Office,
WBPDCL

(ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

B) List of Important Dates of Bids:

Sl No.	Particulars		Date	Time
1	Published Date		11 /03/2025	18:45 Hrs
2	Documents Download / Sale Start Date	From	11/03/2025	18:50 Hrs (as per Server Clock)
3	Documents Download / Sale End Date	To	21/03/2025	18:45 Hrs (as per Server Clock)
4	Bid Submission Start Date		11/03/2025	18:55 Hrs (as per Server Clock)
5	Bid Submission End Date		21/03/2025	18:55Hrs (as per Server Clock)
6	Bid Opening Date (Technical)		24 /03/2025	11:00 Hrs (as per Server Clock)
7	Bid Opening Date (Financial)		After Evaluation of technical Bid	
8	Place of Opening Bid	Office of the Block Development Officer		
9	Officer Inviting Bid	Block Development Officer, Khoyrasole Development Block		
10	Last Date of Bid Validity	90 days from the date of opening of Financial Bid		

No separate intimation will be given for this, unless the above date is changed. In case of change of date, due intimation will be given on-line. No individual intimation will be given.

Instructions to Bidders (ITB)

A. Scanned copies of the following documents to be up-loaded in PDF format in e-portal website https://www.wbtenders.gov.in

1. Copy of Earnest money deposit challan with clearly written UTR and tender processing fees deposit challan
2. GST registration certificate (GSTIN) with up to date GST return.
3. Pan card (IT)
4. Trade license for the year 2023-24
5. Income tax return for last 3 assessment years(2021-22,2022-23,2023-24)
6. Professional Tax registration certificate
7. Annual Profit & Loss Account & Balance Sheet from chartered accountant for 3 (three) financial years.(F.Y.: 2020-2021 , 2021-22 & 2022-23)

Director (Mining)
Corporate Office,
WBFDCL

8. Payment certificates (Signed by Competent Authority)/self attested**26AS** to be uploaded in support of Turnover. The turnover will be indexed at the rate of 8 percent simple interest for a year.**26AS must be submitted for identifying the payment certificate.**

9. Credentials for successful completion (certificates from the officer not below the rank of Executive Officer / or equivalent) of at least one contract of **similar nature in a single contract & single unit** of work in the same name and style as prime contractor having a magnitude of at least **50% of the amount put to tender** of the proposed contract within **last 3 (three) Financial years** & current financial year (i.e. 2021-22,2022-23,2023-24) from the date of publication of this NIT.

10. All tools and plants required for the work will have to be supplied by the contractor at his own cost. The list of machineries as indicated in clause (B1 of ITB) possessed by own/ arranged through lease deed along with Authenticated copy of invoice/ Challan as per ITB.

11. List of ongoing works in hand and the Physical and financial progress of those works as per **Annexure-C.**

12. Scanned copy of Bid Capacity calculation in his/her own letter head. (Calculation to be done as prescribed **annexure -B**)

13. Tender form and NIT with all addendum and corrigendum to be uploaded will be (download and digitally signed. Quoting rate will only encrypted in the B.O.Q under financial bid. In case quoting any rate in printed tender form, the tender will be summarily rejected)

14. Special terms and conditions and specifications of work

15. Partnership firm shall furnish **partnership deed** and company shall furnish the Article of Association and Memorandum.

16. The registered cooperative societies should submit the registration certificate.

17. Power of attorney (in case of Partnership firm /Registered Co-Operative Society/company) to be uploaded.

18. No taried Affidavit in non judicial stamp paper regarding non employment of any Government official under him, deployment of machineries, laboratory equipment; technical personnel, correctness of certificates, and investment of minimum cash up to 30% of estimated cost etc. as per **annexure-A.**

19. Letter head of the agency/contractor containing Name addresses and contact details. During the currency of the project and after completion if the address of the agency/contractor changes, it will be the responsibility of the contractor to intimate the authority regarding such changes.

20. Work program in terms of bar chart to be submitted. **(For work valued more than 1 Cr.)**

21. Bank Credit Certificate of 30% of the Amount put to tender should be provided as per format given above.

22. Job card holder shall be mandatorily be engaged in the work as rural unskilled workers. The contractor/agency executing the work shall also furnish a certificate after completion of work that only Job Card holder were engaged for unskilled works during execution. Scrutiny of such certificate will be done by departmental official before making payment against the work .

23. Others (if any)

24. **Annexture-1 & Section B (Form I, II, III, IV) must be uploaded as per given format, otherwise bid will be rejected.** .

B. Bare Minimum requirements of machineries for road construction works is as follows. (For work valued more than 1 Cr.)

This list is only indicative. The bidder shall have to arrange for every necessary machineries, tools & plants for the intended job to the full satisfaction of Engineer in charge (to be mentioned in the affidavit).

Sl. No	Name of Machineries	Required Minimum number (For work value above Rs 1.00 Cr.)
1	Light-Duty Mobile HMP with separate heating &mixing drum (for Bituminous work only)	1
2	Smooth Wheeled Roller (8-10 Tone) (for Bituminous work/for earth work only)	1
3	Concrete Mixer (in case of concrete pavement)	1

Director (Working)
Corporate Office,
WBPDCL

C. Other instructions

1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
2. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.
3. No Mobilization Advance and Advance against purchase of equipments will be paid for the work.
4. No Advance of any kind will be paid for the work under any circumstances.
5. Under no circumstances Escalation in prices in materials, labour charges, cost of P.O.L.& arbitration will be entertained.
6. The Employer requires the bidders / Contractors to strictly observe the laws against fraud and corruption in force in India, namely, Prevention of Corruption Act, 1988.
7. There will be no price preference to any bidder.
8. No interest claim will be admissible during refund of earnest money and security deposit.
9. Uploaded documents of valid successful bidders may be verified with the original in due course. The valid successful bidders have to show the originals to the concerned authority as and when required.
10. Any bill (running account/final) payment of proposed executed work may be made to Agency as per availability of fund.
11. Bid of any Black listed bidder will be rejected.
12. The engaged contractor will have to get registered under BOCW (RECS) act and shall have to contribute towards " The West Bengal Building and other Construction Workers' welfare fund" @ 1% (One percent) of the gross amount of the work by way of deduction from Running and /or final bill.
13. **Earnest Money & Security Deposit:** The Earnest Money (2% of amount put to tender) will be converted to Security deposit. The Balance amount of Security Deposit (as per Govt. order in force during pendency of the contract) money will be deducted from running and final bill.
14. **The Security Deposit will be released to the contractor as stated below.**

    (a) For work with one year security Period:

    i) Full security deposit shall be refunded to the contractor on expiry of one year from the actual date of completion of the work.

15. Time allowed for completion of work will be measured from the date of issue of work order
16. If any erroneous printing found after agreement or any time in the SOQ (Schedule of Quantity) Quantity or Rate, the Tender Inviting authority reserve the rights to correct the same as per approved original estimate.
17. Bidding documents (NIT and SBD) is to be uploaded by the bidder. The bidder has to only agree/ disagree on the conditions in the bidding document. The bidders who disagree on the conditions of bidding document cannot participate in the tender and his /their bid will be treated as informal.
18. ***Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:***

    (i) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and / or record of submission of any false / fake document(s).

    (ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

    (iii) Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the Employer.

19. Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value. The available bid capacity will be calculated as per **annexure–B.**
20. The successful bidder shall have to abide by all the labour related and other rules, regulations and laws of the land and the Tender Inviting Authority in no way shall be held responsible for financial or any other consequences arising out of non his noncompliance of the same.
21. **Intending Bidder should read carefully read the Cl No 41 of GCC regarding the suspension and debarment policy before participating the tender.**
22. **Tax Invoice needs to be issued by the agency**/contractor for raising claim showing separately the tax charged in accordance with the provisions of GST Act, 2017.
23. **Priority of Documents:** The documents forming the contract are to be taken as mutually explanatory of one another. For purpose of interpretation, the priority of the documents shall be in accordance with the following sequence.

Director (Planning)
Corporate Office,
WBPDCL

a. Form No. 2911
b. Notice to Proceed with the works;
c. Letter of acceptance;
d. Notice Inviting Tender
e. Special Conditions of Contract and General Conditions of Contract (as per Form2911)
f. Specifications;
g. Drawings;
h. Bill of Quantities; and
i. Any other document listed in the Contract Data as forming part of the Contract.

Block Development Officer
Khoyrasole Development Block
Khoyrasole :: Birbhum
Block Development Officer
Khoyrasole, Birbhum.

Memo No. 610 /1(30)/KDB Dated: 11 /03/2025

Copy forwarded for information & taking necessary action.

1) The Sabhadhipati, Birbhum Zilla Parishad,Suri,Birbhum.
2) The District Magistrate, Birbhum
3) The A.E.O, Birbhum Zilla Parishad
4) The S.D.O., (Sadar), Suri.
5) The D.P. & R.D.O., Birbhum, Suri.
6) The D.P.L.O, Birbhum, Suri
7) The District Engineer, Birbhum Zilla Parishad. Suri,
8) The DIO, NIC, Birbhum with a request to publish the notice in Birbhum District's website https://birbhum.gov.in
9-10) The Savapati /SahakariSavapati Khoyrasole Panchayat Samity.
11) The Karmadhakshaya, PKOPSS, Khoyrasole Panchayat Samity.
12)The BL & LRO, Khoyrasole
13) The SAE , Khoyrasole Dev Block
14-23)TheProdhan (All) _____ Gram Panchayat.
24-26) The Officer-in-charge, Khoyrasole/Kankartala/Lokepur PS
27) The Office Notice Board
28-29)The H.C. in-charge, Khoyrasole Development Block/Khoyrasole Panchayat samity
30)Members of Tender committee with a request to attained as per tender schedule.

Block Development Officer
Khoyrasole Development Block
Khoyrasole :: Birbhum
Block Development Officer
Khoyrasole, Birbhum.

Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-A

SAMPLE FORMAT OF AFFIDAVIT (To be submitted in Non-Judicial Stamp Paper and to be Notarised)

I, Sri.....,S/o Sri.....aged.....years, Residing at.....Proprietor/Partner/Director of.....,do hereby solemnly affirm and declare in connection with the scheme.....

.....is as follows :

1. That I, the undersigned do certify that all the information furnished & statements made in the bid documents are true and correct to the best of my knowledge and belief.
2. That the undersigned also hereby verifies that neither any near relations of staff and officers of the department nor any retired gazetted officers are in our employment.
3. The undersigned would authorize and request any bank, person, firm or corporation to furnish pertinent information as deemed necessary and or as requested by the department to verify this statement.
4. The undersigned understands and agrees that the bid shall remain open for Acceptance 90 days from the date of opening of financial bid.
5. The undersigned agrees to invest 30% of the contract price of works by cash during the implementation of the works.
6. The undersigned agrees to authorize the authority to seek references from the bankers of the undersigned.
7. If the contract is awarded to us, we will deploy at site all necessary T&P and equipments immediately on receipt of the work order. We would commence the work only on deployment of machineries at site to the full satisfaction of the Engineer-in-Charge. We would be duty bound to use those equipments at site to achieve the best result as per requirement of the contract. We would upkeep and maintain those equipments in running condition till completion of the Project. Any breakdown of any equipment will be replaced immediately. No part of equipment will be shifted to another site without the written permission of the E.I.C.
8. We would establish a site laboratory with minimum testing equipments/ apparatus to conduct the various tests on soil, aggregates and cement, concrete to maintain the quality at site. We will upkeep the laboratory set-up in good condition of the project.
9. We would deploy at site all necessary technical personnel for efficient contract management and supervision of works to the full satisfaction of the Engineer in Charge with a view to achieving best quality of works at site.
10. We would carry out all necessary tests of all major items at frequency spelled out in the contract document to the full satisfaction of the Engineer in Charge to achieve the best quality work at site. We will be contract bound to bring to the notice of the EIC any non-compliance of test results along with the action taken report.
11. Any departure whatsoever in any form will be considered as breach of contract. In such situation the department at his liberty may withhold our payment till we rectify the defects or fulfill our contractual obligation. In this connection, Departmental decision will be final and binding.
12. The undersigned also certifies that neither we have abandoned any work awarded to us, nor any penal action was taken against us by any department. The undersigned also declares that we do not have any running litigation with any department.

Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-B

BANK GURANTEE FOR ADDITIONAL PERFORMANCE SECURITY DEPOSIT

To
Block Development Officer
Khoyrasole Development Block

	Account Details
Account Name	
Beneficiary Bank Account No	
IFSC Code	
MICR Code	
Branch Address	

WHEREAS ..... [NAME AND ADDRESS OF CONTRACTOR] (here after called "The Contractor") has undertaken, in pursuance of to execute..... (hereinafter called "The Contract").

AND WHEREAS it has been stipulated by you in the said contract that the contractor shall furnish you with a Bank Guarantee by a scheduled commercial bank for the sum specified therein for 'ADDITIONAL PERFORMANCE SECURITY DEPOSIT' for compliance with his obligation in accordance with the Contract.

AND WHEREAS we ..... (indicate the name of the bank branch) have agreed to give the contractor such a Bank Guarantee.

NOW THEREFORE we ..... (indicate the name of the bank & branch) hereby affirm that we are the Guarantor and responsible to you on behalf of the contractor , up-to a total of Rs..... [amount of guarantee].....(in words). We undertaken to pay you, upon your first written demand and without cavil or argument, a sum within the, limits of .....

[amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein to the above beneficiary bank account.

We .....(indicate the name of the bank & branch) hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We .....(indicate the name of the bank & branch) further agree to pay to you any money so demanded not withstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto. Our liability under this present guarantee is absolute and unequivocal.

The payment / so make by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

We ..... (indicate the name of the bank & branch) further agree that no change or addition to or other modification of the terms of the contract or of the works to be performed there under or of any of the contract documents, which may be made between you and the contractor, shall, in anyway, release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

We, ... (indicate the name of the bank & branch) also undertake not to revoke this guarantee except with your prior written consent.

The Guarantee shall be valid up to ..... It comes into force with immediate effect and shall remain in force and valid for a period of .....(Construction period claim period of six months). Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. .....(Rs.....) and unless a claim in writing is lodged with us within the validity period of this Guarantee, i.e. up to ..... , all our liabilities under this Guarantee shall cease to exist.

Director (Mining)
Corporate Office,
WBPDCL

Signed and sealed this day of 20.....at

SIGNED, SEALD AND DELIVERED
For and on behalf of the BANK by
(Signature)
(Name)
(Designation)
(Code Number)
(Address)

NOTES :

(i) The bank guarantee should contain the name, designation and code number of the officer (s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B

FORM-I

PRE-QUALIFICATION APPLICATION

To:
Block Development Officer
Khoyrasole Development Block

Ref: - Tender for

Name of work:

eNITNo. :**WBBIR/KHOYRASOLE-DEVELOPMENT BLOCK /eNIT- 05 /KDB/2024-25** Block Development Officer,
Khoyrasole Development Block
Dear Sir,

Having examined the Statutory, Non statutory & eNIT documents, I / we hereby submit all the necessary information and relevant documents for evaluation.

The application is made by me / us on behalf of _____ In the capacity _____ duly authorized to submit the offer. The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this letter.
We understand that:

(a) Tender Inviting & Accepting Authority/ Engineer-in-Charge can amend the scope & value of the contract bid under this project.

(b) Tender Inviting & Accepting Authority/Engineer – in-Charge reserve the right to reject any application without assigning any reason.

Enclo :-e-Filling:

1 Statutory Documents

2 Non Statutory Documents

Signature of applicant including title and capacity in which application is made

Date :-

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B
FORM-II
FINANCIAL STATEMENT

1 Name of Applicant:

2 Annual Turn Over for the last consecutive 3 (three) audited financial years:

	Year – I (Rs. in Lakh)	Year – II (Rs. in Lakh)	Year – III (Rs. in Lakh)
Annual Turn Over			

N.B: *(i) Submit authentic documents in support of Annual Turn Over*
(ii) Indicate year at time of submission

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

SECTION – B
FORM-III

DETAIL OF ORGANIZATION

1. Name of Applicant: (Indicate whether proprietary firm,) Partnership, Limited Company, Corporation/Others)

2 Office address:

3 Telephone No. :

4 Fax No. :

5 E-mail address:

6 Name and address of Banker:

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

SECTION-B

FORM- IV

Working Certificate

List of Project completed/ ongoing with work order value as stated in Serial No. 1 of the e-NIT

Name of Employer	*Name, Location and nature of work*	*Reference of work order (Memo No. & Date)*	*Contract value in TNR*	*Date of start of work*	*Present status (if completed, indicate date of completion)*

Note: Copy of work order and /or certificate from employer to be attached.

Signature of applicant including title and capacity in which applicant is made

Director (Mining)
Corporate Office,
WBPDCL

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)

Corporate Identity No: U40104WB1985SGC039154

: Registered & Corporate Office :

"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector-III, Salt Lake, Kolkata-700 106.

• Phone: (033) 2335-0571/2339-3100 • Fax: (033) 23393186/23393286

• Email: wbpdcl&wbpdcl.co.in • Website: www.wbpdcl.co.in .

WBPDCL

Ref. No. WBPDCL/AG(G)/25/133 **Date:06.05.2025**

To,
The Block Development Officer,
Khoyrasole Development Block,
Khoyrasole, Birbhum.

Sub: Status report of approved CSR projects for the FY_2024-25 & new proposal for FY_2025-26.

Sir,

First of all, this office is thankful for arranging time to have a meet with you amid of your daily tight schedule.

Please find enclosed herewith one self-explanatory letter of General Manager (HR&A), WBPDCL received by this office on 21. 04.2025 and recall the meet with you on appointment followed by the presence of the Welfare officer and the Mines Manager of this Coal Mine at your office on 02.05.2025.

You are aware that WBPDCL has approved Rs. 55,35,000/- towards CSR activities in the FY_2024-25, out of which phase wide payment have already been released to your designated account in two phases. In 1st phase of Rs. 16, 60. 500/- and in 2nd phase Rs. 22.14,000 but the last phase disbursement amounting Rs. 16,60,500/- is waiting for want of Utilization Certificate against the 2nd phase released amount.

In view of the above, you are requested to expedite action regarding the Utilization Certificate, which may kindly be sent to this end for onward transmission to our corporate office, paving the way for new CSR proposal for the FY_2025-26.

Apart from the above you are further requested to make necessary arrangement for preparing and sending new CSR proposal for the FY_2025-26. The estimated amount of budgetary fund stands Rs. 60 lakhs subject to the approval of the CSR Board level committee of WBPDCL.

In the above context, it would not be out of place to mention of your Memo No. 1631/KDB, dated 18.07.2024 attached with one letter of the principal SFS Mahavidyalaya, Khayrasole, Birbhum, please find attached herein the copies, for your ready reference and inclusion in the new CSR proposal.

With thanks,

06-05-2025

(Samresh Kumar)
Agent/ Project Officer,
G&&GB Coal Mine, WBPDCL.

Agent
Gangaramchak & Gangaramchak-Bhadulia Coal Mine, WBPDCL

Encl: - As stated above.

CC to: -
Director(Mining), Corporate office, WBPDCL,
GM(HR&A), Corporate office, WBPDCL,
GM(Mining), MROD, Durgapur.

Address:
Gangaramchak & Gangaramchak-Bhadulia Coal Mine
Office of the Agent/Project Officer,
Bhadulia, Birbhum-713325

Director (Mining)
Corporate Office,
WBPDCL

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)

WBPDCL

Corporate Identity No. : U40104WB1985SGC039154
: Registered & Corporate Office :
'Bidyut Unnayan Bhaban', Plot No. 3/C, LA-Block, Sector III, Bidhannagar, Kolkata - 700 106
• Phone : (033) 2339-3200 / 3300 • Fax : (033) 2339-3186 / 2339-3286 / 2339-3197
• Website : www.wbpdcl.co.in

Ref. No.: COHRA6210001/ 770(i-ii) Dated: 11.04.25

To,

The General Manager (Mining),
Pachhwara (N)/WBPDCL, Amrapada, Dist.-Pakur, Jharkhand, Pin - 814111

The General Manager (Mining),
MROD, WBPDCL,
DPL Twonship, Dr. B.C.Roy Avenue, Durgapur,
Dist. – Paschim Barddhaman, W.B., Pin–713202.

Sub: Status report of approved CSR Projects for the F.Y. 2024-25 & new proposals for F.Y. 2025-26.

Sir,

With reference to the above, you are requested to arrange for forwarding a present status report for execution of CSR Project as sanctioned on the financial year 2024-25 and also arrange to send the proposed projects for the financial year 2025-26 to this end after necessary recommendation of Mines Level CSR Committee within 15th May, 2025.

Thanking you,

Yours faithfully,
(Sd/-)
(P.S. Chatterjee)
General Manager (HR&A)

Memo No.: COHRA6210001/ 770(i-iv) Dated: 11.04.25

Copy forwarded for kind information to:-

1. The Director, (F&A) & Co. Secretary/ (Mining)/ Chief Vigilance Officer & Director (HR), WBPDCL.
2. The Agent, Barjora (North)/ Gangaramchak & Gangaramchak Bhadulia/ Tara (E&W), WBPDCL.

(P.S. Chatterjee)
General Manager (HR&A)

Bandel Thermal Power Station
GM - (033) 2684 6389
E-mail : gmbtps@wbpdcl.co.in
Fax : 2684 6151

Santaldih Thermal Power Station
GM - (03251) 260 227 / 250 / 341
E-mail : gmstps@wbpdcl.co.in
Fax : 260 217, PBX : 260 197

Kolaghat Thermal Power Station
GM - (03228) 231 110
E-mail : gmktps@wbpdcl.co.in
Fax : 231 260

Bakreswar Thermal Power Station
GM - (03462) 220 201
E-mail : gmbktpp@wbpdcl.co.in
Fax : 220 214, 220 346

Sagardighi Thermal Power Project
GM - (03483) 237 099, E-mail : gmsgtpp@wbpdcl.co.in
Fax : (03483) 237 002

Director (Mining)
Corporate Office,
WBPDCL

GOVERNMENT OF WEST BENGAL
OFFICE OF THE BLOCK DEVELOPMENT OFFICER
KHOYRASOLE DEVELOPMENT BLOCK
P.O. – Khoyrasole; Dist. – Birbhum, PIN – 731125 Tele-Fax: (03462) 240221

Memo No: 1631/KDB Date: 18/07/2024

To
The Agent/Project Officer,
Gangaramchak Coal Mines
WBPDCL
Khoyrasole, Birbhum

Sub:- Request for providing fund for up gradation of infrastructure in SFS Mahavidyalaya

In reference to the above mentioned subject, enclosed please find herewith the application of the Principal of S.F.S. Mahavidyalaya, Kaoyrasole, Birbhum, requesting for arrangement of fund needed for infrastructural up gradation of the College, as described in her letter.
You are requested to look into the matter and explore the provisions for mitigating the demand from CSR Fund, on urgent basis.
This is for your information and taking necessary action on immediate basis.

Enclo:- As stated.

Block Development Officer,
Khoyrasole Dev. Block, Birbhum

Memo No: 1631/1(3)/KDB Date: 18/07/2024

Copy forwarded for information & taking necessary action to:-

1) The Sub-Divisional Officer, Suri Sadar.
2) The Savapati, Khoyrasole Panvhayat Samiti
3) The Principal, SFS Mahavidyalaya

Block Development Officer,
Khoyrasole Dev. Block, Birbhum

Director (Mining)
Corporate Office,
WBPDCL

Sailajananda Falguni Smriti Mahavidyalaya

(Estd. - 1998)

NAAC Accredited

A Government Aided Degree College

P.O. - KHAYRASOLE ✡ DIST. - BIRBHUM ✡ PIN - 731125

Ref. No. 16/mise.(Adv.)/35/2024 Date. 12/07/2024

To
The B.D.O
Khoyrasole Development Block
Khoyrasole, Birbhum

Subject: Request for fund for up gradation of college infrastructure

Dear Sir,

I am writing on behalf of S.F.S. Mahavidyalaya to request financial support for up gradation of the existing infrastructure of our institution.

Our college is located in a remote area at Khoyrasole block in southwestern part of Birbhum district. Sharing boundary with Dumka and Jamtara districts of Jharkhand state on the western and northern parts, the only college of the Khoyrasole block dig up students from neighbouring state as well. The eastern and southern periphery of the college is extended as far as Suri, Dubrajpur, Illambazar blocks of Birbhum district and Pandaveshwar block of Paschim Bardhaman district.

However, with due regret this is to inform you that in spite of completing 25 years of age the college cannot step out from the stage of its infancy. Sir, as you know that infrastructure acts as a foundation pillar on which the subsequent progress of an institution depends. Due to lack of adequate infrastructure, the college cannot provide the minimum required service to the students and staff of the college. As a result, from the developmental point of view the college remains in a stagnant situation.

At this very backdrop I would like to draw your kind attention regarding the following infrastructural requirement of our college:

- Solar panel for power supply (10 KB)
- Rainwater Harvesting infrastructure
- Renovation of Girls' common room with toilet and sanitary napkin vending machine with disposal system
- Completion of toilet and classroom of 2nd floor
- Renovation and repairing of college building: college office, library and Principal's chamber
- Completion of A.C. Seminar hall of 1st floor

Sir, on behalf of the college, I invite your team to visit our college and inspect the actual situation. This is my earnest request to kindly go through the matter with due sympathy and do the needful in this regard.

Thanks and regards,

Bhaswati Ghosh 12.07.2024

Dr. Bhaswati Ghosh
Principal
S.F.S. Mahavidyalaya
Khayrasole, Birbhum

Director (Planning)
Corporate Office,
WBPDCL

HEALTH CHECKUP



Director (Mining)
Corporate Office,
WBPDCL

BLOOD DONATION CAMP



Director (Finance)
Corporate Office,
WBPDCL

Time bound action plan with budget against issues raised in Public Hearing on 6th February, 2023

Sl. No.	Subject	Issues Raised	Action Plan
1	Announcement for public hearing	• Announcement for public hearing is not done properly • Transportation of coal depends on Hajratpur and Kendakor but they are not aware about these public hearing. • Announcement for public hearing is not done properly. • Announcement for 3 MTPA is not done • Announcement for public hearing is not done properly • Didn't informed in Labour union	Announcement for Public Hearing held on 6th February, 2023 at Khoisasol Block Development office was done intensely by Miking from a mobile van in core and buffer zone of the project during 10 am to 5 pm on 31st January and 1st February, 2023. As a result, large number of people from all section of the society attended the Public Hearing.
2	Electricity	• Electricity • Electric poles are break down due to dumpers • Apart from 3 lights there are no other developmental work	There is no provision of supplying electricity to individual house in the nearby villages of the project. However, erection of poles and fixing of lighting had been done by the project proponent wherever it was required. In future for any such electric pole repairing, fixing of lights etc. the project proponent will arrange fund to Block Development Officer (BDO), Khoirasole for executing the work. Yearly budgetary provision would be Rs. 5 lakhs.
3	Drinking water	• Supply of Drinking water is irregular • There is no tube well for drinking water	At present 4 water tankers had been deployed for supplying drinking water to the villages falling in core and buffer zone

Director (Mining)
Corporate Office,
WBPDCL

Sl. No.	Subject	Issues Raised	Action Plan
		• Supply of Drinking water is irregular • Shortage of water tank • Safe Drinking water	(six villages). Provision of additional 2 water tankers would be made through Block Development Officer (BDO), Khoirasole for supplying water to other villages also. Yearly budgetary provision would be Rs. 8 lakhs.
4	Road condition	• Road condition is very poor • Chanditala to Bhadulia road preparation • The road to Sagarbhanga has been cut.	Construction of Road has been undertaken to connect Sagarbhanga Village from Bhadulia and Gangpur Village. Another one section of road repairing work will be undertaken within 3 months from Chanditala to Bhadulia Village. Total budgetary provision would be Rs. 50 lakhs.
5	Job Opportunities	• Job Opportunities • Loading of coal is done by machineries but they want this manually • Peoples are being misunderstood about coal transportation • Drivers of this project are not local. • As a local person they should do this work • Local labour should get job. • Only 57-58 local people are associated to this project • Around 200-300 people from outside are working in this project. But around 3700 local people are in out of state for their work.	Already 106 local people had been engaged in the mines in different jobs since inception of the project. From October, 2020, 210 local people have been engaged as security guard at Hajratpur Railway Siding and transport road. Moreover, the coal transportation from mines to Hajratpur Railway siding has been given to the local people what has benefitted villagers indirectly. Competent persons have been deployed for operation of HEMM as per Coal Mines Regulation. Provision of engagement of additional 25 persons from the core zone has been made.

Director (Mining)
Corporate Office,
WBPDCL

Sl. No.	Subject	Issues Raised	Action Plan
		• He was working under old company (EMTA) but new company (WBPDCL) recruit few people. • If the mine produces 3 MTPA, the life of the entire mine will be reduced so many people will lose their jobs. • Mines falls under three villages, those who are gave the land didn't get any job.	Additional budgetary provision for manpower would be Rs. 60 lakhs yearly. Loading of Coal to the wagons have been carried out mechanically by using pay-loaders which is not possible manually for handling huge quantity every day.
6	No benefits & No development	• No benefits are provided by mine authority • There is no development in Gangpur village • Maximum land acquired from Sagarbhanga but any development of Sagarbhanga has not been done • Development must be done before 3 MTPA coal mining.	Benefits like supply of books, promotion of sports, financial support to the poor people etc. are being undertaken on regular basis at Bastavpur Village. Two no of ponds had been de-silted in Sagarbhanga and Sahapur Village. Other benefits to the villages will be covered under CSR through the Block Development Officer (BDO), Khoirasole. Yearly budgetary provision would be Rs. 60 lakhs.
7	No facility for schools	• No facility for schools • There is a school beside the road, students are suffering for dust and sound	
8	Pollution from Dust	• Dust from Mine lease area spread upto 275 mtr • Dust from mining affects in crops and food stall • Pollution in 10 villages along with Nagrakonda. • Health effects in Cattles and human • Mitigation for dust control. • Dust Problem	For the dust control in road, adequate measures had been taken for preventing generation and suppression of dust by deploying 2 no of water sprinklers. Additional one water tanker fitted with fogging machine will be deployed in the road. Additional budgetary provision would be Rs. 24 lakhs.
9	Forest &	• Coal production by cutting	Diversion of 101.77 ha of

Director (Mining)
Corporate Office,
WBPDCL

Sl. No.	Subject	Issues Raised	Action Plan
	livelihoods	down saal forest • Livelihoods of tribals have been destroyed due to deforestation	Forest land had been done in favour of West Bengal Power Development Corporation Limited for establishment of Gangaramchak & Gangaramchak-Bhadulia Coal Mine under Birbhum Forest Division, West Bengal. There were no duellers in the diverted Forest land. Trees are being felled as required in phased manner under the guidance of Range Officer, Dubrajpur.
10	Water Pollution	• Increase in amount of CO_2 in 200-250 pond • Polluted water from blasting is falling into canals and then into many ponds • As a result, various water-borne diseases are appearing and fish are dying	Mine water is solely used for the purpose of water spraying in the mines and plantation. However, one ETP with the capacity of 100 cum/ hr has been installed on the surface for discharging treated water out of mine boundary if required.
11	WBPDCL-Land	• WBPDCL get the land on 15.10.2020 but farmers didn't get their actual amount	There is no such allegation from the land owners of the project. Proper care has been taken during procurement of land by a special land team.
12	Coal supply	• If local people picked up the coal that is wasted during delivery they get punished for that.	Mine is a prohibited area under the law, nobody can enter the mine without the permission of mines manager.
13	Vibration	• Their houses are being destroyed due to the vibration of the dumper.	Control blasting as recommended by CIMFR has been adopted and vibration during blasting is being monitored regularly for each and every blast by Vibration monitoring equipment. The result of vibration does

Director (Mining)
Corporate Office,
WBPDCL

Sl. No.	Subject	Issues Raised	Action Plan
			confirm much below the permissible standard as given in DGMS Circular (Cir. Tech. 7/1997).
14	Mining Rules	• Coal mining rules did not followed for 1 MTPA	The mine is being operated by competent persons as specified in Coal Mines Regulation. All the operations are being carried out adhering to the conditions given in Mines Act, Regulation, Rules, Laws, Bylaws, Circulars etc.
15	CSR	• There is no supply of coal or wood for the funeral • There are no developmental work is done in CSR fund • Football ground is incomplete • The Ponds are not cut properly. • CSR budget did not used properly. • Development must be done before 3 MTPA coal mining.	Construction of football ground, de-siltation of ponds etc. in different villages will be undertaken under CSR through the Block Development Officer (BDO), Khoirasole. Yearly budgetary provision would be Rs. 60 lakhs (Please refer point no 6).

Director (Mining)
Corporate Office,
WBPDCL

FOG CANNON, WATER SPRINKLER AND SWEEPING MACHINE













Director (Operations)
Corporate Office,
WBPDCL

Annexure-15

3244

FORM 4

[See Rules 9(3) and 10(5)]

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

U32690

PERMIT FOR SINKING OF NEW WELL

[438-7(3)(b) / 7(4)(b) / 7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act 2005.]

PERMIT NO P03040620000000042501WHE

1. (a) Name of the applicant (user) : Shri/Smt. WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
   (b) Son / Daughter of
   (c) Address of the applicant : Bidyut Unnayan Bhavan, Plot No. 3/c, LA-Block, Sector-III, Bidhannagar, Kolkata-700098
   (d) Category of farmer (Please tick) (in case of irrigation well) : Small Farmer / Marginal Farmer / Others
   (e) Serial No. of application Form and date of submission : BP/B 0131 <ENo. 022 dt 07/07/2015
   (f) Specimen signature of the user

2. Location particulars—
   (a) District : Birbhum.
   (b) Block, Mouza, J. L. No., Plot No. : Khyrasol, Goenjemoorm Pur, 62, 425
   (c) Municipality / Corporation Ward No. / Borough No., Holding No. : NA

3. Particulars of the proposed well and pumping device—
   (a) Type of the well : Mine Dewatering from open cast mine sump
   (b) Approx. depth of the well (m) : 150m
   (c) Purpose of the well : Industrial (Dewatering of open cast mine)
   (d) Assembly size (for tube well) : 150 mm X — mm
   (e) Approx. strainer length (for tube well) : NA m
   (f) Diameter (for dug well) : NA m
   (g) Type of pump to be used : Centrifugal
   (h) H. P. of the pump : 250 H.P.
   (i) Operational device : Electrical ~~Diesel~~
   (j) Rate of withdrawal (m3 / hr.) : 1200 m3/hr
   (k) Maximum allowable running hours per day : 18 hrs/day

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (K), and is valid subject to the observance of the conditions stated overleaf.

Place : Suri

Date : 30/06/2016

30/06/16

Geologist

Geological Survey Unit No. IB

State Water Investigation Directorate

Member Secretary

District Level Ground Water Resources Development Authority

BIRBHUM

Director (Technical)
Corporate Office,
WBPDCL

OFFICE OF THE GEOLOGIST • SWID, BIRBHUM • OFFICE SEAL

Conditions :

(1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
(2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
(3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be false during verification at any subsequent stage, this permit is liable for cancellation.
(4) Any other condition imposed by the concerned Authority.

B.C.L.-34/50.000/06

TRUCKS COVERED WITH TARPAULIN







Director (Mining)
Corporate Office,
WBPDCL

WATER HARVESTING POND





Director (Mining)
Corporate Office,
WBPDCL





Director (Mining)
Corporate Office,
WBPDCL





Director (Mining)
Corporate Office,
WBPDCL

PLANTATION



Director (Planning)
Corporate Office,
WRPDCL

PLANTATION





731

438

Environmental Expenses Calculation for Bhadulia Coal Mines

Particulars	2023-24			2024-25		
	Capex	Opex	Total	Capex	Opex	Total
Tree Plantation	2,53,732.04	6,78,793.00	9,32,525.04	5,18,527.88	5,23,346.00	10,41,873.88
Water Tanker	-	70,43,176.16	70,43,176.16	-	59,73,656.32	59,73,656.32
Fog Canon	22,20,000.00	33,16,800.00	55,36,800.00	-	33,16,800.00	33,16,800.00
ENVIRONMENT DISPLAY BOARD WITH CONTROLLER	1,70,000.00	-	1,70,000.00	-	-	-
AMBIENT AIR QUALITY MONITORING SYSTEM	3,00,000.00	-	3,00,000.00	-	-	-
ENVIRONMENT BOARD DATA CONNECTIVITY	-	-	-	2,06,000.00	-	2,06,000.00
	29,43,732.04	**1,10,38,769.16**	**1,39,82,501.20**	**7,24,527.88**	**98,13,802.32**	**1,05,38,330.20**

Director (Mines)
Corporate Office
JSEPDCL

Prodcontrol (India) Private Limited®

INSPECTION ◇◇ SAMPLING ◇◇ SURVEY ◇◇ ANALYSIS

An ISO 17025 (NABL) Accredited Laboratory ◇ An ISO 9001 Certified Inspection Organization

◇◇ An ISO 22000 : 2018 Certified Organization ◇◇

643B, Block 'O', 1st Floor, New Alipore, Kolkata - 700 053, West Bengal, INDIA

E-mail : admin@prodcontrol.com, kol@prodcontrol.com, Web : www.prodcontrol.com

◇ Tel : +91 033 3591 9976 ◇◇ fssai Regd. No. : 22819040000482 ◇

REPORT NO.: PCL/NN/2024-25/K0961 **DATE- 16.07.2024**

TEST REPORT

Issued To:	**M/s GOQUEST SOLUTION PRIVATE LIMITED GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINE BHADULIA LOKEPUR, BIRBHUM, PIN 721125, WEST BENGAL**
Sample Description	**ETP INLET**
Sample Collection Date	**13.07.2024**
Date of Start of Analysis	**13.07.2024**
Date of Completion of Analysis	**16.07.2024**
Sample collected by	**LAB REPRESENTATIVE (D BHATTACHARJEE)**

TEST FINDINGS

SL. NO	PARAMETER UNDER TEST	TEST METHOD	RESULT	LIMIT AS PER CPCB FOR DISCHARGE OF EFFLUENTS	
				INLAND SURFACE WATER	PUBLIC SEWERS
1	Ph at 25°C	APHA 23rd ED, 4500H+	7.9	5.5-9.0	5.5-9.0
2	Total suspended solids in mg/L	APHA 23rd ED, 2540D	182	100	600
3	Chemical oxygen demand as COD in mg/L	APHA 23rd ED, 5220B	1985	250	----
4	Biochemical oxygen demand as BOD in mg/L	IS 3025 (Part 44)-1993	852	30	350
5	Cadmium as Cd in mg/L	APHA 23rd Edition 3111B	68.0	----	----
6	Lead as Pb in mg/L	APHA 23rd Edition 3111B	82.4	----	----
7	Total Arsenic as As in mg/L	APHA 23rd Edition 3114C	18.8	----	----
8	Mercury as Hg in mg/L	APHA 23rd Edition 3112B	15.6	----	----
9	Nickel As Ni in mg/L	APHA 23rd Edition 3111B	78.7	----	----
10	Sulphate AS SO_4 in mg/L	IS:3025(Part-24)- 1986	22.9	----	----
11	Nitrate as NO_3 in mg/L	APHA23rdEdition,4500NO3D	62.1	----	----
12	Alumina as Al in mg/L	APHA 23rd Edition3500 Al B	3212	----	----

Remarks

- ✓ *The given results reflect our finding of the submitted sample only.*
- ✓ *Report shall not be reproduced except in full without the written permission from the laboratory*

Director (Mining)
Corporate Office,
WBPDCL

For Prodcontrol (India) Pvt. Ltd.
Authorised Signatory

REPORT NO.: PCL/NN/2024-25/K0962 **DATE- 16.07.2024**

Prodcontrol (India) Private Limited®

INSPECTION ◇◇ SAMPLING ◇◇ SURVEY ◇◇ ANALYSIS

An ISO 17025 (NABL) Accredited Laboratory ◇ An ISO 9001 Certified Inspection Organization

◇◇ An ISO 22000 : 2018 Certified Organization ◇◇

643B, Block 'O', 1st Floor, New Alipore, Kolkata - 700 053, West Bengal, INDIA

E-mail : admin@prodcontrol.com, kol@prodcontrol.com, Web : www.prodcontrol.com

◇ Tel : +91 033 3591 9976 ◇ ◇ fssai Regd. No. : 22819040000482 ◇

TEST REPORT

Issued To:	**M/s GOQUEST SOLUTION PRIVATE LIMITED GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINE BHADULIA LOKEPUR, BIRBHUM, PIN 721125, WEST BENGAL**
Sample Description	**ETP OUTLET**
Sample Collection Date	**13.07.2024**
Date of Start of Analysis	**13.07.2024**
Date of Completion of Analysis	**16.07.2024**
Sample collected by	**LAB REPRESENTATIVE (D BHATTACHARJEE)**

TEST FINDINGS

PARAMETER UNDER TEST	TEST METHOD	RESULTS OBSERVED	LIMIT AS PER CPCB FOR DISCHARGE OF EFFLUENTS	
			INLAND SURFACE WATER	PUBLIC SEWERS
PH AT 25°C	APHA 23RD ED, 4500H+	7.8	5.5-9.0	5.5-9.0
TOTAL SUSPENDED SOLIDS IN MG/L	APHA 23RD ED, 2540D	16	100	600
CHEMICAL OXYGEN DEMAND AS COD IN MG/L	APHA 23RD ED, 5220B	55	250	-----
BIOCHEMICAL OXYGEN DEMAND AS BOD IN MG/L	IS 3025 (PART 44)-1993	18	30	350
OIL AND GREASE IN MG/L	APHA 23RD ED, 5520A	5.0	10	20

Remarks

- ✓ *The given results reflect our finding of the submitted sample only.*
- ✓ *Report shall not be reproduced except in full without the written permission from the laboratory*

Director (Mining)
Corporate Office,
WBPDCL

For Prodcontrol (India) Pvt. Ltd.
Authorised Signatory

Our liability is limited to the excercise of due care and diligence. This certificate dose not however, release vendors or buyers from their contractual obligation.





Director (Mining)
Corporate Office
WBPDCL





Director (Mining)
Corporate Office,
WBPDCL

GoQuest™
Infinite Possibilities

WO No.: GSPL/DGP/WO/25-26/084
Date: 27.05.2025

To
Green Endeavour Engineers & Consultant
Plot No.3/2 50, Bhupatinagar
P.S. Contai, Dist.Purba Medinipur
West Bengal
PAN: AHQPT2833B

Sub: Work order for Conducting Environmental Audit & Digital Survey at Gangaramchak & Gangaramchak Bhadulia Coal Mines

Dear Sir,

With reference to discussions, we had with you (herein referred to as "contractor" or "You") with respect to captioned subject, we are pleased to issue work order for the same under the below terms and conditions mutually agreed w.e.f **-01.06.2025**

1. **Scope of Work**
    a. Procurement of latest satellite imagery (LISS-IV,5.6m resolution) and toposheet from authorised agencies.
    b. Primary Data collection and ground truthing studies.
    c. Preparation of land use/land cover (LULC) map of core zone (1:5000 SCALE) and buffer zone (10 km radius,1:5000 scale).
    d. Processing digital terrain model using CARTOSAT-1 stereo-pair data (2.45/2.5m resolution).
    e. DEM preparation of all mining area at 1:5000 scale for core and buffer zones.
    f. Land use classification: agriculture, forest, mining, wasteland, waterlogged, habitation, roads, rivers, and other features.
    g. Procurement of registered digital LULC maps from concerned authorities (1:5000 and 1:50000 scale).
    h. Time-series land use change analysis and report preparation.
    i. Identification of existing green cover and scope of afforestation.
    j. Depiction of mine boundaries and lease pillars on LULC maps as per GSPL's input.
    k. It is further clarified that the scope of work under this order is not limited to the specific tasks mentioned above. The contractor shall also be responsible for ensuring that the deliverables and services fully meet the satisfaction and requirements of the Integrated Regional Office (IRO), MoEF&CC, in line with the conditions stipulated in the Environmental Clearance (EC). Any additional efforts, documentation, or clarification required by IRO, MoEF&CC for successful compliance shall be undertaken by the contractor without additional financial implications to GSPL, unless otherwise mutually agreed in writing.

Director (Mining)
Corporate Office
WBPDCL

GOQUEST SOLUTION PRIVATE LIMITED (Formerly known as Gangaramchak Mining Private Limited)
Regd Office: Infinity Benchmark, Plot No. G-1 | Zonal Office : CA-12, Bengal Ambuja Complex,

GoQuest™
Infinite Possibilities

2. **Scope of Work for Third-Party Environmental Audit**
   a. Ground truthing and primary data collection.
   b. Review of EC and CTO conditions along with compliance status.
   c. Examination of documentation under valid CTOs.
   d. Review of Environmental Statement (Form-V) for FY 2024-25.
   e. Validation of dada submitted to WBPCB for FY 2023-24.
   f. Recommendations based on audit findings.
   g. Tools/tackles to be arranged by GSPL.
   h. Submission of reports in both hard as well as soft copy.

3. **Quantity & Rates**
   a. You shall be paid an amount as agreed and fixed as per below table **except GST**.

1. Digital Survey as per Clause 4.1(f)(i)	**240000**
2. Environmental Audit as per Clause 4.1(i)(iv)	**294000**
Total	**534000**
(Rupees Five Lakh Thirty-Four Thousand Only)	

   b. GST amount shall be released only when undisputed Credit of the same is available to us as per monthly return submitted by you.
   c. TDS shall be deducted under Income Tax Act from your bill at the prevailing rates.

4. **Validity of the Contract**
   a. This work order is valid up to **31.08.2025** or completion of the work, whichever is earlier.

5. **Manpower and Wages**
   a. You shall employ only competent, skilled and orderly men to carry out the work. The project manager shall have the right to ask you even verbally to remove from the work site any man who in his opinion is undesirable and incompetent. You may have to remove them within three hours of such orders.

6. **Billing and Payment Terms**
   a. Billing & Address: - **Goquest Solution Private Limited**. Address- CA-12, Bengal Ambuja Complex, Phase-II, City Centre, Durgapur-713216.**GSTIN- 19AAGCG5674B1ZJ.**
   b. 40% advance along with Work Order,40% upon completion of draft report to PP & 20% upon completion of final submission of report.
   c. Final Payment shall be made on certification of undisputed bill by the concerned authority within 15 days from the receipt of the bill by Accounts section by way of Cheque/RTGS only.

7. **Security and Safety**
   In case of accident injuries (fatal, serious or minor nature) or damage of our equipment or injuries to third parties, you will pay compensation for such incidents /accidents. In case of damage of property or persons of the GSPL, while execution of your equipment you shall own full responsibility for the same and make good losses to the GSPL.

Director (Mining)
Corporate Office,
WBPDCL

GoQuest™
Infinite Possibilities

8. **Force Majeure**
Neither Party shall be liable under the Work Order if prevented from the fulfillment of its obligations or undertakings under the Work Order for reasons of Force Majeure, viz. Act of God, acts of Central and State Governments, acts of any Competent Authority, act of terrorism or sabotage, in each case occurring inside or directly involving India, strikes, lockouts or other generalized labour action occurring within India, cyclone, lightening, drought, storm or any other extreme effect of the natural elements, fire or explosion, provided the affected Party shall give notice of the event of Force Majeure to the other party within 7 (Seven) days from the date of occurrence thereof and notice of cessation of Force Majeure shall be given forthwith upon such cessation.

9. **Settlement of Disputes**
If question of any difference or claim or dispute arises under this work order as to the rights, duties and obligations hereto or in all matter, relating to work order, you shall, to the extent possible, try to settle it amicably by negotiation and discussion with us. If the dispute cannot be settled within 30 (thirty) days by mutual discussion the same shall be referred to the arbitration. The sole arbitrator shall be appointed by GSPL. The award of the sole arbitrator shall be binding. The venue of the arbitration shall be Kolkata.

10. **Continuity of Obligation**
The Commencement of Arbitration will not relieve the Parties herein from the performance of their obligations (whether disputed or not) under this Contract during the pendency of such arbitration proceedings.

11. **Addendum to the Work Order**
This Work Order sets out the detailed terms & conditions agreed between the Parties as to the subject matter hereof and overrides any previous correspondence or agreement between them in this regard.
GSPL reserves the right to issue addendum with mutually discussed terms at any time during the tenure of this contract.

12. **Jurisdiction and Governing Laws**
All the disputes pertaining to this Work Order or arising out this Work Order shall be subject to the exclusive jurisdiction of Courts under whose jurisdiction the Kolkata office of GSPL situated. This Work Order shall be governed and constructed according to the laws in force in India.

This work order is being issued to you in duplicate with request to return the duplicate copy duly signed with your office seal as a token of acceptance.

Thanking you,
Yours faithfully,
For Goquest Solution Private Limited

Authorized Signatory

Accepted by,
Green Endeavour Engineers & Consultant

Authorized Signatory

Director (Planning)
Corporate Office,
WBPDCL

GOQUEST SOLUTION PVT. LTD.

CA 12 Bengal Ambuja Housing Dev.Ltd, Urvashi, Phase II, City Centre Durgapur , Burdwan, Pin-713216
GSTIN No:19AAGCG5674B1ZJ

TAX INVOICE

voice No.: GMP/TPB/24-25/14	State : West Bengal
voice Date :- 21-02-2025	State Code: 19
etails of consignor :	Details of Consignee
ame :Goquest Solution Pvt Ltd.	Name : Mangalam Lubricants Pvt Ltd.
lling Address: CA-12, BENGAL AMBUJA COMPLEX, CITY CENTRE, SPURGAPUR,PIN-713216, WEST BENGAL	Address:-Plot No- 121, Off Ranchi- Khunti Road, Hardog, Ranchi, Jharkhand-835221
TE ADDRESS: Gangaramchak & Gangaramchak-Bhadulia Coal Mines,P.S: ikpur,Nakrakonda, Dist-Birbhum, PIN-731125	SHIPPING Address: Mangalam Lubricants Pvt Ltd., Plot No- 121, Off Ranchi, Khunti Road, Hardog, Ranchi, Jharkhand-835221
STIN No:19AAGCG5674B1ZJ	GSTIN No: 20AABCM2476J1ZO
ate: West Bengal State Code: 19	State: Jharkhand State Code: 20

Sl No	Name of Item /Goods	HSN code	UOM	Qty	Rate	Amount	Taxable Amount
1	USED BLACK OIL	27109900	DRUM	25	5,932.20	1,48,305.00	1,48,305.00
					Total		1,48,305.00

Total Invoice amount in words:

RUPEES ONE LAKH SEVENTY-FIVE THOUSAND ONLY.

Add CGST :	0%	0.00
Add SGST :	0%	0.00
Add IGST :	18%	26,694.90
Total Tax Amount		0.00
Round off		0.100
Total Invoice After Tax		1,75,000.00

Mode of Transport:	By Road
Vehicle Number:	WB51A 7403
Driver Name	
E Way bill No:	

For Goquest Solution Pvt Ltd.

GOQUEST SOLUTION PRIVATE LIMITED DGP

21/2/25

Authorised Signatory

Director (Mining)
Corporate Office,
WBPDCL

19AAGCG5674B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED

1.e-Invoice Details

IRN : da9a71c02a65f325a463bf764f6b1007683041 1efcb969e525e011c80275b532 Ack No. : 182518394696734 Ack Date : 21-02-2025 12:40:00

2.Transaction Details

Supply type Code : B2B
Document No. : GMP/TPB/24-25/14
IGST applicable despite Supplier and Recipient located in same State : No
Place of Supply : JHARKHAND
Document Type : Tax Invoice
Document Date : 21-02-2025

3.Party Details

Supplier :
GSTIN : 19AAGCG5674B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED
CA/12, BENGAL AMBUJA HOUSING DEV LTD, CITY CENTRE, DURGAPUR, Bardhaman, DURGAPUR 713216 WEST BENGAL

Recipient :
GSTIN : 20AABCM2476J1ZO
MANGALAM LUBRICANTS PRIVATE LIMITED
Plot No 121 Off Ranchi - Khunti Road Hardag Ranchi Jharkhand

RANCHI Place of Supply: JHARKHAND
835221 JHARKHAND

Dispatch From :
Goquest Solution Pvt. Ltd
Gangaramchak & Gangaramchak Bhadulia Coal Mines P.S- Lokpur, Nakrakonda, Dist- Birbhum
Bhadulia
731125 WEST BENGAL

4.Details of Goods / Services

SlNo	Item Description	HSN Code	Quantity	Unit	Unit Price(Rs)	Discount(Rs)	Taxable Amount(Rs)	Tax Rate(GST + Cess | State Cess + Cess Non Advol	Other charges	Total
1	Used Black Oil	27109900	25	DRM	5932.2	0	148305	18.00 + 0.00 | 0.00 + 0	0	174999.9

Taxable Amt	CGST Amt	SGST Amt	IGST Amt	CESS Amt	State CESS	Discount	Other Charges	Round off Amt	Tot Inv. Amt
148305.00	0.00	0.00	26694.90	0.00	0.00	0.00	0.00	0.00	174999.90

Generated By : 19AAGCG5674B1ZJ
Print Date : 21-02-2025 12:40:14

182518394696734

eSign
Digitally Signed by NIC-IRP
on :2025-02-21 12:40:00

Director (Mining)
Corporate Office,
WBPDCL

-Way Bill

449

1. E-WAY BILL Details

eWay Bill No: **8515 0088 8977**

Generated Date:**21/02/2025 12:39 PM**

Generated By: **19AAG CG567 4B1ZJ**
Valid Upto: **23/02/2025**

Mode: **Road**

Approx Distance: **280km**

Type: **Outward - Supply**

Document Details: **Tax Invoice - GMP/TPB/24-25/14 - 21/02/2025**

Transaction type: **Bill From - Dispatch From**

2.Address Details

From

GSTIN : 19AAG CG567 4B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED
WEST BENGAL

:: Dispatch From ::
GANGARAMCHAK AND GANGARAMCHAK-BHADULIA COAL MINES
PO-NAKRAKONDA,PS-LOKPUR,BIRBHUM
BHADULIA,WEST BENGAL-731125

To

GSTIN : 20AAB CM247 6J1ZO
MANGALAM LUBRICANTS PVT LTD
JHARKHAND

:: Ship To ::
Plot No 121
Off Ranchi - Khunti Road
Hardag Ranchi,JHARKHAND-835221

3. Goods Details

HSN Code	Product Name & Desc.	Quantity	Taxable Amount Rs.	Tax Rate (C+S+I+Cess+Cess Non.Advol)
27109900	USED BLACK OIL &	25.00 DRM	148305.00	NE+NE+18.000+NE+0.00

Tot. Tax'ble Amt	CGST Amt	SGST Amt	IGST Amt	CESS Amt	CESS Non.Advol Amt	Other Amt	Total Inv.Amt
148305.00	0.00	0.00	26694.90	0.00	0.00	0.00	174999.90

4. Transportation Details

Transporter ID & Name :

Transporter Doc. No & Date : **& 21/02/2025**

5. Vehicle Details

Mode	Vehicle / Trans Doc No & Dt.	From	Entered Date	Entered By	CEWB No. (If any)	Multi Veh.Info (If any)
Road	WB51A7403	BHADULIA	21/02/2025 12:39 PM	19AAGCG5674B1ZJ	-	-

851500888977

Director (Mining)
Corporate Office,
WBPDCL

Note*: If any discrepancy in information please try after sometime.

GOQUEST SOLUTION PVT. LTD.

CA 12 Bengal Ambuja Housing Dev.Ltd, Urvashi, Phase II, City Centre Durgapur , Burdwan, Pin-713216
GSTIN No:19AAGCGS674B1ZJ

TAX INVOICE

Invoice No.: **GMP/TPB/24-25/15**
Invoice Date :- **21-02-2025**

State : West Bengal
State Code: 19

Details of consignor :
Name :Goquest Solution Pvt Ltd.
Billing Address: CA-12, BENGAL AMBUJA COMPLEX, CITY CENTRE, DGPURGAPUR,PIN-713216, WEST BENGAL

SITE ADDRESS: Gangaramchak & Gangaramchak-Bhadulia Coal Mines,P.S-Lokpur,Nakrakonda, Dist-Birbhum, PIN-731125

GSTIN No:19AAGCGS674B1ZJ

State: West Bengal State Code: 19

Details of Consignee
Name : M/S R S Metals Industries
Address:- Vill- Chinchuria,P.O- Nuni, P.S- Barabani.Asansol,Paschim Bardhaman, WEST BENGAL, PIN-713341
SHIPPING Address: M/S R S Metals Industries
SHIPPING Address:- Vill- Chinchuria,P.O- Nuni, P.S-Barabani.Asansol,Paschim Bardhaman, WEST BENGAL, PIN-713341
GSTIN No: 19ABGFR4729Q1ZB

State: West Bengal State Code: 19

Sl No	Name of Item /Goods	HSN code	UOM	Qty	Rate	Amount	Taxable Amount
1	SCRAP BATTERY 1000 MHD	85481020	PCS	17	1,900.00	32,300.00	32,300.00
2	SCRAP BATTERY 1800 MHD	85481020	PCS	1	4,200.00	4,200.00	4,200.00
3	SCRAP BATTERY 700 MHD	85481020	PCS	1	1,600.00	1,600.00	1,600.00
					Total		38,100.00

Total Invoice amount in words:

RUPEES FORTY-FOUR THOUSAND NINE HUNDRED FIFTY-EIGHT ONLY.

Add CGST :	9%	3,429.00
Add SGST :	9%	3,429.00
Add IGST :	0%	0.00
Round off		0.00
Total Tax Amount		6,858.00
Total Amount After Tax		44,958.00

Mode of Transport:	By Road
Vehicle Number:	WB37D 6439
Driver Name	
E Way bill No:	

For Goquest Solution Pvt Ltd.

Seal

21/2/25

Authorised Signatory

Director (Mining)
Corporate Office,
WBPDCL

19AAGCG5674B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED

1.e-Invoice Details

IRN : 4bf24aaac5215a679f6973aa770af941f9938ff0 Ack No. : 182518396555626 Ack Date : 21-02-2025 15:27:00
711556ab76a4a2ae0e8a4e98

2.Transaction Details

Supply type Code : B2B | Document No. : GMP/TPB/24-25/15 | IGST applicable despite Supplier and Recipient located in same State : No

Place of Supply : WEST BENGAL

Document Type : Tax Invoice | Document Date : 21-02-2025

3.Party Details

Supplier :
GSTIN : 19AAGCG5674B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED
CA/12, BENGAL AMBUJA HOUSING DEV LTD, CITY CENTRE, DURGAPUR, Bardhaman, DURGAPUR 713216 WEST BENGAL

Recipient :
GSTIN : 19ABGFR4729Q1ZB
R S METALS INDUSTRIES
PS BARABANI, PO NUNI, VILL CHINCHURIA, Chinchuria Place of Supply: WEST BENGAL
713341 WEST BENGAL

Dispatch From :
Goquest Solution Pvt. Ltd
Gangaramchak & Gangaramchak Bhadulia Coal Mines P S- Lokpur, Nakrakonda, Dist-Birbhum Bhadulia
731125 WEST BENGAL

4.Details of Goods / Services

SlNo	Item Description	HSN Code	Quantity	Unit	Unit Price(Rs)	Discount(Rs)	Taxable Amount(Rs)	Tax Rate(GST + Cess | State Cess + Cess Non.Advol	Other charges	Total
1	Scrap Battery 1000 MHD	85481020	17	PCS	1900	0	32300	18.00 + 0.00 | 0.00 + 0	0	38114
2	Scrap Battery 1800 MHD	85481020	1	PCS	4200	0	4200	18.00 + 0.00 | 0.00 + 0	0	4956
3	Scrap Battery 700 MHD	85481020	1	PCS	1600	0	1600	18.00 + 0.00 | 0.00 + 0	0	1888

Tax'ble Amt	CGST Amt	SGST Amt	IGST Amt	CESS Amt	State CESS	Discount	Other Charges	Round off Amt	Tot Inv. Amt
38100.00	3429.00	3429.00	0.00	0.00	0.00	0.00	0.00	0.00	44958.00

Generated By : 19AAGCG5674B1ZJ
Print Date : 21-02-2025 15:27:13

182518396555626

eSign
Digitally Signed by NIC-IRP
on :2025-02-21 15:27:00

Director (Mining)
Corporate Office,
WBPDCL

452

e-Way Bill

1. E-WAY BILL Details

eWay Bill No: **8315 0096 6813**

Generated Date:**21/02/2025 03:26 PM**

Generated By: **19AAG CG567 4B1ZJ**
Valid Upto: **22/02/2025**

Mode: **Road**

Approx Distance: **61km**

Type: **Outward - Supply**

Document Details: **Tax Invoice - GMP/TPB/24-25/15 - 21/02/2025**

Transaction type: **Bill From - Dispatch From**

2.Address Details

From

GSTIN : 19AAG CG567 4B1ZJ
GOQUEST SOLUTION PRIVATE LIMITED
WEST BENGAL

:: Dispatch From ::
GANGARAMCHAK AND GANGARAMCHAK-BHDULIA COAL MINES
PO-NAKRAKONDA,PS-LOKPUR,BIRBHUM
BHADULIA,WEST BENGAL-731125

To

GSTIN : 19ABG FR472 9Q1ZB
R S METALS INDUSTRIES
WEST BENGAL

:: Ship To ::
PO NUNI PS BARABANI
VILL CHINCHURIA
Asansol,WEST BENGAL-713341

3. Goods Details

HSN Code	Product Name & Desc.	Quantity	Taxable Amount Rs.	Tax Rate (C+S+I+Cess+Cess Non.Advol)
85481020	SCRAP BATTERY 1000 MHD &	17.00 PCS	32300.00	9.000+9.000+NE+NE+0.00
85481020	SCRAP BATTERY 1600 MHD &	1.00 PCS	4200.00	9.000+9.000+NE+NE+0.00
85481020	SCRAP BATTERY 700 MHD &	1.00 PCS	1600.00	9.000+9.000+NE+NE+0.00

Tot. Tax'ble Amt	CGST Amt	SGST Amt	IGST Amt	CESS Amt	CESS Non.Advol Amt	Other Amt	Total Inv.Amt
38100.00	3429.00	3429.00	0.00	0.00	0.00	0.00	44958.00

4. Transportation Details

Transporter ID & Name :

Transporter Doc. No & Date : **& 21/02/2025**

5. Vehicle Details

Mode	Vehicle / Trans Doc No & Dt.	From	Entered Date	Entered By	CEWB No. (If any)	Multi Veh.Info (If any)
Road	WB37D6439	BHADULIA	21/02/2025 03:26 PM	19AAGCG5674B1ZJ	-	-

831500966813

Director (Admin)
Corporate Office,
WBPDCL

Note*: If any discrepancy in information please try after sometime.

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
(A Government of West Bengal Enterprise)
Corporate Identity No: U40104WB1985SGC039154
:Registered & Corporate Office:
"Bidyut Unnayan Bhaban", Plot No. 3/C, LA-Block, Sector- III, Salt Lake, Kolkata- 700 106
• Phone: (033) 2335-0571/2339-3100 • Fax: (033)2339 3186 / 2339 3286 • Website: www.wbpdcl.co.in
• email: wbpdcl&wbpdcl.co.in

Ref. No. WBPDCL/AG/(G)/23/139 **Date- 13.10.2023**

To,
The Block Development Officer,
Khayrasole Block,
Birbhum-731125.

Subject- Display of E.C. in Notice Board.

Sir,
In accordance with the conditions stipulated in SL. No.- 10.2 of Environment Clearance(E.C.) miscellaneous conditions of Gangaramchak & Gangaramchak Bhadulia Coal Mine, WBPDCL, vide E.C. Identification No.- EC 23A0101WB5676217N, File No.- J/-11015/375/2006-IA-II(M) from Ministry of Environment, Forest and Climate Change, Govt. of India dated-12.10.2023 (Copy enclosed), this office would like to request your good office to display the copy of Environment Clearance(E.C.) for 30 days from the date of receipt.

This is for your kind information and necessary action please.

Thanking you,

13-10-2023

(Samresh Kumar)
Agent,
Gangaramchak & Gangaramchak Bhadulia Coal Mine,
WBPDCL.

Agent
Gangaramchak & Gangaramchak Bhadulia Coal Mine, WBPDCL

Encl: As stated above.

Khayrasole Block Development
RECEIVED
Without
Verification
Date.-
13/10/23

Director (Mining)
Corporate Office,
WBPDCL

WBPDCL
(A Government of West Bengal Enterprise)

Chanchal Goswami
Director (Mining)

Office Order No: 17/2023 Date:06.12.2023

Sub: Environmental Management Cell at Mine Regional Office Durgapur

As per guidelines of MoEF&CC, GoI The Environmental Management Cell for Barjora(North) Coal Mine, Tara (East) & Tara (west) Coal Mine, Gangaramchak & Gangaramchak Bhadulia Coal Mine & Barjore Coal Mine has been constituted to look after compliance of Environment Clearance conditions, sending half-yearly EC compliance & Form-V. The same will monitored the mitigative measure to be taken in the mine in respect of Environment.

The details of the team constituted with the following members.

Sl.No	Name	Designation	Emp. No	Mine	
1.	Sukla Saha	Asst. Manager (Environment)	50000304	**For all four mines**	Team Leader
2.	Almamun Mollah	Surveyor	50000183	For Barjora (North)	Member
3.	Sri Surajit Das	Assistant Manager(Civil)	50000242	For Barjora (North) & Tara (East) & Tara (West)	Member
4.	Sri Dibkar Sarkar	Surveyor	50000295	For Tara (East) & Tara (West)	Member
5.	Sri Biswajit Das	Assistant Manager(Civil)	50000234	For Gangaramchak & Barjore	Member
6.	Sri Sudip Ghosh	Surveyor	50000166	For Gangaramchak & Barjore	Member

The environment cell will submit the reports to the undersigned along with concerned authority.

06/12/2023

(Chanchal Goswami)
Director(Mining)

Memo No:WBPDCL/Director(Mining)/1709(1-13) Date:06/12/2023

Copy to: -

1. GM(MMC), WBPDCL
2. GM(Mining), Mine Regional Office, Durgapur
3. Consultant (Mining), WBPDCL
4. Agent, Barjora (North)/Tara(East) & Tara (West)/ Gangaramchak& Gangaramchak-Bhadulia/ Barjore
5. Person concerned

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
Corporate Identity No. : U40104WB1985SGC039154
"Bidyut Unnayan Bhaban", Plot No. 3-C, LA-Block, Sector-III, Bidhannagar, Kolkata-700 106
Phone: No. (91) (33) 2335 0581/ 2339 3204/3294, Fax. (91) (33) 2335 0524 / 2339 3286, Mobile: 9425176555
E-mail : c.goswami@wbpdcl.co.in, Website : www.wbpdcl.co.in

Director (Mining)
Corporate Office,
WBPDCL

Annexure-18

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LTD
(GOVERNMENT OF WEST BENGAL ENTERPRISE)

GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINES, WEST BENGAL

MINE CLOSURE ACTIVITY (10.09.2025)

Sl No	Year	Type of work	In Progress/ Completed	Date of Completion (If in Progress)	Estimated Progress	Outcome (Milestone Achieved)
		Technical Reclamation				
1	2020-21	Back Filling	5.85 Ha	31st march 2021	Completed	Completed
2	2021-22	Back Filling	7.9852 Ha	31st march 2022	Completed	Completed
3	2022-23	Back Filling	10.57 Ha	31st march 2023	Completed	Completed
4	2023-24	Back Filling	33.5022 Ha	31st march 2024	Completed	Completed
5	2024-25	Back Filling	12 Ha	31st march 2025	Completed	Completed
6	2025-26	yet to start	yet to start	yet to start	yet to start	yet to start
		Biological Reclamation				
1	2020-21	4787 no of plantation was done in 1.18 Ha area	Completed	31st march 2021	1.18Ha	Completed
2	2021-22	60kg sonajhuri seed was spreaded	Completed	31st march 2022	NA	Completed
3	2022-23	No of plantation 29470 (sapling) + 15000 (from seeds) = 44470 and 140 kg of seed has been spread	Completed	31st march 2023	18Ha	Completed
4	2023-24	1. No of plantation 26210 and 220 kg of seed has been spread over the dump slopes 2. Gap plantation of 8300 nos has been done mainly in the area of 4.60 ha of plantation done by prior allotee.	Completed	31st march 2024	4.60 Ha	Completed
5	2024-25	No of plantation 19600		31st march 2025	6.90 Ha	Completed
6	2025-26	Not Started yet	Not Started yet	Not Started yet	Not Started yet	Not Started yet
		Top soil Management				
1	2020-21	0.7 MM3				
2	2021-22	0.8 MM3				
3	2022-23	0.7MM3				
4	2023-24	1.2MM3				
5	2024-25	0.9MM3				
6	2025-26	0.3 MM3				
		Subsidence Monitoring and Management				
1	2020-21	Slope Monitoring through peg installation in OB Dump survey is in progress				
2	2021-22	Slope Monitoring through peg installation in OB Dump survey is in progress				
3	2022-23	Slope Monitoring through peg installation in OB Dump survey is in progress				
4	2023-24	Slope Monitoring through peg installation in OB Dump survey is in progress				
5	2024-25	Slope Monitoring through peg installation in OB Dump survey is in progress				
6	2025-26	Slope Monitoring through peg installation in OB Dump survey is in progress				
		Plantation (Fruit bearing Plants /Herbs)				
1	2020-21	824 No. of different fruits like Mango, Jackfruit, Guava, Kaju, lemon along with different local fruits have been planted				
2	2021-22	Not Done				
3	2022-23	2795 No. of different fruits like Mango, Jackfruit, Guava, Kaju, lemon along with different local fruits have been planted				
4	2023-24	5577 No. of different fruits like Mango, Jackfruit, Guava, Kaju, lemon along with different local fruits have been planted				
5	2024-25	5450 No. of different fruits like Mango, Jackfruit, Guava, Kaju, lemon along with different local fruits have been planted				
6	2025-26	Not Started yet	Not Started yet	Not Started yet	Not Started yet	Not Started yet
		Environmental Monitoring and Management				
1	2019-20	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc.				
2	2020-21	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc.				

Director (Mining)
Corporate Office,
WBPDCL

	3	2021-22	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc.				
	5	2022-23	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc.				
	4	2023-24	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc. 5.CAAQMS has been installed				
	5	2024-25	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc. 5.CAAQMS has been installed				
	6	2025-26	1. Was carried out in and around mine premises, haul roads, and coal stock yard to mitigate air pollution. 2. Trucks were optimally loaded and covered to minimize dust emission and mitigate air pollution. 3. Sump water was reused for plantation, green belt development, and water spraying purposes. 4. Air, water, and noise quality monitoring was conducted through a nabl-accredited laboratory and reports were submitted half-yearly to moef&cc. 5.CAAQMS has been installed				
			Skill development and training				
	1	2025-26	Total 154 Sewing machines have been distributed to the villagers from Bastavpur and Debgany. Additionally, training sessions were conducted by experts to ensure that the beneficiaries are equipped with the required skills.	Completed	15.04.2025	NA	Completed
			Clean Energy Project				
	1	2023-24	20 NO . Of solar light had been installed and 4 NO of bio toilet also been installed.				
			Water Resource management				
	1	2020-21	2 Piezometer had been installed				
	2	2021-22	3 Pond Cutting had been done				
	3	2022-23	ETP had been established				
	4	2023-24	3 Ground Water recharge ponds had been constructed				
	5	2024-25	STP had been constructed				
	6	2025-26	1 Pond cutting have been done				
			Art and Culture				
	1	2024-25	Promoting Art in the villages around the Mines.				
			Agriculture and other allied activities				
	1	2021-22	3 Pond Cutting had been done				
	2	2022-23	Cutting of drains had been done to chanelise water for agricultural purpose				
			Other				
	1	2019-20	Fencing had been done along the PIT				
	2	2020-21	Toe Wall has been constructed along the perheri of the Dump.				
	3	2021-22	Garland drain ,catch drain had been constructed and Majhithan Temple also had been constructed				
	4	2022-23	Road maintenance, Bastavpur football ground development, Sidhu Kanu statue installation, Books and welfare allowances and Gangarampur canal embankmer				
	5	2023-24	Plantation of 965 Plants along the transport road had been constructed.				
	6	2024-25	20 No of solar light had been installed and 4 No of bio toilet also been installed. Solar powered water overhead tank installation.				
	7	2025-26	2 no of Ambulance have been given to Nakrakonda and Khoyrasol Panchayat	Completed	15.04.2025	NA	Completed

Director (Mining)
Corporate Office,
WBPDCL

SCHEME FOR CONSTRUCTION OF CHECK DAM, RETENTION/TOE WALL TO ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG THE CONTOUR

In Compliance with Condition X(C) of Stage-I Forest Clearance vide letter No. F No.8-45/2018-FC, Dt.29.10.2018 of Ministry of Environment, Forest & Climate Change

(FC Division),

Govt. of India, New Delhi

For

Diversion of 101.77 Ha of Forest Land

In Favour of WB Power Development corporation limited for

Gangaramchak & Gangaramchak-Bhadulia Block Open Cast Coal Mines

Director (Mining)
Corporate Office,
WBPDCL

West Bengal Power Development Corporation limited

Gangaramchak & Gangaramchak-Bhadulia Coal Block Open cast Coal Mines

Under the Birbhum Forest division

SCHEME FOR CONSTRUCTION OF CHECK DAM, RETENTION/TOE WALL TO ARREST SLIDING DOWN.

1. INTRODUCTION

Gangaramchak & Gangaramchak-Bhadulia Coal Mines was allotted to WBPDCL by the nominated authority,GOI, vide Order. No.103/8/2015/NA Dt. March 31, 2015. Under section 6 of the Coal Mines (special provision) second ordinary 2014 for captive use its own plants at different locations in WB.

Director (Mining)
Corporate Office,
WBPDCL



2. Location of Integrated Gangaramchak & Gangaramchak -Bhadulia Block OCP and Mining Lease area

The integrated Gangaramchak & Gangaramchak-Bhadualia Block OCP is located in the Raniganj Coalfield in the Birbhum district of West Bengal

3. Access:

The area is approachable by road only. The Khayrasole-Panchra road connects the block with the Raniganj-Suri Road, (state high way) at Panchra. Another unmetalled road connects both Gangaramchak and Bhadulia Collieries with Khyarasole.

Director (Mining)
Corporate Office,
WBPDCL

Raswan railway station, on the Palasthali section of the Eastern Railway, is located about 4 km. south west of the block.

4. Climate:

Humid tropical climate prevails over the area with summer lasting from the months of March to May and winter from the month of November to February. During summer, the temperature generally varies from 30°C to 40°C while in winter it drops down to about 10°C.

The relative humidity varies from 45% to 95%. The major part of which precipitates during the period from June to October.

5. Physiography & Drainage:

The area exhibit generally undulating topography with elevation ranging from 94m to 121m above mean sea level. The general slope of the area is towards south west. The ground slope is rather steep both towards east and west. The block has highest elevation of 121m in the northern part of the block.

A number of ephemeral nalas, drains the area to the Hinglo River flowing to the south and west of the block.

6. Exacting Land Use:

The requirement of land for the project has been estimated at 187 Ha. Class of different land uses as derived from land cover plan are giving in the table below:

Sl no.	CLASS OF LAND	LAND AFFECT DUE TO		TOTAL (Ha)
		MINING (Ha)	INSFRUCTURE TRUE & OTHERS	
1	Forest	101.77	---	101.77
2	Non- Forest	47.65	37.00	84.65
Total		**149.42**	**37.00**	**186.42**

6. Objective of scheme:

In this scheme, considering the Topography and contours of the lease area, emphasis has been given to arrest sliding down of excavated materials along the contour by constructing check dams, retention walls/toe walls at specified location in the mining lease. Location are judiciously selected within the leasehold and plans have been prepared. Photograph of the OB Dump is furnished below:

Director (Mining)
Corporate Office,
WBPDCL



Existing Dump

7. The Salient features of the drainage management plan:

i) The overall drainage planning has been done in such a manner which follows the existing pre mining& pre mining drainage routing to the extent possible, maintaining the overall slope in the direction of pre mining flow direction so that run off distribution is not affected.

ii) Garland drains have been planned on the sides of external dumps (depending on contours).

The garland drains shall be routed through catch pits and settling tanks to settle out suspended solids in the storm water. The purified water will be discharged to natural water source.

iii) Grass and busses in drains hold back solid particles during the flow of water in the drain. Small stone barriers constructed across the drain will check water flow and arrest solid.

iv) Stone pitching will be made at suitable places to regulate the slope and hence water flow will not be obstructed.

v) Settling pits and drains shall be cleaned intermittently, especially during monsoon.

vi) Outer side of the cross-check dams on the drainage lines shall be reinforced with green cover of non-browsable species like Jatropha curcas,Vitexnegundo, Gliridia maculate.

Director (Mining)
Corporate Office,
WBPDCL

vii) The mining lease area is at close proximity of Hinglo Dam .In order to protect the area from surface inundation during high flood an embankment has been constructed in the south-western sector on the lease hold.

8. Measure Proposed to be adopted:

Structural Measure:

a) Construction of retaining wall: the proposed retaining wall will be constructed all around the over burden dump A,B excepting the northern aspect which is facing to the active mining pit. The length of the retaining wall be 1976 m.

b) Construction of toewall: On the southern aspect of the dump toe wall has to be constructed to prevent erosion of soil from over burden dump. The length of the toe wall be 380m.

c) Continuance of excavation garland drain on the southern aspect of dump be as per details given below.The Garland Drain dug earlier has been silted which needs renovation over a length of 500m. Siltation pond at an interval of every 10 meter and/ or and every curvature will be provided with a dimension of 1 m3 which will scoured at an interval of every 15 day particularly during rains.

Garland drain to be renovated over 500m L x 2.00m W x 1.00m H.

New Garland drain to be made over 8503m L x 2.00m W x1.000 m.H.

d) Check Dam : The garland drain will be connected to a check dam of dimension 10 meter X 4 mt X 3mt depth with a provision of spill way. The whole purpose is that the rain water passing through garland drain will ultimately be deposited in the check dam for a considerable period and the clean water will pass through the spill way to the natural drain.The silt deposited at the base check dam will dam be cleaned at a interval of every 15 days.

Director (Mining)
Corporate Office,
WBPDCL



EXISTING DRAIN

9. EXECUTING AGENCY

West Bengal Power Development Corporation being the User Agency will execute the above works at the Project Cost. To facilitate this the User Agency shall establish its own Executive and Supervision

Director (Mines)
Corporate Office,
WBPDCL

cells along with required infrastructural facilities. In order to maintain the quality of the work in-house supervision through competent personnel shall be entrusted. The entire work shall be carried out in coordination with Forest Deptt. (DFO, Suri Division).

10. SPECIALIZED CELL

Name of Executive	Educational Qualification	Present Designation	Expertise
Sir Sukanta Ghosh	Mining Engineer	Agent	Years of Service Experience in mining
~~Sir Shamareshkumar~~	~~Mining Engineer~~	~~General Manager, Mines~~	~~Years of Service Experience in mining~~
Sri Upendra Kumar	Surveyor	Surveyor	Years of service

SL NO	Number of Dump	Capacity Lakh M^3	Area in Ha
1	Dump A	3.2	14.36
2	Dump B	2.3	7.14

TOTAL COST OF THE PROJECT

Sl. No.	Description of the Work	Unit		Fund required In Rs.
	Structural Measures			
01.	Retaining Wall for O B Dump	02	Dump-A(Length1181m) Dump-B (Length 795m)	3186780.88 2145208.13
02.	Renovation to Garland drain	500m		116008.00
03.	New construction of Garland drain	8503m		1581470.00
04.	Construction of Toe wall coal storage area	380m		1029752.00
05.	New construction of check dam	2		319360.00
			Total	**83,78,579.50**

(Rupees eighty three lakh seventyeightthousand fivehundred and eighty) only.

Director (Mining)
Corporate Office,
WBPDCL

Amaleshkumar

Director (Mining)

West Bengal Power Development Corporation Ltd.

Kolkata

ANNEXURE-I

Detail Estimate of Retaining wall-Dump-A

SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Excavation of earth for foundation	1	1181	0.70	0.7	CUM	**578.690**	125.00	**72336.25**
2	Sand filling for foundation	1	1181	0.70	0.075	CUM	**62.003**	350.00	**21700.88**
3	PCC 1:4:8 for foundation	1	1181	0.60	0.075	CUM	**53.145**	3000.00	**159435.00**
4	Brick work for foundation	1	1181	0.50	0.3	CUM	**177.150**	3000.00	**531450.00**
5	Brick work for S/S,mines back side	1	1181	0.25	2.4	CUM	**708.600**	3150.00	**2232090.00**
6	Concrete for plinth 1:2:4	1	1181	0.25	0.1	CUM	**29.525**	4600.00	**135815.00**
7	Concrete for plinth 1:1/2:3	1	1181	0.25	0.025	CUM	**7.381**	4600.00	**33953.75**
								Total :	**3186780.88**

Detail Estimate of Retaining wall-Dump-B

SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Excavation of earth for foundation	1	795	0.70	0.7	CUM	**389.550**	125.00	**48693.75**
2	Sand filling for foundation	1	795	0.70	0.075	CUM	**41.738**	350.00	**14608.13**
3	PCC 1:4:8 for foundation	1	795	0.60	0.075	CUM	**35.775**	3000.00	**107325.00**
4	Brick work for foundation	1	795	0.50	0.3	CUM	**119.250**	3000.00	**357750.00**
5	Brick work for S/S,mines back side	1	795	0.25	2.4	CUM	**477.000**	3150.00	**1502550.00**
6	Concrete for plinth 1:2:4	1	795	0.25	0.1	CUM	**19.875**	4600.00	**91425.00**

Director (Mining)
Corporate Office,
WBPDCL

7	Concrete for plinth 1:1/2:3	1	795	0.25	0.025	CUM	**4.969**	4600.00	**22856.25**
								Total :	**2145208.13**

ANNEXURE-II

ESTIMATE FOR RENOVATION OF GARLAND-DRAIN

SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Cleaning of Existing garland drain	1	500	2.0	1.00	CUM	**1000.00**	73.00	**73000.00**
2	Earth excavation for settling tank	20	2.00	2.00	1.20	CUM	**96.00**	73.00	**7008.00**
4	Brick work for settling tank	20	8.00	0.25	0.30	CUM	**12.00**	3000.00	**36000.00**
								Total :	**116008.00**

ANNEXURE-III

ESTIMATE FOR OF GARLAND-DRAIN

SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Construction of earth work	1	8503	2.0	1.00	CUM	**17006.000**	73.00	**1241438.00**
2	Earth excavation for settling tank	80	2.00	2.00	1.20	CUM	**384.000**	73.00	**28032.00**
3	Brick work for settling tank	80	8.00	0.25	0.03	CUM	**48.000**	3000.00	**144000.00**
4	Brick work for settling tank	80	8.00	0.125	0.70	CUM	**56.000**	3000.00	**168000.00**
								Total :	**1581470.00**

Director (Mining)
Corporate Office,
WBPDCL

ANNEXURE-IV

ESTIMATE FOR OF TOE WALLCOAL STORAGE AREA

SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Excavation of earth for foundation	1	380	0.70	0.7	CUM	**186.200**	125.00	**23275.00**
2	Sand filling for foundation	1	380	0.70	0.075	CUM	**19.950**	350.00	**6982.50**
3	PCC 1:4:8 for foundation	1	380	0.60	0.075	CUM	**17.100**	3000.00	**51300.00**
4	Brick work for foundation	1	380	0.50	0.300	CUM	**57.000**	3000.00	**171000.00**
5	Brick work for S/S	1	380	0.25	1.40	CUM	**228.000**	3150.00	**718200.00**
6	Concrete for plinth 1:2:4	1	380	0.25	0.10	CUM	**9.500**	4600.00	**43700.00**
7	Concrete for plinth 1:1/2:3	1	380	0.35	0.025	CUM	**3.325**	4600.00	**15295.00**
									Total : 1029752.50

ANNEXURE-V

ESTIMATE FOR OF CHECK DAM

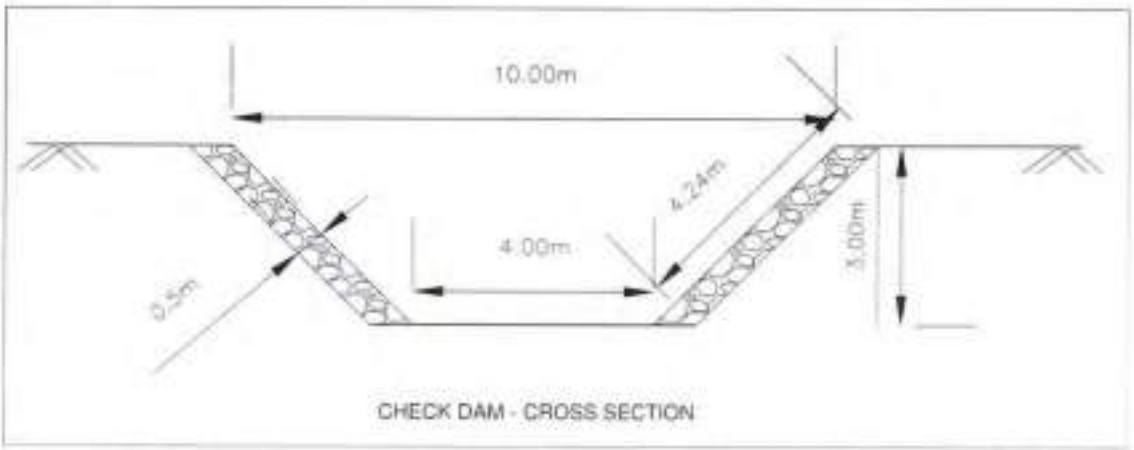
SL NO	JOB DESCRIPOTION	NO	LENGTH	WIDTH	HEIGHT	UOM	QUANTITY	RATE Rs.	AMOUNT
1	Excavation of earth for foundation	1	10	4	3	CUM	**120**	73.00	**8760.00**
2	Boulder pitching	1	10	4	4.5	SqM	**126.00**	110.00 (per Sqft)	**150920.00**
									Total : 159680.00

Cost estimate for 2 numbers of Check dam= Rs.159680.00 X 2

= Rs.319360.00

Thickness of boulder pitching along the slope angle 500mm

Director (Mining)
Corporate Office,
WBPDCL



CHECK DAM - CROSS SECTION

Director (Planning)
Corporate Office,
WBPDCL

Emergency Action Plan (EAP) during pandemic for nearby villages (within 10 Km radius) of Gangaramchak and Gangaramchak Bhadulia Coal Mines of West Bengal Power Development Corporation Limited

1. Objective:

This Emergency Action Plan (EAP) aims to establish a structured response framework for effectively addressing pandemic situations. It ensures timely medical and humanitarian assistance to the population residing within a 10 km radius of the Mines site, in alignment with applicable public health advisories and government protocols.

2. Scope:

The plan covers all six villages namely Gangarampur, Bastabpur, Bhadulia, Sahepur, Sagarbhanga, and Ahmedpur, situated within the 10 km buffer zone of the coal mine leasehold area. The plan addresses the following key domains:

- Public health and medical assistance
- Sanitation and hygiene measures
- Continuity of essential supplies
- Emergency communication protocols
- Coordination with local and district authorities

3. Responsible Agency/Authority

Sl. No.	Stakeholder/Agency	Role in EAP Implementation
1	Mines Authority	Lead coordination, provisioning of logistics and resources
2	District Health Department	Medical support, mobile units, health advisories
3	Gram Panchayats / Village Representatives	Local facilitation, identification of needs
4	Local NGOs / CSR Team	Community mobilization and outreach programs
5	District Administration	Overall supervision and policy-level support

4. Action Plan

A. Medical Support

- Distribution of First Aid kits, face masks, hand sanitizers, and PPE kits in all identified villages.
- Coordination with local PHCs for regular health check-ups and mobile medical units.
- Establishment of isolation facilities at the nearest government healthcare centers (if needed).

B. Sanitation & Hygiene Measures

- Disinfection of public areas, schools, and common facilities at regular intervals.
- Installation of temporary hand-washing stations in public places.
- Awareness campaigns promoting COVID-appropriate behavior and hygiene.

Director (Mining)
Corporate Office,
WBPDCL

C. Food & Essential Supplies

- Provision of dry ration kits to vulnerable families.
- Liaison with local vendors to maintain uninterrupted supply of daily-use items.
- Stockpiling of emergency commodities: baby food, sanitary items, medicines, etc.

D. Communication & Awareness

- Establishment of a dedicated WhatsApp helpline and dissemination of updates via village notice boards.
- Circulation of posters, leaflets, and Audio-Visual messages in vernacular language.
- Emergency hotline for health queries and coordination.

E. Transport & Isolation Logistics

- Deployment of a dedicated ambulance or vehicle for emergency medical evacuation.
- Arrangement of quarantine areas in consultation with district health authorities.

5. Implementation Phases & Responsibility

Phase	Activity	Responsibility
Phase 1	Identification of vulnerable villages	CSR & Admin Team consisting of Doctor
Phase 2	Deployment of supplies and health kits	Logistics Team
Phase 3	Launch of awareness drive and mobile health services	CSR & PHC
Phase 4	Monitoring & feedback loop	Agent/Mines Manager & Gram Panchayat

6. Budget Allocation

The required funds for the execution of this Emergency Action Plan have been provisioned under the **CSR/Contingency Fund** of the project. Budget utilization will be reviewed periodically.

7. Monitoring and review

- Weekly progress review meetings led by the **Agent/Manager/ Welfare Officer/Doctor** of the Mines.
- Regular reporting to the **District Health Officer** and relevant local authorities.

Director (Mines)
Corporate Office,
WBPDCL

8.0 Contact Details

Name	Designation	Mobile Number
Mr. Kumar Hira	Mines Manager	7596014893
Dr. Sujit Sarkar	Medical officer	9933609660
Mr. Swarup Banerjee	Safety Officer	8972775902
Mr. Sushanta Kr. Sahoo	Asst. Manager	9337616899
Mr. Pramod Kumar Harijan	Asst. Manager	8818815112
Mr. Naasir Shamsi	Asst. Manager	9066303470
Mr. Prince Parashar	Asst. Manager	8319033318
Mr. Biswajit Das	Asst. Manager Civil	9038693969
Mr. Arshad Hussain	Asst. Manager Civil	8777738276
Mr. Subrata Mukhopadhyay	Surveyor	9851804700
Mr. Sudip Ghosh	Surveyor	6296005503
Mr. Biplab Mazumdar	Colliery Engineer	7000342049
Mr. Sujit Kr. Jash	Mechanical Engineer	7699882697
Mr. Tanmoy Datta	Overman	8670600286
Mr. Santanu Chattopadhya	Welfare Officer	9800578031
Mr. Abhinav Ojha	Overman	8766662818
Mr. Sikandra Kumar	Overman	7903618149
Mr. Rajat Gupta	Overman	9204461170
Mr. Sanat Mukherjee	Project Incharge, MDO	8250768915
Mr. Bidhan Chandra Khan	Project Co-ordinator, MDO	8918995167
Mr. Ladumor Sangit Vasharambhai	Safety Officer, MDO	8238218381
Mr. Anik Bannerjee	Mechanical Engineer MDO	7908273116
Mr. Parvez Siddiqui	Electrical Supervisor MDO	7209292026
Mr. Basudev Poddar	Attendance Clerk, MDO	7001155071
Mr. Sekh Hasim	Security Incharge, MDO	7679549124

Director Technical
Corporate Office,
WBPDCL

Plan / Plate 20



Director (Mining)
Corporate Office,
WBPDCL

Ref No. WBPDCL/G&GBCM/MGR/25-26/223 Dated- 27.05.25

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

GANGARAMCHAK& GANGARAMCHAK-BHADULIA COAL MINE

MONSOON PREPARATION PLAN – 2025

Corporate Office, WBPDCL

❖ DESCRIPTION OF THE MINES: -

The mine is situated at Lokpur P.S. in Birbhum district of West Bengal. The mine is owned by WBPDCL. The mine consists of one seam i.e Kasta seam varying thickness from 0.95m. to 8.40m.
At present the mine is in operation with Shovel Dumper combination and Inpit OB Dumping is under progress in backfilled area.
At present, there are 2 sumps in South West Side of OCP.

The specification is as follows: -

SUMP-1

Water Surface Area	7498 Sq. M
Quantity of Water	2.3million Gallon
R.L. of Water surface Level	44.112 m
Water Bed	42.718 m
Sump Capacity	12 Million Gallon

SUMP-2

Water Surface Area	14378 Sq. M
Quantity of Water	19.26 million Gallon
R.L. of Water surface Level	42.602 m
Water Bed	36.511 m
Sump Capacity	42 Million Gallon

There are few villages surrounding the mine like Bastabpur, Gangpur etc. which is far away from the mine.
One canal towards southern part and downstream of the mine, connected with Hinglo Dam from West to East which is far away from the mine.

❖ SOURCE OF DANGER TO THE MINE DUE TO INUNDATION AS WELL AS SOME REMEDIAL MEASURES HAVE BEEN TAKEN

There is no possibility of dam/canal water to enter the mine as the canal is more than 600 metres from the mine and the mine is situated at upstream side. However, precautionary measures have already been taken-

1) Garland drain at required places have already been made around the OCP.
2) Berm have already been provided to prevent entry of rain water.
3) Control room have been established
4) Overman has been authorised to check all protective measures of the mine as per CMR 149 of 2017 at 14 days interval during monsoon and 30 days interval at others period.
5) Guards have already been posted in all shift to watch the level of water during monsoon period at the canal as well as at the Hinglo Dam Site.
6) OB dump is of the top was properly maintained having proper drainage system towards the toe of the dump area connecting to the garland drain.
7) Haul road and coal transportation road is maintained.
8) Sump has been maintained on the southern part of the mine.
9) Pumps stations have been made.
10) Shelters have been provided for the pump operators and supervising officials.
11) Communication system have been established from the pump side and different location of the mine to the control room.
12) Adequate no of life jackets has been provided at the pumping station.

Corporate Office, WBPDCL

❖ DUTY OF OVERMAN AUTHORISED FOR MONSOON (CMR – 149 (1,2,3)

Sri , (In absence of Abhinav Ojha, Shri Tanmoy Datta, Overman) Overman has been authorised to examine every protective measure of the mine as per CMR 149 (1, 2, 3) of 2017, Once at least in every 14 days during rainy season (Monsoon period) and once at least in every 30 days during other period of the year. He will examine all nallas, garland drain, entry point of the mine, canal/dam site, H.F.L, mark danger level. He has been authorised to check all the above and keep record and observation an examination in a bound paged book under his signature. He will take help from safety officer and surveyor for further action. If any abnormal conditions observed he will report to the control room, manager, safety officer, surveyor and other key persons of the mine. In addition to above the manager will also inspect this same once in a quarter.

❖ CONTROL ROOM: -

The control room have been established at the mine near main office controlled by 1st Class ACM, in Shifts Mr.Bikram Das (Assistant Manager), Mr.Sushanta Kr. Sahoo (Assistant Manager) & Mr.Pramod Kumar (Assistant Manager) in 3 shifts as per their rotation/roster. Mr.Naasir Shamsi (Assistant Manager) will act as reliever. In addition to above, Mr. Bidhan Chandra Khan (Project Co-ordinator, M/s GMPL& Mr. Sanat Mukherjee, Mining Incharge M/s GMPL) will work in general shift in control room.

Special Note: In case of any inundation or any emergencies arises, the information will be given to the following officials on an urgent basis.

01. Mr. Narendra Kumar (GM, MROD, Durgapur) (Mob. 7596014895)
02. Mr. Samresh Kumar (AGM/ Agent, G&GBCM)(Mob. 9113790074)
03. Mr. Milan Korey (DGM operation MDO/ GSPL) (Mob. 9511737935)
04. Mr. Uttam Biswas (DGM, MDO, GMPL)(Mob.7366089341)

Name of The Officer to be contacted with Mobile Number which have been recorded at the control room.

01. Mr. Kumar Hira – Mines Manager (mob- 7596014893)
02. Mr. Swarup Banerjee – Safety Officer (mob- 8972775902)
03. Mr. Prince Parashar - Asst. Manager (mob-9147307479)
04. Mr. Sushanta Kr. Sahoo- Asst. Manager (mob-9337616899)
05. Mr. Pramod Kumar Harijan- Asst. Manager (mob-8818815112)
06. Mr. Naasir Shamsi- Asst. Manager- (mob-9066303470)
07. Mr. Biswajit Das- Asst. Manager Civil– (mob-9038693969)
08. Mr. Arshad Hussain- Asst. Manager Civil– (mob-8777738276)
09. Mr. Subrata Mukhopadhyay – Surveyor (mob- 9851804700)
10. Mr. Sudip Ghosh – Surveyor (mob- 6296005503)
11. Mr. Biplab Mazumdar- Colliery Engineer (mob- 7000342049)
12. Mr. Sujit Kr. Jash- Mechanical Engineer (mob- 7699882697)
13. Mr. Tanmoy Datta- Overman (Mob-8670600286)
14. Mr. Santanu Chattopadhya- Welfare Officer (mob- 9800578031)
15. Mr. Abhinav Ojha – Overman (mob- 8766662818)
16. Mr. Sikandra Kumar- Overman (mob- 7903618149)
17. Mr. Rajat Gupta – Overman (mob- 9204461170)
18. Mr. Sanat Mukherjee – Project Incharge M/s GMPL (mob-8250768915)
19. Mr. Bidhan Chandra Khan – Project Co-ordinator M/s GMPL (mob-8918995167)
20. Mr. Ladumor Sangit Vasharambhai- Safety Officer M/s GMPL (Mob- 8238218381)
21. Mr. Lokesh Kumar- Project Incharge M/s Saakar (mob- 7978890078)
22. Mr. Anik Bannerjee, Mechanical Engineer (Workmen Inspector, Mech.) M/s GMPL (mob-7908273116)
23. Mr. Parvez Siddiqui,M/s GMPL, Workmen Inspector, Elec. (Electrical Supervisor) (mob-7209292026)
24. Mr. Basudev Poddar- Attendace Clerk M/s GMPL (mob- 7001155071)

Corporate Office, WBPDCL

Special information should be given to local police station (Lokpur Thana) officer in charge (mob. No. - 9932784221) in case of emergency. Welfare office, WBPDCL & Sanat Mukherjee, M/s GMPL will arrange for food, drinking water, etc. in case of emergency.

❖ DUTY OF SECURITY GUARD AUTHORISED FOR MONSOON

Security Guard will be posted in different shift at the canal / dam area. They will check the water level at the canal / dam during rainy season (monsoon).

Danger level have been marked at the H.F.L. area.

1) If the water level touches the danger level, they will report to the control room for further precaution.

2) If water is flowed from the dam or dam authority is intended to release the water from dam, they will report to the control room for further action.

Marking of H.F.L , Danger level and Withdrawal level

H.F.L- 96.36 M

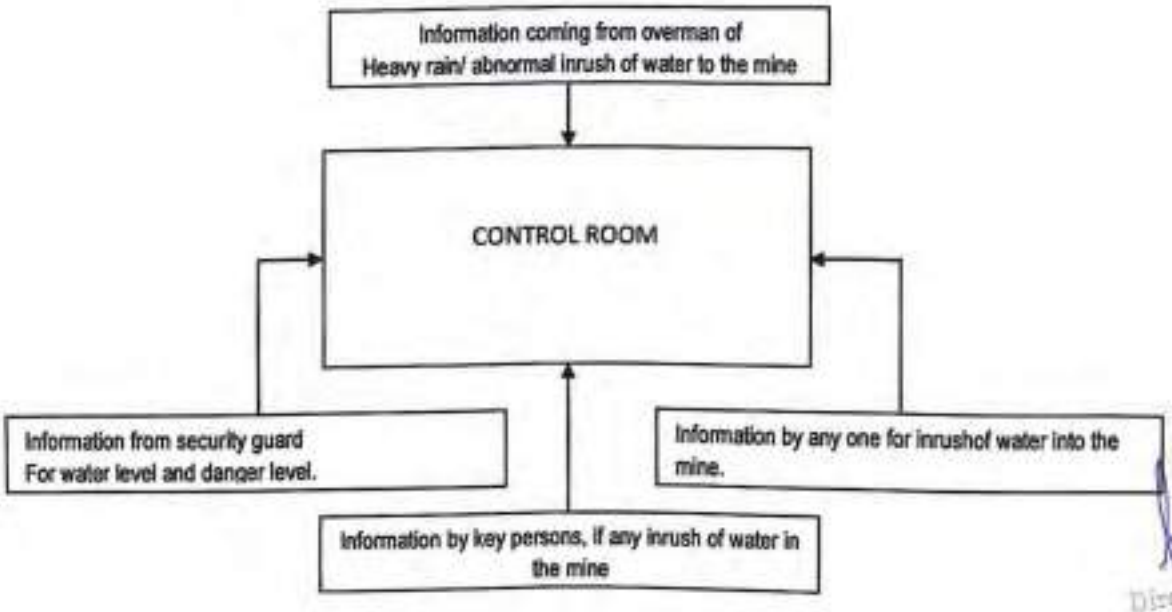
DANGER LEVEL- 94.860 M

Withdrawal level- 94.360 M

❖ KEY PERSONS: -

01. Attendance clerk
02. Asst. Manager
03. Overman
04. Blasting Officer
05. Dozer Operator
06. Shovel Operator
07. Dumper Operator
08. Loader/other equipment operator
09. Supervisor
10. Pump Operator
11. Drill Operator

The name of all key-persons has been recorded in the register at the control room.



Director and Head
Corporate Office,
WBPDCL

❖ DUTY OF OFFICER AT THE CONTROL ROOM: -

The official In charge of the control room will observe the following: -

01. After taking the charge of the control room he will see that if any comments are recorded in the register in the previous shift and will Act-Accordingly.
02. He will see that all record is kept in the room.
03. He will contact the guards posted at strategic points for further information/ instruction.
04. He will take help from the attendance Clerk. The total no's of persons are working in the shift and is to be recorded in the register. And take the names of the key persons in the mine.
05. He will contact with all key persons with mobile and with walkie-talkie.
06. In case of emergency, like as Entry of inrush of water into the mine or water level touches the danger level of HFL at the mark, he will communicate the same to the all-key persons of the mine to take action for withdrawal of the person from the mine and withdrawal of all machinery and equipment at the safe place. And at the same time, inform to the Agent, Manager, Safety Officer, Asst. Manager and Survey Officer for further action.

1) At the same time Information must be given to the Higher Authority of MDO.
1. Sri. Milan Kore (DGM operation MDO/ GSPL) & Sri Uttam Biswas, (DGM MDO/GSPL) who has been authorised to operate the mine to take legal and prompt action on the safety point of view, for arranging all resources like men, Materials and communicate their Project Manager, Asst. Manager, Overman, supervisory staff, store keeper, engineer, electrical engineer, electrical supervisor, and Staff Officer to get ready near the Control Room for dealing the emergency situation wholeheartedly. Staff officer will arrange the canteen facilities for the emergency personnel / key personnel and others in case of emergency, and Mr. Ghosh should reach to the Control Room as early as possible. In absence of Mr.Milan Kore, Mr. Uttam Biswas (DGM, MDO, GMPL) will take the responsibility of Sri. MR. Milan Kore.

Sri Milan Kore(DGM operation MDO/ GSPL) & Sri Uttam Biswas (DGM MDO/ GSPL), will be responsible for establishing their internal emergency organisation of their own with name, designation, Mob. No., and Duty Chart of respective persons. So that they will participate for emergency dealing without loss of time. The above organisation chart must be hand over to the manager of the mine before 15th June-2025 so that the chart must be available at the control room. Mr. Milan Kore will take actions for proper actions for establishing their internal emergency organisation in case of emergency.

After getting information of the emergency of inundation, or like entry of inrush of water into the mine or water level touches at the danger level of HFL at the mark, the senior most official present at the mine will take the charge of the control room and will Act Accordingly.

The Agent & Mines Manager will communicate the same to the Director of Mine Safety, DGMS and Dy. Director of Mine Safety, DGMS.

The above Monsoon Preparation Plan with standing order have been framed as per the instruction of the Manager, Gangaramchak and Gangaramchak- Bhadulia Coal Mines.

The Mock rehearsal will be done of the above standing order once in a month during the period of monsoon and once in 3 (three) months of the other period of the year.

Safety Officer
Gangaramchak and Gangaramchak- Bhadulia
Coal Mines, WBPDCL

Mines Manager
Gangaramchak and Gangaramchak- Bhadulia
Coal Mines, WBPDCL

Director (Mining)
Corporate Office,
WBPDCL

OFFICE OF THE MINES MANAGER
GANGARAMCHAK AND GANGARAMCHAK – BHADULIA COAL MINES
P.O.- KHOYRASOLE, DIST- BIRBHUM

REF: WBPDCL/G&GBCM/MGR/25-26/225

DATE- 27/05/25

To,
Sri Tanmay Dutta, Overman,
Gangaramchak and Gangaramchak-Bhadulia Coal Mines.

Sub- Authorization as per CMR 149 of 2017.

Sir,

You are hereby authorized to examine every protective measure of Gangaramchak and Gangaramchak-Bhadulia Coal Mine as per CMR-149 (1,2,3) of 2017 once at least 14 days during rainy season (monsoon period) and once at least 30days during other period of the year. And also, you are hereby authorized to examine all protective works like nallah, garland drain, berm of the mine to prevent the entry of water to the mine from the cannel for any blockage /dam site.

You are also directed to keep your observation and examination report in a bound paged book under your signature with date and that must be countersigned with the undersigned. During your inspection, examination, and observation, if any abnormal condition is observed or any emergency arises, you are directed to communicate the same to the undersigned, Safety Officer, Asst. Manager, Survey Officer and to control room forthwith.

27/05/25

Mines Manager
Gangaramchak and Gangaramchak- Bhadulia Coal Mine

Cc to,

- Agent, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- Safety officer, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- To All Concerned Persons.

Director (Technical)
Corporate Office,
WBPDCL

OFFICE OF THE MINES MANAGER
GANGARAMCHAK AND GANGARAMCHAK – BHADULIA COAL MINES
P.O.- KHOYRASOLE, DIST- BIRBHUM

REF: WBPDCL/G&GBCM/MGR/ 226 DATE- 27.05.2025

To,
Sri Abhinav Ojha, Overman, (In absence of Mr. Tanmay Dutta, Overman)
Gangaramchak and Gangaramchak-Bhadulia Coal Mines.

Sub- Authorization as per CMR 149 of 2017.

Sir,

You are hereby authorized to examine every protective measure of Gangaramchak and Gangaramchak-Bhadulia Coal Mine as per CMR-149 (1,2,3) of 2017 once at least 14 days during rainy season (monsoon period) and once at least 30 days during other period of the year. And also, you are hereby authorized to examine all protective works like nallah, garland drain, berm of the mine to prevent the entry of water to the mine from the cannel for any blockage /dam site.

You are also directed to keep your observation and examination report in a bound paged book under your signature with date and that must be countersigned with the undersigned. During your inspection, examination, and observation, if any abnormal condition is observed or any emergency arises, you are directed to communicate the same to the undersigned, Safety Officer, Asst. Manager, Survey Officer and to control room forthwith.

27/05/25

Mines Manager
Gangaramchak and Gangaramchak- Bhadulia Coal Mine

Cc to,

- Agent, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- Safety officer, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- To All Concerned Persons.

Director (Operations)
Corporate Office
WBPDCL

STANDING ORDER FOR IMMEDIATE ACTION TO BE TAKEN TO GUARD AGAINST THE DANGER OF INUNDATION AND WITHDRAWAL OF PERSONS FROM THE MINE IN RESPECT OF GANGARAMCHAK & GANGARAMCHAK BHADULIA COAL MINES.

Highlights -: The possible cause of danger of inundation that may arise in the Mine as well as the possible danger of inundation has been assessed as follows.
1. Water may flow from the river Hinglow through canal to the mine.
2. Rain water that may directly flow to the mine though the garland drain has been provided all around the mine

On considering the above situation of the mine the standing order are being framed for this mine. Control room has already been established at the manager's office WBPDCL and it will affectfrom 15th June to 31st October in every year for monsoon preparation.

STANDING ORDER

A) GIVING WARNING:

Duty of guard or any other person (Authorized by the Manager)
1. a. The river guard/canal guard appointed for the purpose will keep a continuous watch on the water level and shall immediately send information to the attendance clerk on duty as well as to the in-charge of the control room when water level touches RL. 94.360 meters i.e. Warning level below Danger mark without leaving the place of duty. (To enable him to do this, he will be provided with at least one assistant when the river canal is in flood).
b. The river guard/canal guard will maintain meticulous record of water level at interval of 30 minutes, after the water level touches the mark referred to above, till water level falls below the above-mentioned mark.
2. (a) As soon as the water level touches the danger mark or (R.L. 94.860 m) or (b) in case of rapid and unusual rise in the level of water, the guard himself or any other person, who notices it, shall at once intimate the fact to the attendance clerk or in charge of the control room on duty.
3. Any person apart from the guard who notice an unusual seepage of water or flow of water anywhere in the mine, shall at once intimate the fact to the official/competent person present at nearby area. The official/competent person will inform to the attendance clerk or incharge of the control room of the above seepage of water or flow of water.

Duty of attendance clerk:
(a) The attendance clerk after computing the attendance, keep records the nos. of persons are working in the mine of GMPL as well as keep records of the persons those who are working under the sub-contractor by GMPL, like SAKAR or any other organization for better reference. The attendance clerk on getting the warning-
(1) a. shall at once send warning to the manager or in his absence to the senior most official present on the surface by the fastest possible means.
(b) The attendance clerk on getting the flood warnings by guard or by walkie talkie or by any other electronic means, shall at once send waning by fastest possible means to
i) All official/competent person present at the mine:
ii) All senior officers in particular the manager, if he has not reached the control room by that time. He shall also arrange to give warning to the members of the mines emergency organization which is kept at the control room by suitable and fastest possible means and in its absence, an adequate siren will be blown by Seven hooter for alarming the situation as well to communicate the same to all official/competent person and the members of the mine emergency organization to reach to the control room.

Director (Mining)
Corporate Office
WBPDCL

Duty of Mine official/competent person:
The mine official/competent persons on receiving flood warning or apprehending that the mine may be in an imminent danger of inundation, shall send the warning by fastest possible means to other parts of the mine, mainly on the high side benches and rise most area. So that the persons as well as all the HEMM, Trippers, Equipment's and other machinery may be withdrawn safely.

Duty of members of mine emergency organization.
On hearing the flood signal or on being informed by any other means, the members of the emergency organization shall immediately reach to the control room fixed for the purpose and will help for emergency organization of inundation point of view.

Duty of incharge of Control room:
The manager / principal official present / Incharge of the control room on hearing the flood signal or on being informed by any other means shall either himself immediately inform or take suitable action to inform the Agent or other senior officer of the company (WBPDCL), D.M.S /DDMS Sitarampur Region-II, COO of MDO of GMPL, administrative official of West Bengal (DM, ADM, SP, ASP, OC Lokepur) Birbhum, mine official of adjoining mines.

Duty of Manager:
On getting the flood warning, the manager or in his absence the principal official present at the mine will hold the chair of the control room and take suitable action of the emergency organization of inundation including the information to all the official and other concerned persons.

B) WITHDRAWAL OF PERSONS

Duty of official/competent person:
On getting the flood warning or on suspicion that the mine or part thereof is under an imminent dangerof inundation, the official/competent person shall forthwith withdraw from the mine, all persons and HEMM, tripper, equipment's and other machineries under his control safely without creating any panic.
The water level touches at the mark that is R.L. 94.36 m which is warning level and when this situation will come every body will be cautioned and will be ready for withdrawal and when the water, level touches at danger mark that is R.L. 94.860 m (Danger level as well as withdrawal level) and atthe same time when imminent danger of inundation comes to the mine, the official / competent personswill communicate to all persons, and he/they will withdraw the all persons and machineriesfrom the mine.

Duty of other mine official:
The superior mine official shall exercise general supervision over the withdrawal of person from the mine.

Duty of Manager:
In the Manager or senior most mine official present at the control room, shall take whole charge of the control room for proper action otherwise on receiving the warning of flood or any imminent danger of inundation, the manager or in his absence the principal official present shall at once proceed to the control room previously fixed for the purpose, and take charge of operation. He shall personally ensure, or take suitable means to ensure that all persons have withdrawn in first priority and next arrange to withdraw all machineries safely from the mine.

Director (Technical)
Corporate Office,
WBPDCL

Duty of attendance clerk:
The attendance clerk will count the total Nos. of persons entered into the mine have been withdrawn safely, will communicate to the manager or if he has any reason to believe that any persons has not been withdrawn from the mine, he shall at once bring to the notice of the manager or in his absence the principal official present.

C) ADMITTANCE OF PERSONS.

Restriction of employment of persons in the mine.
No persons, other than those permitted by the manager or in his absence, by the principal official present at the mine, shall be allowed to remain in or to enter, the mine. Every such authorization shall as far as possible be in writing and to be record in a register.

Duty of attendance clerk:
The attendance clerks shall, in his register, the entry to, and exit from, the mine of every authorized person, and issue a pass card to entry of the person signed by manager.

Duty of guard:
A guard will be posted at the entry of the mine, who will allow the person those who will show the pass card for entry.

D) RESUMPTION OF WORK

Normal work shall not be resumed in the mine except with the prior permission of the manager or in his absence, the principal official present at the mine and unless all working, benches, haul road and other area have been thoroughly examined by a competent person/official of the mine as statutorily required and declared safe.

E) ENFORCEMENT OF ORDER

A copy of these orders shall be posted at the mine office, the attendance room and every entrance to the mine. It shall be the duty of all the mine officials and other concerned persons to make themselves thoroughly familiar with their duties in case of danger of inundation.
Mock rehearsals shall also be held for the purpose once at least in every month during the rainy season (from 15th June to 31st October) every year.
A meticulous record of all such occurrence shall be kept in a bound paged book kept for the purpose
• Transmission of message by fastest possible means implies transmission through telephone (mobile), walky-talkies or messenger in that order of importance. A message sent by telephone or walky-talky shall always be confirmed through a special message.

22/05/25
Mines Manager
Gangaramchak and Gangaramchak- Bhadulia Coal Mine

Director (Operations)
Corporate Office,
WBPDCL

❖ RECEIPT COPY OF THE MONSOON PREPARATION PLAN BY ALL THE KEY PERSONS: -

Received the monsoon preparation plan of Gangaramchak and Gangaramchak –bhadulia coal mines from the manager through safety officer of Gangaramchak and Gangaramchak –bhadulia coal mines and understood the same in details, what I have to do in case of emergency or entry of water into the mine, and I promise that I will do my duty sincerely at the time of emergency or in case of inrush of water enter into the mine.

01. Mr. Kumar Hira – Mines Manager (mob- 7596014893)
02. Mr. Swarup Banerjee – Safety Officer (mob- 8972775902)
03. Mr. Sushanta Kr. Sahoo- Asst. Manager (mob-9337616899)
04. Mr. Pramod Kumar Harijan- Asst. Manager (mob-8818815112)
05. Mr. Naasir Shamsi- Asst. Manager- (mob-9066303470)
06. Mr. Prince Parashar- Asst. Manager- (mob-8319033318)
07. Mr. Biswajit Das- Asst. Manager Civil-- (mob-9038693969)
08. Mr. Arshad Hussain- Asst. Manager Civil– (mob-8777738276)
09. Mr. Subrata Mukhopadhyay – Surveyor (mob- 9851804700)
10. Mr. Sudip Ghosh – Surveyor (mob- 6296005503)
11. Mr. Biplab Mazumdar- Colliery Engineer (mob- 7000342049)
12. Mr. Sujit Kr. Jash- Mechanical Engineer (mob- 7699882697)
13. Mr. Tanmoy Datta- Overman (Mob-8670600286)
14. Mr. Santanu Chattopadhya- Welfare Officer (mob- 9800578031)
15. Mr. Abhinav Ojha – Overman (mob- 8766662818)
16. Mr. Sikandra Kumar- Overman (mob- 7903618149)
17. Mr. Rajat Gupta – Overman (mob- 9204461170)
18. Mr. Sanat Mukherjee – Project Incharge M/s GMPL (mob-8250768915)
19. Mr. Bidhan Chandra Khan – Project Co-ordinator M/s GMPL (mob-8918995167)
20. Mr. Ladumor Sangit Vasharambhai- Safety Officer M/s GMPL (Mob- 8238218381)
21. Mr. Lokesh Kumar- Project In chargeM/s Saakar (mob- 7978890078)
22. Mr. Anik Bannerjee, Mechanical Engineer (Workmen Inspector, Mech.)M/s GMPL(mob-7908273116)
23. Mr. Parvez Siddiqui,M/s GMPL, Workmen Inspector, Elec. (Electrical Supervisor) (mob-7209292026)
24. Mr. Basudev Poddar - Attendance Clerk M/s GMPL (mob- 7001155071)

Director (Mining)
Corporate Office,
WBPDCL

Director (Mining)
Corporate Office,
WBPDCL

OFFICE OF THE MINES MANAGER
GANGARAMCHAK AND GANGARAMCHAK – BHADULIA COAL MINES
P.O.- KHOYRASOLE, DIST- BIRBHUM

REF: WBPDCL/G&GBCM/MGR/ 25-26 | 227

DATE- 27/05/25

To,
Sri Seikh Hasim, Security Supervisor (GSPL),
Authorised to work as Security Incharge,
Gangaramchak and Gangaramchak-Bhadulia Coal Mines.

Sub- To Monitor the water level at the cannel.

You are aware that monsoon is coming very soon. The period of Monsoon is from 15/06/2025 to 31/10/2025.For monsoon preparation plan of 2025 in respect of Gangaramchak and Gangaramchak Bhadulia Coal Mine.You are here by authorised to monitor closely the rising of water level at the cannel of the southern part of the mine near WBPDCL Office from the period of 15/06/2025 to 31/10/2025.

In this respect you are hereby directed to depute 2 (two) security guards of each shift in round the clock to monitor closely the rising of water level at cannel and maintain the record at the bound paged register (The H.F.L, Danger Level, Withdrawal level) have been marked at the the cannel.

You will communicate them when the water level touches the withdrawal level, the security guards posted at the cannel must communicate the matter to the control room at the mine newly constructed V.T room and inform the same to the attendance clerk and keep record.

This is for your kind information and necessary action please.

27/05/25

Mines Manager
Gangaramchak and Gangaramchak- Bhadulia Coal Mine

Cc to,

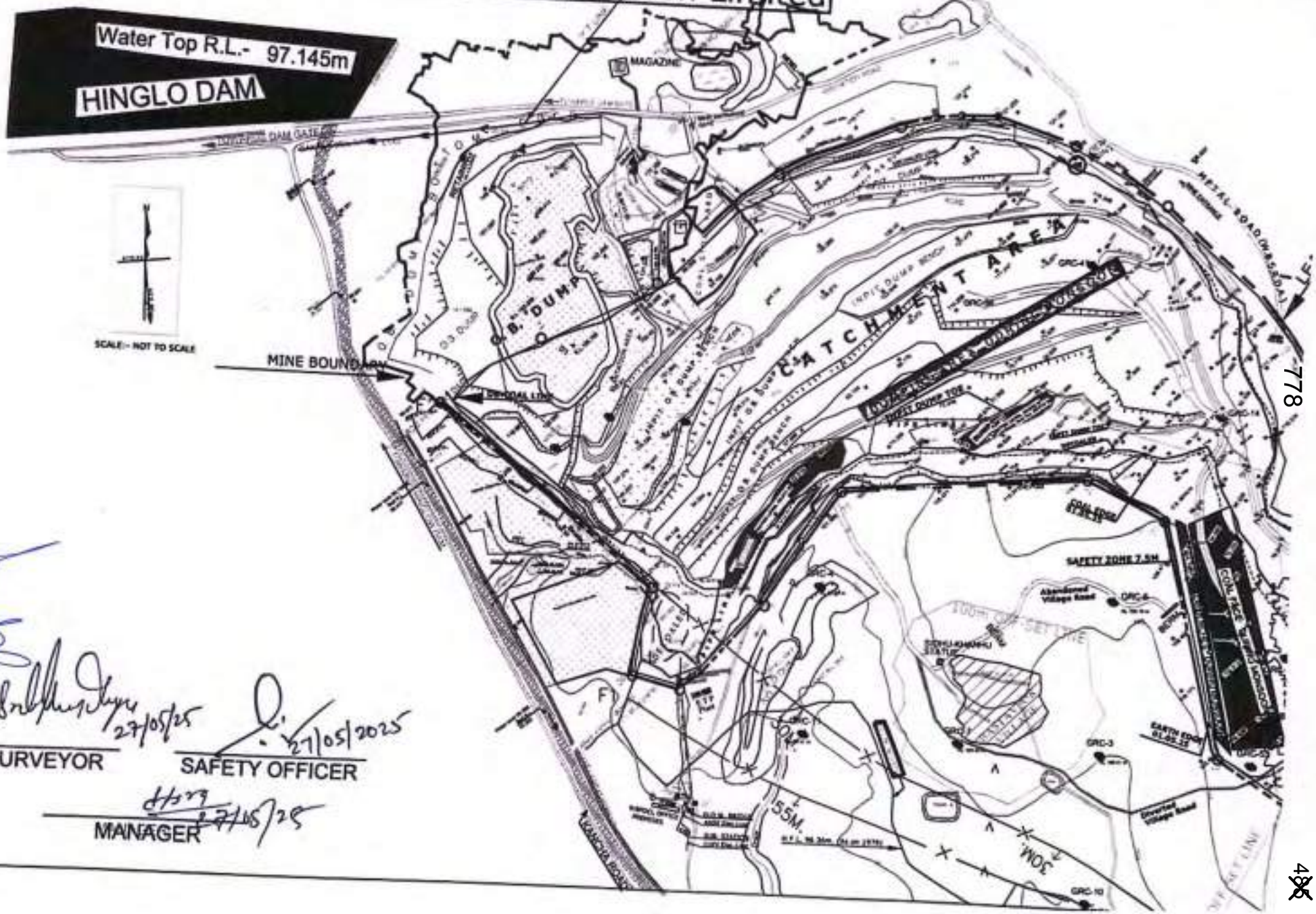
- Agent, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- Safety officer, Gangaramchak and Gangaramchak- Bhadulia Coal Mine.
- To All Concerned Persons.

Director (Mines)
Corporate Office,
WBPDCL

MONSOON PLAN - 2025

GANGARAMCHAK & GANGARAMCHAK-BHADULIA COAL MINE

West Bengal Power Development Corporation Limited



Director (Technical)
Corporate Office
WBPDCL

27/05/25

SURVEYOR

27/05/2025

SAFETY OFFICER

27/05/25

MANAGER

778

48

By Speed Post/Online

F.No. IA-L-11011/5/2025-IA-I
Government of India
Ministry of Environment, Forest and Climate Change
(IA- Compliance & Monitoring Division)
*****

Indira Paryavaran Bhavan
Jor Bagh Road, Aliganj
New Delhi-110 003
Email: moefcc-monitoring@gov.in

Dated: **19th June, 2025**

To,

The Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change
A/3, Chandersekharpur,
Bhubaneswar – 751023

Sub: Letter seeking SCN Review Report with respect to the project "Integrated Gangaramchak & Gangaramchak-Badulia Block Opencast Coal Mine Project' of M/s The West Bengal Power Development Corporation Limited (WBPDCL) located in village Bastabpur, Tehsil Khoyrasole, District Birbhum, West Bengal. -reg.

Ref i. EC vide letter no. J-11015/375/2006-IA.II (M) dated 17.05.2007.
ii. Transfer of EC vide letter no. J-11015/375/2006-IA.II (M) dated 20.12.2018.
iii. Expansion of EC vide letter no. J-11015/375/2006-IA.II (M) ddated 27.12.2022.
iv. Expansion EC no. J-11015/375/2006-IA.II(M) dated 12.10.2023.
v. SO Kolkata Monitoring report No. 102-132/05/EPE/133 dated 15.04.2025.
vi. Show Cause Notice dated 17.02.2025
vii. PP's response to the SCN dated 13.06.2025

Sir,

This has reference to the SCN response dated 13.06.2025 submitted by **M/s The West Bengal Power Development Corporation Limited (WBPDCL)** wrt the non-compliance reported for the above cited project (copy enclosed).

2. The Sub Office (SO) is requested to verify the inputs submitted by the PP in reference to observations of SO on the issue of non-compliance and submit SCN review report to the Ministry at the earliest.

This issues with the approval of the Competent Authority.

Yours faithfully

Encl: As above

(Dr. Bhardwaj Adiraju)
Scientist 'D'

Copy to:

1. The Head of Office (HoO), Ministry of Environment, Forest and Climate Change,-Sub - Regional Office, Kolkata IB-198, Sector-III, Salt Lake City, Kolkata – 700106

2. The Director,M/s The West Bengal Power Development Corporation Limited, Bidyut Unnayan Bhaban; Plot No. 3/C, LA-Block, Sector-III, Salt Lake, Kolkata, 700098.
3. The Member Secretary, Coal Sector, Ministry of Environment Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110 003. (*For information and further necessary action*)

(Dr. Bhardwaj Adiraju)
Scientist 'D'