



एनटीपीसी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Govt. of India Enterprise)

कोयला खनन परियोजनाएँ, हजारीबाग
Coal Mining Projects, Hazaribag

Ref: 1040/PBCMP/EMG/2023/F-47/ 208

Date: 17.11.2023

To,
The Deputy Director General of Forests (C),
MoEF&CC, Integrated Regional Office,
2nd Floor, Headquarter Jharkhand State Housing Board
Harmu Chowk, Ranchi (Jharkhand) - 834002.

Dear Sir,

Sub: Six Monthly Progress Report on compliance of conditions stipulated in the Environmental Clearance by MoEF & CC and Monitoring report for the period April 2023 to September 2023 for NTPC Ltd - Pakri Barwadih Coal Mining Project (15MTPA): Reg.

Ref1: EC Ltr No. J-11015/692/2007-1A-II(M) Date 19th May 2009.
Ref2: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 29.06.2016
Ref3: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 07.12.2017
Ref4: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 14.08.2018
Ref5: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 10.11.2020
Ref6: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 16.08.2023
Ref7: EC Amendment Ltr No J-11015/692/2007-1A-II(M) Date 09.11.2023

With reference to above subject please find enclosed herewith the six-monthly status report on compliance of various conditions in the Environmental Clearance accorded to NTPC Ltd - Pakri Barwadih Coal Mining Project (15MTPA) for the period April 2023 to September 2023. The monitoring reports on fugitive emission, effluent quality, ambient air quality, ground and surface water quality, noise measured data etc. are also enclosed with the report.

This is for your kind information please.

Thanking you.

Yours Faithfully,

Navin Kumar
[NAVIN KUMAR]
[NAVIN KUMAR] / NAVIN KUMAR
जय प्रकाश (प्रबंधन प्रभु) / DGM (ENVT. MGMT.)
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कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Encl.: A/a

Copy to:

1. **Sc. E & Regional Director, Kolkata**, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, Rajdhanga Main road, Kolkata-700107 (W.B), e-mail: mkbiswas.cpcb@nic.in.
2. **Regional Officer, Jharkhand State Pollution Control Board**, PTC Chowk, Hazaribagh, Jharkhand. E-mail-jspcb_hazaribagh@rediffmail.com
3. **Member Secretary, Jharkhand State Pollution Control Board**, Ranchi-834004 (Jharkhand), E-mail-ranchijspcb@gmail.com

कोयला खनन परियोजनाएँ, सिकरी साईट कार्यालय, बड़कागाँव, हजारीबाग - 825311
Coal Mining Projects, Sikri Site Office, Barkagaon, Hazaribag - 825311



Report Period:
April-2023 to Sept. -2023

Six Monthly EC Compliance Report



In Year 2017



In Year 2023



Dump Surface 90 meter Plantation



Retaining wall and Garland Drain

NTPC LTD.

Pakri Barwadih Coal Mining Project.

COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS

Period: April–2023 to September–2023

EC Clearance Ltr. No.J-11015/692/2007-IA.II (M) Dated 19th May 2009
& Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 29.06.2016
Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 07.12.2017
Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 14.08.2018
Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 10.11.2020
Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 16.08.2023
Amendment Ltr. No J-11015/692/2007-IA-II (M) Dated 09.11.2023




NTPC Ltd – PAKRI BARWADIH COAL MINING PROJECT
Sikri Site Office
PO: Barkagaon, Dist: Hazaribagh
Jharkhand – 825 311

COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS

| SL No | Conditions | Compliance/ Status report for the period April-2023 to Sept.-2023 |
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| SPECIFIC CONDITIONS | | |
| I | The environmental clearance is restricted to Phase-1 of 39 years of opencast operations involving 3319.42 ha of ML area only for which exploration has been completed. | Noted. We shall always abide the said condition. |
| II | No mining operations shall be undertaken in the forestland within the ML until clearance has been obtained under the provisions of FC Act, 1980. | <p>All necessary clearances under the provisions of FC Act, 1980 has been obtained for the 1026.438 Ha of forest land involved vide:</p> <ul style="list-style-type: none"> i. Stage I Clearance obtained vide letter no. "F. No 8-56/2009, dated 11th May 2010", ii. Stage II Clearance obtained vide letter no. "F. No 8-56/2009, dated 17th Sept 2010", iii. Final land release letter received from the State Govt. vide letter no. 3/Vanbhoomi-75/2009-1240 dated 31.03.2011. iv. Amendment in Forest Clearance accorded vide letter ref. no. 8-56/2009 Fcpt dated 25.05.2023. <p>The Mining operations is restricted to the area only for which forest clearance has been accorded by MoEF under the provisions of FC Act, 1980.</p> |
| III | The monolith found within the core zone shall not be disturbed by the mining operations and a minimum 500m distance along with thick green belt would be maintained between the eastern quarry and the monolith. A road would be created upto the monolith a park created around it so that the monolith could be visited. | <p>To maintain thick green belt between Eastern quarry and Monolith, the existing green belt of 500m having large canopy trees, mainly of Mahua (Madhuca longifolia), Sisham (dalbergia sisoo) and other species between eastern quarry and Monolith has not been disturbed. Further, 13707 nos. of tree saplings have been planted around the east quarry to make the area green and fast-growing seedlings have been spread over the overburdens.</p> <p>NTPC is committed for development of the</p> |
| | Amendment vide letter number- | |

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हजारीबाग / Hazaribag

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| | <p>J-11015/692/2007-IA-II(M) Date- 07.12.2017</p> <p>The user agency would provide necessary fund to the state Government for construction of road up to the monolith and a park around it so as that the Monolith could be visited as for tourism purpose.</p> | <p>area in and around its projects, according NTPC had requested state govt for submission of the estimate for development of the Megalith. After various correspondence made with the District authority, an estimate of Rs. 3,03,92,449/- for development of Megalith Park with direction to submit Rs. 50 Lakhs as an advance was received from District Authority on 16.10.2023. Copy of the letter attached as Annexure-1.</p> <p>Based on demand raised by the District Authority payment of Rs. 50,00,000.00 (Rupees Fifty Lac) has been made for development of Megalith Park vide letter no. NTPC/PBCMP/R&R-CD/2023 Dated 28.10.2023. Copy of the letter attached as Annexure-2.</p> |
| IV | <p>Mining shall be carried out as per statuette from the streams/nallahs flowing within the lease. Embankment to be constructed shall be based on peak flow data and shall be at least 3m above the HFL. The slope of the embankment shall at least 2:1 towards the ML and shall be stabilized with plantation. The CWPRS would be engaged for the design and study of realignment of the drains / nalas flowing across the ML and creation of embankment, and also obtain approval of the State Government for diversion of the nalas.</p> | <p>As suggested the CWPRS was involved in study and designing of the Nala diversion. Also, necessary permission/NOC has been obtained from State Water Resource Dept, GoJh vide their ltr. Ref. no. 2/PMC/ND-171/2012/224 dated 19.03.2013.</p> <p>Based on the above study report of CWPRS and NOC/permission from water resource Dept, GoJH, realignment of Dumuhani nala has been done.</p> |
| V | <p>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.</p> <p style="text-align: right;">  नवीन कुमार / NAVIN KUMAR <small>अध्यक्ष (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)</small> <small>एनटीपीसी लिमिटेड NTPC Limited</small> <small>कोयला खनन परियोजनाएँ / COAL MINING PROJECTS</small> <small>हजारीबाग / Hazaribag</small> </p> | <p>Top soil is being stacked in available suitable land. Same is being used for spreading over the completed portion of OB Dump for development of the green belt.</p> <p>All the protective measures for soil erosion from top soil dumps are being taken. To prevent erosion from top soil dumps, coir mats have been laid on the slopes. Catch drain and siltation pond has been constructed along the top soil dump and the filled-in drains and toe wall areas are repaired. The repairing of the toe wall and cleaning of drains are the regular process</p> |

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| | | <p>and completed before onset of the monsoon every year. Photographs are enclosed as Annexure-3.</p> <p>Further, to avoid soil erosion plantation has been carried out on external dump and its slopes with Mixed grass variety seeds and root shoots of Vertiver grass.</p> |
| VI | <p>OB should be stacked at earmarked three external OB dump site within ML area of a maximum height of 90m.</p> <p>Amendment vide letter number-J-11015/692/2007-IA-II(M) Date-07.12.2017 A minimum of 500m shall be maintained and thick green belt developed between the habitation of Barkagaon and OB dumps.</p> | <p>As per approved revised Mine Plan, OB is being stacked at earmarked area. Presently height of the dump is 89.62 m with three terraces. It will be restricted to the maximum height of 90 meter.</p> <p>At present the working of mine is more than 4 km from Barkagaon village. Workings of the mine shall be restricted 500 m away from the village Barkagaon.</p> <p>To maintain the thick green belt between habitation of Barkagaon and OB dumps, existing greeneries between mine and habitation of the Barkagaon have not been disturbed. Further, about 2500 trees have been planted along road side between East quarry and Barkagaon village. Apart from above 5500 nos. of trees have been planted in Langatu and Arahara village falling between Mining and Barkagaon village.</p> |
| | The option of raising the level of grazing land created after backfilling the quarry by 10m or so shall be examined so to reduce the overall OB dump height. | As per approved Mining Plan Grazing land of 223 Ha will be developed on back filled quarry of western & eastern part at the time of mine closure. |
| | Slope stability tests may be undertaken and the feasibility of backfilling depending on the type of cost-effective technology available at that stage shall be re-examined. | Slope stability tests have been conducted through the Central Institute of Mining and Fuel Research (CIMFR) Dhanbad & BIT, Sindri – Dhanbad for Dump-A and Dump-C & also for Western Mine Pit slopes. Slope stability Study of Eastern Quarry & its dump has been done by IIT-BHU. |
| | The ultimate slope of the dump shall not exceed 28°. | The ultimate slope of the dump shall be restricted to 28 degree. |
| | Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. | Monitoring & management of reclaimed dump site shall be carried out till the vegetation becomes self-sustaining. |
| | Compliance status should be submitted to the Ministry of Environment & | The half yearly compliance report of EC is being submitted regularly to the MoEF & |

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| | Forests and its Regional office located at Bhubaneswar on yearly basis. | CC Regional office Ranchi. Last report submitted online on Parivesh Portal and also submitted to regional office vide letter no.- 1040/PBCMP/EMG/2023/F-47/111 dated- 31/05/2023 through mail dated 31.05.2023. Copy of the mail enclosed as Annexure – 4. |
| VII | 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 utilized 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 provide adequate retention period to allow proper settling of silt material. | <p>All the possible actions are being taken to arrest the silts from all the possible sources. The catch drains and the silt ponds are designed to contain the max rainfall and silt generation during the rain. The siltation ponds are being regularly de-silted and maintained properly and directly connected to garland drains and apart from this 03 more nos. of the silt ponds have been constructed along the OB Dump-C and Top Soil Dump. Few Photographs are enclosed as Annexure-5.</p> <p>The damaged toe wall has been repaired and constructed. Toe walls have been constructed to arrest the silts but to allow the water to pass through it, accordingly these are prepared with the appropriately sized boulders so as to arrest the silt only. Photographs are enclosed as Annexure-6.</p> <p>The sump has been constructed keeping the safety margin more than 50% over and above the maximum rainfall in the area. Water so collected is being utilized for dust suppression in mining area, transport roads and also for green belt development etc. The catch drains are regularly being de-silted and maintained properly.</p> <p>The main sump is in the de-coaled area at dip most side so as to provide adequate retention period to allow proper settling of silt material.</p> |
| VIII | 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. | OB dump-C is in active condition, i.e. presently excavated OBs are being dumped over the OB dump and hence, all the protection measures for soil erosion from OB dump are being taken. |

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| | | <p>To prevent erosion from dumps, 2400-meter toe wall followed by garland drain along the embankment, 130-meter toe wall on the toe of the Dump 'C', 530-meter toe wall along the Dump 'A' have been constructed, and the garland drains constructed all around the dumps are ultimately connected to the settling pit to allow the water to pass through it. And, more than 1.5 Lakhs tree saplings of native species are planted on the Slope of Dump "C", Dump "A" and the embankment.</p> <p>Apart from the above Catch drains also provided at workshop, offices etc. to direct the rain water to siltation pond at sump area to arrest silts and further to direct water to main sump.</p> |
| IX | <p>Amendment : letter number- J-11015/692/ 2007-IA-II(M) Date 29.06.2016</p> <p>The coal shall be transported through closed belt conveyor system of a length of 13 km to Banadag railway station. The project proponent is permitted for (2) years to use State Highway/public roads for transportation of coal (approx. 35 km) to Banadag Railway Siding by adopting all mitigative measures to control dust pollution. The project proponent shall put all the efforts to expedite completion of service road for belt conveyor so that the same can be utilized for coal transportation.</p> | <p>NTPC has already commissioned 13 Km of the Conveyor Belt Stream-A on 28.02.2022 and Stream-B on 30.11.2022. Part of the Coal is being transported through the same. The connecting 1.2 Km Silo with Rapid Loading System over a short distance of 1.2 Km between TP-10 and Banadag Railway Station could not be completed due to Land Acquisition and Law and Order Issues. Presently, the Land Acquisition issues have been resolved with the help of District Administration on 28.04.2023, the work for implementation of "Silo Rapid Loading System" and Rail Infra are in full swing and it is likely to be completed by Dec 2024.</p> <p>Part of the coal transportation is being done by trucks which is covered with the tarpaulin. Also, to prevent the dust generation due to plying of the trucks regular water sprinkling is being done along the transportation road.</p> <p>Apart from the above the coal has been transported in wet condition from mine end to Banadag Railway Siding. For wetting the coal there are fog canon installed in the crusher area as well as coal stock yard of CHP.</p> |


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| | <p>Photographs of the CHP are Enclosed as Annexure-7.</p> <p>Further, the coal which is transported through conveyor is done in closed belt passes through 10 nos. of TPs all the TP have water injection system which regularly inject the water in the coal. There are two nos. of mist fog canon have been installed at the TP-10 to wet the coal or minimize the dust generation. Also, to control the pollution, green wind screen/net shed has been erected all around and at the top of the coal stock yard and coal is being transported in fully covered vehicle.</p> |
| <p>Amendment: letter number- J-11015/692/ 2007-IA-II(M) Date 07.12.2017:</p> <p>The approach road of 6 km along northern boundary of mining lease shall be metaled. For development of 3-tier avenue plantation, northern sides of main approach road to be preferred in place of haul roads.</p> | <p>The approach road of 6 km along northern boundary of mining lease is already metaled.</p> <p>The existing greenbelt along the Norther side of the main approach road has not been disturbed. Photographs attached as Annexure –8.</p> <p>Apart from the above till date total 5265 nos. of plants have been planted along the northern boundary of the mining lease also existing green belt have not been disturbed. 3-tier avenue plantation will be developed in the phase manner. Photographs enclosed as Annexure-9.</p> |
| <p>Condition IX, Amendment vide letter number-J-11015/692/2007-IA-II(M) Date 29.06.2016, letter number-J-11015/692/2007-IA-II(M) Date 14.08.2018, letter number- J-11015/692/2007-IA-II(M) Date 10.11.2020</p> <p>Thereby extension in amendments in EC dated 19th July 2018 for a period of two years (i.e upto 28th June, 2022) by road as an interim arrangement by adopting all mitigation measures to control dust pollution, which would include regular maintenance of roads, water sprinkling, covering trucks with tarpaulin sheet etc.</p> | <p>The EC has been amended vide MoEF & CC letter no. J-11015/692/2007-IA-II(M) dated 09.11.2023 which allow the coal transportation through road till 31st Jan 2024. Copy of the EC attached as Annexure-10.</p> <p>Closed Belt Conveyor system is partly completed and operational upto TP-10. From TP-10 to siding, a rapid loading system (RLS) for transporting and loading of coal to railway wagons is under construction, which has been delayed due to land acquisition and Law and Order issues. Land has been made available only on 28.04.2023 through deployment of</p> |


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| <ul style="list-style-type: none"> • Width of the road shall be at least 7 mts before the start of the transportation and necessary permission shall be taken from state PWD. • The State Pollution Control Board, while considering consent to operate for the project, shall ensure that with the proposed coal transportation by road, air quality would remain within the national ambient air quality standards. • The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been distributed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc." | <p>forces by district administration and now all efforts are being made to complete the SILO system before 31.12.2024.</p> <p>Road which is used for transportation of coal is wider than 7mtr. For granting of necessary permission from state PWD a letter vide letter no.1040/PBCMP/ENV/2021/F-47/44 Dt 28.06.2021 has been submitted. Copy of letter already submitted in previous compliance reporting.</p> <p>Agree to abide the conditions.</p> <p>The mining activity are being carried out as per the approved mine plan and due care are being taken to minimize the adverse impact of the mining activity to surrounding areas.</p> <p>All the mitigation measures are being taken as per the approved EMP and Mine Closure Plan.</p> |
| <p>Condition IX, Amendment vide letter number-J-11015/692/2007-IA-II(M) Dated-16.08.2023.</p> <p>1.1 The PP needs to complete the construction of closed belt conveyor system of a length of 13 km to Banadag railway station. The project proponent is permitted till October, 2023 to use Service road/State Highways for transportation of coal to Banadag railway siding by adopting all mitigative measure to control dust pollution".</p> | <p>NTPC has already commissioned 13 Km of the Conveyor Belt Stream-A on 28.02.2022 and Stream-B on 30.11.2022. Part of the Coal is being transported through the same. The connecting 1.2 Km Silo with Rapid Loading System over a short distance of 1.2 Km between TP-10 and Banadag Railway Sstation could not be completed due to Land Acquisition and Law and Order Issues. Presently, the Land Acquisition issues have been resolved with the help of District Administration on 28.04.2023, the work for implementation of "Silo Rapid Loading System" and Rail Infra are in full swing and it is likely to be</p> |


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| | <p>1.2 Transportation of coal from service road instead of conveyor belt and silo loading system is subject to the outcome of Order of Hon'ble Supreme Court i.e. Civil Appeal No. 6249 of 2021 (in matter of National Thermal Power Corporation (NTPC) vs Tripurari Singh & Ors.)</p> <p>1.3 The PP shall submit the status of Dumhani nallah to IRO, MoEF&CC before October 2023 with photographs and drone video for diverted portion of Dumhani nallah. The project proponent shall also make all possible effort towards protecting catchment area of the streams flowing within the lease boundary as well as along the boundary of lease area.</p> <p>1.4 The PP shall deploy the covered truck with tarpaulin having size upto 50 tonnes for transportation of coal through Service road only. SPCB to ensure the strict compliance of condition.</p> <p>1.5 The PP shall submit the status report of diverted Dumhani stream to IRO, MoEF&CC before October, 2023 ensuring that proper water management in catchment area has been made along with</p> | <p>completed by Dec 2024.</p> <p>All environmental mitigative measures associated with transportation of coal by road are being followed.</p> <p>Agreed to comply.</p> <p>NTPC has submitted Miscellaneous Application vide MA-001824/2023 dated 18.08.2023 in Hon'ble SC for seeking extension in timeline for completion of construction of Belt Conveyor (remaining 400 m length) up to 31.12.2024. Copy of same is attached as Annexure-11.</p> <p>Hon'ble Supreme Court extended the timeline for construction of Belt Conveyor till 31.01.2024 through its order dated 20.10.2023. Copy of the order attached as Annexure-12.</p> <p>The Status Report of Dumuhani Nallah has been submitted to RO, MoEF&CC vide letter no- Ref: 1040/PBCMP/EMG/2023/F-47/199 Dated: 19.10.2023. The copy of the same is attached as Annexure-13. Work has been awarded to IIT-ISM for preparation of Catchment Area Treatment Plan vide work order dated 18.07.2023. Accordingly, action towards protecting catchment area of the streams flowing within the lease boundary as well as along the boundary of lease area shall be taken.</p> <p>Presently, part of the coal produced from PBCMP is being transported through road in tarpaulin covered truck of size of up to 50 tonnes and part of the coal is transported through conveyor belt. Photographs are enclosed as Annexure-14.</p> <p>As submitted at point no. 1.3.</p> <div style="text-align: right;">  नवीन कुमार / NAVIN KUMAR <small>असistant प्रोडक्शन मैनेजर / DGM (ENVT. MGMT.)</small> <small>एनटीपीसी लिमिटेड / NTPC Limited</small> <small>कोयला खनन परियोजना / COAL MINING PROJECTS</small> <small>हजारीबाग / Hazaribag</small> </div> |
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| <p>photographs and drone video for diverted portion. The project proponent shall also make all possible effort for protecting catchment area of other streams flowing within the lease boundary as well as along the boundary of lease area without their diversion.</p> <p>1.6 The PP shall submit the complete compliance report of EC letter dated 19.05.2009 and subsequent amendment of ECs vide letter dated 29.06.2016, 07.12.2017, 14.08.2018 & 10.11.2020 respectively.</p> <p>1.7 All the railway siding involved in loading and unloading of the materials which are prone to generate fugitive dust emissions, should install fixed type water sprinklers for effective dust suppression, should install settling pond of suitable capacity with chemical dosing system for treatment of the runoff water, should construct the wind breaking wall of 20 feet high to prevent the dusts to spread and should do tree plantation along the boundary wall.</p> <div style="text-align: right; margin-top: 20px;">  नवीन कुमार / NAVIN KUMAR <small>ज्वायल प्रबन्धक (पर्यावरण प्रबन्धन) / DGM (ENVT. MGMT.)</small> <small>एनटीपीसी लिमिटेड / NTPC Limited</small> <small>कोयला खनन परियोजना / COAL MINING PROJECT</small> <small>हजारीबाग / Hazaribag</small> </div> | <p>The half yearly compliance report of EC is being submitted regularly to the MoEF & CC Regional office Ranchi. Last report submitted online on Parivesh Portal and also submitted to regional office vide letter no.- 1040/PBCMP/EMG/2023/F-47/111 dated- 31/05/2023 through mail dated 31.05.2023. Copy of the mail enclosed as Annexure-4.</p> <p>The coal is being transported to Banadag Railway Siding from where the coal is transported to different power plants of NTPC Ltd.</p> <p>At Banadag Railway Siding to minimize the dust generation, Permanent/fixed type-high capacity rain-guns have been installed on both side of railway siding. i.e., on the Northern as well as Southern Side. Apart from the above Fugitive emissions are being controlled by water sprinkling through 4 no. of 10 KL capacity water tankers. Photographs attached as Annexure-15.</p> <p>No run-off water is being discharged outside the railway siding. However, Garland drains have been constructed on both side of the Railway siding which ultimately connected with the de-silting pit. Photographs attached as Annexure-16.</p> <p>Further, boundary wall erected on both side of Banadag Railway Siding along with permanent wind screen of height 20 ft. i.e., North & South Side. Photographs attached as Annexure-17.</p> <p>Till date 1200 nos. of tree sapling have</p> |
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| <p>1.8 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.</p> <p>1.9 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.</p> <p>1.10 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.</p> <div style="text-align: right; margin-top: 20px;">  नवीन कुमार / NAVIN KUMAR <small>ज्येष्ठ पर्यावरण प्रबंधक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)</small> <small>नवीन कोयला लिमिटेड / NTPC Limited</small> <small>कोयला खनन परियोजनाएं / COAL MINING PROJECTS</small> <small>हजारीबाग / Hazaribag</small> </div> | <p>been planted along the periphery of the railway siding and available vacant land. Photographs attached as Annexure-18.</p> <p>Public Grievance Redressal and Monitoring System has been established at Pakri Barwadih Coal Mining Project for resolving any issues related to the pollution of mines. The same has been reported to RO, MoEF&CC vide letter Ref: 1040/PBCMP/EMG/2023/F-47/199 Dated:19.10.2023. The copy of the same is attached as Annexure-13.</p> <p>A logbook is being maintained by PBCMP, NTPC Ltd on "Public Grievance Redressal and Monitoring System". Further an online system has also been established on 02.10.2023. Address of the same is https://www.ntpc.co.in/grievance/ .</p> <p>Agreed to comply.</p> <p>Presently, Monitoring and analysis is being done through MoEF&CC and NABL accredited lab in consultation with the State Pollution Control Board.</p> <p>However, Environmental laboratory has already been setup with the following equipment's:</p> <ul style="list-style-type: none"> • 5 nos. RDS machines, • 5 nos. of fine particulate sampler, • 1 no of High-volume sampler, • 1 set of continuous ambient Air Quality monitoring station (AAQMS), • 1 set of meteorological station, • 1 set of noise level meter, • 5 set of Piezometers with Automatic data recorder. • 1 no. of manual water level meter, • 1 no. of handy sampler for indoor air quality. |
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| | <p>1.11 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.</p> <p>1.12 PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.</p> <p>1.13 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.</p> | <ul style="list-style-type: none"> 1 no. Personal Dust Sampler <p>Photographs of the CAAQMS and other equipment's are enclosed as Annexure-19.</p> <p>To avoid the accidents at night 858 nos. of power Lights have been installed along the transportation road till date. Apart from the at the rural areas 550 nos. of solar lights have been installed.</p> <p>The NTPC have already constructed 645 nos. Of toilets in surrounding villages under Swachh Bharat Abhiyan. The possibilities for installation of the Bio-toilets are being explored.</p> <p>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 shall be conducted in line with the Fly Ash Utilization Notification, 2021.</p> |
| X | Drills should be wet operated only. | Drilling machine with inbuilt water injecting system is being utilized for drilling purpose. Also, regular water spraying is being carried out in the drilling area for minimization of the fugitive dust emission. |
| XI | 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. | <p>Blasting patterns have been designed based on the study conducted by CIMFR Dhanbad. As suggested by CIMFR, Dhanbad, controlled blasting technique with "nonel" is being practiced to minimize ground vibration and to avoid fly rocks & boulders.</p> <p>Also blast vibration monitoring is being done regularly (<i>and also through third party</i>) to determine any adverse impact due to blasting. The test results are well within the norms prescribed by the DGMS.</p> |


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| | | The latest test report of the same is enclosed as Annexure – 20. |
| XII | No additional groundwater (bore well) shall be used for mining operations. Additional water if any required for the project shall be used from recycled water or mine discharge water or rainwater collected in rainwater harvesting pits within the CML. | As stipulated, the requirement of water for other activity viz.: dust suppression, gardening and vehicle washing etc are being fulfilled through recycled water, mine seepage water, storm water. Ground water is being used mainly for domestic use. |
| XIII | Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. 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 to the Central Pollution Control Board quarterly within one month of monitoring. Rainwater structures shall be erected in the core and buffer zone, in case monitoring indicates a decline in water table. | Monitoring of groundwater levels are being carried out by manual monitoring at 20 locations around the mining lease area. Apart from manual monitoring, automatic water level recorders (Piezometers) have been installed at two locations viz.: Langatu site office, Sikri site office. The data so generated is being submitted to Ministry of Environment & Forests and Climate Change & Central Pollution Control Board. Last six months water level data are enclosed as Annexure – 21. Water quality report of month May & August-2023 is attached as Annexure – 22. Various conservation measures are being taken in Pakri Barwadih Coal Mining Project for rainwater harvesting. The Roof top rainwater structure has been constructed and also rejuvenated the existing ponds in nearby villages for improving the ground water of the area. Approximately 1.49 lakh m ³ /year of ground water is being recharged at Pakri Barwadih Coal Mining Project. Details of the same and Photographs attached as Annexure-23. Apart from the above Approx. 23 lakh m³ of rainwater have been stored in the East quarry for use in dust suppression, plantation activity and the same water is used for other miscellaneous use also. In addition to that, 12 Nos. of Check dams have been constructed in Pakwa and Khora Nala to meet water requirements and to augment the groundwater of the area around PBCMP. The estimated cumulative storage capacity of the Check |


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| | | dams is 16.18 lakh cum. And estimated groundwater recharge potential of approx. 340.52 lakh m³/year through the Check Dams. Details and photographs of the check dams are attached as Annexure-24. |
| XIV | The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine. | <p>As mentioned Regular monitoring of the ground water table in the surrounding villages are being done to determine the any adverse impact on to the ground water regime. Till date no decline in water table are observed due to dewatering from the mine.</p> <p>However, NTPC Ltd – PBCMP, under its social obligation, have installed 6 Nos. of hand pumps 8 nos. of Tube wells in nearby villages in FY 2023-24. Also, to meet the further water requirement of the nearby villagers 16 tankers water has been supplied through mobile water tankers during this summer season.</p> |
| XV | Sewage treatment plant of adequate capacity shall be installed in the colony. | <p>Sewage Treatment Plant (STP) of 1.5 MLD capacities has already been provided in R&R colony. STP is being operated as per the Standard Operating Procedure.</p> <p>Further, STP of 25 KLD of MBBR technology is installed at site office for treatment of the sewage generated at Offices and 300 KLD capacities STP of MBBR technology is also installed at MDO Colony, Sikri.</p> <p>The treated water are being used for horticulture purpose and no water is being discharged outside.</p> <p>Quality of the treated sewage water is being carried out at stipulated frequency. Latest monitoring report attached as Annexure-25.</p> |
| | ETP should also be provided for workshop and CHP wastewater. | For treatment of industrial effluents, an ETP with Electro-Mechanical process technology have been installed at Mine workshop. Drains of washing platforms associated with oil & grease trap is being cleaned regularly. |


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| | | Effluent quality data is enclosed as Annexure-26. |
| | Treated wastewater meeting prescribed norms only shall be recycled for mining operations to the extent possible and permitted to be discharged in to the natural water courses only if it meets the prescribed standards. | Till date no discharge is being done into any natural water course. Treated waste water is being re-cycled and reused for various mining operations. |
| XVI | The total area that shall be brought under afforestation at the time of mine closure shall not be less than 1199 ha which includes reclaimed topsoil soil dump area (25 ha), external OB dump (632 ha), backfilled area (524 ha), along ML boundary, embankment and undisturbed area, along roads and infrastructure, green belt (18 ha), 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. | <p>Shall always be complied with.</p> <p>Overburden dump "C" and "A" are in active condition, i.e. presently excavated OBs are being dumped over the OB dumps and hence, at the active side of dump plantation is not possible. However, more than 1.5 lakhs of tree sapling have already been planted with dense plantation all other parts of closed side of the OB Dump-C as well as more than 45 thousand plant saplings have been planted along the slope of the Dump-A. Photographs of the attached as Annexure-27.</p> <p>Further, more than 20 thousand plant saplings have already been planted along the OB dump-D and vacant part of the eastern quarry. Photographs attached as Annexure-28.</p> <p>It would very much relevant to mentioned here that more than 3.06 Lakhs of tree saplings have been planted and 10,172 nos. of tree saplings have been distributed to local villagers at and around the Pakri Barwadih Coal Mining Project.</p> <p>Also, for mass awareness, the NTPC Ltd – PBCMP is actively participating in "Van Mahotsav" "Tree Raksha Bandhan", "Paryavaran Mela" etc. being organized by State Forest Department.</p> <p>Details of the plantation / distribution taken up by NTPC Limited till date is enclosed as Annexure-29.</p> |
| XVII | A Progressive Mine Closure Plan shall be implemented by reclamation of 524 ha, of the total quarry area of | <p>Shall always be complied with.</p> <p>Till Sept 2023 total area of approx. 85.06</p> |

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| | <p>1785 ha, which shall be backfilled 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. Of the total reclaimed backfilled area, 223 ha shall be grazing land and 442 ha shall be agricultural land for utilization of the villagers. Of the balance 1261 ha of quarry area, an area of 596 ha of de-coaled area/void being converted into a water reservoir shall be gently sloped and the upper benches of the reservoir shall be terraced and stabilized with plantation and the remaining 665 ha is for public use for Phase-2 of the project.</p> | <p>Ha has been backfilled. However internal dumping is in active stage and Mining / reclamation shall be implemented at the cost of project.</p> <p>Escrow account has been opened and amount is being deposited annually. Rs 7.60 Crore have been deposited in the FY 2022-23 as 7th year Mine Closure cost. So far Rs. 52.20 Crore including interest has accrued as on 31.03.2023 in Escrow account as part of the Mine Closure cost.</p> <p>Detail of amounts accumulated in ESCROW is enclosed as Annexure- 30.</p> |
| XVIII | <p>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.</p> | <p>Regular periodic medical check-up of all mine workers as per DGMS guidelines is being carried out at project hospital.</p> <p><i>"Occupational health study in Pakri Barwadih Coal Project with special reference to respiratory health and hearing impairment assessment"</i> was conducted through Regional Occupational Health Centre (Eastern), Kolkata & National Institute Of Occupational Health, Ahmedabad. Report of the same already submitted in last compliance reporting.</p> <p>As of now no case of occupational disease and hearing impairment has been reported.</p> |
| XIX | <p>Condition XIX, Amendment vide letter number-J-11015/692/2007-IA-II(M) Date 07.12.2017</p> <p>A detailed R&R Plan for the life of the project comprising land losers, homestead losers and land and homestead losers, including tribals to be displaced from the project area shall be prepared and implemented in a stipulated time frame. Project proponent will implement the approved R&R plan as per phased requirement of displacement. The compensation shall be not less than</p> | <p>NTPC RAP has been approved vide Govt. of Jharkhand (GoJh) Gazette Notification and forwarded vide letter No. 116 /R dated 27.02.2013 which is in line with the Jharkhand R&R policy.</p> <p>Also, the R&R benefits being extended are not less than as enlisted in the national R&R policy.</p> <p>As per the approved Govt. of Jharkhand (GoJh) Sankalp No. 116 / R dated 27.02.2013, houses have been constructed in the R&R colony at Dhenga along with all necessary infrastructure.</p> |


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| | <p>that specified in the National R&R Policy.</p> <p>Provision shall also be made in the R&R Plan to take care of the land less labourers and the tribals. The total expenditure on R&R shall not be less than Rs. 2976 Cr, which includes private land acquisition (Rs. 982 Cr) and R&R (Rs.1492 Cr). Alternate livelihood and skill development programmes and schemes shall be implemented as part of R&R and CSR.</p> | <p>Total 78 HSOs have been shifted to the R&R colony at Dhenga. Some of the PAPs have opted for self-relocation. Based on the demands of PAPs, a special package has been designed to compensate each self-relocating family. Till Sept. 2023 total 1290 PAPs have been resettled.</p> <p>As per the Socio-economic survey which has been mentioned in Sankalp document, SI No. 3, page no. 2, there are no ST PAF in the project area.</p> <p>The total expenditure on R&R shall not be less than Rs. 2976 Cr, which includes private land acquisition (Rs. 982 Cr) and R&R (Rs.1492 Cr).</p> <p>Further, through ITI Dhenga (Being run by NTPC) capacity building of youths of the project area is being carried out by PBCMP. Other training programs for women empowerment and providing livelihood options is also being organised by PBCMP.</p> <p>Till date 380 nos. of student get employed after passing from ITI Dhenga. Employment details after passing of students from ITI, R&R and LA expenditure details and other livelihood program details area attached as Annexure-31.</p> |
| XX | <p>The project authorities shall carry out a pre-mining socio-economic survey based on the UNDP Human Development Report and monitor the socio-economic status once every three years and maintain records thereof and report in their Annual Report, the socio-economic impact of R&R and CSR activities.</p> | <p>Pre-mining Socio economic survey has been undertaken through IIT Kharagpur and Abhigyan Samiti (Local NGO).</p> <p>For monitoring, socio economic status a contract for conducting Social Impact Assessment in the project affected villages of PBCMP has been awarded to M/s. Deloitte Touche Tohmatsu India LLP, Gurgaon dated 16.09.2020. The study report has already submitted in previous compliance report.</p> |
| XXI | <p>For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 23 ha) of</p> | <p>The LULC study is being carried out in every three years interval. The last study was conducted in the year 2019-22 and report of the same was submitted to the</p> |

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| | | <p>Monitoring data of the month of Sept. 2023 is attached as Annexure-33.</p> <p>Apart from the above One no. CAAQMS has been installed to monitor Ambient Air Quality at Langatu village in Mining lease area in consultation with JSPCB officials which is only 2.5 Km from the Mining area.</p> |
| IV | <p>Fugitive dust emissions (SPM and RSPM and heavy metals such as Hg, Pb, Cr., As, etc) from all the sources shall be controlled regularly monitored and data recorded properly.</p> <p>Water spraying arrangement on haul roads, wagon loading, and dump trucks (loading and unloading) points shall be provided and properly maintained.</p> | <p>All the possible measures are being taken to control the fugitive dust emission. Dust suppression at mines haul roads & other dust generating areas like truck loading & unloading points is being carried out by engaging 25 nos. mobile water tankers. Details are as under:</p> <p>12KL: 04 Nos. 14KL: 06 Nos. 16KL: 05 Nos. 20KL: 04 Nos. 25KL: 01 No. 28KL: 03 Nos. 70KL: 01 No. 80KL: 01 No.</p> <p>Apart from the above fixed water sprinklers are installed at main haul road.</p> <p>It would very much relevant to mentioned here that the 80 KL water tanker is being used in the Pakri Barwadih coal mining project which is unique in India.</p> <p>Further arrangement has been made to bring water from Eastern Quarry by pipeline to Western Quarry for adequate availability of water for dust suppression.</p> <p>Also, water from Eastern Quarry is being used for dust suppression in coal transport road through water tankers and also in the coal stock yard of CHP area.</p> <p>For controlling of the fugitive dust emissions wet drilling with water injection system is being in practice during drilling operations.</p> <p>Further to minimize the dust generation, part of the coal transportation is being</p> |


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| | | <p>done by trucks which is covered with the tarpaulin. Also, to prevent the dust generation due to plying of the trucks regular water sprinkling is being done along the transportation road.</p> <p>Also, the coal has been transported in wet condition from mine end to Banadag Railway Siding. For wetting the coal there are fog canon installed in the crusher area as well as coal stock yard of CHP. Photographs attached as Annexure-34.</p> <p>Apart from the above the coal which is transported through conveyor is done in closed belt passes through 10 nos. of TPs all the TP have water injection system which regularly inject the water in the coal. There are two nos. of mist fog canon have been installed at the TP-10 to wet the coal or minimize the dust generation. Also, green wind screen/net shed has been erected all around and at the top of the coal stock yard and coal is being transported in fully covered vehicle.</p> <p>Further at the loading point i.e, at Banadag Railway Siding, Fixed type of water sprinkler with rain gun has been installed on both side of the Railway Siding. Also, regular water sprinkling is being done through the water taker. Apart from the above to minimize the dust propagation wind screen of 20 ft. height have been installed on both side of the Banadag Railway Siding.</p> <p>Monitoring of the fugitive emission and heavy metal are being done at CPCB prescribed intervals. Analysis reports of same are enclosed as Annexure – 33.</p> |
| V | Data on ambient air quality (SPM, RSPM, SO ₂ , NO _x and heavy metals such as Hg, Pb, Cr, As, etc)) shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. | <p>Environmental monitoring of ambient air quality is being done through MoEF&CC approved and NABL accredited Lab at CPCB prescribed intervals.</p> <p>Data for the Period April-2023 to Sept. 2023 is enclosed as Annexure-33.</p> <p>The Last report was submitted online on</p> |

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| | | Parivesh Portal and to regional office vide letter no.- 1040/PBCMP/EMG/2023/F-47/111 dated- 31/05/2023 through mail dated 31.05.2023. Copy of the mail enclosed as Annexure-4 . |
| VI | <p>Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment.</p> <p>Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.</p> | <p>Effective measures are well taken to minimize the noise level below 85 dB (A) in the work zone.</p> <p>All the equipment/machines are provided with acoustic enclosure cabins. Also, the Workers engaged in noisy operations are provided with earplugs/muffs. Noise levels are also being monitored at regular intervals the results are well within the prescribed norms.</p> <p>Noise monitored data is enclosed as Annexure-35.</p> |
| VII | <p>Industrial wastewater (workshop and wastewater from the mine) shall 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.</p> <p>Oil and grease trap shall be installed before discharge of workshop effluents.</p> | <p>For treatment of wastewater generated at HEMM Washing Centre, an Electromechanical ETP with capacity of 200 KL has been installed at Mine workshop and Oil & grease trap with sedimentation pit is integral part of the ETP installed.</p> <p>For collection and treatment of industrial water SoP has been prepared which is rigorously followed at the plant. Flow diagram attached as Annexure-36. Copy of the SOP of ETP operation is attached as Annexure-37. Effluent quality data are enclosed as Annexure-26.</p> |
| VIII | Vehicular emissions shall be kept under control and regularly monitored. | <p>Planned preventive maintenance of all vehicles plying for project is being done periodically. All the vehicles deployed at PBCMP are PUC compliant.</p> <p>PUC certificate of some of the vehicle is enclosed as Annexure - 38.</p> |
| IX | <p>Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.</p> <p>Amendments dt 07.12.2017: The monitoring shall be done by</p> | <p>Presently Monitoring and analysis is being done through MoEF&CC and NABL accredited lab in consultation with the State Pollution Control Board. However, Environmental laboratory has already been setup with the following equipments:</p> <p>❖ 5 nos. RDS machines,</p> |

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| | NABL/MoEF&CC Laboratory. | accredited | <ul style="list-style-type: none"> ❖ 5 nos. of fine particulate sampler, ❖ 1 no of High-volume sampler, ❖ 1 set of continuous ambient Air Quality monitoring station (AAQMS), ❖ 1 set of meteorological station, ❖ 1 set of noise level meter, ❖ 5 set of Piezometers with Automatic data recorder. ❖ 1 no. of manual water level meter, ❖ 1 no. of handy sampler for indoor air quality. ❖ 1 no. Personal Dust Sampler <p>Photograph of the CAAQMS and other equipments are enclosed as Annexure – 19.</p> |
| X | <p>Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.</p> <p>Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.</p> | | <p>All the possible measures are being taken to control the fugitive dust emission. Apart from controlling fugitive dust emission, Personal protective respiratory devices are provided to personnel working in dusty areas & adequate training on safety & health are also being imparted.</p> <p>Occupational health surveillance program prepared and implemented to identify the adverse impact, if any, and to take appropriate corrective action, if required.</p> <p>Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project are being done at required intervals to observe any contractions due to exposure to dust. The various tests include PFT, X-Ray, and lung spirometry etc.</p> <p>Summary report of the medical checkup is enclosed as Annexure – 39.</p> |
| XI | A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company. | | <p>At the corporate office, a separate Environmental Management Cell is already functioning under supervision of senior executive who is reporting to Head of the Company to look after the implementation of the various pollution control measures and other Environment Management System requirements.</p> <p>At local level, dedicated department for</p> |

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| | | <p>Environment Management is also functional with qualified Environmental Engineer. Head of the Department directly reports to Head of the Project. The working level staffs in Environment Cell have been deployed through MDO.</p> <p>The organization chart of the same is enclosed as Annexure – 40.</p> |
| XII | <p>The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose.</p> <p>Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.</p> | <p>As per the EIA/EMP only 21.13 Crores Capital cost and 0.84 Crores Recurring cost are earmarked as cost of environmental control measures. However, NTPC have spending beyond the amount stipulated in the EIA/EMP.</p> <p>So far, an amount of Rs. 5.465 Crores have been spent during April-2023 to Sept.-2023 for the Environment Management Cost.</p> <p>Till Sept. 2023 we have spent an amount Rs. 77.488 Crores (Rs. 61.155 Crores – Audited and Rs. 16.32 Crores - Unaudited) for the Environment Management Cost. Details of the expenditure incurred towards EMP are enclosed as Annexure-41.</p> |
| XIII | The Regional Office of this Ministry located at Ranchi shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports. | Full co-operation is being extended by the project authorities to the officers of MoEF/ RO during their inspection / site visit. |
| XIV | A copy of the EC will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. | <p>No suggestion / representation have been received while processing the proposal. Copy of the EC letter has been sent to the local administrative offices and the EC letter has been also uploaded on the company's website www.ntpc.co.in. Further, copy of the EC has been handed over to all the Mukhiya / Surpanch concerned with the PBCMP.</p> <p>Copy of the receipt of EC from different Panchayats is already submitted.</p> |


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| XV | State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days. | Copy of the EC letter was sent to office of District Industry centre, District Collector office for display. A copy of the EC has been also marked to JSPCB for display at their Regional office. |
| XVI | The Project authorities shall 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/ . The compliance status shall also be uploaded by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at the entrance of the project premises and mines office and in corporate office. | EC was granted on 19.05.2009 which was received at our end on 25.05.2009 and the same was published in English Daily "The Times of India" as well as in vernacular language (Hindi) daily "PRABHAT Khabar" on 30.05.2009 which is within 7 days of receiving the granted EC. Copies of the news clippings published in Papers are enclosed herewith and marked as Annexure- 42 . The half yearly Compliance status is being updated on Company's website. https://www.ntpc.co.in/about-us/corporate-functions/environment/status-hyc-reports The data is also being displayed at entrance of the office. |
| 3 | The Ministry or any other competent authority may stipulate any further condition for environmental protection. | The additional conditions stipulated by MoEF vide amendment letter no. J-11015/692/2007-IA.II(M) Dated 29.06.2016, 07.12.2017, 14.08.2018, 10.11.2020, 16.08.2023 & 09.11.2023 towards environment protection have been complied. |
| 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. | Noted and will be complied. |
| 5 | The above conditions will be enforced <i>inter-alia</i> , 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. | Noted and will be complied under the provision of these acts and rules. |


नवीन कुमार / NAVIN KUMAR
 ज्वायनर (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

NTPC Limited
Pakri Barwadih Coal Mining Project (15MTPA)

| | | |
|--|---|--|
| | The proponent shall ensure to provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations. | |
|--|---|--|

Navin Kumar
नवीन कुमार / NAVIN KUMAR
आ. पर्यावरण (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

उपायुक्त का कार्यालय, हजारीबाग

(जिला योजना)

e-Mail:- dpohazariibagh@gmail.com

पत्रांक...14.7.2023/जि०यो०

प्रेषक,

उपायुक्त,
हजारीबाग।

सेवा में,

महाप्रबंधक
एन०टी०पी०सी०, पकरी-बरवाहीह
हजारीबाग।

हजारीबाग, दिनांक...1.6.2023

विषय :-

सी०एस०आर० मद के तहत हजारीबाग जिला के बड़कागाँव स्थित मेगालिथ पार्क के विकास एवं पथ निर्माण हेतु राशि उपलब्ध कराने के संबंध में।

प्रसंग:-

आपका पत्रांक- NTPC/PBCMP/R&R-CD/2023 Dated 10-10-2023

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के द्वारा सी०एस०आर० मद के तहत हजारीबाग जिला के बड़कागाँव स्थित मेगालिथ पार्क के विकास एवं पथ निर्माण हेतु 06 किस्तों में 3,03,92,447/- रुपये राशि उपलब्ध कराने पर सहमति व्यक्त की गई है एवं मांग पत्र उपलब्ध कराने हेतु अनुरोध किया गया है।

उक्त के आलोक में अनुरोध है कि जिला डिपोजिट में उक्त राशि का प्रथम किस्त 50.00 लाख रुपये निम्नांकित बैंक विवरणी के अनुसार उपलब्ध कराने का कष्ट किया जाय। विवरणी निम्नवत है :-

बैंक का नाम:- भारतीय स्टेट बैंक, मुख्य शाखा, हजारीबाग

खाता संख्या-11071859457

IFSC Code-SBIN0000090

विश्वासभाजन

उपायुक्त
हजारीबाग।

Navin Kumar
नवीन कुमार / NAVIN KUMAR
महाप्रबंधक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



एनटीपीसी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Govt. of India Enterprise)

कोयला खनन परियोजनाएँ, हजारीबाग
Coal Mining Projects, Hazaribag

Date: 28/10/2023

Ref: NTPC/PBCMP/R&R-CD/2023

To,
The **Dy. Commissioner,**
District Hazaribag.

Sub: Deposit of funds for development of "Megalith Park", at Barkagaon, Hazaribagh: reg

Respected Madam,

This has reference to the letter No.476 dated 16.10.2023, of the Deputy Commissioner, Hazaribagh, wherein the District Administration had requested for deposit of fund for Rs.3,03,92,447/- (Rs. 3.03 Crore approx.) in six (06) instalments for development of "Megalith Park", at Barkagaon, as per the estimated expenditure, under the Community Development activities of NTPC Pakri Barwadih.

In this connection, NTPC, Pakri Barwadih is depositing fund of Rs. 50.00 Lakhs (Fifty lakhs) as 1st Instalment with the 'The Deputy Commissioner, (CSR Fund) Hazaribagh' vide Cheque No. 090436 dated 20.10.2023 to start the development work of "Megalith Park", at Barkagaon.

Original Cheque is attached herewith. Subsequent instalments would be released on receipt of Utilization Certificate of at least 80% amount of the previous instalment.

As part of the process, you are requested to direct the concerned Govt. Deptt./ Executives to kindly provide the Utilization Certificate/ Good quality photographs on a periodic basis. It is humbly submitted that the display of NTPC logo, as replicated below:



and citation 'Courtesy NTPC PBCMP' at appropriate locations of the project work, may also kindly be advised to concerned Govt. agency, so that the efforts of NTPC in augmenting the Govt. Schemes towards socio-economic development of the area also gets due recognition.

Thanking you,

Yours Sincerely,


(Neeraj Jalota)

HOP, PB & PB-NW Coal Mining Project

Encl.: As above

CC: The District Engineer, Hazaribagh: For kind information please.

The District Planning Officer, Hazaribagh: For kind information please.

कोयला खनन परियोजनाएँ, सिकरी साईट कार्यालय, बड़कागाँव, हजारीबाग - 825344


नवीन कुमार / NAVIN KUMAR
प्रमाणित (पर्यवेक्षण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

20102023
D D M Y Y Y

PAY *DEPUTY COMMISSIONER (CSR FUND)* को या उनके आदेश पर OR ORDER

रुपये RUPEES *Fifty Lakh only*

₹ *50,00,000=00*
अदा करें

For NTPC LIMITED

35110379118

बैंक अ/c नं.

VALID UPTO ₹ 15 CRORES AT NON-HOME BRANCH FOR NON-CASH TRANSACTION ONLY

81197301153

CURRENT A/C

PREFIX:
1516200000

MULTI-CITY CHEQUE Payable at Par at All Branches of SBI

AUTHORISED SIGNATORY AUTHORIZED SIGNATORY
Please sign above

Naaz *Diwan*

1109043611 8340020031 00090111 29

Photographs showing # Catch drain and siltation pond has been constructed along the second top soil dump.



Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्येष्ठ सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Six Monthly Progress Report on compliance of conditions stipulated in the Environmental Clearance by MoEF & CC and Monitoring report for the period Oct., 2022 to March 2023 for NTPC Ltd - Pakri Barwadih Coal Mining Project (15MTPA): Reg.

EMG_PBCMP <emg_pbcmp@ntpc.co.in>

Wed 31/05/2023 16:52

To:ro.ranchi-mef@gov.in <ro.ranchi-mef@gov.in>

Cc:TSPAKRI <tspakri@ntpc.co.in>;Upendra Kumar Pandit

<UPENDRAKUMARPANDIT@NTPC.CO.IN>;NAVIN <NAVINKUMAR03@NTPC.CO.IN>;Amudala

<AMUDALAPRATHAP@NTPC.CO.IN>;jspcb_hazaribagh@rediffmail.com

<jspcb_hazaribagh@rediffmail.com>;ranchijspcb@gmail.com

<ranchijspcb@gmail.com>;mkbiswas.cpcb@nic.in <mkbiswas.cpcb@nic.in>

 [EC-Compliance.pdf](#)

Dear Sir,

With reference to above subject please find enclosed herewith the six-monthly status report on compliance of various conditions in the Environmental Clearance accorded to **NTPC Ltd - Pakri Barwadih Coal Mining Project (15MTPA)** for the period **Oct., 2022 to March 2023**.

this is for your kind information please.

With regards

Navin Kumar

Dy. GM (Envt. Mgmt.)

PBCMP - NTPC Ltd.



Navin Kumar
नवीन कुमार / NAVIN KUMAR
उप महाप्रबंधक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Photograph showing # Garland Drains and Siltation ponds along the OB Dump.



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन व्हाट्सएप (पर्यावरण प्रबंधक) / DGM (ENVT. MGMT.)
नए दिल्ली / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Pond no - 1



Pond no - 2



Pond no - 3



Photographs showing # Toe wall and garland drain around the OB dump





Navin Kumar
नवीन कुमार / NAVIN KUMAR
 कोयला खनन प्रशासक (BOM) (EXC) (MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Photographs Showing Conveyor System



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन वीपीसी लिमिटेड (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
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हजारीबाग / Hazaribag



Navin Kumar
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 डी.एम.एस. (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Existing plantation photographs along the Northern part of the Mine Lease



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन वनमैनेजमेंट (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



Navin Kumar
नवीन कुमार / NAVIN KUMAR
 एन एनपीसी लिमिटेड (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Photographs showing # plants have been planted along the northern boundary .



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन सी प्रमोशन (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



Navin Kumar
नवीन कुमार / NAVIN KUMAR
 डीएम (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag



File No.: J-11015/692/2007-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Dated 09/11/2023



To,

Vijay Prakash
 NTPC LIMITED
 NTPC Limited, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi – 110003
 , , NEW DELHI, DELHI, , 110003
 environment.ntpc@gmail.com

Subject: **Pakri Barwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri-Barwadih, Chepa-Khurd, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkhand – Amendment in Environmental Clearance dated 19.05.2009 - reg.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/JH/CMIN/443583/2023 dated 08/09/2023 for grant of an amendment in 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. | EC23A0101JH5786831A |
| (ii) File No. | J-11015/692/2007-IA-II(M) |
| (iii) Clearance Type | Amendment in EC |
| (iv) Category | A |
| (v) Schedule No./ Project Activity | 1(a) Mining of minerals |
| (vi) Sector | Coal Mining |
| (vii) Name of Project | Amendment of Environment Clearance of Pakri Barwadih Coal Mining Project, NTPC Limited |
| (viii) Location of Project (District, State) | HAZARIBAGH, JHARKHAND |
| (ix) Issuing Authority | MoEF&CC |
| (x) EC Date | |
| (xii) Applicability of General Conditions | NO |

Navin Kumar
नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVY: MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECT
 हजारीबाग / Hazaribag

(xiii) Status of implementation of the project

3. The Ministry of Environment, Forest and Climate Change has granted Environmental Clearance vide its letter dated 19th May, 2009. Amendments in EC conditions were granted by Ministry: 1st amendment in EC vide letter dated 29.06.2016, 2nd amendment in EC vide letter dated 07.12.2017, 3rd amendment vide letter dated 14.08.2018, 4th amendment vide letter dated 10.11.2020 and 5th amendment vide letter dated 16th August, 2023 in favour of Pakri Barwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri- Barwadih, Chepa-Khurd, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, (Jharkhand) with certain terms and condition.

4. As per EC condition, Project Proponent was comply the following condition:

2A (ix) "Mineral transportation from CHP to Railway siding shall be by closed belt conveyor of a length of 7km. The railway siding shall be provided with Silo Rapid Loading System".

Ministry vide its EC amendment letters as above at different time interval granted the amendments. As per EC Amendment letter dated 16.08.2023, following is stipulated

i.e "The PP needs to complete the construction of closed belt conveyor system of a length of 13 km to Banadag railway station. The project proponent is permitted till October, 2023 to use Service road/State Highways for transportation of coal to Banadag railway siding by adopting all mitigative measure to control dust pollution".

5. Now the PP has again requested amendment of condition no. 2A (ix) to extend the time line to implement the same condition of belt conveyor with silo loading by citing the order of Hon'ble Supreme Court vide judgment dated 20.10.2023, in the matter of National Thermal Power Corporation (NTPC) v. Tripurari Singh in Miscellaneous Application No. 1824/2023 in Civil Appeal No. 6249 of 2021 wherein the timeline has been extended for completing the construction of the conveyor belt (mechanized system) from 31.10.2023 to 31.01.2024. Further, direction of Hon'ble Supreme Court order dated 20th October, 2023 states the following:

- "we extend the timeline fixed by the order of this Court dated 08.08.2022, till 31.01.2024"
- "MoEF&CC through the Sectoral Expert Appraisal Committee i.e., EAC shall appraise the matter afresh"
- "The outcome of the appraisal may be placed before this Court after information to the Project Proponent" and

6. PP has submitted the following comparative status upon the implementation of Rapid Loading System mentioning the progress of work after the last review made by EAC in August 2023 till 27th October 2023:

- **Progress on 16.06.2023 (Last EC amendment application):** Civil works: 76%; Structural Supply: 57%; Electrical and Mechanical Supply: 57%; Structural erection: 22%
- **Progress on 27.10.2023:** Civil works: 82%; Structural Supply: 74%; Electrical and Mechanical Supply: 76%; Structural erection: 39%

7. The proposal was considered by the sector expert appraisal committee in its 2nd EAC meeting held during 30th October, 2023 through Video Conferencing wherein the Committee recommended for the proposal for Amendment in Environmental Clearance letter dated 19.05.2009 i.e. amendment of condition no 2A (ix) up to 31st January, 2024 w.e.f 31st October 2023 for **Pakri Barwadih Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara, Sonbarsa, Pakri- Barwadih, Chepa-Khurd, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkhand**, under the provisions of EIA Notifications, 2006 and its amendments therein with following

specific conditions at Annexure I.

8. All other terms and conditions stipulated in the Environmental Clearance dated 19th May, 2009 and its amendments vide letter 29.06.2016, 07.12.2017, 14.08.2018, 10.11.2020 and 16th August, 2023 shall remain unchanged.

This issues with the approval of the competent Authority

Copy To

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi
3. The Additional Principal Chief Conservator of Forests, Regional office (ECZ), Ministry of Environment & Forests, Bungalow No. A-2, Shyamali Colony, Ranchi - 834002
4. The Chairman, Jharkhand State Pollution Control Board, TA Building, HEC Complex, PO Dhurwa, Ranchi
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi, 32
6. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
7. The District Collector, Hazaribagh, Government of Jharkhand
8. Monitoring File/Guard File/Record File. 9. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Mining of minerals)

1. Specific condition

| S. No | EC Conditions |
|-------|--|
| 1.1 | PP needs to implement the conditions laid down in amended EC letter dated 16.08.2023 wherein additional safeguards with regard to road transportation have been provided. |
| 1.2 | PP needs to submit the Certified Compliance Report (CCR) from IRO for the Amendment of Environmental Clearance (EC) letter dated 16.08.2023 and their respective Action taken report by 15 December 2023. |
| 1.3 | PP shall collect the One-month baseline data on environmental quality – air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, AS, etc), noise, water (surface and groundwater), soil at different location of the existing coal transportation route. |
| 1.4 | PP needs to submit the Compliance of above condition no. (ii) in order to address the matter of court cases pending before the Hon'ble Supreme Court for National Thermal Power Corporation (NTPC) v. Tripurari Singh in Miscellaneous Application No. 1824/2023 in Civil Appeal No. 6249 of 2021. |

Signature Not Verified

Digitally Signed by : Mr Lalit Bokolia
Member Secretary, MoEFCC (EC)

Date: 09/11/2023

Navin Kumar
नवीन कुमार / NAVIN KUMAR
का. प्रशासक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
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कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

SECTION-XVII

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

MISCELECNEOUS APPLICATION NO. 1824 OF 2023

IN

CIVIL APPEAL NO. 6249/2021

IN THE MATTER OF:-

NATIONAL THERMAL POWER
CORPORATION LIMITED (NTPC)

...PETITIONER

VERSUS

TRIPURARI SINGH & ORS.

...RESPONDENTS

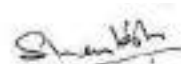
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| 1. | PROCESS FEE | 7 | NIL |
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| | | | |
| | TOTAL | | NIL/- |

C.C. No. 1893

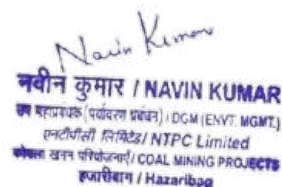
I.C.NO.3911 AMIT CLERK

MO.NO. 8447997954



[SHAILESH MADIYAL]

Advocate For Respondents
208, C.K. Daphtary Chamber
Supreme Court of India
New Delhi-110001



नवीन कुमार / NAVIN KUMAR
एन वन डी एम (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एन टी पी सी लिमिटेड / NTPC Limited
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**IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION
M.A. NO. _____/2023
IN
CIVIL APPEAL NO. 6249 OF 2021**

IN THE MATTER OF:

NTPC LTD.

...APPELLANT

VERSUS

TRIPURARI SINGH & ORS.

...RESPONDENTS

**AN APPLICATION SEEKING EXTENSION OF TIME FOR
COMPLETION OF THE COAL CONVEYING SYSTEM
FACILITIES/CIP AT APPELLANT'S PAKRI BARWADIH COAL
MINE PROJECT, BARKAGAON, HAZARIBAG.**

TO,
THE HON'BLE CHIEF JUSTICE OF INDIA
AND HIS COMPANION JUDGES
OF THE SUPREME COURT OF INDIA

THE HUMBLE APPLICATION
OF THE APPELLANT ABOVE NAMED

MOST RESPECTFULLY SHOWETH:

1. The captioned Appeal arose out of the impugned order dated 06.01.2021 passed in Original Application No. 61/2019/EZ by the National Green Tribunal, Principal Bench, New Delhi. Vide order dated 06.01.2021, the National Green Tribunal, Principal Bench, New Delhi had directed the Appellant to construct the Conveyor belt facilities at its Pakri Barwadih Coal Mining Project,

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Hazaribag, within three months. This order came to be passed without any basis or assessment of the time period required for completion of such facilities.

2. Being aggrieved by the same, the Appellant approached this Hon'ble Court by way of Civil Appeal No. 6249/2021. This Hon'ble Court, while dealing with the Appeal filed by the Appellant, initially, vide its order dated 22.10.2021 granted stay on operation of the order passed by the Hon'ble National Green Tribunal regarding fixation of time limit for construction of Conveyor System. Later, vide its final order dated 08.08.2022, this Hon'ble Court was pleased to extend the timeline for completion of the construction of the conveyor belt on or before October, 2023. The copy of the order dated 08.08.2022 passed by this Hon'ble Court in Civil Appeal No. 6249/2021 is annexed herewith and marked as **Annexure A/1 (Pages 26 to 28)**.
3. For the sake of brevity, the Appellant is not repeating the detailed factual matrix leading to filing of the captioned Appeal before this Hon'ble Court. However, the Appellant

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would like to place on record certain facts, which are relevant for the adjudication of the present application:

- i. On 11.10.2004, the Ministry of Coal & Mines, Department of Coal, Government of India, New Delhi [hereinafter to be referred as MoC, New Delhi] allotted a coal block in favour of the Appellant - NTPC Ltd. The said coal block is known as Pakri Barwadih Coal Mine block and has been allotted for captive use. The coal mining project is site specific i.e., where the coal deposits are available.
- ii. This Coal Mine supplies coal to nearly 20 power projects of the Appellant - NTPC Ltd. across most of the states of the Country. It is pertinent to note that in the wake of recent power shortage faced by the Country this Coal Mine assumes vital significance to meet the energy requirements.
- iii. On 25.08.2006, the MoC, New Delhi approved the mining plan in favor of Appellant/NTPC Ltd in respect of the Pakri Barwadih Coal Mine Block.

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- iv. On 18.12.2007, the Jharkhand State Pollution Control Board, Jharkhand [JSPCB] granted Consent to Establish [CTE] to the NTPC Ltd.
- v. On 19.05.2009, the Ministry of Environment & Forests, Government of India, New Delhi granted Environmental Clearance to the Appellant and further granted amendments to same for transportation of coal by road to Banadag Railway siding up to October 2023 in view of the order dated 08.08.2022 passed by this Hon'ble Court.
- vi. On 11.05.2010, the Ministry Environment & Forests, (F. C Division) Government of India, New Delhi granted Stage-I forest clearance to the Appellant for diversion of an area of 1026.43\$ hectares.
- vii. On 17.09.2010, the Ministry Environment & Forests, (F.C Division) Government of India, New Delhi granted Stage-II forest clearance to the Appellant.
- viii. On 17.05.2016, the Appellant wrote a letter to the Director General of Mines Safety intimating

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regarding initiation of mining activities in Pakri Barwaddh Coal Mine Block.

- ix. On 12.12.2016, the JSPCB, Jharkhand renewed the Consent to Operate for operation of the Coal Block. The same has been extended and valid upto 31.12.2024. It is to be noted that various statutory clearances and Community Development-Corporate Social Responsibility (CD-CSR) were undertaken by the NTPC Ltd. in the years before starting of mining activities in the year 2016
- x. Meanwhile, the contracts for (i) manufacturing and design, and (ii) for transport/delivery and erection& operationalization of Main Coal Handling Plant (CHP) (vide CHP Contract/NOA dated 31.03.2011), and the Extended CHP (vide Extended CHP Contract/NOA dated 05.10.2011) at Appellant's Pakri Barwaddh Coal Project were executed between the Appellant-NTPC Ltd. and Tecpro Systems Ltd (TSL).

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- xi. That in terms of the Main CHP Contracts, all Main CHP facilities and associated auxiliaries were to be completed within 18 months from the date of NOA i.e., from 31.03.2011. Similarly, commissioning and completion of all facilities pertaining to Extended CHP was to be done within 15 months from the date of NOA i.e., from 05.10.2011.
- xii. It is submitted that the TSL failed to meet its obligations on account of its poor financial condition which led to initiation of proceedings against it (for the default of approx. 2800 Crores), under the Insolvency and Bankruptcy Code, 2016 [hereinafter to be referred as 'IBC'] vide CP (IB) No.197(PB)/2017 before National Company Law Tribunal, Principal Bench, New Delhi.
- xiii. It is submitted that the NTPC Ltd. has, twice for the Main CHP, and once for the Extended CHP, awarded cost and time escalations and revisions to TSL, however, TSL failed to complete the Projects even in terms of such revised timelines.

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xiv **LIQUIDATION OF TSL:** The Corporate Insolvency Resolution Process against the TSL finally culminated into passing of an order for Liquidation of TSL, on 16.01.2020, by the National Company Law Tribunal, Principal Bench, New Delhi in the Company Petition. The order directing Liquidation of TSL was challenged before the National Company Law Appellate Tribunal, New Delhi [NCLAT] in CA (AT) No. 202/2020, which came to be dismissed on 08.09.2020. Thereafter, in an Appeal bearing Civil Appeal bearing No. 3299/2020 before this Hon'ble Court, the Liquidation Order was initially stayed by this Court, with a view to give an opportunity to the Resolution Applicant and the Corporate Debtor, to give effect to the Resolution Plan. However, vide final order dated 01.03.2021, the Civil Appeal has been dismissed, and the Liquidation Order was upheld. Therefore, presently, the TSL is being run by the Liquidator appointed by the National Company Law Tribunal, New Delhi.

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- xv **ARBITRATION PROCEEDINGS:** It is pertinent to submit that the TSL vide notice dated 25.04.2019, invoked arbitration clause against the Appellant - NTPC Ltd. allegedly towards the amounts having not been settled by the NTPC Ltd. in connection with setting up of CHP for Pakri Barwadih Coal Mining Project, which led to initiation of the arbitration proceedings. Subsequently, the arbitral tribunal was constituted.
- xvi While the arbitration proceedings were ongoing, on account of persistent delays and defaults, on 03.07.2021, NTPC Ltd. was constrained to issue show-cause notice, in terms of the contracts, and, due to absence of any remedial action, the Appellant proceeded to terminate the subsisting contracts vide Termination Notices dated 12.08.2021, with immediate effect.
- xvii That on 04.09.2021, TSL filed an Application (dated 02.09.2021) under Section 17 of the Act, seeking, inter-alia, (i) setting aside of the Termination Notices; and, (ii) that NTPC Ltd. be

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restrained from creating any third-party interest in the work being executed by TSL in relation to the Projects.

- xviii. That on 14.09.2021, the Ld. Tribunal passed an ad-interim order, thereby directing that the status quo be maintained with respect to creation of *“third party interest in the respect of the contract”* till the Application under Section 17 was decided. This was extended vide order dated 14.09.2021 till 30.11.2021.
- xix. It is submitted that the orders dated 14.09.2021 and 29.09.2021 passed by the Ld. Arbitral Tribunal were challenged by the Appellant-NTPC Ltd. by preferring an appeal bearing Arb. A. (Comm.) No. 58/2021 before the Hon'ble High Court of Delhi. The Hon'ble High Court, vide its final order dated 29.10.2021, set aside the orders dated 14.09.2021 and 29.09.2021 passed by the Ld. Arbitral Tribunal. The true copy of the order dated 29.10.2021 passed in Arb. A. (Comm.) No. 58/2021 by the Hon'ble High Court of Delhi is

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annexed herewith and marked as **Annexure A/2**
[Pages 29 to 39].

- xx. **PRESENT STATUS OF WORK:** That after termination of the contracts for construction of Main & extended CHP awarded to M/s TSL, a total of 145 small contracts/purchase orders were issued for execution of the balance works of Main & extended CHP upto Transfer Point-10 with a total awarded value of 76.66 Cr. excluding Goods & Services Tax. Pursuant thereto, the work was executed and the commissioning of the Conveyor Stream-A (upto TP-10) was done, on 28.02.2022, and the commissioning of the Conveyor Stream-B (upto TP-10) was done, on 30.11.2022. The copies of work completion certificates issued in this regard are annexed herewith and marked as **Annexure A/3 (Colly.) [Pages 40 to 41].**

- xxi. It is submitted that as per the scheme of the Coal Conveying facilities at Appellant's Pakri Barwadih Coal Mine Project, the Appellant is required to construct the Rapid Loading System and the

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Banadag Railway Yard/tracks, beyond Transfer Point-10. The true copies of the route map/layout of the entire Coal Conveying facilities along with its schematic design are annexed herewith and marked as **Annexure A/4 (Colly.) [Pages 42 to 44]**. The true copies of the schematic designs/route layout of Rapid Loading System and the Banadag Railway Yard/tracks at Appellant are Pakri Barwadih Coal Mine Project, beyond Transfer Point-10 are annexed herewith and marked as **Annexure A/5 (Colly.) [Pages 45 to 46]**.

- xiii. It is submitted that the construction of Mechanical Transport and Loading Arrangement from TP-10 to Banadag Railway Sidmg [Rapid Loading System] and construction of Banadag Railway yard/tracks and associated works for NTPC Pakri Barwadih Coal Mining Project is/was completely dependent on the availability of the land from TP-10 till the area earmarked for construction of such facilities, which is

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approximately 24.593 Hectares. It is pertinent to submit that due to the continuous agitations of locals for fulfillment of demands beyond the acquisition policy etc., the Appellant had to repeatedly write to the Deputy Commissioner, Hazaribagh, Jharkhand requesting for deployment of police personnel for taking possession of the notified land [for which the payment was already disbursed/compensation was already deposited]. Due to such protest and agitations, the required extent of land could be taken in possession only on 28.04.2023. The true copies of the certain communication between the Appellant and the District Administration, Hazaribag along with the photographs are annexed herewith and marked as **Annexure A/6 (Colly.) [Pages 47 to 53]**.

- xxiii. Permanently, on 06.12.2021, the Appellant had awarded a contract for Rapid Loading System [RLS] to M/s BTL EPC Ltd. for construction of Rapid Loading System for a value of 268 Crores. The period for completion of work, as per contract,

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is from 06.12.2021 to 05.10.2023. The true copies of the Notifications of Award to M/s BTL EPC Ltd., dated 06.12.2021 for construction of Rapid Loading System along with estimated timeline for completion are annexed here with and marked as **Annexure A/7 (Copy.) (Pages 60 to 68)**

xxiv. It is reiterated that due to continuous agitations and encroachments by the locals, the required extent of land could be taken into possession only with the assistance of force deployed by District Administration. This could be done only on 28th April, 2023 by deploying the force for 2 continuous days. Thereafter, the land was handed over to M/s BTL EPC Ltd for further construction activities of Rapid Loading System. That due to delay in handover of the required extent of land, M/s BTL EPC Ltd has revised the timeline for completion of construction of Rapid Loading System from 5th October, 2023 to 27th September, 2024. The true copy of the email communication along with the revised estimation of timeline for

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completion submitted by M/s BTL EPC Ltd to the Appellant are annexed herewith and marked as **Annexure A/8 (Colly.) [Pages 89to 91].**

- xxv. Meanwhile, on 04.07.2022, the Appellant had awarded a contract to Eastern Central Railways, Indian Railways for the construction of Banadag Railway yard/tracks and associated works for NTPC Pakri Barwadih Coal Mining Project through Railways on deposit work basis for loading of coal from Rapid Loading System into railway wagons/rakes on awarded value of Rs. 170 Crores. The total length of route is 2843 Meters [the total length of the tracks to be laid by Railways is approximately 17 Kilometers]. Out of which, 235 Meters route length falls in the forest land for which the Appellant is in the process of obtaining the forest clearance. That land for another extent of route length i.e., 1220 meters was taken into possession only on 28.04.2023, which was more than 09 months after the award of contract.

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- xxvi. That delay in taking possession of land and handover of the required extent of land to Eastern Central Railways for commencement of work, has affected the estimated timeline for completion of construction of Banadag Railway yard/tracks and associated works. The revised estimated timeline for completion of construction of Banadag Railway yard/tracks and associated works is by the end of October, 2024. A chart showing the sequence of activities carried towards construction of Banadag Railway yard/tracks and associated works and the expected timeline for completion is annexed herewith and marked as **Annexure A/9 [Page 92]**.
- xxvii. It is submitted that the entire Coal Conveying System can be made ready for operation only after completion of the complete Rapid Loading System and construction of Banadag Railway yard/tracks for loading of coal into the railway wagons for transportation of coal to the respective power plants. It is submitted that due to delay in taking

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possession of land, the progress of the work was seriously affected and the Appellant would not be in position to complete the entire facilities by October, 2023, as directed by this Hon'ble Court on 08.08.2022.

xxviii. It is submitted that keeping in mind the additional un anticipated hindrances, time required for load trial run of complete conveying system and process of integration of existing CHP with RLS system, it is estimated that the entire process will be completed by 31.12.2024. Therefore, this application seeks an extension of time upto 31.12.2024.

xxix. **LAW & ORDER ISSUE AT THE AREA:** It is further pertinent to submit that the executives of the NTPC Ltd. or of the companies engaged in construction of the Coal Handling Plant, who are visiting villages and associated with land Acquisition/R&R/Infrastructure works are getting frequent threat calls from anti-social elements/villagers during their visit to villages.

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Due to this, the mining operations and the Development works have faced frequent disruptions due to law-and-order issues, leading to inordinate delays at all work fronts. The ground situation could easily be understood from the following events.

- A In the month of October 2016, there was a standoff between the agitating villagers and the Dist. Administration during land acquisition drive for the mine approach road. The agitators attacked the land acquisition officials and also the then C.O. Barkagaon, who was looking after the law and order situation. The C.O. was seriously injured in this incident along with other policemen. As a result, the Police had to open fire on an unruly mob to safeguard their lives resulting in four people succumbing to their injuries. Few of other major incidents are mentioned as under:

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- B. In an unfortunate incident, which occurred in the month of December, 2019, one Sh. Gopal Singh, a senior official of Mine Developer-cum-Operator was murdered by the unknown assailants.
- C. Another unfortunate incident occurred recently on 19.02.2021, in which Shri Satyendra Singh, working in M/s L&T for construction of CHP for NTPC Ltd.'s Kerandari mine, was shot dead in broad daylight while travelling to Barkagaon. This incident has again created a fear situation among the employees of NTPC Ltd. and its associates. Recently, a contractor of the CHP has received threats and was warned not to operationalize the CHP.
- D. On 03.03.2021, with the help of Dist. Administration, the illegal structures at two(02) locations were demolished in MDO's CHP corridor. However, during this

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process, the vehicles of Circle Officer, Barkagaon and other officials were vandalized & Police personnel were injured due to stone pelting by the encroachers.

- E. It is reiterated that due to the continuous agitations of locals for fulfillment of demands beyond the acquisition policy etc., the Appellant had to repeatedly write to the Deputy Commissioner, Jharkhand requesting for deployment of police personnel for taking possession of the notified land [for which the payment was already disbursed/compensation was already deposited]. These lands are/were required for the purpose of completion of construction of CHP, rail tracks, sibo and Rapid Loading System.
- F. Even as recently on 09th May, 2023, one Mr. Sharath Babu, GM Coordination of ChatuBariatu Coal Mining Project Limited

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[another coal block of Appellant in the same District] was shot dead in the broad daylight near Pakri Barwadih Barakgaon, Hazaribag.

- 4 The Appellant would also like to place on record following documents for the kind reference of this Hon'ble Court:

- (i) The photographs showing the present status of the construction of Coal Conveying System/ facilities/Coal Handling Plant as compared to the status of construction as in 2021/2022 are annexed herewith and marked as **Annexure A/10 (Colly.) [Pages 93 to 107]**.
- (ii) A progress bar chart of the total extent of work done towards entire Coal Conveying System facilities/CHP [from mine to Railway Siding] at Appellant's Pakri Barwadih Coal Mine Project, Barkagaon, Hazaribag, at present, is annexed herewith and marked as **Annexure A/11 [Pages 108]**.

5. That if the present application is not allowed the Appellant/Applicant would be put to great prejudice and

Navin Kumar
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 ज्वा. सहायक (पर्यावरण प्रबंध) / JGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

hardship and on the other hand, no prejudice would be caused to the Respondents, if the application is allowed.

PRAYER

WHEREFORE, it is therefore, respectfully prayed that this Hon'ble Court may graciously be pleased to:

- a) Allow the present application, and
- b) Extend the timeline for completion of the entire Coal Conveying System facilities/CHP (from mine to Railway Siding) at Appellant's Pakri Barwadih Coal Mine Project, Barkagaon, Hazaribag, until 31st December, 2024; and
- c) Pass any other order/orders as this Hon'ble Court may deem fit and proper in the facts and circumstances of the case.

AND FOR THIS ACT OF KINDNESS, THE APPELLANT AS IN DUTY BOUND SHALL EVER PRAY.

FILED BY:

Shantosh

(SHAILKESH MAHTA)

ADVOCATE FOR THE APPELLANT

PLACE: NEW DELHI

DATE: 05.08.2023

Navin Kumar
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 जल सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
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 हजारीबाग / Hazaribag

22



Aditya Kumar Pandey
NOTARY
Hazaribagh, Jharkhand

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

N.A. NO. .../2023

IN

CIVIL APPEAL NO. 6249 OF 2021

IN THE MATTER OF:

NTPC LTD. APPELLANT

VERSUS

TRIPURARI SINGH & ORS RESPONDENTS

AFFIDAVIT

I, Bhasini Kumar Behera, S/o Late Sunakar Behera, aged about 43 years, working as Additional General Manager (Fuel Management - Coal Co-ordination) with NTPC Ltd. - Pakri Barwadih Coal Mining Project, presently at NTPC, Sakri, Hazaribagh-825301, PO:PS- Barkagaon, District Hazaribagh, do hereby solemnly affirm and state as under:

I. That I am the authorized representative of the Appellant/Applicant herein in the abovementioned matter and as such I am well conversant with the facts and circumstances of the case and hence, I am authorized to swear to this affidavit.



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन वलमिड (एनवेल प्रोजेक्ट) / DGM (ENVT. MGMT.)
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कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारिबाग / Hazaribag

2. That I have read and understood the contents of the accompanying application, which has been drafted under my instructions and the same are true and correct to my knowledge and belief.
3. That the Annexures A/1 - A/1 enclosed with the accompanying Application is/are true copy of its/their originals and Annexures enclosed with the accompanying Application is/are true translated copies of its/their respective originals.



Sulast Kumar Dey
 DEPENDENT

सुलस्त कुमार देव / SULAST KUMAR DEY
 जल संयंत्र, राँची, झारखण्ड
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Navin Kumar
 नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / JCM (ENVY MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

VERIFICATION

Verified at Hazaribag on the third day of August, 2023.
That the contents of my above affidavit from pages 1 to
3 are true and correct to my knowledge and belief, no
part of it is false and nothing material has been
concealed therefrom.

Deponent Name: Navin Kumar
DEPONENT

महोदय श्री: NAVIN K. KUMAR
एन सीईएम (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



अभिज्ञान, दस्तावेजों के माध्यम से
हस्ताक्षरों के द्वारा प्रमाणित किया गया है
कि यह सत्य है कि मैं
जो कुछ कह रहा हूँ, वह सत्य है।
NOTARY

अभिज्ञान, दस्तावेजों के माध्यम से
हस्ताक्षरों के द्वारा प्रमाणित किया गया है
कि यह सत्य है कि मैं
जो कुछ कह रहा हूँ, वह सत्य है।
NOTARY

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन सीईएम (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

25
Affidavit



Ashish Kumar Pandey
NOTARY
Hazaribag, Jharkhand

Subscribed and sworn to before me on this 25th day of May 2016 at Hazaribag, Jharkhand.



[Signature]
Ashish Kumar Pandey
Notary

Sl. No. C



Signature of Examinee

Navin Kumar
नवीन कुमार / NAVIN KUMAR
असistant डायरेक्टर (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

S U P R E M E C O U R T O F I N D I A
R E C O R D O F P R O C E E D I N G S

Miscellaneous Application No. 1824/2023 in C.A. No. 6249/2021

(Arising out of impugned final judgment and order dated 08-08-2022 in C.A. No. 6249/2021 passed by the Supreme Court of India)

NATIONAL THERMAL POWER CORPORATION LIMITED (NTPC) Petitioner(s)

VERSUS

TRIPURARI SINGH & ORS.

Respondent(s)

(IA No. 155852/2023 - EXTENSION OF TIME and IA No. 192404/2023 - GRANT OF INTERIM RELIEF)

Date : 20-10-2023 This matter was called on for hearing today.

CORAM :

HON'BLE MR. JUSTICE J.K. MAHESHWARI
HON'BLE MR. JUSTICE K.V. VISWANATHAN

For Petitioner(s)

Mr. Tushar Mehta, Solicitor General
Ms. Aishwarya Bhati, A.S.G.
Mr. Shailesh Madiyal, AOR
Mr. Sudhanshu Prakash, Adv.
Mr. Vaibhav Sabharwal, Adv.
Mr. Akshay Kumar, Adv.
Ms. Divija Mahajan, Adv.

For Respondent(s)

Mr. Vikramjeet Banerjee, A.S.G.
Mr. Gurmeet Singh Makker, AOR
Mr. Piyush Beriwal, Adv.
Mr. S K Gupta, Adv.
Ms. Nidhi Khanna, Adv.
Ms. Chinmaee Chandra, Adv.
Mr. Rajesh Kumar Singh, Adv.
Mr. Ishaan Sharma, Adv.

UPON hearing the counsel the Court made the following
O R D E R

By this application, the National Thermal Power
Corporation Limited has made the following prayer:

Signature Not Verified
Digitally signed by
Nidhi Ahuja
Date: 2023.10.21
16:28:42 IST
Reason: [?]

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल शक्ति (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खान परियोजना / COAL MINING PROJECTS
हज़ारिबाग / Hazaribag

- "a) Allow the present application; and
- b) Extend the timeline for completion of the entire Coal Conveying System facilities /CHP [from mine to Railway siding] at Appellant's Pakri Barwadih Coal Mine Project, Barkagaon, Hazaribag, until 31st December, 2024"

Earlier, this Court by its order on 08.08.2022 had extended the timeline for completion of the construction of the conveyor belt till 31.10.2023.

When the application was taken up, response from the Ministry of Environment, Forest and Climate Change (hereinafter referred to as 'MoEF&CC' for brevity) was called for. MoEF&CC has filed an affidavit dated 13.10.2023 wherein after setting out the background, in para 18 they have averred as under:

"18. That, however, it is pertinent to mention here that the Sectoral Expert Appraisal Committee i.e., EAC appraises proposal for amendment in EC as per the merits of each case subject to observance of applicable environmental safeguards. Applications for extension in timeline for installing mechanized systems are appraised under the category of amendment in EC. As per the direction of the Hon'ble Supreme Court, Ministry can have the instant matter, seeking extension in timeline for installation of mechanized coal transportation system, appraised afresh by the Sectoral EAC upon receipt of such application for amendment in EC. The outcome of such an appraisal shall be made available to the Project Proponent for any further direction regarding the matter by Hon'ble Supreme Court."

Navin Kumar
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एन टी पी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Having considered the averments made in the application and the reply of MoEF&CC, we extend the timeline fixed by the order of this Court dated 08.08.2022, till 31.01.2024.

In the meantime, we also give liberty to the applicant to file an appropriate application for amendment of the Environmental Clearance Certificate (EC). On the filing of such an application, MoEF&CC through the Sectoral Expert Appraisal Committee i.e., EAC shall appraise the matter afresh.

The outcome of the appraisal may be placed before this Court after information to the Project Proponent.

List the matter on 29th January, 2024.

(NIDHI AHUJA)
AR-cum-PS

(VIRENDER SINGH)
BRANCH OFFICER

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
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कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag



एनटीपीसी लिमिटेड
(भारत सरकार का उद्यम)

NTPC Limited
(A Govt. of India Enterprise)

कोयला खनन परियोजनाएँ, हजारीबाग
Coal Mining Projects, Hazaribag

Ref: 1040/PBCMP/EMG/2023/F-47/199

Date: 19.10.2023

To,

The Deputy Director General of Forests (C),
MoEF & CC, Regional Office,
2nd Floor, Headquarter, Jharkhand State Housing Board,
Harmu Chowk, Ranchi (Jharkhand) - 834 002.

Sub: Submission of status of Dumuhani Nallah as per specific condition no. 1.3, 1.5 and 1.8 of the Environmental Clearance amendment dated 16.08.2023 accorded by MoEF & CC for NTPC Ltd - Pakri Barwadih Coal Mining Project (15MTPA): Reg.

Ref: 1. EC Ref. no. J-11015/692/2007-IA-II(M) Dated 19.05.2009.
2. Letter No. 2/PMC/ND-171/2012/224 Dated 19.03.2013.
3. EC Amendment dated 16.08.2023.

Respected Sir,

With reference to specific condition no. 1.3, 1.5 and 1.8 of the Environmental Clearance amendments dated 16.08.2023, **I hereby submit the Following:**

Condition no-1.3 & 1.5 -It is kindly submitted that in compliance of the specific condition no. iv of EC dated 19.05.2009, the CWPRS was awarded the study and designing of the Nallah diversion. Based on the above study report of CWPRS, NOC/permission has been accorded by Water Resource Dept, GoJH for realignment of Dumuhani nallah vide letter mentioned under reference 2 (**attached as Annexure-1**). In line with this, to continue the mining operation 3.1 Km length of Dumuhani nallah has been re-aligned. Rest of the part of Dumuhani Nalla is intact. Photographs (**attached as Annexure-2**) and Drone Video of Dumuhani Nalla (**attached as Annexure-3**) is being submitted to your kind office. It is further submitted that NTPC Ltd PBCMP shall make all possible efforts towards protecting catchment area of the streams flowing within the lease boundary as well as along the boundary of lease area until mining operation reaches its vicinity.

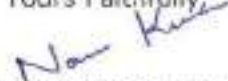
Nitin Kumar

कोयला खनन परियोजनाएँ, सिकरी साईट कार्यालय, बड़कागाँव, हजारीबाग — 825311
Coal Mining Projects, Sikri Site Office, Barkagaon, Hazaribag - 825311

Condition No-1.8- It is kindly submitted that required "Public Grievance Redressal and Monitoring System" has been established at Pakri Barwadih Coal Mining Project for resolving any issues related to the pollution of mines. Adequate awareness is being spread among the public / local villagers to address their grievance. A logbook is being maintained by NTPC on "Public Grievance Redressal and Monitoring System". The same is being monitored weekly by Head of Department (Envt Mgmt.) and monthly by Head of Project (PBCMP).

Thanking you.

Yours Faithfully,



[NAVIN KUMAR]

नवीन कुमार / NAVIN KUMAR

उप महाप्रबन्धक (पर्यावरण प्रबन्धन) - DGM (ENVT MGMT.)

प्रबन्धन प्रणाली - NTPC Limited

पर्यावरण प्रबन्धन प्रणाली - ENVIRONMENTAL MANAGEMENT PROJECTS

Encl.: A/a

Trucks are covered with tarpaulins for prevention of spillage and generation of dust.



Navin Kumar
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हजारीबाग / Hazaribag



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Dust Suppression through Water Tanker



Navin Kumar
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हजारीबाग / Hazaribag

Photographs of Garland Drain and Settling Pit



Photographs of Boundary wall with 20 ft. windscreen



Navin Kumar
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Navin Kumar
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 हज़ारीबाग / Hazaribag

Plantation photographs at Banadag Railway Siding

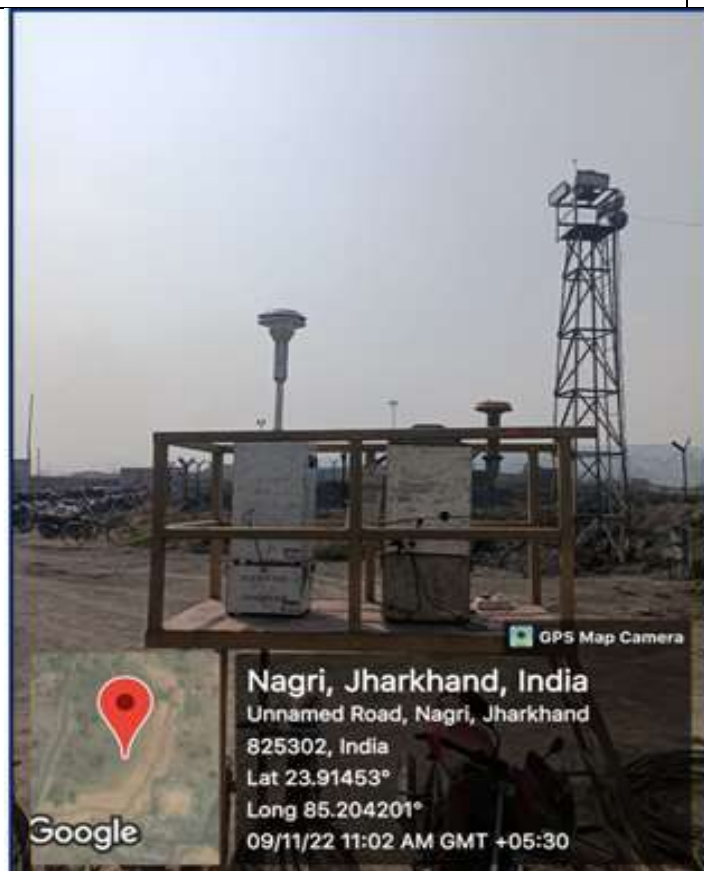


Navin Kumar
नवीन कुमार / NAVIN KUMAR
आ. प्रशासनिक (पर्यावरण प्रशासन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

PAKRI BARWADIH COAL MINING PROJECT, NTPC LTD.

ENVIRONMENTAL MONITORING EQUIPEMENTS

| Sl. No. | Name of Equipment | No. of Equipments |
|---------|---|-------------------|
| 1. | Respirable dust sampler | 5 |
| 2. | Fine Dust Sampler | 5 |
| 3. | High Volume Sampler | 1 |
| 4. | Continuous AAQ Monitoring Station | 1 |
| 5. | Continuous AAQM PM ₁₀ Analyzer | 1 |
| 6. | Noise Level Meter | 1 |
| 7. | Telemetry Piezometer | 2 |
| 8. | Telemetry Ground Water Level Meter | 4 |
| 9. | Meteorological Station | 1 |
| 10. | pH, TDS, EC Handy Meter | 1 |

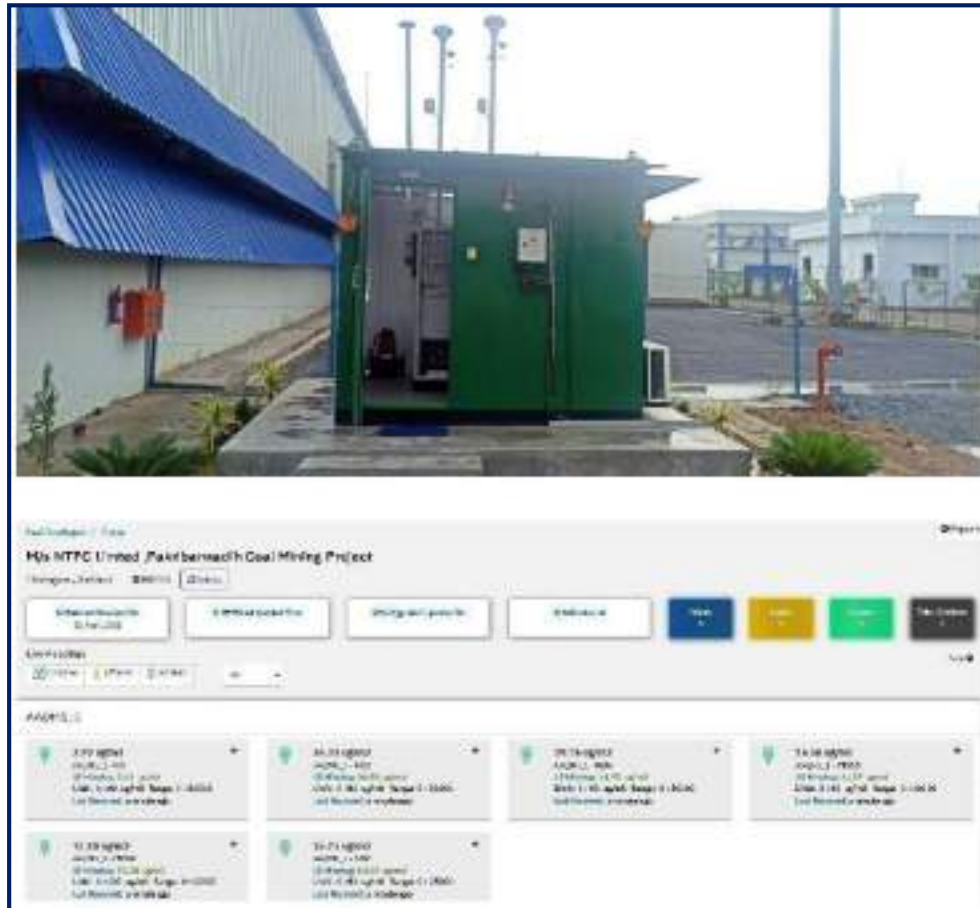


Ambient Air Quality Monitoring

Navin Kumar
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 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Continue Ambient Air Quality Monitoring Station.

CAAQMS Online Monitoring System installed at Site Office, the monitoring system is monitoring the parameter like PM₁₀, PM_{2.5}, SO₂ & NO_x. The real time data is generating continuously and transferring to JSPCB server.



Continuous Ambient Air Quality Monitoring Station



Continuous PM₁₀ Analyzer at Banadag Railway Siding

Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्य. प्रशासक (पर्यावरण प्रबंधन) / JGM (ENVY. MGMT.)
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हजारीबाग / Hazaribag



SLM 100 - Noise Monitor

Two (02) nos. Piezometers inside the mine premises with continuous automatic data recorder



Location: Langatu Office Area



Location: NTPC Office, Sikri

Navin Kumar
नवीन कुमार / NAVIN KUMAR
 सहायक (पर्यावरण प्रबंध) / DGM (ENVT. MGMT.)
 एनटीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

The project has installed Four (4) nos. water flow recorder in & around the project area with continuous automatic data recorder for monitoring of the ground water consumption.



Location: Langatu Office Area



Location: NTPC Office, Sikri



Location: MDO Canteen, Sikri



Location: MDO Colony, Sikri

Meteorological Station at Langatu Site Office



Navin Kumar
 नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / JGM (ENVY MGMT.)
 एनटीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

pH, TDS & EC Meter



Navin Kumar
नवीन कुमार / NAVIN KUMAR
जून सहायक, पर्यावरण प्रबंधन / JGM (ENVT. MGMT.)
(एनटीपीसी लिमिटेड) / NTPC Limited
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हजारीबाग / Hazaribag

Date/Time Tran at 14:07:55 September 28, 2023
 Trigger Source Geo: 0.610 mm/s
 Range Geo: 254.0 mm/s
 Record Time 4.0 sec at 1024 sps

Notes

Location: On ground surface
 Client: Pakri Barwadih Coal Mines Western Quarry
 User Name: Black Diamond Explosives Pvt Ltd
 General:

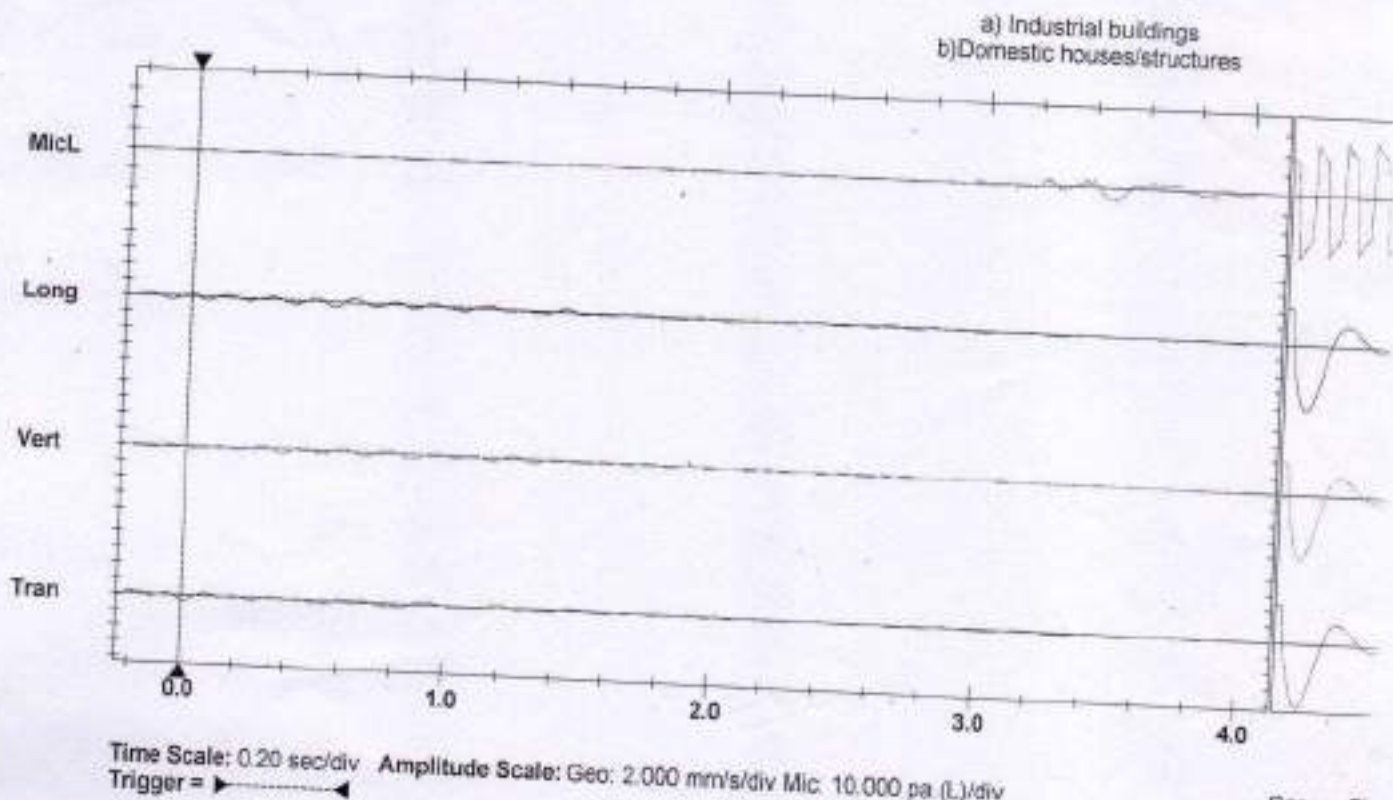
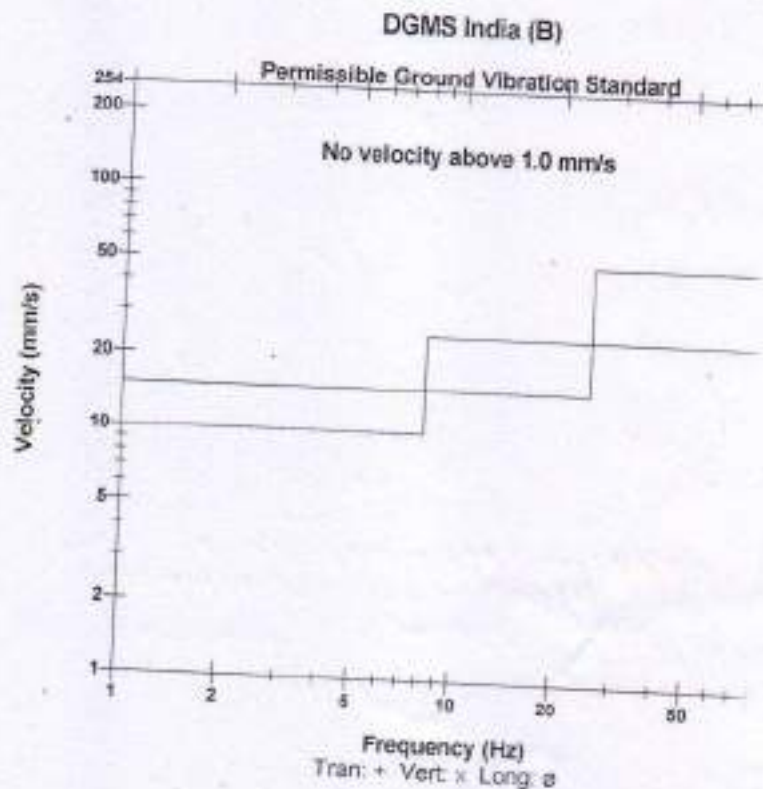
Extended Notes

Microphone Linear Weighting
 PSPL 110.6 dB(L) at 3.479 sec
 ZC Freq 4.2 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 516 mv)

| | Tran | Vert | Long | |
|---------------------|--------|--------|--------|------|
| PPV | 0.762 | 0.635 | 0.635 | mm/s |
| PPV | 48.64 | 47.06 | 47.06 | dB |
| ZC Freq | 7.6 | 6.6 | 6.7 | Hz |
| Time (Rel. to Trig) | 0.008 | 0.060 | 0.540 | sec |
| Peak Acceleration | 0.027 | 0.027 | 0.027 | g |
| Peak Displacement | 0.018 | 0.016 | 0.012 | mm |
| Sensor Check | Passed | Passed | Passed | |
| Frequency | 7.5 | 7.7 | 7.5 | Hz |
| Overswing Ratio | 3.2 | 3.6 | 3.4 | |

Peak Vector Sum 0.661 mm/s at 0.008 sec

Serial Number BE20626 V 10.72-1.1 Minimate Blaster
 Battery Level 6.2 Volts
 Unit Calibration January 18, 2023 by UES New Delhi
 File Name TEMP.EVT
 Post Event Notes
 At Near Nagari Village 290 Mtr from Blasting Patch



Date/Time Vert at 14:24:41 August 5, 2023
 Trigger Source Geo: 0.810 mm/s
 Range Geo: 254.0 mm/s
 Record Time 4.0 sec at 1024 sps

Notes

Location: On ground surface
 Client: Pakri Borwadih Coal Mines Western Quarry
 User Name: Black Diamond Explosives Pvt Ltd
 General:

Serial Number BE20626 V 10.72-1.1 Minimate Blaster
 Battery Level 6.3 Volts
 Unit Calibration January 18, 2023 by UES New Delhi
 File Name V626K52Y.P50
 Post Event Notes
 At Near Itige Village 305 MT From Blasting Patch

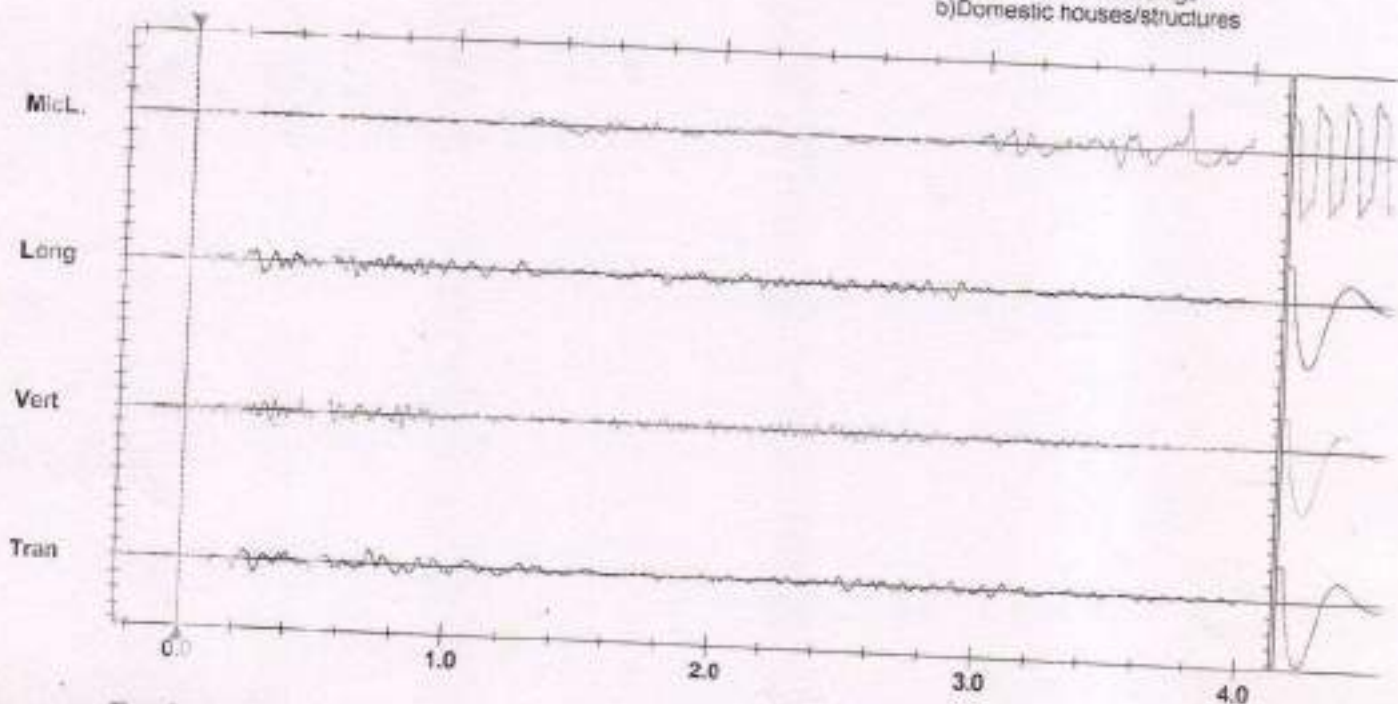
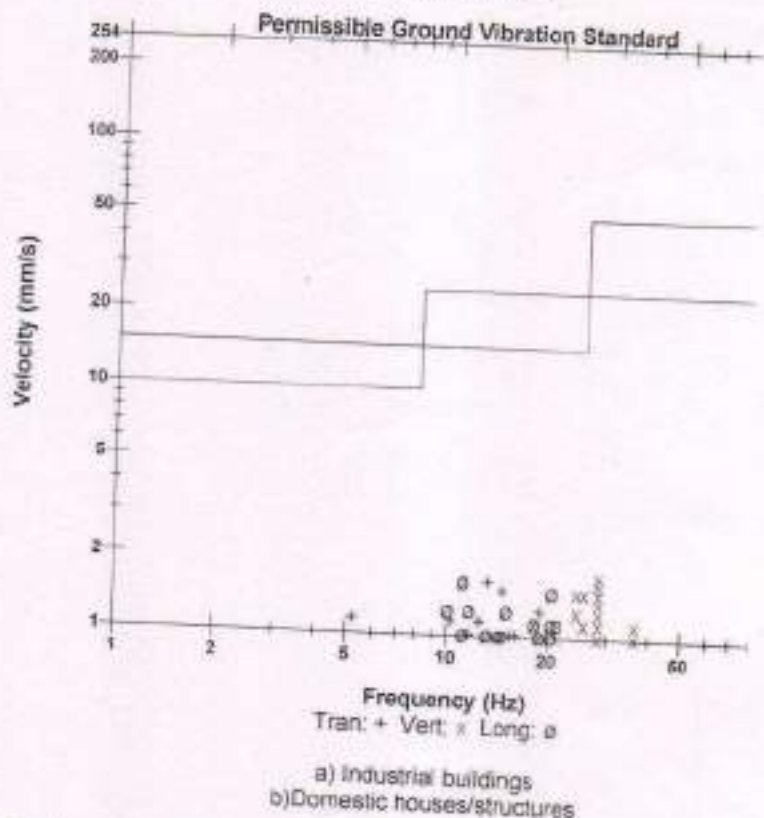
Extended Notes

Microphone Linear Weighting
 PSPL 120.2 dB(L) at 3.756 sec
 ZC Freq 5.6 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 479 mv)

| | Tran | Vert | Long | |
|---------------------|--------|--------|--------|------|
| PPV | 1.651 | 1.778 | 1.651 | mm/s |
| PPV | 55.35 | 58.00 | 55.35 | dB |
| ZC Freq | 13 | 28 | 11 | Hz |
| Time (Ref. to Trig) | 0.716 | 0.824 | 0.278 | sec |
| Peak Acceleration | 0.027 | 0.040 | 0.040 | g |
| Peak Displacement | 0.030 | 0.011 | 0.022 | mm |
| Sensor Check | Passed | Passed | Passed | |
| Frequency | 7.5 | 7.6 | 7.6 | Hz |
| Overswing Ratio | 3.2 | 3.6 | 3.4 | |

Peak Vector Sum 2.373 mm/s at 0.278 sec

DGMS India (B)



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 10.000 pa.(L)/div

Sensor Ch

Printed: August 11, 2023 (V 10.72 - 10.72)

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 नवीन कुमार / NAVIN KUMAR
 (एनटीपीसी लिमिटेड) (NTPC Limited)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Date/Time Tran at 14:27:12 August 2, 2023
 Trigger Source Geo: 0.610 mm/s
 Range Geo: 254.0 mm/s
 Record Time 4.0 sec at 1024 sps

Notes

Location: On ground surface
 Client: Pakri Barwadih Coal Mines Western Quarry
 User Name: Black Diamond Explosives Pvt Ltd
 General:

Extended Notes

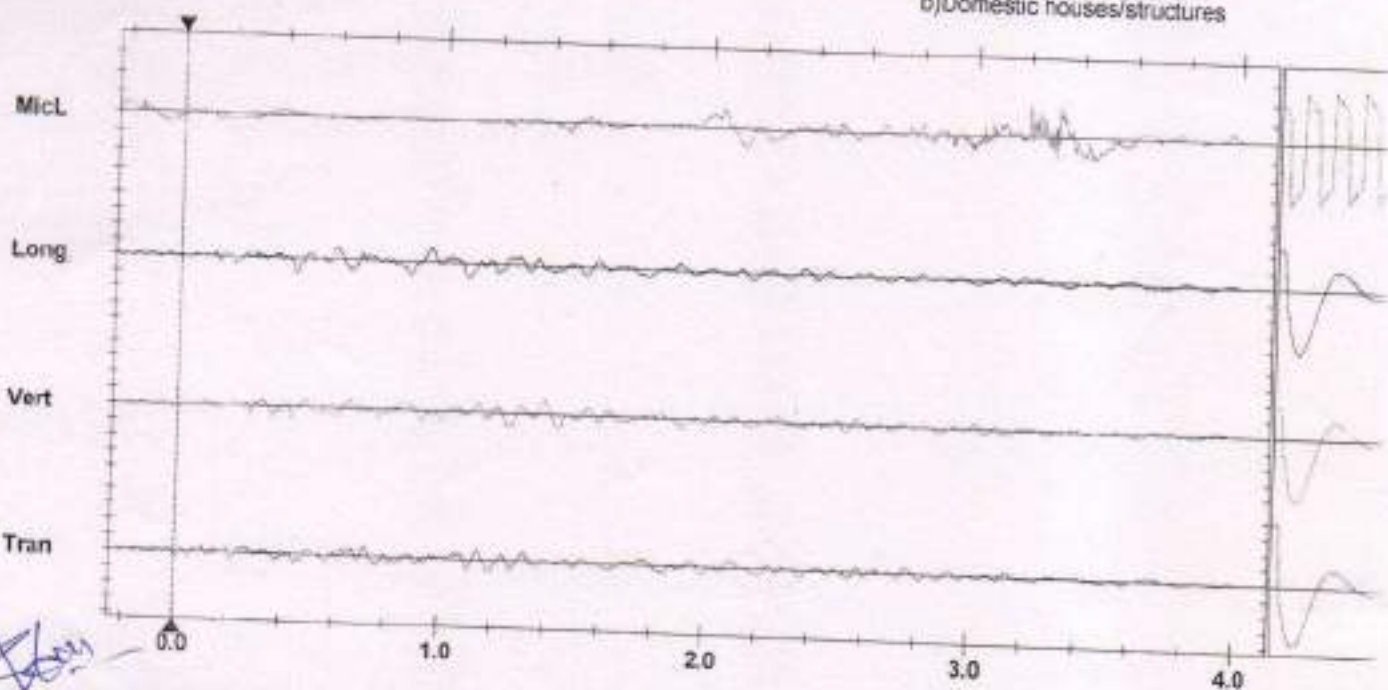
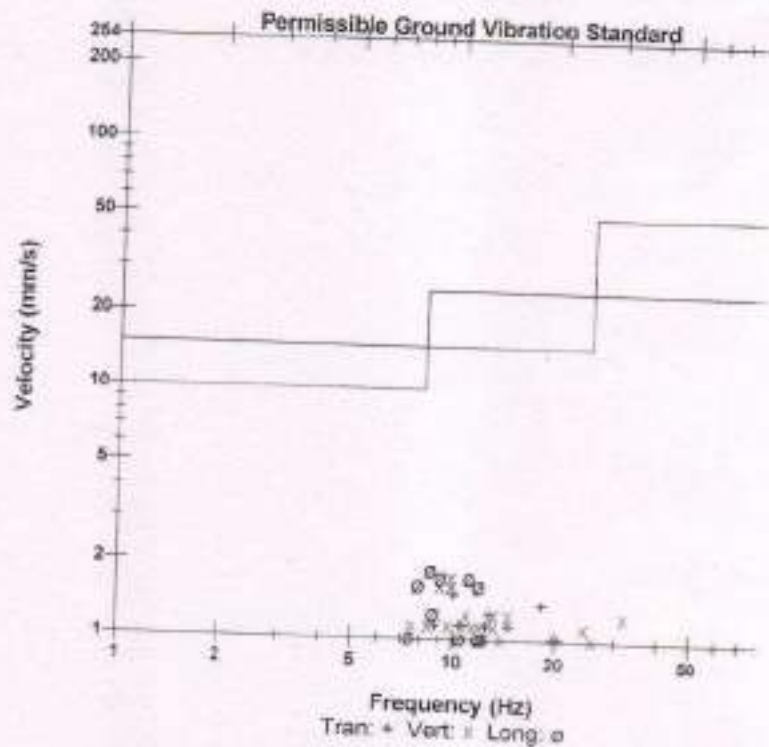
Microphone: Linear Weighting
 PSPL: 118.6 dB(L) at 3.195 sec
 ZC Freq: 43 Hz
 Channel Test: Passed (Freq = 20.1 Hz Amp = 510 mv)

| | Tran | Vert | Long | |
|---------------------|-------|--------|--------|------|
| PPV | 1.524 | 1.778 | 1.905 | mm/s |
| PPV | 54.66 | 56.00 | 56.60 | dB |
| ZC Freq | 10 | 9.8 | 6.5 | Hz |
| Time (Rel. to Trig) | 1.185 | 1.383 | 1.088 | sec |
| Peak Acceleration | 0.027 | 0.027 | 0.040 | g |
| Peak Displacement | 0.022 | 0.031 | 0.032 | mm |
| Sensor Check | Check | Passed | Passed | |
| Frequency | 7.5 | 7.6 | 7.6 | Hz |
| Overswing Ratio | 3.3 | 3.6 | 3.3 | |

Peak Vector Sum: 2.024 mm/s at 0.438 sec

Serial Number: BE20626 V 10.72-1.1 Minimate Blaster
 Battery Level: 6.3 Volts
 Unit Calibration: January 18, 2023 by UES New Delhi
 File Name: V626K4XE.TCO
 Post Event Notes:
 At Near Nagari Village 280 MT From Blasting Patch

DGMS India (B)



Date/Time: Train at 14:44:49 June 29, 2023
 Trigger Source: Geo: 0.603 mm/s
 Range: Geo: 127.0 mm/s
 Record Time: 6.0 sec at 1024 sps

Serial Number: 5803 V 2.61 MiniMate
 Battery Level: 6.4 Volts
 Unit Calibration: November 2, 2022 by UES New Delhi
 File Name: G603K38B.MP0
 Post Event Notes: At Near Churchur Gate 320 Mt From Blasting Patch

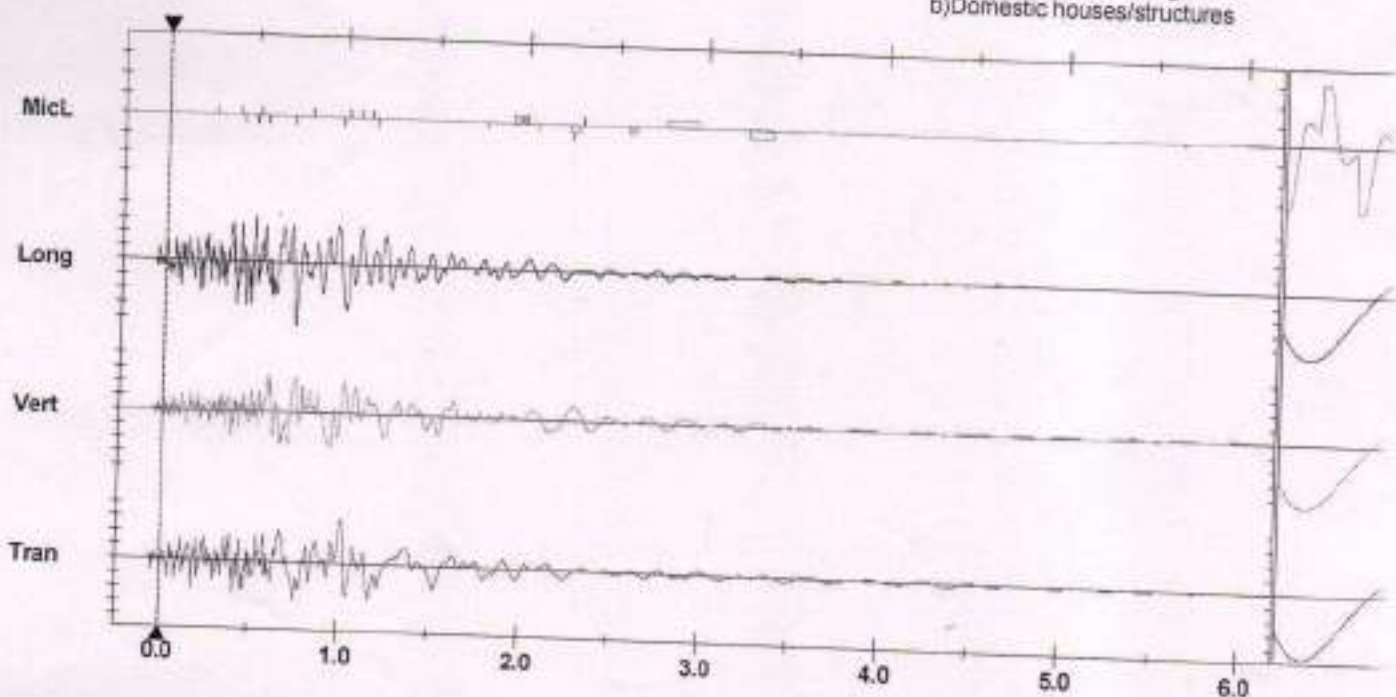
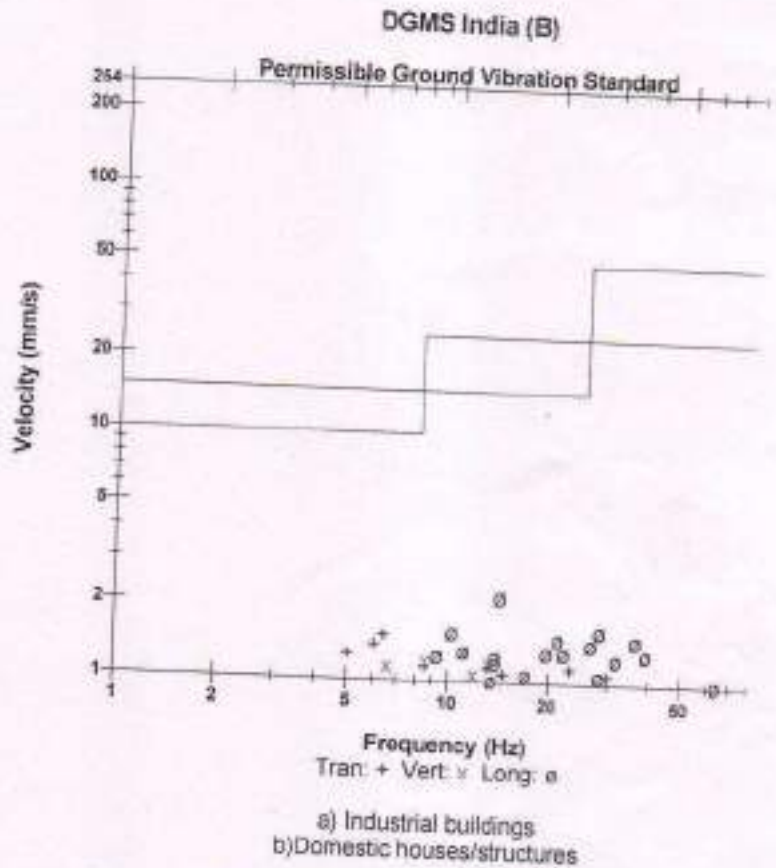
Notes
 Location: On Ground Location
 Client: Pakri Barwadih coal Mines Western Quarry
 User Name: Black Diamond Explosives Pvt Ltd
 Converted: July 19, 2023 14:54:23 (V10.72)

Extended Notes

Microphone: Linear Weighting
 PSPL: 106.0 dB(L) at 2.242 sec
 ZC Freq: 9.1 Hz
 Channel Test: Passed (Freq = 20.0 Hz Amp = 265 mv)

| | Tran | Vert | Long | |
|---------------------|--------|--------|--------|------|
| PPV | 1.524 | 1.334 | 2.223 | mm/s |
| ppv | 54.66 | 53.50 | 57.94 | dB |
| ZC Freq | 6.0 | 11 | 14 | Hz |
| Time (Rel. to Trig) | 1.009 | 0.591 | 0.735 | sec |
| Peak Acceleration | 0.040 | 0.027 | 0.053 | g |
| Peak Displacement | 0.032 | 0.027 | 0.025 | mm |
| Sensor Check | Passed | Passed | Passed | |
| Frequency | 7.8 | 7.8 | 7.8 | Hz |
| Overswing Ratio | 3.9 | 3.6 | 3.5 | |

Peak Vector Sum: 2.508 mm/s at 0.737 sec



Time Scale: 0.50 sec/div Amplitude Scale: Geo: 0.500 mm/s/div Mic: 5.000 pa (L)/div
 Trigger =

Sensor Ch:

Date/Time: Vert at 14:12:47 May 12, 2023
 Trigger Source: Geo: 0.510 mm/s
 Range: Geo: 31.75 mm/s
 Record Time: 1.0 sec at 1024 sps
 Job Number: 1

Serial Number: BE20626 V 10.72-1.1 Minimate Blaster
 Battery Level: 6.3 Volts
 Unit Calibration: January 18, 2023 by UES New Delhi
 File Name: V626K0PJ.HB0

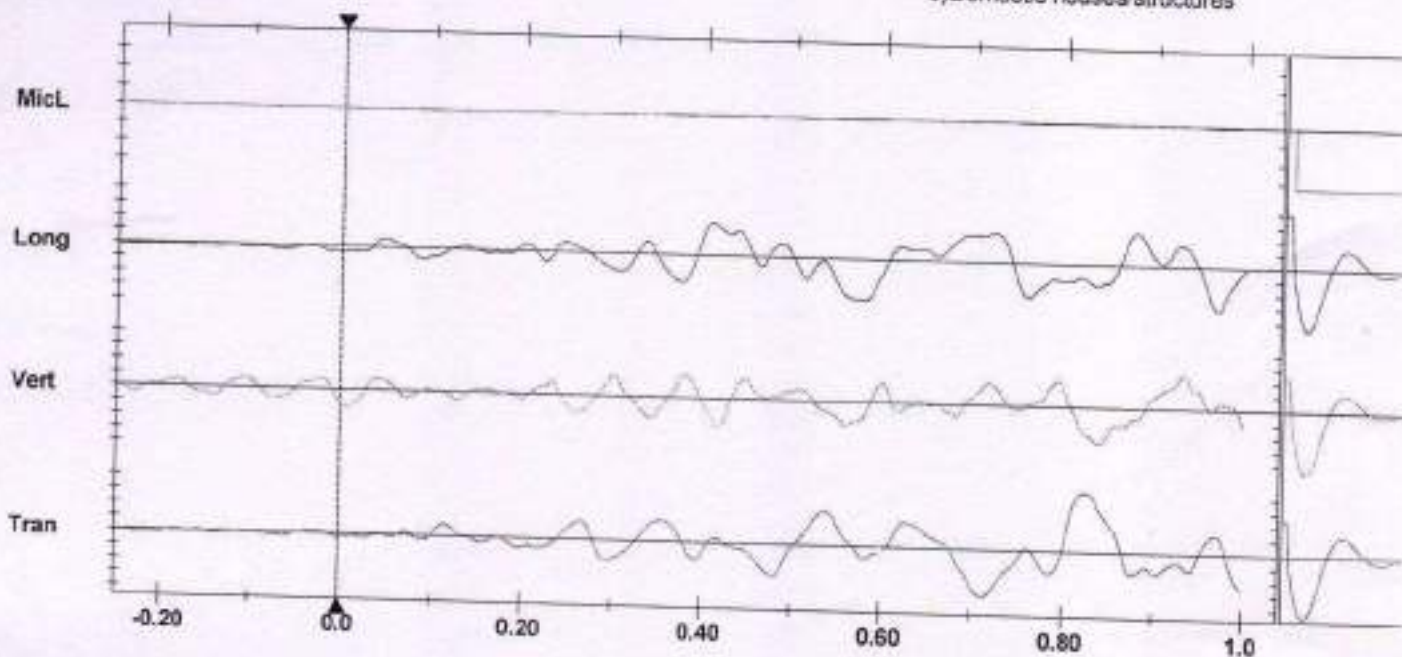
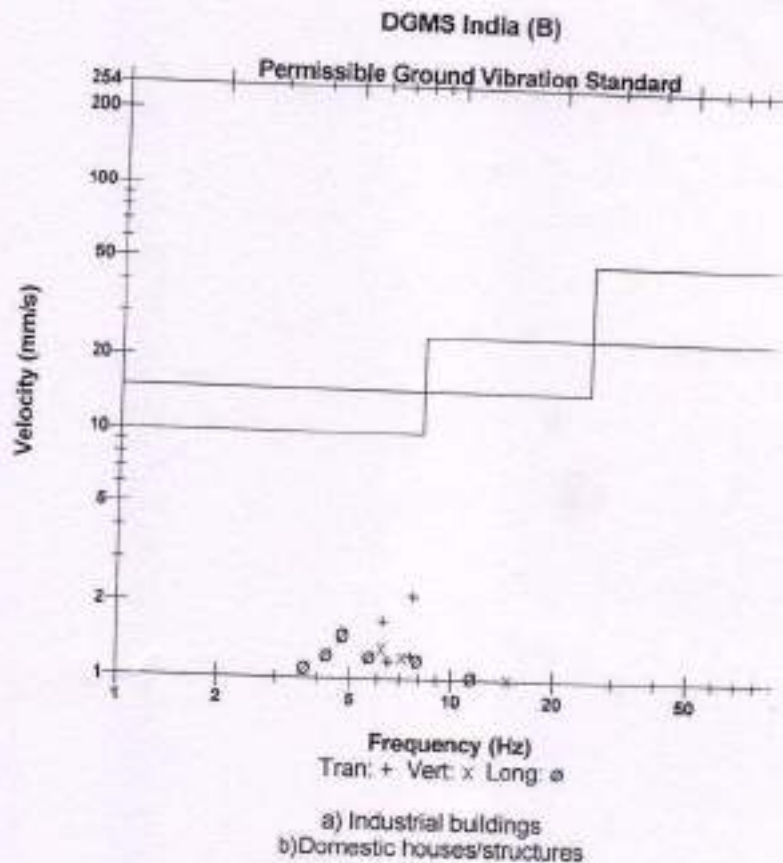
Notes
 Location:
 Client:
 User Name:
 General:

Post Event Notes
 At Near Nagari Village 250 Mt From Blasting Patch

Microphone: Linear Weighting
 PSPL: 91.48 dB(L) at 0.568 sec
 ZC Freq: 15 Hz
 Channel Test: Check (Freq = 0.0 Hz Amp = 0 mV)

| | Tran | Vert | Long | |
|---------------------|--------|--------|--------|------|
| PPV | 2.159 | 1.349 | 1.619 | mm/s |
| PPV | 57.89 | 53.60 | 55.19 | dB |
| ZC Freq | 7.6 | 6.2 | N/A | Hz |
| Time (Rel. to Trig) | 0.826 | 0.838 | 0.989 | sec |
| Peak Acceleration | 0.017 | 0.013 | 0.015 | g |
| Peak Displacement | 0.044 | 0.030 | 0.042 | mm |
| Sensor Check | Passed | Passed | Passed | |
| Frequency | 7.6 | 7.6 | 7.7 | Hz |
| Overswing Ratio | 3.1 | 3.5 | 3.2 | |

Peak Vector Sum: 2.489 mm/s at 0.830 sec
 N/A: Not Applicable



Event Report

Date/Time: Tran at 14:20:56 May 20, 2023
 Trigger Source: Geo: 0.510 mm/s
 Range: Geo: 31.75 mm/s
 Record Time: 1.0 sec at 1024 sps
 Job Number: 1

Serial Number: BE20626 V 10.72-1.1 Minimate Blaster
 Battery Level: 6.2 Volts
 Unit Calibration: January 18, 2023 by UES New Delhi
 File Name: V626K14D.6W0

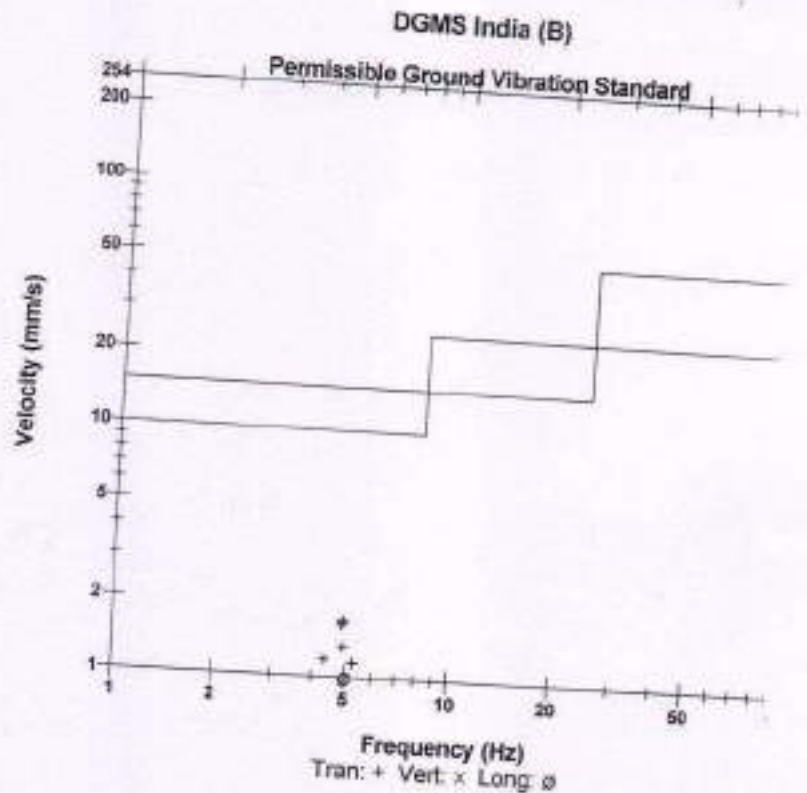
Post Event Notes
 At Near Ilge Village 290 MT From Blasting Patch

Notes:
 Location:
 Client:
 User Name:
 General:

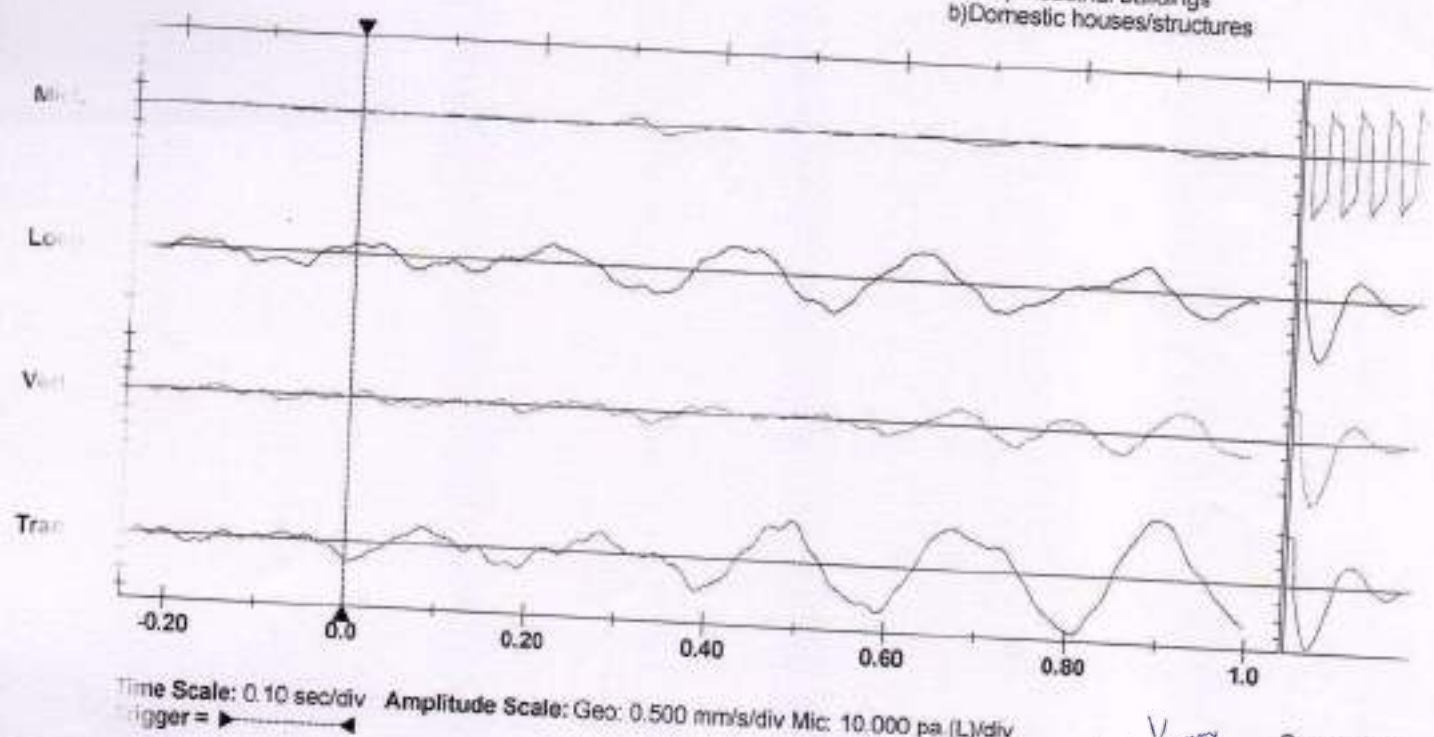
Microphone: Linear Weighting
 PSPL: 108.8 dB(L) at 0.338 sec
 ZC Freq: 7.6 Hz
 Channel Test: Passed (Freq = 20.1 Hz Amp = 423 mv)

| | Tran | Vert | Long | |
|----------------------|--------|--------|--------|------|
| PPV | 1.699 | 0.635 | 1.000 | mm/s |
| PPV | 55.60 | 47.08 | 51.00 | dB |
| ZC Freq | 4.9 | 7.2 | 5.0 | Hz |
| Time (Start to Trig) | 0.896 | 0.914 | 0.530 | sec |
| Peak Acceleration | 0.010 | 0.008 | 0.010 | g |
| Peak Displacement | 0.052 | 0.014 | 0.029 | mm |
| Similar Check | Passed | Passed | Passed | |
| Frequency | 7.4 | 7.6 | 7.6 | Hz |
| Overwing Ratio | 2.9 | 3.6 | 3.2 | |

Peak Vector Sum: 1.747 mm/s at 0.896 sec



a) Industrial buildings
 b) Domestic houses/structures



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 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Sensor Check

PAKRI BARWADIH COAL MINING PROJECT

Ground Water Level Monitoring Report (in meter) - April-September-2023

| Sl.No. | Monitoring Location | Total Depth of Well | Height from surface | GPS Location | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 |
|--------|---------------------|---------------------|---------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|
| 1 | SINDUARI | 10 meter | 0.10 meter | N- 23° 53' 33.3" E- 85° 12' 08.3" | 8.00 | 8.15 | 8.20 | 8.20 | 8.10 | 7.90 |
| 2 | KANDABER | 20 meter | 0.95 meter | N- 23° 54' 26.4" E- 85° 09' 34.7" | 9.30 | 9.40 | 9.55 | 9.60 | 9.50 | 9.25 |
| 3 | SIRMA | 9 meter | 0.40 meter | N- 23° 53' 36.1" E- 85° 10' 42.5" | 6.85 | 7.00 | 7.10 | 7.15 | 7.10 | 6.95 |
| 4 | PAKRI BARWADIH | 10 meter | 0.55 meter | N- 23° 52' 16.6" E- 85° 13' 55.5" | 5.10 | 5.20 | 5.35 | 5.35 | 5.20 | 5.05 |
| 5 | AMBAJEET | 11 meter | 0.45 meter | N- 23° 51' 07.8" E- 85° 17' 12.0" | 8.60 | 8.70 | 8.85 | 8.90 | 8.60 | 8.45 |
| 6 | HORAM | 10.5 meter | 0.45 meter | N- 23° 50' 28.0" E- 85° 15' 09.6" | 8.20 | 8.25 | 8.35 | 8.40 | 8.30 | 8.15 |
| 7 | DHENGHA | 11 meter | 0.40 meter | N- 23°50' 48.2" E- 85°13' 30.9" | 5.95 | 6.10 | 6.20 | 6.25 | 6.15 | 6.00 |
| 8 | DEWORIA KHURD (1) | 9 meter | 0.85 meter | N- 23° 53' 06.7" E- 85° 11' 06.9" | 7.40 | 7.45 | 7.55 | 7.60 | 7.50 | 7.30 |
| 9 | KANKIDARI | 9 meter | 0.5 meter | N- 23° 53' 05.5" E- 85° 12' 38.2" | 7.40 | 7.55 | 7.60 | 7.65 | 7.55 | 7.45 |
| 10 | DARIKALAN | 15.1 meter | 0.25 meter | N-23°52'29.208" E- 85° 13'5.714" | 9.80 | 9.90 | 9.95 | 10.00 | 9.90 | 9.75 |
| 11 | LANGATU | 14 meter | 0.30 meter | N- 23° 51'0.889" E-85°12'54.623" | 10.05 | 10.10 | 10.20 | 10.25 | 10.15 | 9.90 |
| 12 | BARKAGAON | 10 meter | 0.75 meter | N- 23° 53' 05.5" E- 85° 12' 38.2" | 8.35 | 8.40 | 8.50 | 8.55 | 8.45 | 8.30 |
| 13 | SONBARSA (1) | 8 meter | 0.30 meter | N-23°52'48.579" E-85°12'15.253" | 6.40 | 6.50 | 6.55 | 6.65 | 6.60 | 6.35 |
| 14 | ITIJ | 13 meter | 0.35 meter | N-23°55'33.715" E- 85° 11'3.872" | 7.30 | 7.40 | 7.45 | 7.55 | 7.50 | 7.35 |
| 15 | KERIGARA | 11 meter | 0.25 meter | N-23°51'51.562" E- 85°12' 12.15" | 9.60 | 9.65 | 9.75 | 9.80 | 9.70 | 9.55 |
| 16 | NAGRI | 4.5 meter | 0.20 meter | N- 23° 54' 30.4" E- 85° 12' 06.6" | 2.50 | 2.55 | 2.65 | 2.70 | 2.60 | 2.40 |
| 17 | SONBARSA (2) | 7.90 meter | 0.40 meter | N-23°52'39.66" E-85°12'19.51" | 5.60 | 5.70 | 5.75 | 5.85 | 5.80 | 5.55 |
| 18 | DEWORIA KHURD (2) | 10 meter | 0.50 meter | N-23°53'7.01" E- 85° 11'39.01" | 6.95 | 7.05 | 7.10 | 7.15 | 7.05 | 6.80 |
| 19 | CHURCHU | 8.80meter | 0.30 meter | N-23°53'24.24" E- 85°11' 49.23" | 6.60 | 6.70 | 6.75 | 6.85 | 6.80 | 6.55 |
| 20 | URUB | 14.30 meter | 0.40 meter | N- 23° 54' 9.34" E- 85° 11' 16.01" | 11.55 | 11.70 | 11.75 | 11.85 | 11.70 | 11.45 |

PAKRI BARWADIH COAL MINING PROJECT

Automatic Water Level Reading in meter (Piezometer -1) - 2023, Location - NTPC Office, Sikri

| Date | April | May | June | July | August | September |
|------|-------|------|------|------|--------|-----------|
| 1 | 7.31 | 7.98 | 9.25 | | 8.52 | |
| 2 | 6.92 | 8.07 | 9.35 | | 8.98 | |
| 3 | 6.79 | 8.09 | 9.33 | 8.45 | 8.91 | |
| 4 | 6.92 | | 9.03 | 8.21 | 9.20 | |
| 5 | 7.09 | | 8.85 | 8.37 | 9.49 | 7.61 |
| 6 | 6.87 | | | 8.51 | 8.98 | 7.56 |
| 7 | 7.00 | | | 8.39 | 8.65 | 7.79 |
| 8 | 7.07 | 8.45 | 9.91 | 8.21 | 10.02 | 7.90 |
| 9 | 7.37 | 8.28 | 9.32 | 8.03 | 8.90 | 7.88 |
| 10 | 6.88 | 8.13 | 9.54 | 7.96 | 8.80 | 7.75 |
| 11 | 7.15 | 8.96 | 9.46 | 8.23 | 9.28 | 7.75 |
| 12 | 7.40 | 8.50 | 9.03 | 8.20 | 8.93 | 7.84 |
| 13 | 7.47 | 8.82 | 9.35 | 8.24 | 8.94 | 7.58 |
| 14 | 7.60 | 8.85 | 9.77 | 8.42 | 8.68 | 7.81 |
| 15 | 7.53 | 8.41 | 9.38 | 9.10 | 8.77 | 8.26 |
| 16 | 7.72 | 9.13 | 9.89 | 8.63 | 8.42 | 8.32 |
| 17 | 7.51 | 9.01 | 9.64 | 8.31 | 9.08 | 8.26 |
| 18 | 7.53 | 9.03 | | 8.42 | 8.28 | 7.79 |
| 19 | 8.02 | 9.00 | 9.91 | 8.42 | 8.55 | 7.84 |
| 20 | 7.66 | 9.09 | 9.56 | 8.42 | 8.52 | |
| 21 | 7.41 | 9.15 | 9.27 | 8.14 | 8.24 | |
| 22 | 7.01 | 8.93 | 9.12 | 8.45 | | |
| 23 | 6.79 | 9.19 | 9.08 | 8.18 | | 7.41 |
| 24 | 6.59 | 9.02 | 9.20 | 8.30 | 8.35 | 6.88 |
| 25 | 6.94 | 9.25 | 8.94 | 8.61 | 8.69 | 7.21 |
| 26 | 7.50 | 9.59 | 8.74 | 8.77 | 9.38 | 7.06 |
| 27 | 8.14 | 9.30 | 8.65 | 8.98 | | 7.11 |
| 28 | 8.13 | | 8.64 | 9.27 | | 7.08 |
| 29 | 7.82 | | 8.44 | 9.12 | 9.10 | 7.13 |
| 30 | 8.05 | | 8.86 | 8.94 | 8.31 | 7.30 |
| 31 | | 8.86 | | 8.37 | 8.34 | |
| Avg. | 7.34 | 8.80 | 9.24 | 8.47 | 8.83 | 7.61 |


नवीन कुमार / NAVIN KUMAR
 ज्य. सहायक (पर्यावरण प्रबंधन) / JGM (ENVY. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | |
|---|-------|------|------|------|-------------|-----------|
| Automatic Water Level Reading in meter (Piezometer -2) - 2023, Location - Nursery, Sonbarsa | | | | | | |
| Date | April | May | June | July | August | September |
| 1 | 7.53 | 7.68 | 8.05 | 8.13 | Not working | |
| 2 | 7.34 | 7.72 | 8.08 | 8.06 | | |
| 3 | 7.32 | 7.70 | 8.09 | 8.01 | | |
| 4 | 7.34 | 7.70 | 8.20 | 7.96 | | |
| 5 | 7.33 | 7.90 | 8.19 | 7.93 | | 8.82 |
| 6 | 7.36 | 7.70 | 8.22 | 7.90 | | 8.78 |
| 7 | 7.38 | 7.69 | 8.24 | 7.92 | | 8.79 |
| 8 | 7.39 | 7.70 | 8.32 | 7.87 | | 8.82 |
| 9 | 7.38 | 7.69 | 8.38 | 7.84 | | 8.83 |
| 10 | 7.44 | 7.88 | 8.37 | 7.83 | | 8.77 |
| 11 | 7.48 | 7.90 | 8.38 | 7.86 | | 8.76 |
| 12 | 7.54 | 7.92 | 8.39 | 7.84 | | 8.73 |
| 13 | 7.49 | 7.86 | 8.40 | 7.85 | | 8.76 |
| 14 | 7.56 | 7.95 | 8.40 | 7.93 | | 8.80 |
| 15 | 7.53 | 8.05 | 8.41 | 7.94 | | 8.76 |
| 16 | 7.49 | 7.94 | 8.47 | 7.85 | | 8.68 |
| 17 | 7.65 | 7.89 | 8.46 | 7.93 | | 8.64 |
| 18 | 7.69 | 7.88 | 8.26 | 7.94 | | 8.76 |
| 19 | 7.69 | 7.96 | 8.26 | 7.85 | | 8.71 |
| 20 | 7.71 | 8.00 | 8.20 | 7.82 | | 8.63 |
| 21 | 7.63 | 8.05 | 8.21 | 7.83 | | 8.63 |
| 22 | 7.63 | 8.04 | 8.23 | 7.85 | | 8.63 |
| 23 | 7.65 | 7.99 | 8.17 | 7.82 | | 8.28 |
| 24 | 7.61 | 8.14 | | 7.74 | | 8.14 |
| 25 | 7.68 | 8.06 | | 7.75 | | 7.82 |
| 26 | 7.73 | 7.92 | | 7.83 | | 7.74 |
| 27 | 7.71 | 7.99 | | 7.90 | | 7.66 |
| 28 | 7.67 | | 8.14 | 7.89 | | 7.63 |
| 29 | 7.73 | 7.99 | 8.12 | 7.96 | | 7.64 |
| 30 | 7.70 | 8.03 | 8.12 | 8.02 | | 7.51 |
| 31 | | 8.01 | 8.08 | | | 7.49 |
| Avg. | 7.55 | 7.90 | 8.25 | 7.90 | | 8.42 |


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 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

GROUND WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | | | | | |
|----------------------------------|---|-------|--------------------------|---------------------------|-----------------------|---------------------------------|------------------|-------------------|
| GROUND WATER REPORT (18.08.2023) | | | | | | | Acceptable Limit | Permissible limit |
| S. No | PARAMETER | Unit | RESULT | | | | IS: 10500:2012 | |
| | | | WELL AT SINDUARI- (GW-1) | WELL AT KANDABER - (GW-2) | WELL AT SIRMA- (GW-3) | WELL AT PAKRI BARWADIH - (GW-4) | | |
| 1 | Colour | Hazen | <5.0 | <5.0 | <5.0 | <5.0 | 5 Max | 15 Max |
| 2 | Odour | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 3 | Taste | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 4 | Turbidity | NTU | 3.2 | 3.8 | 4.2 | 4.5 | 1 | 5 |
| 5 | pH | --- | 7.45 | 7.32 | 7.26 | 7.45 | 6.5-8.5 | No relaxation |
| 6 | Residual Free Chlorine(as Cl ₂) | mg/l | ND | ND | ND | ND | 0.2 | 1 |
| 7 | Total Dissolved Solids | mg/l | 498 | 512 | 395 | 512 | 500 | 2000 |
| 8 | Total Hardness (as CaCO ₃) | mg/l | 208 | 213 | 165 | 213 | 200 | 600 |
| 9 | Calcium (as Ca) | mg/l | 41.5 | 42.7 | 32.9 | 42.7 | 75 | 200 |
| 10 | Magnesium | mg/l | 25.2 | 25.9 | 20.0 | 25.9 | 30 | 100 |
| 11 | Chloride (as Cl) | mg/l | 135 | 138.4 | 106.8 | 138.4 | 250 | 1000 |
| 12 | Sulphate | mg/l | 58.0 | 54.0 | 53.0 | 42.0 | 200 | 400 |
| 13 | Iron (as Fe) | mg/l | 0.28 | 0.25 | 0.32 | 0.28 | 0.3 | No relaxation |
| 14 | Copper(as Cu) | mg/l | BDL | BDL | BDL | BDL | 0.05 | 1.5 |
| 15 | Boron | mg/l | BDL | BDL | BDL | BDL | 0.5 | 1 |
| 16 | Nitrate (as NO ₃) | mg/l | 5.2 | 4.6 | 4.1 | 5.2 | 45 | No relaxation |
| 17 | Fluoride (as F) | mg/l | 0.21 | 0.32 | 0.24 | 0.26 | 1 | 1.5 |
| 18 | Phenolic Compound (as C ₆ H ₅ OH) | mg/l | BDL | BDL | BDL | BDL | 0.001 | 0.002 |
| 19 | Mercury(as Hg) | mg/l | BDL | BDL | BDL | BDL | 0.001 | No relaxation |
| 20 | Cadmium (as Cd) | mg/l | BDL | BDL | BDL | BDL | 0.003 | No relaxation |
| 21 | Selenium (as Se) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 22 | Arsenic (as As) | mg/l | BDL | BDL | BDL | BDL | 0.01 | 0.05 |

| GROUND WATER REPORT | | | | | | | | |
|---------------------|----------------------------------|------------|--------|--------|--------|--------|---------------|---------------------------------|
| 23 | Cyanide (as CN) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 24 | Lead (as Pb) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 25 | Zinc (as Zn) | mg/l | BDL | BDL | BDL | BDL | 5 | 15 |
| 26 | Total Alkalinity | mg/l | 178 | 183 | 141 | 183 | 200 | 600 |
| 27 | Aluminium (as Al) | mg/l | BDL | BDL | BDL | BDL | 0.03 | 0.2 |
| 28 | Barium (as Ba) | mg/l | BDL | BDL | BDL | BDL | 0.7 | No relaxation |
| 29 | Ammonia (Total Ammonia -N) | mg/l | BDL | BDL | BDL | BDL | 0.5 | No relaxation |
| 30 | Silver (as Ag) | mg/l | BDL | BDL | BDL | BDL | 0.1 | No relaxation |
| 31 | Nickel (as Ni) | mg/l | BDL | BDL | BDL | BDL | 0.02 | No relaxation |
| 32 | Chromium (as Cr + ⁶) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 33 | Manganese (as Mn) | mg/l | BDL | BDL | BDL | BDL | 0.1 | 0.3 |
| 34 | E.Coli | /100 ml | Absent | Absent | Absent | Absent | --- | NOT DETECTABLE IN 100 ML SAMPLE |
| 35 | Total Coli forms | MPN/100 ml | Absent | Absent | Absent | Absent | --- | NOT DETECTABLE IN 100 ML SAMPLE |
| 36 | Conductivity | μS/cm | 772 | 812 | 571 | 794 | NOT SPECIFIED | NOT SPECIFIED |


BDL- Below Detection Limit

END OF TEST REPORT

Page No. -2 of 2

FOR GLOBAL ENVIRO LABORATORIES


 CHECKED BY
 (INTEKHAB KHAN)


 नवीन कुमार / NAVIN KUMAR
 जल संप्रदायक (पर्यावरण प्रबंधन) / DGM (ENV. MGMT.)
 भारतीय नदी नदी NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag


 AUTHORIZED SIGNATORY
 (SHIKHA BHATIYA)

GROUND WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | | | | | |
|----------------------------------|---|-------|-------------------------|----------------------|--------------------------|-------------------------------|------------------|-------------------|
| GROUND WATER REPORT (18.08.2023) | | | | | | | Acceptable Limit | Permissible limit |
| S. No | PARAMETER | UNIT | RESULT | | | | IS: 10500:2012 | |
| | | | WELL AT AMBAJIT- (GW-5) | WELL AT HORAM (GW-6) | WELL AT BARKAGAON (GW-7) | WELL AT DEWORIA KHURD- (GW-8) | | |
| 1 | Colour | Hazen | <5.0 | <5.0 | <5.0 | <5.0 | 5 Max | 15 Max |
| 2 | Odour | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 3 | Taste | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 4 | Turbidity | NTU | 3.6 | 2.6 | 1.8 | 2.4 | 1 | 5 |
| 5 | pH | --- | 4.23 | 7.15 | 7.22 | 7.28 | 6.5-8.5 | No relaxation |
| 6 | Residual Free Chlorine(as Cl ₂) | mg/l | ND | ND | ND | ND | 0.2 | 1 |
| 7 | Total Dissolved Solids | mg/l | 478 | 485 | 476 | 394 | 500 | 2000 |
| 8 | Total Hardness (as CaCO ₃) | mg/l | 199 | 202 | 198 | 164 | 200 | 600 |
| 9 | Calcium (as Ca) | mg/l | 39.8 | 40.4 | 39.7 | 32.8 | 75 | 200 |
| 10 | Magnesium | mg/l | 24.2 | 24.5 | 24.1 | 19.9 | 30 | 100 |
| 11 | Chloride (as Cl) | mg/l | 129.2 | 131.1 | 128.6 | 106.5 | 250 | 1000 |
| 12 | Sulphate | mg/l | 38.0 | 48.0 | 58.0 | 38.0 | 200 | 400 |
| 13 | Iron (as Fe) | mg/l | 0.31 | 0.34 | 0.22 | 0.32 | 0.3 | No relaxation |
| 14 | Copper(as Cu) | mg/l | BDL | BDL | BDL | BDL | 0.05 | 1.5 |
| 15 | Boron | mg/l | BDL | BDL | BDL | BDL | 0.5 | 1 |
| 16 | Nitrate (as NO ₃) | mg/l | 4.7 | 4.3 | 4.1 | 4.9 | 45 | No relaxation |
| 17 | Fluoride (as F) | mg/l | 0.28 | 0.22 | 0.25 | 0.15 | 1 | 1.5 |
| 18 | Phenolic Compound (as C ₆ H ₅ OH) | mg/l | BDL | BDL | BDL | BDL | 0.001 | 0.002 |
| 19 | Mercury(as Hg) | mg/l | BDL | BDL | BDL | BDL | 0.001 | No relaxation |
| 20 | Cadmium (as Cd) | mg/l | BDL | BDL | BDL | BDL | 0.003 | No relaxation |
| 21 | Selenium (as Se) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 22 | Arsenic (as As) | mg/l | BDL | BDL | BDL | BDL | 0.01 | 0.05 |

| GROUND WATER REPORT | | | | | | | | |
|----------------------------|----------------------------|-------------|--------|--------|--------|--------|---------------|---------------------------------|
| 23 | Cyanide (as CN) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 24 | Lead (as Pb) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 25 | Zinc (as Zn) | mg/l | BDL | BDL | BDL | BDL | 5 | 15 |
| 26 | Total Alkalinity | mg/l | 171 | 173 | 170 | 141 | 200 | 600 |
| 27 | Aluminum (as Al) | mg/l | BDL | BDL | BDL | BDL | 0.03 | 0.2 |
| 28 | Barium (as Ba) | mg/l | BDL | BDL | BDL | BDL | 0.7 | No relaxation |
| 29 | Ammonia (Total Ammonia -N) | mg/l | BDL | BDL | BDL | BDL | 0.5 | No relaxation |
| 30 | Silver (as Ag) | mg/l | BDL | BDL | BDL | BDL | 0.1 | No relaxation |
| 31 | Nickel (as Ni) | mg/l | BDL | BDL | BDL | BDL | 0.02 | No relaxation |
| 32 | Chromium (as Cr +6) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 33 | Manganese (as Mn) | mg/l | BDL | BDL | BDL | BDL | 0.1 | 0.3 |
| 34 | E. Coli | /100 ml | Absent | Absent | Absent | Absent | --- | NOT DETECTABLE IN 100 ML SAMPLE |
| 35 | Total Coli forms | MPN/ 100 ml | Absent | Absent | Absent | Absent | --- | NOT DETECTABLE IN 100 ML SAMPLE |
| 36 | Conductivity | µS/cm | 741 | 552 | 738 | 543 | NOT SPECIFIED | NOT SPECIFIED |
| BDL- Below Detection Limit | | | | | | | | |

END OF TEST REPORT

Page No. -2 of 2

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATTAYA)



GROUND WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINES

GROUND WATER REPORT (02.05.2023)

| S. No | PARAMETER | | RESULT | | | | Acceptable Limit | Permissible Limit |
|-------|---|-------|--------------------------|---------------------------|-----------------------|---------------------------------|------------------|-------------------|
| | | Unit | WELL AT SINDUARI- (GW-1) | WELL AT KANDABER - (GW-2) | WELL AT SIRMA- (GW-3) | WELL AT PAKRI BARWADIH - (GW-4) | IS: 10500:2012 | |
| 1 | Colour | Hazen | <5.0 | <5.0 | <5.0 | <5.0 | 5 Max | 15 Max |
| 2 | Odour | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 3 | Taste | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 4 | Turbidity | NTU | 4.2 | 4.1 | 4.8 | 5.3 | 1 | 5 |
| 5 | pH | --- | 7.28 | 7.31 | 7.22 | 7.42 | 6.5-8.5 | No relaxation |
| 6 | Residual Free Chlorine(as Cl ₂) | mg/l | ND | ND | ND | ND | 0.2 | 1 |
| 7 | Total Dissolved Solids | mg/l | 553 | 563 | 397 | 540 | 500 | 2000 |
| 8 | Total Hardness (as CaCO ₃) | mg/l | 263 | 268 | 189 | 257 | 200 | 500 |
| 9 | Calcium (as Ca) | mg/l | 52.7 | 53.6 | 37.8 | 51.4 | 75 | 200 |
| 10 | Magnesium | mg/l | 32.0 | 32.6 | 23.0 | 31.2 | 30 | 100 |
| 11 | Chloride (as Cl) | mg/l | 157 | 155 | 117.0 | 162.0 | 250 | 1000 |
| 12 | Sulphate | mg/l | 60.1 | 62.0 | 48.0 | 62.0 | 200 | 400 |
| 13 | Iron (as Fe) | mg/l | 0.16 | 0.2 | 0.25 | 0.32 | 0.3 | No relaxation |
| 14 | Copper(as Cu) | mg/l | BDL | BDL | BDL | BDL | 0.05 | 1.5 |
| 15 | Boron | mg/l | BDL | BDL | BDL | BDL | 0.5 | 1 |
| 16 | Nitrate (as NO ₃) | mg/l | 2.8 | 8.7 | 5.1 | 7.0 | 45 | No relaxation |
| 17 | Fluoride (as F) | mg/l | 0.26 | 0.35 | 0.34 | 0.29 | 1 | 1.5 |
| 18 | Phenolic Compound (as C ₆ H ₅ OH) | mg/l | BDL | BDL | BDL | BDL | 0.001 | 0.002 |
| 19 | Mercury(as Hg) | mg/l | BDL | BDL | BDL | BDL | 0.001 | No relaxation |
| 20 | Cadmium (as Cd) | mg/l | BDL | BDL | BDL | BDL | 0.003 | No relaxation |
| 21 | Selenium (as Se) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 22 | Arsenic (as As) | mg/l | BDL | BDL | BDL | BDL | 0.01 | 0.05 |

| GROUND WATER REPORT | | | | | | | | |
|----------------------------|----------------------------------|------------|--------|--------|--------|--------|---------------|---------------------------------------|
| 23 | Cyanide (as CN) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 24 | Lead (as Pb) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 25 | Zinc (as Zn) | mg/l | BDL | BDL | BDL | BDL | 5 | 15 |
| 26 | Total Alkalinity | mg/l | 178 | 197 | 142 | 174 | 200 | 600 |
| 27 | Aluminium (as Al) | mg/l | BDL | BDL | BDL | BDL | 0.03 | 0.2 |
| 28 | Barium (as Ba) | mg/l | BDL | BDL | BDL | BDL | 0.7 | No relaxation |
| 29 | Ammonia (Total Ammonia -N) | mg/l | BDL | BDL | BDL | BDL | 0.5 | No relaxation |
| 30 | Silver (as Ag) | mg/l | BDL | BDL | BDL | BDL | 0.1 | No relaxation |
| 31 | Nickel (as Ni) | mg/l | BDL | BDL | BDL | BDL | 0.02 | No relaxation |
| 32 | Chromium (as Cr + ⁶) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 33 | Manganese (as Mn) | mg/l | BDL | BDL | BDL | BDL | 0.1 | 0.3 |
| 34 | E.Coli | /100 ml | Absent | Absent | Absent | Absent | ---- | NOT DETECTABLE IN 100 ML SAMPLE |
| 35 | Total Coli forms | MPN/100 ml | Absent | Absent | Absent | Absent | ---- | NOT DETECTABLE IN 100 ML SAMPLE |
| 36 | Conductivity | µS/cm | 862 | 830 | 578 | 842 | NOT SPECIFIED | NOT SPECIFIED |
| BDL- Below Detection Limit | | | | | | | | |

***END OF TEST REPORT ***

Page No. -2 of 2

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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AUTHORISED SIGNATORY
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GROUND WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | | | | | |
|----------------------------------|---|-------|-------------------------|----------------------|--------------------------|-------------------------------|------------------|-------------------|
| GROUND WATER REPORT (02.05.2023) | | | | | | | Acceptable Limit | Permissible limit |
| S. No | PARAMETER | UNIT | RESULT | | | | IS: 10500:2012 | |
| | | | WELL AT AMBAJIT- (GW-5) | WELL AT HORAM (GW-6) | WELL AT BARKAGAON (GW-7) | WELL AT DEWORIA KHURD- (GW-8) | | |
| 1 | Colour | Hazen | <5.0 | <5.0 | <5.0 | <5.0 | 5 Max | 15 Max |
| 2 | Odour | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 3 | Taste | --- | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 4 | Turbidity | NTU | 4.6 | 2.8 | 2.9 | 3.4 | 1 | 5 |
| 5 | pH | --- | 7.19 | 7.26 | 7.2 | 7.22 | 6.5-8.5 | No relaxation |
| 6 | Residual Free Chlorine(as Cl ₂) | mg/l | ND | ND | ND | ND | 0.2 | 1 |
| 7 | Total Dissolved Solids | mg/l | 416 | 382 | 477 | 385 | 500 | 2000 |
| 8 | Total Hardness (as CaCO ₃) | mg/l | 198 | 182 | 227 | 183 | 200 | 600 |
| 9 | Calcium (as Ca) | mg/l | 39.6 | 36.4 | 45.4 | 36.7 | 75 | 200 |
| 10 | Magnesium | mg/l | 24.1 | 22.1 | 27.6 | 22.3 | 30 | 100 |
| 11 | Chloride (as Cl) | mg/l | 157.0 | 120.0 | 140.0 | 128.0 | 250 | 1000 |
| 12 | Sulphate | mg/l | 49.2 | 42.6 | 52.1 | 43.1 | 200 | 400 |
| 13 | Iron (as Fe) | mg/l | 0.21 | 0.32 | 0.3 | 0.26 | 0.3 | No relaxation |
| 14 | Copper(as Cu) | mg/l | BDL | BDL | BDL | BDL | 0.05 | 1.5 |
| 15 | Boron | mg/l | BDL | BDL | BDL | BDL | 0.5 | 1 |
| 16 | Nitrate (as No ₂) | mg/l | 6.5 | 4.8 | 6.6 | 7.7 | 45 | No relaxation |
| 17 | Fluoride (as F) | mg/l | 0.34 | 0.14 | 0.25 | 0.29 | 1 | 1.5 |
| 18 | Phenolic Compound (as C ₆ H ₅ OH) | mg/l | BDL | BDL | BDL | BDL | 0.001 | 0.002 |
| 19 | Mercury(as Hg) | mg/l | BDL | BDL | BDL | BDL | 0.001 | No relaxation |
| 20 | Cadmium (as Cd) | mg/l | BDL | BDL | BDL | BDL | 0.003 | No relaxation |
| 21 | Selenium (as Se) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 22 | Arsenic (as As) | mg/l | BDL | BDL | BDL | BDL | 0.01 | 0.05 |

Page 1 of 2

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हजारिबाग / Hazaribag



GROUND WATER REPORT

| | | | | | | | | |
|----|----------------------------|-------------|--------|--------|--------|--------|---------------|---------------------------------|
| 23 | Cyanide (as CN) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 24 | Lead (as Pb) | mg/l | BDL | BDL | BDL | BDL | 0.01 | No relaxation |
| 25 | Zinc (as Zn) | mg/l | BDL | BDL | BDL | BDL | 5 | 15 |
| 26 | Total Alkalinity | mg/l | 162 | 138 | 164 | 145 | 200 | 600 |
| 27 | Aluminum (as Al) | mg/l | BDL | BDL | BDL | BDL | 0.03 | 0.2 |
| 28 | Barium (as Ba) | mg/l | BDL | BDL | BDL | BDL | 0.7 | No relaxation |
| 29 | Ammonia (Total Ammonia -N) | mg/l | BDL | BDL | BDL | BDL | 0.5 | No relaxation |
| 30 | Silver (as Ag) | mg/l | BDL | BDL | BDL | BDL | 0.1 | No relaxation |
| 31 | Nickel (as Ni) | mg/l | BDL | BDL | BDL | BDL | 0.02 | No relaxation |
| 32 | Chromium (as Cr +6) | mg/l | BDL | BDL | BDL | BDL | 0.05 | No relaxation |
| 33 | Manganese (as Mn) | mg/l | BDL | BDL | BDL | BDL | 0.1 | 0.3 |
| 34 | E. Coli | /100 ml | Absent | Absent | Absent | Absent | ----- | NOT DETECTABLE IN 100 ML SAMPLE |
| 35 | Total Coli forms | MPN/ 100 ml | Absent | Absent | Absent | Absent | ----- | NOT DETECTABLE IN 100 ML SAMPLE |
| 36 | Conductivity | µS/cm | 655 | 575 | 764 | 572 | NOT SPECIFIED | NOT SPECIFIED |

BDL- Below Detection Limit

***END OF TEST REPORT ***

Page No. -2 of 2

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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Desilting / Water Harvesting Structures construction / repair taken up by NTPC Limited in and around Pakribarwadih CMP.

| SI No | Name of village | Water Recharge Activity | Surface area (Sq M) | GPS Coordinates | | Water storage Capacity (Cum) | Description of pond in | | | Volume of Pond in m3 | Annual Ground Water Recharge in m3 | Remarks |
|-------|-----------------|--|------------------------|-----------------|--------------|---------------------------------|------------------------|-------|---------------|-------------------------|--|---|
| | | | | Latitude | Longitude | | Length | Width | Avg. Depth | | | |
| 1 | Dadikala | Tari Ahar talab | 2982 | 23°52'52.1" | 85°12'30.22" | 7455 | 65 | 24 | 2.01 | 3135.6 | 3657.36384 | |
| 2 | Chepakala | Chepa Ahar talab | 30415 | 23°90'60.05" | 85°21'38.11" | 76037.5 | 160 | 55 | 3.5 | 30800 | 35925.12 | |
| 3 | Pakri-Barwadih | Barka Ahra talab deepening and desilting | 13200 | 23°86'35.23" | 85°22'43.19" | 33000 | 126 | 35 | 3 | 13230 | 15431.472 | |
| 4 | Urub | Padeo bagi Arhar pond (Bada talab) deepening and check dam repair | 20000 | 23°53'59.63" | 85°11'16.92" | 50000 | 184 | 34 | 3.2 | 20019.2 | 23350.39488 | |
| 5 | Garikala | Japotva Ahar pond deepening | 4940 | 23°52'30.31" | 85°09'54.74" | 12350 | 92 | 28 | 2.5 | 6440 | 7511.616 | |
| 6 | Kusumbha | Purna Ahar talab repair and deepening | 6862 | 23°94'81.61" | 85°27'82.54" | 17155 | 87 | 32 | 2.5 | 6960 | 8118.144 | |
| 7 | Banka | Banka talab | 2900 | 23°98'13.9" | 85°29'13.9" | 7250 | 64 | 24 | 2.4 | 3686.4 | 4299.81696 | |
| 8 | Petto | Badi talab | 3816 | 23°86'33.39" | 85°06'92.95" | 9540 | 56 | 35 | 2 | 3920 | 4572.288 | |
| 9 | Kodwe | Kodwe Talab | 1280 | 23°26'48.16" | 85°47'10.74" | 3200 | 36 | 18 | 2 | 1296 | 1511.6544 | |
| 10 | Langathu | New Water Recharge Pond construction | 400 | 23°52'15.52" | 85°12'43.27" | 1000 | 28 | 11 | 2.09 | 643.72 | 750.835008 | |
| 11 | Langathu | Roof top water recharge system | 1500 | 23°52'19.49" | 85°12'49.30" | 1800 | | | | | 1152 | 80% of the stored rainwater will percolate to ground water.(1200 mm Avg Annual rainfall) |
| 12 | Hazaribagh | Zeel park desilting and repair (One side) | 36000 | 24°00'98" | 85°36'30" | 108000 | 225 | 54 | 3 | 36450 | 42515.28 | |
| | | | | | | | | | | | 148795.99 | |


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 हजारीबाग / Hazaribag

Photograph# Rain Water Harvesting System in Site Office (Langatu)



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Rain water harvesting pond



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Jugra Pond before Deepened



Jugra Pond after Deepened



Navin Kumar
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हजारीबाग / Hazaribag

Details and photographs of check dams

| (A) PAKWA NALA (Eastern Nala) | | | (B) KHORHA NALA (Western Nala) | | |
|----------------------------------|-------------------------------------|---|--------------------------------|-------------------------------------|---|
| Check Dam | Reservoir Capacity (in Lakh cum) | Ground water Recharge (in Lakh cum/Yr) | Check Dam | Reservoir Capacity (in Lakh cum) | Ground water Recharge (in Lakh cum/Yr) |
| Check Dam No. (1) | 0.56 | 11.98 | Check Dam No. (1) | 0.78 | 16.26 |
| Check Dam No. (2) | 1.75 | 37.54 | Check Dam No. (2) | 2.08 | 43.62 |
| Check Dam No. (3) | 0.48 | 9.99 | Check Dam No. (3) | 0.73 | 15.25 |
| Check Dam No. (4) | 0.37 | 7.80 | Check Dam No. (4) | 2.77 | 58.15 |
| Check Dam No. (5) | 1.84 | 38.66 | Check Dam No. (5) | 1.29 | 27.04 |
| Total | 5.00 | 105.97 | Check Dam No. (6) | 1.76 | 36.99 |
| | | | Check Dam No. (7) | 1.77 | 37.24 |
| Grand Total (A) + (B) | 16.18 | 340.52 | Total | 11.18 | 234.55 |



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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)


| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | | | | | |
|--|--|------|--|------------|---|------------|---|------------|--|------------|------------------|--------------|
| STP INLET & OUTLET ANALYSIS DATA MONTH OF SEPTEMBER 2023 | | | | | | | | | | | | |
| Sl. No | Parameter | Unit | Mine infra building at Langatu (Capacity: 20 KLD) Inlet Result | | Mine infra building at Langatu (Capacity: 20 KLD) Outlet Result | | R & R at Colony Dhenga (Capacity: 1.5 MLD) Inlet Result | | R & R at Colony Dhenga (Capacity: 1.5 MLD) Outlet Result | | Standards (CPCB) | Protocol |
| | | | 02.09.2023 | 16.09.2023 | 02.09.2023 | 16.09.2023 | 02.09.2023 | 16.09.2023 | 02.09.2023 | 16.09.2023 | | |
| 1 | pH | — | 6.72 | 6.64 | 7.38 | 7.23 | 6.49 | 6.46 | 7.2 | 7.21 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 163 | 154 | 76 | 69 | 158 | 145 | 64 | 68 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 244 | 257 | 82 | 52 | 242 | 239 | 60 | 53.6 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 71 | 61 | 18 | 13 | 53 | 44 | 15 | 13.8 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 11.5 | 12.5 | 3.2 | 3.3 | 11.8 | 12.8 | 3.9 | 3.8 | 10 mg/l | IS 3025 P-39 |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES


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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
 LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|--|--|------|--------------|------------|---------------|------------|------------------|--------------|
| ETP INLET & OUTLET ANALYSIS DATA MONTH OF SEPTEMBER 2023 | | | | | | | | |
| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
| | | | 02.09.2023 | 16.09.2023 | 02.09.2023 | 16.09.2023 | | |
| 1 | pH | — | 7.14 | 7.26 | 7.06 | 7.3 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 350 | 336 | 78 | 63 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 491 | 452 | 126 | 112 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 106 | 99 | 26 | 24 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 12.2 | 11.7 | 2.5 | 1.3 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1559 | 1566 | 456 | 452 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 652 | 618 | 127 | 118 | Not Specified | IS 3025 P-32 |


END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES


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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|---|--|------|--------------|------------|---------------|------------|------------------|--------------|
| ETP INLET & OUTLET ANALYSIS DATA MONTH OF AUGUST 2023 | | | | | | | | |
| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
| | | | 03.08.2023 | 18.08.2023 | 03.08.2023 | 18.08.2023 | | |
| 1 | pH | --- | 7.16 | 7.23 | 7.14 | 7.31 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 355 | 334 | 70 | 66 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 492 | 454 | 129 | 114 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 109 | 98 | 25 | 26 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 12.6 | 11.3 | 2.2 | 1.4 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1555 | 1563 | 450 | 453 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 654 | 617 | 124 | 116 | Not Specified | IS 3025 P-32 |

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES


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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND, (INDIA)

PAKRI BARWADIH COAL MINING PROJECT

ETP INLET & OUTLET ANALYSIS DATA MONTH OF JULY 2023

| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
|---------|--|------|--------------|------------|---------------|------------|------------------|--------------|
| | | | 02.07.2023 | 17.07.2023 | 02.07.2023 | 17.07.2023 | | |
| 1 | pH | --- | 7.14 | 7.22 | 7.12 | 7.36 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 351 | 339 | 72 | 55 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 494 | 452 | 127 | 112 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 112 | 96 | 29 | 24 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 12.1 | 11.5 | 2.1 | 1.3 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1553 | 1561 | 449 | 452 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 658 | 615 | 122 | 113 | Not Specified | IS 3025 P-32 |

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT

ETP INLET & OUTLET ANALYSIS DATA MONTH OF JUNE 2023

| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
|---------|--|------|--------------|------------|---------------|------------|------------------|--------------|
| | | | 02.06.2023 | 15.06.2023 | 02.06.2023 | 16.06.2023 | | |
| 1 | pH | ---- | 7.19 | 7.21 | 7.39 | 7.48 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 355 | 334 | 76 | 75 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 573 | 462 | 138 | 120 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 125 | 98 | 29 | 27 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 13.5 | 12.4 | 2.5 | 2.2 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1695 | 1545 | 460 | 465 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 684 | 605 | 128 | 121 | Not Specified | IS 3025 P-32 |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|--|--|------|--------------|------------|---------------|------------|------------------|--------------|
| ETP INLET & OUTLET ANALYSIS DATA MONTH OF MAY 2023 | | | | | | | | |
| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
| | | | 02.05.2023 | 16.05.2023 | 02.05.2023 | 16.05.2023 | | |
| 1 | pH | ---- | 7.17 | 7.25 | 7.36 | 7.45 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 369 | 345 | 78 | 73 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 568 | 498 | 136 | 118 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 129 | 106 | 28 | 26 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 13.9 | 12.5 | 2.4 | 2.1 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1725 | 1569 | 459 | 463 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 697 | 617 | 127 | 119 | Not Specified | IS 3025 P-32 |

END OF TEST REPORT

JOIN HANDS TO SAVE ENVIRONMENT Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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MoEF&CC Recognized Environmental Laboratory

WASTE WATER SAMPLING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|--|--|------|--------------|------------|---------------|------------|------------------|--------------|
| ETP INLET & OUTLET ANALYSIS DATA MONTH OF APRIL 2023 | | | | | | | | |
| Sl. No. | Parameter | Unit | Inlet Result | | Outlet Result | | Standards (CPCB) | Protocol |
| | | | 01.04.2023 | 15.04.2023 | 01.04.2023 | 15.04.2023 | | |
| 1 | pH | --- | 7.06 | 7.69 | 7.28 | 7.33 | 5.5-9.0 | IS 3025 P-11 |
| 2 | Total Suspended Solid (TSS) | mg/L | 334 | 294 | 72 | 66 | 100 mg/l | IS 3025 P-17 |
| 3 | Chemical Oxygen Demand | mg/L | 596 | 486 | 116 | 96 | 250 mg/l | IS 3025 P-58 |
| 4 | Biological Oxygen Demand (BOD 3 day, at 27 °C) | mg/L | 130 | 106 | 25 | 20 | 30 mg/l | IS 3025 P-44 |
| 5 | Oil & Grease (O&G) | mg/L | 12.8 | 9.3 | 3.4 | 2.6 | 10 mg/l | IS 3025 P-39 |
| 6 | Total Dissolved Solid (TDS) | mg/L | 1696 | 1482 | 482 | 476 | Not Specified | IS 3025 P-16 |
| 7 | Manganese (Mn) | mg/L | N.D. | N.D. | N.D. | N.D. | 2 mg/l | IS 3025 P-59 |
| 8 | Chloride (Cl) | mg/L | 788 | 652 | 98 | 138 | Not Specified | IS 3025 P-32 |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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Photographs showing # Mixed grass variety seeds and root shoots of Vertiver grass.



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महाराष्ट्र शासन, अर्थ विभाग, मुंबई
मुंबई / महाराष्ट्र

Plantation Photographs of mines



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Plantation Done at East Quarry



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Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT, | | | | | |
|---|------|--|----------------------|--|---|
| NTPC LIMITED, HAZARIBAGH, JHARKHAND | | | | | |
| A. PLANTATION / DISTRIBUTION DONE BY NTPC LTD | | | | | |
| Sl No | Year | No of plants planted / Distributed | Cum no. of plants | Location | Remarks |
| 1 | 2008 | 200 | 200 | Inside Site Office, Barkagaon | Misc shady plants |
| 2 | 2010 | 70 | 270 | Rani talab, Budua mahadev mandir | Mango plants |
| 3 | 2010 | 200 | 470 | Distributed to villagers | Fruit bearing plants |
| 4 | 2011 | 125 | 595 | Distributed to villagers | Fruit bearing plants |
| 5 | 2012 | 225 | 820 | Distributed to villagers | Fruit bearing plants |
| 6 | 2012 | 130 | 950 | Plantation at Vinobha bhawe university | Shady plants |
| 7 | 2013 | 480 | 1430 | Distributed to villagers | fruit bearing and shady plants |
| 8 | 2013 | 40 | 1470 | Infront of site office, barkagaon | Casurina, Bottle plam |
| 9 | 2013 | 30 | 1500 | on the bund barka ahar | pakribarwadih |
| 10 | 2013 | 25 | 1525 | Ramsagra talab, back of site office | Barkagaon |
| 11 | 2014 | 300 | 1825 | Distribution | |
| 12 | 2015 | 118 | 1943 | ITI | |
| 13 | 2015 | 30 | 1973 | Site office, barkagaon | Kanel, bouganvilia |
| 14 | 2015 | 90 | 2063 | Utkramith madya vidyalay, kusumbha | Kanel, bouganvilia |
| 15 | 2015 | 220 | 2283 | Chhath talab, hazaribagh | |
| 16 | 2015 | 417 | 2700 | Distributed to villagers | Shady plants |
| 17 | 2016 | 1000 | 3700 | Distributed to villagers | Shady and fruit bearing plants |
| 18 | 2016 | 4500 | 8200 | In and around langathu site office and approach road | Shady plants through MDO |
| 19 | 2017 | 690 | 8890 | In and around Sikri township and langathu site office | On 05.06.17, 09.06.17, Misc shady and fruit bearing plants |
| 20 | 2017 | 5000 | 13890 | In and around Hazaribagh, Neem, Karanj, Jamun, Kathal, | Distributed through SDM, Hazaribagh in and around Hazaribagh on 17.06.17 |
| 21 | 2017 | 800 | 14690 | In Village Langathu at the vacant place, Gulmohar, Neem, Arjun, Karanj, Imli, Jamun, Kathal, Amrud | Involving the villagers of Langathu on 20.06.17 |
| 22 | 2017 | 500 | 15190 | In Village Langathu at the vacant place, Gulmohar, Neem, Arjun, Karanj, Imli, Jamun, Kathal, Amrud | Involving the employees on 21.06.17 |
| 23 | 2017 | 580 | 15770 | In Village Langathu at the vacant place, Gulmohar, Neem, Arjun, Karanj, Imli, Jamun, Kathal, Amrud | Involving the employees on 22.06.17 |
| 24 | 2017 | 150 | 15920 | Plantation at SSB Camp, Nagari, Neem and Karanj | Involving the SSB security Personnnel |
| 25 | 2017 | 1550 | 17470 | For plantation in and around Hazaribagh, Neem, Karanj, Jamun, Kathal, | Distributed through DFO, Hazaribagh West Forest Division in and around Hazaribagh on 13.07.17 |
| 26 | 2017 | 2500 | 19970 | In Village Langathu at the vacant place, Gulmohar, Neem, Arjun, Karanj, Imli, Jamun, Kathal, Amrud | On 15.07.17 during Van Mahotsav involving villagers and employees |
| 27 | 2017 | 500 | 20470 | Plantation along the dividers, sides of the haul road, Kanel | At the mining premise |
| 28 | 2017 | 935 | 21405 | Plantation near the top soil dump | At the mining premise on topsoil dump along with the grass seeding |
| 29 | 2017 | 1000 Kg | -- | Mixed Grass seeding on the top soil dump | At the Mine |
| 30 | 2017 | 260 | 21665 | In Village Arahara near the dump, garland drain and fencing, Mine approach. Gulmohar, Neem, Arjun, Karanj, | On 17.07.17 during Van Mahotsav involving villagers and employees |
| 31 | 2017 | 2450 | 24115 | In Village Arahara at the vacant place, Gulmohar, Neem, Arjun, Karanj, Jamun, Kathal. | Mix Plantation |

| Sl No | Year | No of plants planted / Distributed | Cum no. of plants | Location | Remarks |
|-------|------|------------------------------------|-------------------|--|-----------------------------------|
| 32 | 2017 | 1150 | 25265 | In the village Devaria Khurd, on the edge of Khora Nala, Neem, Arjun, Karanj, Jamun, Gulmohar | Block Plantation near Khora Nalla |
| 33 | 2017 | 450 | 25715 | In Village Arahara near the dump, garland drain and fencing, Mine approach. Gulmohar, Neem, Arjun, Karanj, | Mix Plantation |
| 34 | 2017 | 1300 | 27015 | On the Dump Slope, Neem, Arjun, Karanj, Jamun, Gulmohar | Mix Plantation |
| 35 | 2017 | 845 | 27860 | In the village Devaria Khurd, on the edge of Khora Nala, Neem, Arjun, Karanj, Jamun, Gulmohar | Mix Plantation |
| 36 | 2017 | 935 | 28795 | Dispatch Road on the edge of Khora Nala, Neem, Arjun, Karanj, Jamun, Gulmohar | Mix Plantation |
| 37 | 2018 | 2000 | 30795 | Hazaribag, Jharkhand | Misc shady plants |
| 38 | 2018 | 200 | 30995 | GDM Girls High School | Misc shady plants |
| 39 | 2018 | 250 | 31245 | Middle School, Sonbarsa | Flower & Shady plants |
| 40 | 2018 | 7500 | 38745 | Safety Zone Plantation - Deworia Village, Urub Village | Misc shady plants |
| 41 | 2018 | 3750 | 42495 | Along the Pakwa Nala - East Quarry | Mix Plantation |
| 42 | 2018 | 8750 | 51245 | Near Sikri township, East Quarry dump area, langathu office. | Misc shady plants |
| 43 | 2019 | 25500 | 76745 | OB Dump "C" Slope | Misc shady plants |
| 44 | 2019 | 520 | 77265 | Along the dispatch Raod (Langatu to Substation) | Misc shady plants |
| 45 | 2019 | 2000 | 79265 | Vacant land, Sonbarsa Village, Near Nursery | Misc shady plants |
| 46 | 2019 | 8500 | 87765 | Safety Zone Plantation - Deworia Village, Urub Village | Misc shady plants |
| 47 | 2019 | 6200 | 93965 | Dump "D" Slope East Quarry | Misc shady plants |
| 48 | 2019 | 3200 | 97165 | Plantation Program in Township area, Sikri | Misc shady plants |
| 49 | 2019 | 1000 | 98165 | R&R Colony | Misc shady plants |
| 50 | 2019 | 2200 | 100365 | Along the Pakwa Nala - East Quarry | Misc shady plants |
| 51 | 2019 | 300 | 100665 | Distributed to villagers and School | Misc shady plants |
| 53 | 2019 | 500 | 101165 | Gandhi Maidan, Matwari, Hazaribagh | Misc shady plants |
| 54 | 2019 | 1080 | 102245 | Banadag Railway Siding | Misc shady plants |
| 55 | 2020 | 14766 | 117011 | Along the Nallah Side (Embankment) | Misc shady plants |
| 57 | 2020 | 24340 | 141351 | OB Dump "C" Slope | Misc shady plants |
| 58 | 2020 | 2770 | 144121 | OB Dump "C" Surface | Misc shady plants |
| 59 | 2020 | 400 | 144521 | Banadag Railway Siding | Misc shady plants |
| 60 | 2020 | 160 | 144681 | Along the dispatch Raod (Sonbarsa village to Langatu) | Misc shady plants |
| 61 | 2021 | 9065 | 153746 | Along the Lathorwa Nala | Misc shady plants |
| 62 | 2021 | 54763 | 208509 | OB Dump "C" Slope | Misc shady plants |
| 63 | 2021 | 3437 | 211946 | OB Dump "C" Surface | Misc shady plants |
| 64 | 2021 | 1630 | 213576 | Along the Pakwa Nala | Misc shady plants |
| 65 | 2021 | 2204 | 215780 | In and around Sikri township | Misc shady plants |
| 66 | 2021 | 3018 | 218798 | Along the Nallah Side (Embankment) | Misc shady plants |
| 67 | 2021 | 142 | 218940 | Along the dispatch Raod (Sonbarsa village to Langatu) | Misc shady plants |
| 68 | 2021 | 5735 | 224675 | Lathorwa Nala | Misc shady plants |
| 69 | 2021 | 575 | 225250 | Distributed to villagers | Misc shady plants |
| 70 | 2022 | 13175 | 238425 | Dump "A" Slope | Misc shady plants |
| 71 | 2022 | 100 | 238525 | Vacant Land, Arahara Village, Near CHP | Fruity & shady plants |
| 72 | 2022 | 1620 | 240145 | OB Dump "C" Slope & Surface | Misc shady plants |
| 73 | 2022 | 3720 | 243865 | Along the northern sides of main approach road, Conveyor Line | Misc shady plants |
| 74 | 2022 | 3735 | 247600 | East Quarry | Misc shady plants |
| 75 | 2022 | 320 | 247920 | Stockpile Area | Misc shady plants |

| SI No | Year | No of plants planted / Distributed | Cum no. of plants | Location | Remarks |
|-------|------|--|----------------------|--|--|
| 76 | 2023 | 1545 | 249465 | Along the Northern side of the main Approach Road | Peepal,Bargad, Gular,Neem,Kadam Arjun |
| 77 | 2023 | 32650 | 282115 | Dump A | Chakundi, Bamboo |
| 78 | 2023 | 1506 | 283621 | Safety Zone Plantation | Peltophorum, Sarvan, Babul |
| 79 | 2023 | 10869 | 294490 | 90 M Dump C | Bamboo, Arjun |
| 80 | 2023 | 1496 | 295986 | Embakment Area | Kadam, Gular, Imali, Amaltas, Semal |
| 81 | 2023 | 8000 | 303986 | Nala Side, | Seed Ball |
| 82 | 2023 | 4210 | 308196 | Nala Side, | Babul, Peltophorum, Sarvan , Maha Neem |
| 83 | 2023 | 565 | 308761 | Langatu Office Road | Kadam, Sarvan, Peltophorum, Mahaneem, Arjun, Bottel Brash, Foxtel. |
| 84 | 2023 | 650 | 309411 | Batching Plant | Malasian Sal, Chakundi |
| 85 | 2023 | 360 | 309771 | Embakment Area (Miyawki Plantation) | Sal, Maha Neem, Babul, Kadam,Amla, Sagwan, Jamun, Sarifa, Kaner, Hibiscus, Gamhar, Baheda, Semal, Kari Patta, Guava, Bel Patra, Sahtoot, Peepal, Amaltas, Mahua,Kachnar,Kathal, Arjun |
| 86 | 2023 | 3000 | 312771 | R&R Colony | Mango, Bel, Gauava, Kathal etc. |
| 87 | 2023 | 3772 | 316543 | East Quarry | Bamboo, Kadam, Chakaundi, Mahogany, etc. |


नवीन कुमार / NAVIN KUMAR
 जल संप्रदायक (पर्यावरण प्रबंधन) / DGM (ENVY MGMT.)
 (एनटीपीसी लिमिटेड) / NTPC Limited
 कोयला खनन परियोजना / COAL MINING PROJECT
 हजारीबाग / Hazaribag

NTPC LIMITED


 12/3/09
 Anand Kumar
 Anand Kumar (Pvt) Ltd & Co
 Joint Managing Director (JMD)
 Add: General Manager (Finance) SSC
 National Institute of Coal Mining (NIMC)
 NTPC Limited / Coal Mining Headquarters

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन व्हायरल (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag


| PBCMP, NTPC Limited, 31.03.2023 | | | |
|---------------------------------|------------------|--------------------------------|--------------------------|
| Sl NO | EXPS HEAD | APPROVED BUDGET AMOUNT(Cr Rs.) | AMOUNT DISBURSED(Cr Rs.) |
| 1 | Land Acquisition | 1,806.58 | 969.85 |
| 2 | R&R | 1,563.48 | 452.72 |
| | | 3,370.06 | 1,422.57 |

Navin Kumar

नवीन कुमार / NAVIN KUMAR
 जल संचयन (Water Conservation) एवं पर्यावरण (Environment)
 प्रबंधन अधिकारी / NTPC Limited
 जल संचयन एवं पर्यावरण विभाग, नवीन दिल्ली

NTPC MAITI Skill Development training Repor Till 18/01/2023

| Sl | YEAR | No of Students Taken Admission | Date of Start | End Date | Trade | One Year | Two years | Months | Nos. of Students Completed | No of student Placed | Ave Gross Salary Per Month | Major Companies |
|-------|------|--------------------------------|---------------|----------------|-------------|----------|-----------|--------|----------------------------|----------------------|----------------------------|---|
| 1 | 2015 | 42 | Aug-15 | July-17 | Electrician | NA | YES | NA | 30 | 30 | 16000 | Suzuki Motor Gujarat, Thiriveni JV Group, IBM Group |
| 2 | 2015 | 41 | Aug-15 | July-17 | Fitter | NA | YES | NA | 35 | 35 | 16000 | |
| 3 | 2015 | 42 | Aug-15 | July-16 | Welder | YES | NA | NA | 24 | 24 | 14000 | |
| 4 | 2016 | 32 | Aug-16 | July-17 | Welder | YES | NA | NA | 28 | 28 | 14000 | |
| 5 | 2017 | 24 | Aug-17 | July-18 | Welder | YES | NA | NA | 22 | 22 | 14000 | Suzuki Motor Gujarat, Thiriveni JV Group, IBM Group, Technocraft Mumbai, Badve engineering Mumbai |
| 6 | 2017 | 34 | Aug-17 | July-19 | Electrician | NA | YES | NA | 25 | 25 | 18000 | |
| 7 | 2017 | 31 | Aug-17 | July-19 | Fitter | NA | YES | NA | 31 | 31 | 18000 | |
| 8 | 2018 | 31 | Aug-18 | July-19 | Welder | YES | NA | NA | 24 | 24 | 16000 | |
| 9 | 2019 | 25 | Aug-19 | July-20 | Welder | YES | NA | NA | 17 | 17 | 16000 | |
| 10 | 2019 | 20 | Aug-19 | July-21 | Electrician | NA | YES | NA | 19 | 19 | 18000 | |
| 11 | 2019 | 20 | Aug-19 | July-21 | Fitter | NA | YES | NA | 14 | 14 | 18000 | |
| 12 | 2020 | 28 | Aug-20 | July-21 | Welder | YES | NA | NA | 25 | 25 | 16000 | |
| 13 | 2020 | 19 | Aug-20 | July-22 | Electrician | NA | YES | NA | 14 | 14 | 19000 | |
| 14 | 2020 | 20 | Aug-20 | July-22 | Fitter | NA | YES | NA | 18 | 18 | 19000 | |
| 15 | 2021 | 40 | Aug-21 | July-22 | Welder | YES | NA | NA | 37 | 31 | 18000 | |
| 16 | 2021 | 20 | Aug-21 | Under Training | Electrician | NA | YES | NA | NA | NA | NA | |
| 17 | 2021 | 20 | Aug-21 | Under Training | Fitter | NA | YES | NA | NA | NA | NA | |
| 18 | 2022 | 40 | Aug-22 | Under Training | Welder | YES | NA | NA | NA | NA | NA | |
| 19 | 2022 | 20 | Aug-22 | Under Training | Electrician | NA | YES | NA | NA | NA | NA | |
| 20 | 2022 | 20 | Aug-22 | Under Training | Fitter | NA | YES | NA | NA | NA | NA | |
| Total | | 576 | | | | | | | 363 | 357 | | |


श्रीमन्त कुमार / NAVIN KUMAR
 एम. एडमिशन / एडमिशन (एम. एडमिशन)
 प्रोफेशनल एडमिशन / NTPC Limited
 एडमिशन एडमिशन / COAL, Mining Projects
 एडमिशन / Hazaribagh

Skill Development - Shorts Term Course (SD-STC)

| Sl | Year | No of Students Taken Admission | Date of Start | End Date | Trade | One Year | Two years | Months | Nos. of Students Completed | No of student Placed | Ave Gross Salary Per Month | Major Companies |
|----|-------|--------------------------------|-----------------------|----------------|-----------------------------|----------|-----------|--------|----------------------------|----------------------|----------------------------|--|
| 1 | 2015 | 18 | Oct-15 | Feb-16 | Sewing & Tailoring | NA | NA | 3 | 18 | NA | NA | Self Employment |
| 2 | 2016 | 20 | Apr-16 | Jul-16 | Sewing & Tailoring | NA | NA | 3 | 20 | NA | NA | |
| 3 | 2019 | 19 | May-19 July-19 Aug-19 | 1 month | Basic Computer & Internet | NA | NA | 1 | 19 | NA | NA | |
| 4 | 2022 | 5 | Aug-22 | Sep-22 | Industrial Training | NA | NA | 1 | 5 | NA | NA | |
| 5 | 2022 | 60 | Sep-22 | Oct-22 | Sewing & Tailoring | NA | NA | 1 | 60 | NA | NA | |
| 6 | 2022 | 10 | Dec-22 | Under Training | Welder | NA | NA | 3 | 10 | 10 | 15000 | IBEX Engineering Pvt.Ltd Bangalore |
| 7 | 2022 | 10 | Dec-22 | Under Training | Electrician | NA | NA | 3 | 10 | 6 | 16400 | Lumax Auto Technology Ltd. Kolar Karnataka |
| 8 | 2022 | 10 | Dec-22 | Under Training | Basic Computer & Internet | NA | NA | 3 | 10 | 7 | 16400 | |
| 9 | 2023 | 20 | Jan-23 | Under Training | Sewing & Tailoring | NA | NA | 3 | NA | NA | | |
| 10 | 2023 | 1 | Jan-23 | Under Training | Electrical House Wiring | NA | NA | 3 | NA | NA | | |
| 11 | 2023 | 1 | Jan-23 | Under Training | TIG & MIG Welding | NA | NA | 3 | NA | NA | | |
| 12 | 2023 | 2 | Jan-23 | Under Training | Motor winding & fan winding | NA | NA | 3 | NA | NA | | |
| 13 | 2023 | 4 | Jan-23 | Under Training | BCI | NA | NA | 4 | NA | NA | | |
| | Total | 180 | | | | | | | 112 | 23 | | |

Navin
नवीन कुमार / NAVIN KUMAR
 उप सहायक प्रबंधक (आर)/ डीएम (एनटी मशीन)
 भारतीय रिजर्व बैंक/ NITFC, Limited
 सैलम कार्प चेंबर/ डीएम, मातंग प्रोजेक्ट्स
 इंदौर / Huzarbag



887
24-8-16
25-8-16

34-12-78
26-8-16
17-8-16

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22-8-16
943

झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद,

क्षेत्रीय कार्यालय-सह-प्रयोगशाला, पी०टी०सी० चौक, मटवारी रोड, हजारीबाग।

दिनांक 22/8/16

प्रेषक,

दिनेश प्रसाद सिंह,
क्षेत्रीय पदाधिकारी।

सेवा में,

महाप्रबंधक,
मेसर्स पकरी-बरवाडीह माइंस,
एन०टी०पी०सी० लि०, हजारीबाग।

विषय: मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, एन०टी०पी०सी० लि० का Environment Quality Monitoring Stations की स्थापना के संबंध में।

महाशय,

उपर्युक्त विषयक आपके पत्रांक 229 दिनांक 30.06.2016 एवं पर्षद पत्रांक बी - 3420, रॉंची, दिनांक 02.08.2016 के आलोक में मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, बड़कागाँव, हजारीबाग के पर्यावरणीय स्वीकृति के तहत Buffer Zone, Core Zone, में Environment Quality Monitoring हेतु मैप में दर्शाये गये बिन्दुओं का निरीक्षण किया गया। इससे ऐसा प्रतीत हुआ कि पर्यावरणीय स्वीकृति के अनुरूप ही ये सभी स्टेशन स्थापित किये जा रहे हैं।

अतः आपके उक्त पत्र में दर्शाये गये AAQ, Fugitive Dust, Ground Water Quality, Ground Water Level, Surface Water Quality, Noise Level, Soil Quality एवं Metrological Monitoring Stations को स्थापित करने हेतु अनुमोदन किया जा रहा है।

विश्वासभाजन

22/8/16

(दिनेश प्रसाद सिंह)
क्षेत्रीय पदाधिकारी

चिंदन कुंठ
22/8/16
(चिंदन कुंठ्यादव)
वै०सहा०

अशोक
22/8/16
(अशोक कुं० सिंह)
सहा०वै०पदा०

महाप्रबंधक पी.बी.।सी.बी

पी०एम०एस०
24/8/16

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन०टी०पी०सी० लि० लि० (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



883
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64-1278
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(943)

झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद,

क्षेत्रीय कार्यालय-सह-प्रयोगशाला, पी०टी०सी० चौक, मटवारी रोड, हजारीबाग।

दिनांक 22/8/16

प्रेषक,

दिनेश प्रसाद सिंह,
क्षेत्रीय पदाधिकारी।

सेवा में,

महाप्रबंधक,
मेसर्स पकरी-बरवाडीह माइंस,
एन०टी०पी०सी० लि०, हजारीबाग।

विषय: मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, एन०टी०पी०सी० लि० का Environment Quality Monitoring Stations की स्थापना के संबंध में।

महाराज,

उपर्युक्त विषयक आपके पत्रांक 229 दिनांक 30.08.2016 एवं पर्षद पत्रांक बी - 3420, राँची, दिनांक 02.08.2016 के आलोक में मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, बड़कागाँव, हजारीबाग के पर्यावरणीय स्वीकृति के तहत Buffer Zone, Core Zone, में Environment Quality Monitoring हेतु मैप में दर्शाये गये बिन्दुओं का निरीक्षण किया गया। इससे ऐसा प्रतीत हुआ कि पर्यावरणीय स्वीकृति के अनुरूप ही ये सभी स्टेशन स्थापित किये जा रहे हैं।

अतः आपके उक्त पत्र में दर्शाये गये AAQ, Fugitive Dust, Ground Water Quality, Ground Water Level, Surface Water Quality, Noise Level, Soil Quality एवं Metrological Monitoring Stations को स्थापित करने हेतु अनुमोदन किया जा रहा है।

विश्वासभाजन

(दिनेश प्रसाद सिंह)
क्षेत्रीय पदाधिकारी

(चन्दन कु० यादव)
वै०सहा०

(अशोक कु० सिंह)
सहा० वै०पदा०

महाप्रबंधक पी.बी./सी.बी.

पी०एम०एस०
24/8/16

Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्य. सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

23664
24/8/16



JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI-834004
Phone. - 2400852, 2400851 Fax. - 0651-2400850, Website - www.jspcb.org

Ref. Letter No. 13-3420

Ranchi, Dated: 01/08/16

From

R.P. Kumar
Section Head, Hazaribagh

To

Regional Officer
JSPC Board, Hazaribagh

Sub: Regarding M/s Pakri Barwadih Coal Mining, NTPC setting of Environment
Quality Monitoring Stations

Sir,

With reference to your letter Ref. No. 1572 dated 22.07.2016, you are requested to visit the site and select the suitable point for installation of Ambient Quality Monitoring Stations to be setup by NTPC and report the same to this office.

Yours Faithfully,

(R.P. Kumar)

Section Head, Hazaribagh

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन एम डी (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



पत्रांक 1572

झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद,

राष्ट्रीय कार्यालय-सह-प्रयोगशाला, पी०टी०सी० चौक, मठवारी रोड, हजारीबाग।

दिनांक 22/11/16

प्रेषक:

डी०पी० सिंह

क्षेत्रीय पदाधिकारी।

सेवा में,

सदस्य सचिव,

झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद, राँची।

विषय: मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, NTPC Ltd. की Environment Quality Monitoring Stations की स्थापना के संबंध में।

सहाय्य,

सेवा में सूचित करना है कि NTPC Ltd. के मेसर्स पकरी बरवाडीह कोल माइनिंग प्रोजेक्ट, बड़कागँव, हजारीबाग का पर्यावरणीय स्वीकृति के तहत Buffer Zone एवं Core Zone में Environment Quality Monitoring Stations fixed करने हेतु पत्र प्राप्त हुआ है। पत्र के साथ मैप में स्थापित होने वाले Location को दर्शाया गया है।

अतः अनुरोध है कि मैप में दर्शाये गये Location को अनुमोदित करने का कृपया कार्य

अनुष्ठान- इकाई से प्राप्त मैप एवं लोकेशन की प्रति।

दिनांक 22/11/16
डी०पी० सिंह
क्षेत्रीय पदाधिकारी

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन वलप्रमूक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag



एन टी पी सी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

पीएबीडी, सीएबीडी, एवं केडी कोल माइनिंग प्रोजेक्ट
PB, CB & KD Coal Mining Projects

Ref: No. 7010/PBCM/Mining/16/F-38/229

Date: 30.06.2016.

To,

The Regional Officer,
Jharkhand State Pollution Control Board,
JSPCB Regional office,
PTC Chowk, Hazaribagh Jharkhand. 825301.

Sub: - Establishment of Location of the Environment Quality Monitoring Stations for Pakri Barwadih Coal Mining Project -reg

Ref :- Env Clearance Letter No. J-11015/692/2007-IA.II(M) Dated 19th May 2009.

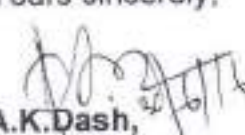
Dear Sir,

NTPC Limited is operating Pakri Barwadih Coal Mining Project near Barkagaon Block. As per the General Condition No III of the Environment Clearance granted by MoEF & CC vide Letter No. J-11015/692/2007-IA.II(M) Dated 19th May 2009, "Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring SPM, RPM, SO₂, NO_x and heavy metals such as Hg, Pb, Cr, As, etc. 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."

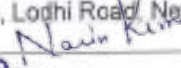
It is requested to kindly advise the concerned to identify the locations for establishing all the Environment Quality Monitoring stations for Pakri Barwadih Coal Mining Project.

Thanking you,

Yours sincerely,


A.K. Dash,
General Manager,
PB, CB Min,
NTPC Ltd.,
Hazaribagh. (Jharkhand)


पकरी बरवाडीह, चरडी बरियातु एवं केरेडारी कोल माइनिंग प्रोजेक्ट, पगमिल रोड, हजारीबाग-825301
Pakri Barwadih, Chatti-Bariatu & Keredari Coal Mining Projects, Pugmil Road, Hazaribagh-825301
Ph.: 06546-270622, 270855 Fax: 06546-270744, 270852
Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110 003


नवीन कुमार / NAVIN KUMAR
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एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribagh

**LOCATION OF ENVIRONMENTAL QUALITY MONITORING STATIONS FOR
PAKRIBARWADIH COAL MINING PROJECT,
BARKAGAOAN, HAZARIBAGH DISTRICT, JHARKHAND.**

Refer general Condition No III of Environmental Clearance Granted by MoEF vide EC clearance Ltr. No. J-1105/692/2007-IA.II (M) dated 19th May 2009.

Quoted Condition

"Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring SPM, RPM, SO₂, NO_x and heavy metals such as Hg, Pb, Cr, As, etc. 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".

Proposed plan:

As per condition the project has identified following monitoring stations for Ambient Air quality, Fugitive emission and dust fall. The detailed monitoring station is as follows.

Ambient Air Quality (Four parameters Monitoring) – PM 10, PM 2.5, SO₂ & NO_x

| SL.No | Station Name | Zone | Reference No |
|-------|--|-------------|--------------|
| 1 | VILLAGE URUB Western side from the central of the coal Block | Core Zone | AAQ – C : 1 |
| 2 | VILLAGE NAGARI North side from the center of the coal block | Core Zone | AAQ – C : 2 |
| 3 | VILLAGE LANGATHU Southern side from the center of the coal block | Core Zone | AAQ – C : 3 |
| 4 | VILLAGE PAKRIBARWADIH Eastern Side from the center of coal block. | Core Zone | AAQ – C : 4 |
| 5 | VILLAGE KANDABER Western side of the coal block | Buffer Zone | AAQ – B : 5 |
| 6 | VILLAGE GARIKALAN Southern side of the coal block | Buffer Zone | AAQ – B : 6 |
| 7 | VILLAGE DHENGA South Eastern side of the coal block | Buffer Zone | AAQ – B : 7 |
| 8 | VILLAGE KUSUMBHA North Eastern side of the coal block | Buffer Zone | AAQ – B : 8 |

Note: The Monitoring frequency will be followed on weekly twice in each station except monsoon period.

Navin Kumar
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हजारीबाग / Hazaribag

Ambient Air Quality (Heavy Metals)

| SL.No | Station Name | Zone | Reference No |
|-------|--|-------------|--------------|
| 1 | VILLAGE URUB Western side from the central of the coal Block | Core Zone | AAQ – C : 1 |
| 2 | VILLAGE NAGARI North side from the center of the coal block | Core Zone | AAQ – C : 2 |
| 3 | VILLAGE LANGATHU Southern side from the center of the coal block | Core Zone | AAQ – C : 3 |
| 4 | VILLAGE PAKRIBARWADIH Eastern Side from the center of coal block. | Core Zone | AAQ – C : 4 |
| 5 | VILLAGE KANDABER Western side of the coal block | Buffer Zone | AAQ – B : 5 |
| 6 | VILLAGE GARIKALAN Southern side of the coal block | Buffer Zone | AAQ – B : 6 |
| 7 | VILLAGE DHENGA South Eastern side of the coal block | Buffer Zone | AAQ – B : 7 |
| 8 | VILLAGE KUSUMBHA North Eastern side of the coal block | Buffer Zone | AAQ – B : 8 |

Fugitive Emission Monitoring:

| SL.No | Station Name | Zone | Reference No |
|-------|-------------------|-----------|--------------|
| 1 | Excavation area | Core Zone | FD – C : 1 |
| 2 | Haul Road | Core Zone | FD – C : 2 |
| 3 | Waste Dump | Core Zone | FD – C : 3 |
| 4 | Top Soil Dump. | Core Zone | FD – C : 4 |
| 5 | Work Shop | Core Zone | FD – C : 5 |
| 6 | Drilling location | Core Zone | FD – C : 6 |

Note:

- The Monitoring frequency will be followed on Monthly twice in each station except monsoon period.
- The update plate for monitoring station is enclosed as Appendix – 1
- The sampling procedure and parameters analysis will be followed as per National Ambient Air Quality standards and procedure.

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एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Ground Water Quality Monitoring:

| SL.No | Station Name | Source | Reference No |
|-------|------------------------|--------------|--------------|
| 1 | Well at Sinduari | Ground Water | GW - 1 |
| 2 | Well at Kandaber | -Do- | GW - 2 |
| 3 | Well at Sirma | -Do | GW - 3 |
| 4 | Well at Pakri-Barwadih | -Do | GW - 4 |
| 5 | Well at Ambajit | -Do | GW - 5 |
| 6 | Well at Horam | -Do | GW - 6 |
| 7 | Well at Barkagaon | -Do | GW - 7 |
| 8 | Well at DeworiaKhurd | -Do | GW - 8 |

Ground Water Level Monitoring:

| SL.No | Station Name | Source | Reference No |
|-------|------------------------|--------------|--------------|
| 1 | Well at Sinduari | Ground Water | GWL - 1 |
| 2 | Well at Kandaber | -Do- | GWL - 2 |
| 3 | Well at Sirma | -Do | GWL - 3 |
| 4 | Well at Pakri-Barwadih | -Do | GWL - 4 |
| 5 | Well at Ambajit | -Do | GWL - 5 |
| 6 | Well at Horam | -Do | GWL - 6 |
| 7 | Well at Barkagaon | -Do | GWL - 7 |
| 8 | Well at DeworiaKhurd | -Do | GWL - 8 |

Note:

- The Monitoring frequency will be followed on quarterly basis, which is winter, summer, monsoon & Post Monsoon.
- The update plate for monitoring station is enclosed as Appendix - 1
- The sampling procedure and parameters analysis will be followed as per IS 15001: 2012.

Navin Kumar
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एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

SURFACE WATER QUALITY MONITORING:

| SL.No | Station Name | Source | Reference No |
|-------|--|---------------------------|--------------|
| 1 | Lathorwa Nala, near Sirma | U/S of proposed Core Zone | SW-1 |
| 2 | Pakwa Nala, while entering the lease area | U/S of proposed Core Zone | SW-2 |
| 3 | Pakwa Nala, while leaving the lease area | D/S of proposed Core Zone | SW-3 |
| 4 | Lathorwa Nala, before confluence with GhagraNadi | D/S of proposed Core Zone | SW-4 |
| 5 | Ghagra Nadi near Panduriya, d/s of confluence with HorhoriNadi | D/S of proposed Core Zone | SW-5 |
| 6 | HaharoNadi, near Kanrtari | Core Zone | SW-6 |
| 7 | Pond near ChepaKhurd | Core Zone | SW-7 |

Note:

- The Monitoring frequency will be followed on quarterly basis, which is winter, summer, monsoon & Post Monsoon.
- The update plate for monitoring station is enclosed as Appendix – 1
- The sampling procedure and parameters analysis will be followed as per IS 15001: 2012.

NOISE QUALITY MONITORING:

| SL.No | Station Name | Zone | Reference No |
|-------|-------------------------------|-------------|--------------|
| 1 | EXCAVATION AREA | Core Zone | ANL - 1 |
| 2 | HAUL ROAD | Core Zone | ANL - 2 |
| 3 | WASTE DUMP | Core Zone | ANL - 3 |
| 4 | TOP SOIL DUMP | Core Zone | ANL - 4 |
| 5 | WORK SHOP | Core Zone | ANL - 5 |
| 6 | DRILLING LOCATION | Core Zone | ANL - 6 |
| 7 | OPERATOR CABIN | Core Zone | ANL - 7 |
| 8 | VILLAGE KANDABER | Buffer Zone | BNL - 8 |
| 9 | VILLAGE GARIKALAN | Buffer Zone | BNL - 9 |
| 10 | VILLAGE DHENGA | Buffer Zone | BNL - 10 |
| 11 | VILLAGE KUSUMBHA | Buffer Zone | BNL - 11 |
| 12 | BLOCK OFFICE AREA (BARKAGAON) | Buffer Zone | BNL - 12 |

Note:

- The Monitoring frequency will be followed on fortnightly basis in each station for day and night.
- The update plate for monitoring station is enclosed as Appendix – 1

Soil Quality Monitoring:

| SL.No | Station Name | Reference No |
|-------|--------------------------------------|--------------|
| 1 | Village Pakri-Barwadih Forest Land | SQ - 1 |
| 2 | Village Chirudih Forest Land | SQ - 2 |
| 3 | Village ChepaKhurd Agricultural Land | SQ - 3 |
| 4 | Horam Agricultural Land | SQ - 4 |
| 5 | Barkagaon Fallow Land | SQ - 5 |
| 6 | Kanrtari Sediment From Haharo river | SQ - 6 |
| 7 | MahugainKhurd Fallow Land | SQ - 7 |
| 8 | Kandaber Agricultural land | SQ - 8 |

Note:

- The Monitoring frequency will be followed on quarterly basis, which is winter, summer, monsoon & Post Monsoon.
- The update plate for monitoring station is enclosed as Appendix – 1

Micro Meteorological Station (MMS):

| SL.No | Station Name | Reference No |
|-------|---|--------------|
| 1 | Village Langathu (At NTPC Site Office) | MMS |

Note:

- The Monitoring will be continuous for Wind Speed, Wind Direction, Temperature, Humidity, rainfall, Solar Radiation, Cloud Cover, etc.
- The update plate for monitoring station is enclosed as Appendix – 1

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कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

| SL.No | Village | Monitoring Stations |
|-------|----------------------------|--|
| 1 | Itiz , Chirudih | FD-C:1,FD-C:2, FD-C:4, FD-C:5, FD-C:6 ANL-1, ANL-2,ANL-4,ANL-5,ANL-6,ANL-7, SQ-2 |
| 2 | Sirma | GW-3, GWL-3, |
| 3 | Nagari | AAQ-C:2 |
| 4 | Urub | AAQ-C:1, ANL-3, FD-C:3 |
| 5 | Pakri Barwadih | AAQ-C:4, GW-4, GWL-4, SQ-1 |
| 6 | Langathu | AAQ-C:3, MMS |
| 7 | Sinduari | GW-1, GWL-1 |
| 8 | Deworia Khurd | GW-8, GWL-8 |
| 9 | Chepa Khurd | SW-7, SQ-3 |
| | Barkagaon | GW-7, GWL-7, BNL-12, SQ-5 |
| 10 | Kandaber | AAQ-B:5 , GW-2, GWL-2, BNL-8, SQ-7 |
| 11 | Garikalan | AAQ-B:6 , BNL-9 |
| 12 | Dhenga | AAQ-B:7, BNL-10 |
| 13 | Kusumbha | AAQ-B:8, BNL-11 |
| 14 | Ambajit | GW-5, GWL-5 |
| 15 | Horam | GW-6, GWL-6, SQ-4 |
| 16 | Ghagra Nadi , Panduriya | SW-5 |
| 17 | Haharo Nadi, Kantari | SW-6, SQ-6 |
| 18 | Mahugain Khurd | SQ-7 |
| 19 | Lathorwa Nala | SW-1, SW-4 |
| 20 | Pakwa Nala | SW-2, SW-3 |

Navin Kumar
नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंध) / DGM (ENVT. MGMT.)
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 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | |
|---|------------|----------------------------------|--------|-----------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF SEPTEMBER 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.09.2023 | Excavation Area | 316 | 600 ug/m ³ |
| | 14.09.2023 | Excavation Area | 319 | 600 ug/m ³ |
| 2 | 02.09.2023 | Haul Road | 239 | 600 ug/m ³ |
| | 15.09.2023 | Haul Road | 252 | 600 ug/m ³ |
| 3 | 05.09.2023 | Waste Dump | 205 | 600 ug/m ³ |
| | 16.09.2023 | Waste Dump | 216 | 600 ug/m ³ |
| 4 | 06.09.2023 | Top Soil Dump | 265 | 600 ug/m ³ |
| | 17.09.2023 | Top Soil Dump | 246 | 600 ug/m ³ |
| 5 | 07.09.2023 | Work Shop | 234 | 600 ug/m ³ |
| | 17.09.2023 | Work Shop | 215 | 600 ug/m ³ |
| 6 | 09.09.2023 | Drilling Location | 317 | 600 ug/m ³ |
| | 19.09.2023 | Drilling Location | 267 | 600 ug/m ³ |
| 7 | 10.09.2023 | PSS Area (Village Nagari) FD:C:8 | 363 | 600 ug/m ³ |
| | 24.09.2023 | PSS Area (Village Nagari) FD:C:8 | 213 | 600 ug/m ³ |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN) (Technical Manager)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल सहायक (प्रयोग प्रबंधक) / JGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारिबाग / Hazaribag

Global Enviro Laboratories
AUTHORISED SIGNATORY
(SHINHA BHARYA)
Ghaziabad

AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS)

SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name and Address of Customer: **M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)**

| PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF SEPTEMBER 2023 | | | | | | | | | | | | | | | | | | |
|---|----------------------|---------------|--------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|----------------|------------|------------------|------------|
| S. No | PARAMETERS | NORMS | VILLAGE URLU | | VILLAGE NAGARI | | VILLAGE LANGATNU | | PAKRI BARWADIH | | VILLAGE KANDARER | | VILLAGE GARIKALAN | | VILLAGE DHENGA | | VILLAGE KUSUMBHA | |
| | | | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 | 06.09.2023 | 15.09.2023 |
| 1 | PM 10* | 100 ug/m3 | 50.4 | 55.8 | 59.4 | 58.6 | 47.5 | 48.2 | 48 | 49.6 | 43.6 | 47.3 | 49.5 | 46.4 | 35.3 | 36.8 | 32.2 | 35.4 |
| 2 | PM 2.5* | 60 ug/m3 | 27.5 | 30.2 | 32.2 | 31.9 | 26.25 | 26.4 | 26.4 | 27.5 | 24.5 | 26.25 | 27.3 | 25.9 | 20.45 | 20.6 | 18.2 | 20.2 |
| 3 | SO2* | 80 ug/m3 | 9.4 | 9.4 | 10.2 | 10.3 | 8.7 | 8.3 | 8.9 | 9.5 | 9.5 | 7.5 | 9.7 | 9.4 | 7.5 | 9.5 | 6.6 | 9.7 |
| 4 | NO2* | 80 ug/m3 | 15.8 | 15.3 | 17.3 | 16.9 | 14.3 | 12.3 | 15.2 | 14.9 | 15.6 | 11.2 | 16.1 | 14.6 | 11.3 | 15.5 | 9.4 | 15.2 |
| 5 | CO** | 4.0 mg/m3 | 0.54 | 0.53 | 0.59 | 0.54 | 0.33 | 0.39 | 0.34 | 0.38 | 0.43 | 0.49 | 0.42 | 0.39 | 0.26 | 0.37 | 0.29 | 0.26 |
| 6 | O3** | 180 ug/m3 | 20.1 | 21.3 | 21 | 20.2 | 17.7 | 19.2 | 17.1 | 17.8 | 19.3 | 19.9 | 20.9 | 18.4 | 17.9 | 18.2 | 19.9 | 20.4 |
| 7 | NH3* | 400 ug/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzo (A) Pyrene *** | 1.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene *** | 5.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 6.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 20.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.

** CPCB Specification for Ambient Air Quality for 1 hr.

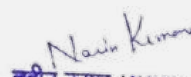
*** CPCB Specification for Ambient Air Quality for Annual

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES


CHECKED BY
(INTEKHAB KHAN) (Technical Manager)


नवीन कुमार / NAVIN KUMAR
जल सार्वजनिक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag


AUTHORISED SIGNATORY
(SHIKHA BHATIYA)

FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | |
|--|------------|----------------------------------|--------|------------------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF AUGUST 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.08.2023 | Excavation Area | 312 | 600 $\mu\text{g}/\text{m}^3$ |
| | 16.08.2023 | Excavation Area | 318 | 600 $\mu\text{g}/\text{m}^3$ |
| 2 | 02.08.2023 | Haul Road | 238 | 600 $\mu\text{g}/\text{m}^3$ |
| | 18.08.2023 | Haul Road | 254 | 600 $\mu\text{g}/\text{m}^3$ |
| 3 | 03.08.2023 | Waste Dump | 209 | 600 $\mu\text{g}/\text{m}^3$ |
| | 19.08.2023 | Waste Dump | 218 | 600 $\mu\text{g}/\text{m}^3$ |
| 4 | 04.08.2023 | Top Soil Dump | 268 | 600 $\mu\text{g}/\text{m}^3$ |
| | 20.08.2023 | Top Soil Dump | 242 | 600 $\mu\text{g}/\text{m}^3$ |
| 5 | 05.08.2023 | Work Shop | 235 | 600 $\mu\text{g}/\text{m}^3$ |
| | 21.08.2023 | Work Shop | 210 | 600 $\mu\text{g}/\text{m}^3$ |
| 6 | 08.08.2023 | Drilling Location | 319 | 600 $\mu\text{g}/\text{m}^3$ |
| | 24.08.2023 | Drilling Location | 251 | 600 $\mu\text{g}/\text{m}^3$ |
| 7 | 09.08.2023 | PSS Area (Village Nagari) FD:C:8 | 361 | 600 $\mu\text{g}/\text{m}^3$ |
| | 25.08.2023 | PSS Area (Village Nagari) FD:C:8 | 217 | 600 $\mu\text{g}/\text{m}^3$ |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(SHIKHA BHATTIYA)
Global Enviro Laboratories
Ghaziabad

AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS) SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF AUGUST 2023

| S. N | PARAMETERS | NORMS | VILLAGE URUB | | VILLAGE NAGARI | | VILLAGE LANGATHU | | PAKRI BARWADIH | | VILLAGE KANDABER | | VILLAGE GARIKALAN | | VILLAGE DHINGA | | VILLAGE KUSUMBHA | |
|------|---------------------|------------------------|--------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|----------------|------------|------------------|------------|
| | | | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 | 03.08.2023 | 16.08.2023 |
| 1 | PM 10* | 100 ug/m ³ | 60 | 60.2 | 64 | 65 | 64 | 58 | 49 | 49.6 | 52 | 52.3 | 54 | 54.1 | 66 | 66.3 | 43 | 43.3 |
| 2 | PM 2.5* | 60 ug/m ³ | 32.3 | 32.4 | 34.5 | 35.1 | 34.5 | 31.4 | 26.9 | 27.5 | 28.7 | 28.75 | 29.5 | 29.75 | 25.8 | 25.35 | 23.6 | 24.15 |
| 3 | SO ₂ * | 80 ug/m ³ | 11.9 | 11.4 | 12.8 | 12.3 | 12.8 | 10.3 | 8.2 | 8.4 | 9.3 | 9.1 | 7.8 | 7.4 | 7.4 | 7.2 | 6.9 | 6.7 |
| 4 | NO ₂ * | 80 ug/m ³ | 29.8 | 19.3 | 22.5 | 20.9 | 22.5 | 14.3 | 12.8 | 12.7 | 15.2 | 14.4 | 12.3 | 10.6 | 11.1 | 10.9 | 10 | 9.2 |
| 5 | CO** | 4.0 mg/m ³ | 0.56 | 0.53 | 0.61 | 0.62 | 0.61 | 0.33 | 0.35 | 0.34 | 0.33 | 0.31 | 0.25 | 0.24 | 0.29 | 0.26 | 0.24 | 0.21 |
| 6 | O ₃ ** | 180 ug/m ³ | 20.4 | 20.1 | 21.3 | 20.7 | 18.3 | 18.1 | 17.5 | 17.2 | 19.8 | 18.2 | 20.3 | 19.8 | 17.4 | 17.1 | 19.4 | 19.9 |
| 7 | NH ₃ * | 400 ug/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzo (A) Pyrene*** | 1.0 ng/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene*** | 3.0 ng/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 0.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 20.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.
** CPCB Specification for Ambient Air Quality for 1 hr.
*** CPCB Specification for Ambient Air Quality for Annual

FOR GLOBAL ENVIRO LABORATORIES

END OF TEST REPORT

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATTYA)

FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | |
|--|------------|----------------------------------|--------|-----------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF JULY 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.07.2023 | Excavation Area | 314 | 600 ug/m ³ |
| | 17.07.2023 | Excavation Area | 320 | 600 ug/m ³ |
| 2 | 02.07.2023 | Haul Road | 231 | 600 ug/m ³ |
| | 25.07.2023 | Haul Road | 270 | 600 ug/m ³ |
| 3 | 03.07.2023 | Waste Dump | 205 | 600 ug/m ³ |
| | 27.07.2023 | Waste Dump | 211 | 600 ug/m ³ |
| 4 | 05.07.2023 | Top Soil Dump | 282 | 600 ug/m ³ |
| | 28.07.2023 | Top Soil Dump | 273 | 600 ug/m ³ |
| 5 | 09.07.2023 | Work Shop | 239 | 600 ug/m ³ |
| | 28.07.2023 | Work Shop | 248 | 600 ug/m ³ |
| 6 | 10.07.2023 | Drilling Location | 348 | 600 ug/m ³ |
| | 30.07.2023 | Drilling Location | 269 | 600 ug/m ³ |
| 7 | 12.07.2023 | PSS Area (Village Nagari) FD:C:8 | 380 | 600 ug/m ³ |
| | 30.07.2023 | PSS Area (Village Nagari) FD:C:8 | 311 | 600 ug/m ³ |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(ARVIND KUMAR)



AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS) SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF JULY 2023

| S. N O | PARAMETERS | NRMS | VILLAGE URUB | | VILLAGE NAGARI | | VILLAGE LANGATHU | | PAKRI BARWADIH | | VILLAGE KANDABER | | VILLAGE GARIKALAH | | VILLAGE DHENGA | | VILLAGE KUSUMBHA | |
|--------|------------------------|---------------|--------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|----------------|------------|------------------|------------|
| | | | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 | 14.07.2023 | 27.07.2023 |
| 1 | PM10* | 200 ug/m3 | 63.2 | 51.7 | 67.3 | 56.8 | 57.1 | 45.8 | 58.4 | 41.8 | 55.3 | 39.7 | 52.3 | 32.9 | 46.8 | 33.9 | 46.5 | 30.7 |
| 2 | PM2.5* | 50 ug/m3 | 33.9 | 27.5 | 36.15 | 29.1 | 30.55 | 24.6 | 31.9 | 23.5 | 32.3 | 21.3 | 28.45 | 18.4 | 26 | 19.8 | 27.25 | 16.5 |
| 3 | SO2* | 80 ug/m3 | 12.3 | 10.2 | 14.5 | 11.4 | 10.9 | 7.1 | 11.2 | 6.5 | 11.2 | 5.9 | 9.7 | 5.2 | 8.3 | 5.5 | 7.6 | 5.2 |
| 4 | NO2* | 80 ug/m3 | 21.1 | 16.3 | 25.3 | 18.5 | 19.5 | 19.5 | 18.3 | 13.1 | 19.3 | 11.4 | 15.2 | 10.8 | 14.5 | 13.1 | 11.7 | 10.7 |
| 5 | CO** | 4.0 mg/m3 | 0.76 | 0.20 | 0.84 | 0.32 | 0.55 | 0.23 | 0.49 | 0.24 | 0.62 | 0.16 | 0.56 | 0.21 | 0.34 | 0.26 | 0.41 | 0.26 |
| 6 | O3** | 180 ug/m3 | 19.4 | 24.1 | 18.1 | 21.9 | 21.8 | 27.9 | 20.6 | 25.9 | 22.7 | 27.1 | 24.8 | 27.7 | 22.1 | 28.4 | 25.4 | 28.5 |
| 7 | H2S* | 400 ug/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzene (A) Pyrene *** | 1.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene *** | 1.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 6.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 20.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.

** CPCB Specification for Ambient Air Quality for 1 hr.

*** CPCB Specification for Ambient Air Quality for Annual

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)



FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | |
|--|------------|----------------------------------|--------|-----------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF JUNE 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.06.2023 | Excavation Area | 366 | 600 ug/m ³ |
| | 15.06.2023 | Excavation Area | 354 | 600 ug/m ³ |
| 2 | 02.06.2023 | Haul Road | 262 | 600 ug/m ³ |
| | 16.06.2023 | Haul Road | 277 | 600 ug/m ³ |
| 3 | 03.06.2023 | Waste Dump | 239 | 600 ug/m ³ |
| | 17.06.2023 | Waste Dump | 248 | 600 ug/m ³ |
| 4 | 04.06.2023 | Top Soil Dump | 279 | 600 ug/m ³ |
| | 18.06.2023 | Top Soil Dump | 270 | 600 ug/m ³ |
| 5 | 05.06.2023 | Work Shop | 234 | 600 ug/m ³ |
| | 19.06.2023 | Work Shop | 249 | 600 ug/m ³ |
| 6 | 06.06.2023 | Drilling Location | 349 | 600 ug/m ³ |
| | 20.06.2023 | Drilling Location | 357 | 600 ug/m ³ |
| 7 | 07.06.2023 | PSS Area (Village Nagari) FD:C:B | 386 | 600 ug/m ³ |
| | 21.06.2023 | PSS Area (Village Nagari) FD:C:B | 379 | 600 ug/m ³ |

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATIYA)



AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS) SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF JUNE 2023

| S. No | PARAMETERS | NORMS | VILLAGE JARUB | | VILLAGE NAGARI | | VILLAGE LANGATHU | | PAKRI BARWADIH | | VILLAGE KANDABER | | VILLAGE GARIKALAN | | VILLAGE DHENDRA | | VILLAGE KUSUMBHA | |
|-------|---------------------------|------------------------|---------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|-----------------|------------|------------------|------------|
| | | | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 | 07.06.2023 | 20.06.2023 |
| 1 | PM 10* | 100 ug/m ³ | 70.2 | 65.6 | 75.2 | 74.6 | 62.1 | 61.5 | 63.9 | 64.4 | 57.1 | 56.2 | 54.9 | 56.8 | 53.9 | 52.6 | 51.2 | 49.8 |
| 2 | PM 2.5* | 60 ug/m ³ | 37.4 | 35.6 | 40.1 | 39.8 | 33.45 | 33.15 | 34.65 | 34.9 | 31.15 | 30.75 | 30.15 | 31.1 | 29.15 | 28.5 | 28.1 | 27.4 |
| 3 | SO ₂ * | 80 ug/m ³ | 13.1 | 14.2 | 18.3 | 17.9 | 13.5 | 10.4 | 12.4 | 11.8 | 10.9 | 8.8 | 11.4 | 10 | 8.7 | 9.5 | 9.9 | 7.9 |
| 4 | NO ₂ * | 80 ug/m ³ | 22.7 | 24.9 | 32.9 | 32.1 | 22.7 | 16.5 | 20.7 | 19.5 | 16 | 13.8 | 18.6 | 15.8 | 13.9 | 15.5 | 16.3 | 12.3 |
| 5 | CO** | 4.0 mg/m ³ | 0.72 | 0.59 | 0.97 | 0.87 | 0.64 | 0.45 | 0.66 | 0.57 | 0.61 | 0.44 | 0.49 | 0.6 | 0.47 | 0.54 | 0.51 | 0.49 |
| 6 | O ₃ ** | 180 ug/m ³ | 22.4 | 21.9 | 20.4 | 20.9 | 24.4 | 23.7 | 22.1 | 23.5 | 25.8 | 26.1 | 26.8 | 26.4 | 26.2 | 27.5 | 27.8 | 28.9 |
| 7 | NH ₃ * | 400 ug/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzene (A) Pesticide *** | 1.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene *** | 5.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 4.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 20.0 mg/m ³ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.

** CPCB Specification for Ambient Air Quality for 1 hr.

*** CPCB Specification for Ambient Air Quality for Annual

***END OF TEST REPORT ***

FOR GLOBAL ENVIRO LABORATORIES

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Page No. 1 of 1
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FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

| PAKRI BARWADIH COAL MINES | | | | |
|---|------------|----------------------------------|--------|-----------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF MAY 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.05.2023 | Excavation Area | 369 | 600 ug/m ³ |
| | 15.05.2023 | Excavation Area | 351 | 600 ug/m ³ |
| 2 | 02.05.2023 | Haul Road | 258 | 600 ug/m ³ |
| | 16.05.2023 | Haul Road | 274 | 600 ug/m ³ |
| 3 | 03.05.2023 | Waste Dump | 236 | 600 ug/m ³ |
| | 17.05.2023 | Waste Dump | 244 | 600 ug/m ³ |
| 4 | 04.05.2023 | Top Soil Dump | 281 | 600 ug/m ³ |
| | 18.05.2023 | Top Soil Dump | 268 | 600 ug/m ³ |
| 5 | 05.05.2023 | Work Shop | 234 | 600 ug/m ³ |
| | 19.05.2023 | Work Shop | 251 | 600 ug/m ³ |
| 6 | 06.05.2023 | Drilling Location | 347 | 600 ug/m ³ |
| | 20.05.2023 | Drilling Location | 355 | 600 ug/m ³ |
| 7 | 07.05.2023 | PSS Area (Village Nagari) FD:C:B | 382 | 600 ug/m ³ |
| | 21.05.2023 | PSS Area (Village Nagari) FD:C:B | 376 | 600 ug/m ³ |

***END OF TEST REPORT ***

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(ARVIND KUMAR)

AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS) SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF MAY 2023

| S. N | PARAMETERS | NORMS | VILLAGE URUB | | VILLAGE NAGARI | | VILLAGE LANGATHU | | PAKRI BARWADIH | | VILLAGE KANDADER | | VILLAGE GARIKALAN | | VILLAGE DHENGA | | VILLAGE KUSUMBHA | |
|------|----------------------|---------------|--------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|----------------|------------|------------------|------------|
| | | | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 | 07.05.2023 | 19.05.2023 |
| 1 | PM 10* | 100 ug/m3 | 69.2 | 66.9 | 74.2 | 75.6 | 64.2 | 62.3 | 63.6 | 64.2 | 55.3 | 58.6 | 57.9 | 58.6 | 51.6 | 53.2 | 52.4 | 50.2 |
| 2 | PM 2.5* | 50 ug/m3 | 36.9 | 35.75 | 39.6 | 40.3 | 34.5 | 33.5 | 34.5 | 34.8 | 30.2 | 31.9 | 31.65 | 32 | 28 | 28.8 | 28.7 | 27.6 |
| 3 | SO2* | 80 ug/m3 | 14.1 | 13.2 | 16.3 | 17.6 | 10.9 | 12 | 12.6 | 11.3 | 11.2 | 9.6 | 9.7 | 10.2 | 8.3 | 8.6 | 10.3 | 9.8 |
| 4 | NO2* | 80 ug/m3 | 24.7 | 22.9 | 28.9 | 31.5 | 17.5 | 19.7 | 21.1 | 18.5 | 18.6 | 15.4 | 15.2 | 16.2 | 13.1 | 13.7 | 0.64 | 16.1 |
| 5 | CO** | 4.0 mg/m3 | 0.82 | 0.71 | 0.92 | 0.84 | 0.53 | 0.55 | 0.55 | 0.49 | 0.56 | 0.62 | 0.61 | 0.56 | 0.44 | 0.34 | 0.52 | 0.41 |
| 6 | O3** | 180 ug/m3 | 22.9 | 21.3 | 19.9 | 20.7 | 23.8 | 24.2 | 22.7 | 23.6 | 25.4 | 26.9 | 26.3 | 25.8 | 25.8 | 27.1 | 27.2 | 28.7 |
| 7 | NH3* | 400 ug/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzo (A) Pyrene *** | 1.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene *** | 5.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 6.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 20.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.

** CPCB Specification for Ambient Air Quality for 1 hr.

*** CPCB Specification for Ambient Air Quality for Annual

***END OF TEST REPORT ***

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(ARVIND KUMAR)

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GLOBAL ENVIRO Laboratories

PLOT NO. 4, KHASRA NO. 45, OPPOSITE SHREE MANAN DHAM TEMPLE,
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MoEF&CC Recognized Environmental Laboratory

FUGITIVE DUST MONITORING AND ANALYSIS SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)


| PAKRI BARWADIH COAL MINES | | | | |
|---|------------|----------------------------------|--------|------------------------------|
| FUGITIVE DUST MONITORING REPORT MONTH OF APRIL 2023 | | | | |
| Sl. No. | Date | Station | Result | Norms |
| 1 | 01.04.2023 | Excavation Area | 358 | 600 $\mu\text{g}/\text{m}^3$ |
| | 17.04.2023 | Excavation Area | 376 | 600 $\mu\text{g}/\text{m}^3$ |
| 2 | 02.04.2023 | Haul Road | 252 | 600 $\mu\text{g}/\text{m}^3$ |
| | 18.04.2023 | Haul Road | 284 | 600 $\mu\text{g}/\text{m}^3$ |
| 3 | 03.04.2023 | Waste Dump | 216 | 600 $\mu\text{g}/\text{m}^3$ |
| | 19.04.2023 | Waste Dump | 254 | 600 $\mu\text{g}/\text{m}^3$ |
| 4 | 04.04.2023 | Top Soil Dump | 274 | 600 $\mu\text{g}/\text{m}^3$ |
| | 21.04.2023 | Top Soil Dump | 288 | 600 $\mu\text{g}/\text{m}^3$ |
| 5 | 05.04.2023 | Work Shop | 242 | 600 $\mu\text{g}/\text{m}^3$ |
| | 22.04.2023 | Work Shop | 248 | 600 $\mu\text{g}/\text{m}^3$ |
| 6 | 06.04.2023 | Drilling Location | 362 | 600 $\mu\text{g}/\text{m}^3$ |
| | 23.04.2023 | Drilling Location | 359 | 600 $\mu\text{g}/\text{m}^3$ |
| 7 | 07.04.2023 | PSS Area (Village Nagari) FD:C:8 | 368 | 600 $\mu\text{g}/\text{m}^3$ |
| | 24.04.2023 | PSS Area (Village Nagari) FD:C:8 | 398 | 600 $\mu\text{g}/\text{m}^3$ |

END OF TEST REPORT

Page No. 1 of 1

FOR GLOBAL ENVIRO LABORATORIES


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MoEF&CC Recognized Environmental Laboratory

AMBIENT AIR QUALITY MONITORING AND ANALYSIS (HEAVY METALS)

SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name and Address of Customer: M/S PAKRI BARWADIH COAL MINING NTPC LTD.,
LANGATU, BARKAGAON, HAZARIBAGH, JHARKHAND. (INDIA)

PAKRI BARWADIH COAL MINING PROJECT, VILLAGE WISE HEAVY METALS ANALYSIS DATA MONTH OF APRIL 2023

| S. N | PARAMETERS | NORMS | VILLAGE LURUB | | VILLAGE NAGARI | | VILLAGE LANGATHU | | PAKRI BARWADIH | | VILLAGE KANDABER | | VILLAGE GARIKALAN | | VILLAGE DHENGA | | VILLAGE KUSUMBHA | |
|------|-----------------------|---------------|---------------|------------|----------------|------------|------------------|------------|----------------|------------|------------------|------------|-------------------|------------|----------------|------------|------------------|------------|
| | | | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 | 07.01.2023 | 27.01.2023 |
| 1 | PM 10* | 100 ug/m3 | 65.6 | 69.6 | 72.6 | 75.2 | 63.8 | 64.2 | 63.4 | 64.8 | 58.2 | 62.4 | 61.4 | 62.8 | 55.8 | 56.4 | 56.2 | 56.4 |
| 2 | PM 2.5* | 50 ug/m3 | 35.1 | 37.1 | 38.8 | 40.2 | 34.6 | 34.5 | 34.1 | 35.1 | 31.8 | 33.8 | 33.2 | 34.1 | 30.7 | 30.4 | 30.2 | 31.7 |
| 3 | SO2* | 80 ug/m3 | 14.2 | 15.4 | 15.2 | 17.2 | 11.4 | 13.2 | 11.4 | 12.6 | 10.6 | 10.2 | 10.7 | 10.5 | 10.2 | 11.2 | 10.9 | 9.6 |
| 4 | NO2* | 80 ug/m3 | 25.4 | 27.3 | 27.3 | 30.7 | 19.5 | 22.1 | 19.2 | 21.1 | 17.8 | 16.6 | 18.1 | 16.8 | 0.96 | 18.9 | 18 | 0.64 |
| 5 | CO** | 4.0 mg/m3 | 0.43 | 0.84 | 0.67 | 0.92 | 0.69 | 0.74 | 0.46 | 0.65 | 0.54 | 0.62 | 0.64 | 0.54 | 0.77 | 0.56 | 0.87 | 0.72 |
| 6 | 03** | 180 ug/m3 | 21 | 23 | 20 | 21 | 23 | 24 | 24 | 21 | 26 | 23 | 22 | 22 | 28 | 28 | 27 | 27 |
| 7 | NH3* | 400 ug/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 8 | Benzop (A) Pyrene *** | 1.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 9 | Benzene *** | 5.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 10 | Arsenic** | 6.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 11 | Nickel** | 70.0 mg/m3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 12 | Mercury | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 13 | Chromium | NOT SPECIFIED | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 14 | Lead* | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

* CPCB Specification for Ambient Air Quality for 24 hrs.
** CPCB Specification for Ambient Air Quality for 1 hr.
*** CPCB Specification for Ambient Air Quality for Annual

***END OF TEST REPORT ***

FOR GLOBAL ENVIRO LABORATORIES

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Water Sprinkling System at Pakri Barwadig Coal Mining Project



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Dust Suppression through Water Tanker



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हजारीबाग / Hazaribag

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | |
| NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 01.09.2023 | ANL-1 | Average | 67.0 | 65.3 | 75/90 | 70 | 1 | 02.09.2023 | ANL-2 | Average | 66.8 | 64.8 | 75/90 | 70 |
| | | | Maximum | 70.6 | 67.5 | | | | | | Maximum | 69.3 | 68.5 | | |
| | | | Minimum | 63.3 | 63 | | | | | | Minimum | 64 | 61.1 | | |
| | | | Leqdb(A) | 68.9 | 66.6 | | | | | | Leqdb(A) | 67.3 | 65.8 | | |
| 2 | 17.09.2023 | ANL-1 | Average | 66.0 | 63.3 | 75/90 | 70 | 2 | 19.09.2023 | ANL-2 | Average | 67.4 | 63.9 | 75/90 | 70 |
| | | | Maximum | 69.3 | 66.2 | | | | | | Maximum | 71.5 | 67.2 | | |
| | | | Minimum | 62.7 | 60.3 | | | | | | Minimum | 63.2 | 60.6 | | |
| | | | Leqdb(A) | 67.2 | 64.6 | | | | | | Leqdb(A) | 68.4 | 65.4 | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 05.09.2023 | ANL-3 | Average | 68.7 | 64.8 | 75/90 | 70 | 1 | 06.09.2023 | ANL-4 | Average | 65.8 | 64.5 | 75/90 | 70 |
| | | | Maximum | 71.2 | 67.9 | | | | | | Maximum | 68.4 | 66.5 | | |
| | | | Minimum | 66.2 | 61.6 | | | | | | Minimum | 63.2 | 62.4 | | |
| | | | Leqdb(A) | 70.2 | 65.7 | | | | | | Leqdb(A) | 66.8 | 65.2 | | |
| 2 | 19.09.2023 | ANL-3 | Average | 64.4 | 63.7 | 75/90 | 70 | 2 | 19.09.2023 | ANL-4 | Average | 66.8 | 63.8 | 75/90 | 70 |
| | | | Maximum | 67.3 | 67.3 | | | | | | Maximum | 71.2 | 67.4 | | |
| | | | Minimum | 61.4 | 60.1 | | | | | | Minimum | 62.4 | 60.2 | | |
| | | | Leqdb(A) | 65.8 | 65.3 | | | | | | Leqdb(A) | 68.8 | 65.1 | | |

FOR GLOBAL ENVIRO LABORATORIES

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(INTEKHAB KHAN)(Technical Manager)

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(SHIKHA KUMARIYA)

Page 01 of 04

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 07.09.2023 | ANL-5 | Average | 68.9 | 63.3 | 75/90 | 70 | 1 | 09.09.2023 | ANL-6 | Average | 65.3 | 61.8 | 75/90 | 70 |
| | | | Maximum | 71.4 | 67.6 | | | | | | Maximum | 68.2 | 64.4 | | |
| | | | Minimum | 66.4 | 58.9 | | | | | | Minimum | 64.3 | 59.2 | | |
| | | | Leqdb(A) | 70.2 | 65.3 | | | | | | Leqdb(A) | 67.7 | 62.9 | | |
| 2 | 24.09.2023 | ANL-5 | Average | 63.2 | 62.2 | 75/90 | 70 | 2 | 24.09.2023 | ANL-6 | Average | 62.2 | 60.4 | 75/90 | 70 |
| | | | Maximum | 68.3 | 66.3 | | | | | | Maximum | 67.7 | 62.1 | | |
| | | | Minimum | 58.1 | 58.1 | | | | | | Minimum | 56.7 | 58.6 | | |
| | | | Leqdb(A) | 65.8 | 64.2 | | | | | | Leqdb(A) | 64.6 | 60.6 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 10.09.2023 | ANL-7 | Average | 69.1 | 62.9 | 75/90 | 70 | 1 | 13.09.2023 | ANL-8 | Average | 67.0 | 64.8 | 75 | 70 |
| | | | Maximum | 71.8 | 67.3 | | | | | | Maximum | 69.9 | 66.3 | | |
| | | | Minimum | 66.4 | 58.4 | | | | | | Minimum | 64.1 | 63.2 | | |
| | | | Leqdb(A) | 70.5 | 64.9 | | | | | | Leqdb(A) | 68.3 | 65.5 | | |
| 2 | 24.09.2023 | ANL-7 | Average | 64.6 | 60.3 | 75/90 | 70 | 2 | 25.09.2023 | ANL-8 | Average | 69.3 | 64.4 | 75 | 70 |
| | | | Maximum | 68.6 | 67.2 | | | | | | Maximum | 72.2 | 67.7 | | |
| | | | Minimum | 60.5 | 53.3 | | | | | | Minimum | 66.3 | 61.1 | | |
| | | | Leqdb(A) | 66.5 | 64.6 | | | | | | Leqdb(A) | 71.7 | 65.6 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)(Technical Manager)

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हजारीबाग / Hazaribag

Global Enviro Laboratories
AUTHORISED SIGNATORY
(SHIKHA BHATTIA)

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NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|----------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|----------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description in noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description in noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 14.09.2023 | ANL-9 | Average | 66.7 | 62.7 | 75/90 | 70 | 1 | 15.09.2023 | BNL-10 | Average | 51 | 40.4 | 55 | 45 |
| | | | Maximum | 70.9 | 67.5 | | | | | | Maximum | 53.6 | 44.3 | | |
| | | | Minimum | 62.5 | 57.9 | | | | | | Minimum | 48.4 | 36.5 | | |
| | | | Leqdb(A) | 68.4 | 64.6 | | | | | | Leqdb(A) | 52.4 | 42.5 | | |
| 2 | 25.09.2023 | ANL-9 | Average | 67.2 | 60.2 | 75/90 | 70 | 2 | 25.09.2023 | BNL-10 | Average | 48.1 | 38.2 | 55 | 45 |
| | | | Maximum | 71.9 | 64.4 | | | | | | Maximum | 51.4 | 40.8 | | |
| | | | Minimum | 62.5 | 55.9 | | | | | | Minimum | 44.8 | 35.6 | | |
| | | | Leqdb(A) | 69.7 | 62.6 | | | | | | Leqdb(A) | 49.8 | 39.3 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description in noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description in noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 15.09.2023 | BNL-11 | Average | 48.1 | 37.8 | 55 | 45 | 1 | 16.09.2023 | BNL-12 | Average | 48.2 | 40.1 | 55 | 45 |
| | | | Maximum | 51.4 | 42.2 | | | | | | Maximum | 52.3 | 42.7 | | |
| | | | Minimum | 44.8 | 33.4 | | | | | | Minimum | 44.1 | 37.3 | | |
| | | | Leqdb(A) | 50.1 | 39.3 | | | | | | Leqdb(A) | 49.7 | 41.3 | | |
| 2 | 27.09.2023 | BNL-11 | Average | 49.6 | 35 | 55 | 45 | 2 | 28.09.2023 | BNL-12 | Average | 44.9 | 36.7 | 55 | 45 |
| | | | Maximum | 52.4 | 39.3 | | | | | | Maximum | 48.6 | 39.9 | | |
| | | | Minimum | 46.8 | 30.7 | | | | | | Minimum | 41.1 | 33.5 | | |
| | | | Leqdb(A) | 51.3 | 37.2 | | | | | | Leqdb(A) | 46.7 | 38.4 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)(Technical Manager)

Navin Kumar
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हजारीबाग / Hazaribag

Global Enviro Laboratories
AUTHORISED SIGNATORY
(SHIKHA BHATTYA)

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NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF SEPTEMBER 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
 LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF SEPTEMBER 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 16.09.2023 | BNL-13 | Average | 49.5 | 38.4 | 55 | 45 | 1 | 16.09.2023 | BNL-14 | Average | 49.9 | 38.6 | 55 | 45 |
| | | | Maximum | 52.4 | 41.7 | | | | | | Maximum | 53.4 | 42.4 | | |
| | | | Minimum | 46.6 | 35.1 | | | | | | Minimum | 46.4 | 35.2 | | |
| | | | Leqdb(A) | 51.1 | 39.8 | | | | | | Leqdb(A) | 51.8 | 40.7 | | |
| 2 | 29.09.2023 | BNL-13 | Average | 44.4 | 37.9 | 55 | 45 | 2 | 29.09.2023 | BNL-14 | Average | 47.4 | 37.3 | 55 | 45 |
| | | | Maximum | 48.4 | 40.6 | | | | | | Maximum | 51.4 | 39.3 | | |
| | | | Minimum | 40.3 | 35.2 | | | | | | Minimum | 43.4 | 35.3 | | |
| | | | Leqdb(A) | 46.2 | 39.3 | | | | | | Leqdb(A) | 49.4 | 38.2 | | |

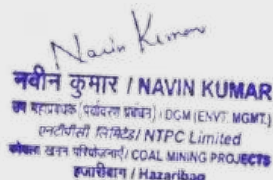
FOR GLOBAL ENVIRO LABORATORIES


 CHECKED BY

(INTEKHAB KHAN)(Technical Manager)


 AUTHORIZED SIGNATORY

(SHIKHA BHATIYA)


 नवीन कुमार / NAVIN KUMAR
 डी.एम.एस. (पर्यावरण प्रबंधन) / DGM (ENVY. MGMT.)
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 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Page 04 of 04

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|---|--------|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | | |
| NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 01.08.2023 | ANL-1 | Average | 66.8 | 65.5 | 75/90 | 70 | 1 | 02.08.2023 | ANL-2 | Average | 67.1 | 64.8 | 75/90 | 70 |
| | | | Maximum | 70.4 | 67.7 | | | | | | Maximum | 69.9 | 68.1 | | |
| | | | Minimum | 63.2 | 63.2 | | | | | | Minimum | 64.2 | 61.4 | | |
| | | | Leq db(A) | 68.4 | 66.3 | | | | | | Leq db(A) | 68.2 | 66.6 | | |
| | | | | | | | | | | | | | | | |
| 2 | 16.08.2023 | ANL-1 | Average | 65.9 | 63.4 | 75/90 | 70 | 2 | 18.08.2023 | ANL-2 | Average | 67.4 | 63.9 | 75/90 | 70 |
| | | | Maximum | 69.1 | 66.6 | | | | | | Maximum | 70.6 | 67.4 | | |
| | | | Minimum | 62.6 | 60.1 | | | | | | Minimum | 64.2 | 60.4 | | |
| | | | Leq db(A) | 67.2 | 64.8 | | | | | | Leq db(A) | 68.5 | 65.3 | | |
| | | | | | | | | | | | | | | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 03.08.2023 | ANL-3 | Average | 69.7 | 64.4 | 75/90 | 70 | 1 | 04.08.2023 | ANL-4 | Average | 66.8 | 64.4 | 75/90 | 70 |
| | | | Maximum | 72.2 | 67.3 | | | | | | Maximum | 69.4 | 66.4 | | |
| | | | Minimum | 67.2 | 61.4 | | | | | | Minimum | 64.2 | 62.3 | | |
| | | | Leq db(A) | 70.8 | 65.4 | | | | | | Leq db(A) | 68.1 | 65.5 | | |
| | | | | | | | | | | | | | | | |
| 2 | 19.08.2023 | ANL-3 | Average | 65.4 | 64.1 | 75/90 | 70 | 2 | 20.08.2023 | ANL-4 | Average | 66.4 | 64 | 75/90 | 70 |
| | | | Maximum | 68.3 | 67.5 | | | | | | Maximum | 70.2 | 67.6 | | |
| | | | Minimum | 62.4 | 60.6 | | | | | | Minimum | 62.5 | 60.4 | | |
| | | | Leq db(A) | 66.8 | 65.4 | | | | | | Leq db(A) | 68.2 | 66.5 | | |
| | | | | | | | | | | | | | | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATIA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 05.08.2023 | ANL-5 | Average | 68.3 | 66.2 | 75/90 | 70 | 1 | 06.08.2023 | ANL-6 | Average | 65.9 | 62.8 | 75/90 | 70 |
| | | | Maximum | 70.4 | 68.1 | | | | | | Maximum | 69.2 | 65.4 | | |
| | | | Minimum | 66.2 | 64.2 | | | | | | Minimum | 64.6 | 60.2 | | |
| | | | Leq db(A) | 69.2 | 67.3 | | | | | | Leq db(A) | 67.9 | 65.9 | | |
| 2 | 21.08.2023 | ANL-5 | Average | 63.6 | 62.5 | 75/90 | 70 | 2 | 24.08.2023 | ANL-6 | Average | 62.2 | 60.4 | 75/90 | 70 |
| | | | Maximum | 68.8 | 66.8 | | | | | | Maximum | 67.7 | 62.1 | | |
| | | | Minimum | 58.4 | 58.2 | | | | | | Minimum | 56.7 | 58.6 | | |
| | | | Leq db(A) | 65.6 | 64.6 | | | | | | Leq db(A) | 64.6 | 60.6 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 08.08.2023 | ANL-7 | Average | 69.2 | 62.9 | 75/90 | 70 | 1 | 09.08.2023 | ANL-8 | Average | 66.8 | 65.8 | 75 | 70 |
| | | | Maximum | 71.5 | 66.3 | | | | | | Maximum | 69.3 | 67.3 | | |
| | | | Minimum | 66.8 | 59.4 | | | | | | Minimum | 64.2 | 64.2 | | |
| | | | Leq db(A) | 70.6 | 64.4 | | | | | | Leq db(A) | 67.3 | 66.5 | | |
| 2 | 25.08.2023 | ANL-7 | Average | 64.7 | 59.3 | 75/90 | 70 | 2 | 25.08.2023 | ANL-8 | Average | 69.2 | 64.6 | 75 | 70 |
| | | | Maximum | 68.4 | 66.2 | | | | | | Maximum | 72.1 | 67.9 | | |
| | | | Minimum | 60.9 | 52.3 | | | | | | Minimum | 66.2 | 61.3 | | |
| | | | Leq db(A) | 66.3 | 63.6 | | | | | | Leq db(A) | 70.7 | 63.2 | | |

FOR GLOBAL ENVIRO LABORATORIES

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कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHEKHA BHATTIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 11.08.2023 | ANL-9 | Average | 66.7 | 63.3 | 75/90 | 70 | 1 | 12.08.2023 | BNL-10 | Average | 50.4 | 40.4 | 55 | 45 |
| | | | Maximum | 70.9 | 67.6 | | | | | | Maximum | 52.6 | 44.1 | | |
| | | | Minimum | 62.5 | 58.9 | | | | | | Minimum | 48.2 | 36.7 | | |
| | | | Leq db(A) | 68.3 | 65.3 | | | | | | Leq db(A) | 50.8 | 40.4 | | |
| 2 | 26.08.2023 | ANL-9 | Average | 66.8 | 59.9 | 75/90 | 70 | 2 | 27.08.2023 | BNL-10 | Average | 48.4 | 38 | 55 | 45 |
| | | | Maximum | 71.4 | 64.3 | | | | | | Maximum | 50.3 | 40.7 | | |
| | | | Minimum | 62.2 | 55.4 | | | | | | Minimum | 46.4 | 35.3 | | |
| | | | Leq db(A) | 68.7 | 62.2 | | | | | | Leq db(A) | 49.2 | 39.2 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 13.08.2023 | BNL-11 | Average | 47.4 | 38.5 | 55 | 45 | 1 | 13.08.2023 | BNL-11 | Average | 48.6 | 39.7 | 55 | 45 |
| | | | Maximum | 50.4 | 43.2 | | | | | | Maximum | 52.5 | 42.3 | | |
| | | | Minimum | 44.4 | 33.8 | | | | | | Minimum | 44.6 | 37.1 | | |
| | | | Leq db(A) | 48.1 | 40.3 | | | | | | Leq db(A) | 49.4 | 40.5 | | |
| 2 | 27.08.2023 | BNL-11 | Average | 48.1 | 35 | 55 | 45 | 2 | 28.08.2023 | BNL-11 | Average | 44.8 | 35.2 | 55 | 45 |
| | | | Maximum | 51.4 | 39.2 | | | | | | Maximum | 48.4 | 38.9 | | |
| | | | Minimum | 44.6 | 30.8 | | | | | | Minimum | 41.2 | 31.5 | | |
| | | | Leq db(A) | 49.8 | 37.3 | | | | | | Leq db(A) | 46.3 | 36.8 | | |

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORIZED SIGNATORY
(SHIKHA BHATTIYA)
हजारीबाग


NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF AUGUST 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
 LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|---|---------|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | NOISE MONITORING DATA MONTH OF AUGUST 2023 | | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 14.08.2023 | BNL-13 | Average | 49.2 | 38.9 | 55 | 45 | 1 | 14.08.2023 | BNL-14 | Average | 50.1 | 39.1 | 55 | 45 |
| | | | Maximum | 52.9 | 42.7 | | | | | | Maximum | 53.4 | 42.9 | | |
| | | | Minimum | 46.4 | 35.1 | | | | | | Minimum | 46.8 | 35.2 | | |
| | | | Leq db(A) | 50.7 | 39.7 | | | | | | Leq db(A) | 50.8 | 39.7 | | |
| 2 | 28.08.2023 | BNL-13 | Average | 43.4 | 37.7 | 55 | 45 | 2 | 30.08.2023 | BNL-14 | Average | 46.4 | 37.5 | 55 | 45 |
| | | | Maximum | 47.4 | 40.3 | | | | | | Maximum | 50.4 | 39.6 | | |
| | | | Minimum | 39.3 | 35.1 | | | | | | Minimum | 42.4 | 35.4 | | |
| | | | Leq db(A) | 45.2 | 38.7 | | | | | | Leq db(A) | 48.4 | 38.2 | | |

FOR GLOBAL ENVIRO LABORATORIES


 CHECKED BY
 (INTEKHAB KHAN)


 नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
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 हजारीबाग / Hazaribag


 AUTHORIZED SIGNATORY
 (SHIKHA BHATIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | |
| NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JULY2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 02.07.2023 | ANL-1 | Average | 66.0 | 62.1 | 75/85 | 70 | 1 | 05.07.2023 | ANL-2 | Average | 69.9 | 62.8 | 75/85 | 70 |
| | | | Maximum | 68.3 | 64.3 | | | | | | Maximum | 71.4 | 64.8 | | |
| | | | Minimum | 63.6 | 59.8 | | | | | | Minimum | 68.3 | 60.8 | | |
| | | | Leqdb(A) | 67.2 | 62.9 | | | | | | Leqdb(A) | 70.2 | 63.1 | | |
| 2 | 16.07.2023 | ANL-1 | Average | 67.7 | 64.7 | 75/85 | 70 | 2 | 17.07.2023 | ANL-2 | Average | 67.7 | 60.5 | 75/85 | 70 |
| | | | Maximum | 70.2 | 67.3 | | | | | | Maximum | 70.2 | 63.2 | | |
| | | | Minimum | 65.2 | 61.8 | | | | | | Minimum | 65.2 | 57.8 | | |
| | | | Leqdb(A) | 68.6 | 66.1 | | | | | | Leqdb(A) | 68.2 | 62.2 | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 06.07.2023 | ANL-3 | Average | 64.2 | 61.0 | 75/85 | 70 | 1 | 08.07.2023 | ANL-4 | Average | 69.4 | 64.3 | 75/85 | 70 |
| | | | Maximum | 65.6 | 62.6 | | | | | | Maximum | 70.9 | 66.5 | | |
| | | | Minimum | 62.8 | 59.3 | | | | | | Minimum | 67.8 | 62.1 | | |
| | | | Leqdb(A) | 64.9 | 61.8 | | | | | | Leqdb(A) | 70.2 | 65.3 | | |
| 2 | 18.07.2023 | ANL-3 | Average | 68.5 | 63.7 | 75/85 | 70 | 2 | 19.07.2023 | ANL-4 | Average | 65.6 | 57.3 | 75/85 | 70 |
| | | | Maximum | 71.9 | 67.4 | | | | | | Maximum | 68.3 | 59.6 | | |
| | | | Minimum | 65.1 | 59.9 | | | | | | Minimum | 62.9 | 54.9 | | |
| | | | Leqdb(A) | 69.2 | 63.9 | | | | | | Leqdb(A) | 67.6 | 58.3 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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जल संप्रदायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 09.07.2023 | ANL-5 | Average | 65.9 | 58.4 | 75/85 | 70 | 1 | 10.07.2023 | ANL-6 | Average | 68.4 | 64.6 | 75/85 | 70 |
| | | | Maximum | 69.3 | 60.1 | | | | | | Maximum | 70.2 | 66.5 | | |
| | | | Minimum | 62.4 | 56.6 | | | | | | Minimum | 66.6 | 62.6 | | |
| | | | Leqdb(A) | 67.5 | 59.4 | | | | | | Leqdb(A) | 69.1 | 65.1 | | |
| 2 | 20.07.2023 | ANL-5 | Average | 67.8 | 62.8 | 75/85 | 70 | 2 | 22.07.2023 | ANL-6 | Average | 68.4 | 66.8 | 75/85 | 70 |
| | | | Maximum | 70.4 | 66.3 | | | | | | Maximum | 71.9 | 69.6 | | |
| | | | Minimum | 65.2 | 59.3 | | | | | | Minimum | 64.9 | 63.9 | | |
| | | | Leqdb(A) | 68.8 | 64.9 | | | | | | Leqdb(A) | 69.8 | 68.3 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 10.07.2023 | ANL-7 | Average | 70.3 | 66.4 | 75/85 | 70 | 1 | 11.07.2023 | ANL-8 | Average | 68.6 | 65.6 | 75/85 | 70 |
| | | | Maximum | 72.3 | 68.9 | | | | | | Maximum | 70.6 | 67.7 | | |
| | | | Minimum | 68.2 | 63.8 | | | | | | Minimum | 66.9 | 63.5 | | |
| | | | Leqdb(A) | 71.1 | 67.3 | | | | | | Leqdb(A) | 69.3 | 66.2 | | |
| 2 | 23.07.2023 | ANL-7 | Average | 69.1 | 63.2 | 75/85 | 70 | 2 | 24.07.2023 | ANL-8 | Average | 68.0 | 65.6 | 75/85 | 70 |
| | | | Maximum | 72.2 | 68.3 | | | | | | Maximum | 70.2 | 67.9 | | |
| | | | Minimum | 65.9 | 58.1 | | | | | | Minimum | 65.8 | 63.7 | | |
| | | | Leqdb(A) | 70.9 | 65.3 | | | | | | Leqdb(A) | 69.2 | 66.2 | | |

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 14.07.2023 | ANL-9 | Average | 68.5 | 64.3 | 75/85 | 70 | 1 | 12.07.2023 | BNL-10 | Average | 47.5 | 36.7 | 55 | 45 |
| | | | Maximum | 70.9 | 67.4 | | | | | | Maximum | 50.4 | 39.5 | | |
| | | | Minimum | 66.1 | 61.2 | | | | | | Minimum | 44.6 | 33.9 | | |
| | | | Leqdb(A) | 69.4 | 65.9 | | | | | | Leqdb(A) | 48.1 | 37.7 | | |
| 2 | 31.07.2023 | ANL-9 | Average | 69.6 | 64.3 | 75/85 | 70 | 2 | 26.07.2023 | BNL-10 | Average | 48.6 | 37.5 | 55 | 45 |
| | | | Maximum | 72.6 | 67.8 | | | | | | Maximum | 51.3 | 40.4 | | |
| | | | Minimum | 66.3 | 60.7 | | | | | | Minimum | 45.9 | 34.6 | | |
| | | | Leqdb(A) | 70.8 | 65.6 | | | | | | Leqdb(A) | 49.8 | 39.5 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 12.07.2023 | BNL-11 | Average | 49.2 | 39.2 | 55 | 45 | 1 | 13.07.2023 | BNL-12 | Average | 47.2 | 36.3 | 55 | 45 |
| | | | Maximum | 52.6 | 43.4 | | | | | | Maximum | 49.1 | 37.8 | | |
| | | | Minimum | 45.8 | 34.9 | | | | | | Minimum | 45.3 | 34.7 | | |
| | | | Leqdb(A) | 51.2 | 42.2 | | | | | | Leqdb(A) | 48.4 | 37.1 | | |
| 2 | 27.07.2023 | BNL-11 | Average | 49.0 | 37.7 | 55 | 45 | 2 | 28.07.2023 | BNL-12 | Average | 46.2 | 36.4 | 55 | 45 |
| | | | Maximum | 51.3 | 41.2 | | | | | | Maximum | 50.2 | 40.5 | | |
| | | | Minimum | 46.7 | 34.2 | | | | | | Minimum | 42.2 | 36.2 | | |
| | | | Leqdb(A) | 50.5 | 39.5 | | | | | | Leqdb(A) | 48.6 | 39.3 | | |

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JULY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|
| NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | | NOISE MONITORING DATA MONTH OF JULY 2023 | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) |
| | | | | Day | Night | Day Night | | | | | Day | Night | Day Night |
| 1 | 13.07.2023 | BNL-13 | Average | 48.2 | 38.9 | 55 45 | 1 | 14.07.2023 | BNL-14 | Average | 50.3 | 36.7 | 55 45 |
| | | | Maximum | 51.5 | 43.5 | | | | | Maximum | 53.3 | 38.9 | |
| | | | Minimum | 44.8 | 34.3 | | | | | Minimum | 47.2 | 34.4 | |
| | | | Leqdb(A) | 49.3 | 40.3 | | | | | Leqdb(A) | 52.1 | 37.5 | |
| 2 | 30.07.2023 | BNL-13 | Average | 47.8 | 38.5 | 55 45 | 2 | 30.07.2023 | BNL-14 | Average | 47.3 | 36.6 | 55 45 |
| | | | Maximum | 49.6 | 40.4 | | | | | Maximum | 49.3 | 38.7 | |
| | | | Minimum | 45.9 | 36.6 | | | | | Minimum | 45.2 | 34.5 | |
| | | | Leqdb(A) | 48.1 | 39.1 | | | | | Leqdb(A) | 48.3 | 37.5 | |

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|---|--------|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | | |
| NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 01.06.2023 | ANL-1 | Average | 72.1 | 64.0 | 75/90 | 70 | 1 | 02.06.2023 | ANL-2 | Average | 70.2 | 63.3 | 75/90 | 70 |
| | | | Maximum | 74.3 | 66.1 | | | | | | Maximum | 74.6 | 64.8 | | |
| | | | Minimum | 69.9 | 61.8 | | | | | | Minimum | 65.8 | 61.8 | | |
| | | | Leqdb(A) | 73.1 | 62.9 | | | | | | Leqdb(A) | 72.4 | 63.9 | | |
| 2 | 16.06.2023 | ANL-1 | Average | 71.7 | 64.7 | 75/90 | 70 | 2 | 17.06.2023 | ANL-2 | Average | 68.0 | 62.5 | 75/90 | 70 |
| | | | Maximum | 74.2 | 67.5 | | | | | | Maximum | 70.7 | 67.2 | | |
| | | | Minimum | 69.2 | 61.8 | | | | | | Minimum | 65.2 | 57.8 | | |
| | | | Leqdb(A) | 72.5 | 65.1 | | | | | | Leqdb(A) | 69.8 | 64.6 | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 03.06.2023 | ANL-3 | Average | 69.7 | 59.6 | 75/90 | 70 | 1 | 04.06.2023 | ANL-4 | Average | 70.4 | 63.8 | 75/90 | 70 |
| | | | Maximum | 72.6 | 60.8 | | | | | | Maximum | 73.9 | 65.5 | | |
| | | | Minimum | 65.8 | 58.4 | | | | | | Minimum | 66.8 | 62.1 | | |
| | | | Leqdb(A) | 71.4 | 60.1 | | | | | | Leqdb(A) | 71.8 | 64.1 | | |
| 2 | 38.06.2023 | ANL-3 | Average | 70.0 | 61.2 | 75/90 | 70 | 2 | 19.06.2023 | ANL-4 | Average | 68.6 | 63.8 | 75/90 | 70 |
| | | | Maximum | 72.9 | 66.4 | | | | | | Maximum | 73.4 | 65.6 | | |
| | | | Minimum | 57.1 | 55.9 | | | | | | Minimum | 64.2 | 61.9 | | |
| | | | Leqdb(A) | 71.2 | 64.7 | | | | | | Leqdb(A) | 70.7 | 64.9 | | |

FOR GLOBAL ENVIRO LABORATORIES

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 05.06.2023 | ANL-5 | Average | 65.1 | 64.8 | 75/90 | 70 | 1 | 05.06.2023 | ANL-6 | Average | 70.9 | 64.9 | 75/90 | 70 |
| | | | Maximum | 70.1 | 68.4 | | | | | | Maximum | 72.8 | 67.4 | | |
| | | | Minimum | 60.1 | 61.2 | | | | | | Minimum | 69 | 62.3 | | |
| | | | Leqdb(A) | 68.5 | 66.1 | | | | | | Leqdb(A) | 71.5 | 66.1 | | |
| 2 | 20.06.2023 | ANL-5 | Average | 70.5 | 60.2 | 75/90 | 70 | 2 | 21.06.2023 | ANL-6 | Average | 71.05 | 62.8 | 75/90 | 70 |
| | | | Maximum | 71.7 | 62.8 | | | | | | Maximum | 74.2 | 64.8 | | |
| | | | Minimum | 69.2 | 57.6 | | | | | | Minimum | 67.9 | 60.7 | | |
| | | | Leqdb(A) | 70.9 | 61.4 | | | | | | Leqdb(A) | 72.8 | 63.6 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 07.06.2023 | ANL-7 | Average | 70.7 | 65.4 | 75/90 | 70 | 1 | 08.06.2023 | ANL-8 | Average | 70.2 | 64.5 | 75 | 70 |
| | | | Maximum | 72.9 | 68.6 | | | | | | Maximum | 73.5 | 65.4 | | |
| | | | Minimum | 68.4 | 62.1 | | | | | | Minimum | 66.8 | 63.5 | | |
| | | | Leqdb(A) | 71.8 | 66.9 | | | | | | Leqdb(A) | 71.5 | 64.9 | | |
| 2 | 22.06.2023 | ANL-7 | Average | 70.4 | 63.4 | 75/90 | 70 | 2 | 23.06.2023 | ANL-8 | Average | 67.5 | 66.8 | 75 | 70 |
| | | | Maximum | 74.1 | 68.6 | | | | | | Maximum | 69.2 | 69.9 | | |
| | | | Minimum | 66.6 | 58.1 | | | | | | Minimum | 65.8 | 63.7 | | |
| | | | Leqdb(A) | 72.2 | 65.9 | | | | | | Leqdb(A) | 68.6 | 67.3 | | |

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(SHIKHA BHATIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD,
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 15.06.2023 | ANL-9 | Average | 68.7 | 65.3 | 75/90 | 70 | 1 | 30.06.2023 | BNL-10 | Average | 50 | 37.7 | 55 | 45 |
| | | | Maximum | 73.6 | 69.4 | | | | | | Maximum | 54.4 | 41.5 | | |
| | | | Minimum | 63.8 | 61.2 | | | | | | Minimum | 45.6 | 33.8 | | |
| | | | Leqdb(A) | 70.6 | 67.2 | | | | | | Leqdb(A) | 52.3 | 39.5 | | |
| 2 | 30.06.2023 | ANL-9 | Average | 70.1 | 63.3 | 75/90 | 70 | 2 | 25.06.2023 | BNL-10 | Average | 50.1 | 38.65 | 55 | 45 |
| | | | Maximum | 73.6 | 65.8 | | | | | | Maximum | 54.3 | 42.4 | | |
| | | | Minimum | 66.5 | 60.7 | | | | | | Minimum | 45.9 | 34.5 | | |
| | | | Leqdb(A) | 71.8 | 64.6 | | | | | | Leqdb(A) | 51.8 | 40.5 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 11.06.2023 | BNL-11 | Average | 47.5 | 38.9 | 55 | 45 | 1 | 12.06.2023 | BNL-12 | Average | 49.7 | 40.8 | 55 | 45 |
| | | | Maximum | 49.2 | 42.9 | | | | | | Maximum | 54.1 | 44.8 | | |
| | | | Minimum | 45.8 | 34.9 | | | | | | Minimum | 45.3 | 36.7 | | |
| | | | Leqdb(A) | 48.2 | 40.6 | | | | | | Leqdb(A) | 52.6 | 42.5 | | |
| 2 | 26.06.2023 | BNL-11 | Average | 48.3 | 39.4 | 55 | 45 | 2 | 27.06.2023 | BNL-12 | Average | 47.4 | 40.4 | 55 | 45 |
| | | | Maximum | 50.6 | 44.6 | | | | | | Maximum | 52.6 | 41.5 | | |
| | | | Minimum | 46.7 | 34.2 | | | | | | Minimum | 42.2 | 39.2 | | |
| | | | Leqdb(A) | 49.2 | 41.6 | | | | | | Leqdb(A) | 50.9 | 40.8 | | |

FOR GLOBAL ENVIRO LABORATORIES

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AUTHORISED SIGNATORY
(SHIKHA BHATIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF JUNE 2023

Name & Address of Customer:

M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF JUNE 2023 | | | | | | | |
| SL. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | SL. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 13.06.2023 | BNL-13 | Average | 47.2 | 39.15 | 55 | 45 | 1 | 14.06.2023 | BNL-14 | Average | 50.9 | 38.7 | 55 | 45 |
| | | | Maximum | 50.5 | 43.9 | | | | | | Maximum | 54.6 | 42.9 | | |
| | | | Minimum | 43.8 | 34.4 | | | | | | Minimum | 47.2 | 34.4 | | |
| | | | Leqdb(A) | 48.4 | 40.3 | | | | | | Leqdb(A) | 52.8 | 40.3 | | |
| 2 | 28.06.2023 | BNL-13 | Average | 49.3 | 39.5 | 55 | 45 | 2 | 29.06.2023 | BNL-14 | Average | 49.8 | 38.1 | 55 | 45 |
| | | | Maximum | 52.6 | 42.4 | | | | | | Maximum | 53.4 | 40.7 | | |
| | | | Minimum | 45.9 | 36.6 | | | | | | Minimum | 46.2 | 35.5 | | |
| | | | Leqdb(A) | 51.1 | 40.9 | | | | | | Leqdb(A) | 51.9 | 39.9 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल सहायक (पर्यावरण प्रबंधन) / JGM (ENV. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारिबाग / Hazaribag

AUTHORISED SIGNATORY
(SHIKHA BHATIYA)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name & Address of Customer: **M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.**
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|-------------------------------|---|--------|------------|-----------------|-------------------------------|--------|-------|-------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | | |
| NOISE MONITORING DATA MONTH OF MAY 2023 | | | | | | | NOISE MONITORING DATA MONTH OF MAY2023 | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORYS ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORYS ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 01.05.2023 | ANL-1 | Average | 69.1 | 65.6 | 75/90 | 70 | 1 | 02.05.2023 | ANL-2 | Average | 69.4 | 62.3 | 75/90 | 70 |
| | | | Maximum | 72.3 | 68.3 | | | | | | Maximum | 70.3 | 63.8 | | |
| | | | Minimum | 65.9 | 62.8 | | | | | | Minimum | 68.4 | 60.8 | | |
| | | | Leqdb(A) | 70.9 | 66.9 | | | | | | Leqdb(A) | 69.8 | 62.9 | | |
| 2 | 16.05.2023 | ANL-1 | Average | 71.2 | 64.2 | 75/90 | 70 | 2 | 17.05.2023 | ANL-2 | Average | 70.5 | 62 | 75/90 | 70 |
| | | | Maximum | 73.2 | 66.5 | | | | | | Maximum | 75.7 | 66.2 | | |
| | | | Minimum | 69.2 | 61.8 | | | | | | Minimum | 65.2 | 57.8 | | |
| | | | Leqdb(A) | 71.8 | 65.1 | | | | | | Leqdb(A) | 72.8 | 63.2 | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORYS ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORYS ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 03.05.2023 | ANL-3 | Average | 70.2 | 64.0 | 75/90 | 70 | 1 | 04.05.2023 | ANL-4 | Average | 70.9 | 63.8 | 75/90 | 70 |
| | | | Maximum | 74.6 | 65.6 | | | | | | Maximum | 73.9 | 65.5 | | |
| | | | Minimum | 65.8 | 62.3 | | | | | | Minimum | 67.8 | 62.1 | | |
| | | | Leqdb(A) | 72.4 | 64.1 | | | | | | Leqdb(A) | 72.2 | 64.1 | | |
| 2 | 18.05.2023 | ANL-3 | Average | 69.5 | 60.7 | 75/90 | 70 | 2 | 19.05.2023 | ANL-4 | Average | 70.1 | 63.6 | 75/90 | 70 |
| | | | Maximum | 71.9 | 65.4 | | | | | | Maximum | 76.3 | 65.6 | | |
| | | | Minimum | 67.1 | 55.9 | | | | | | Minimum | 63.9 | 61.9 | | |
| | | | Leqdb(A) | 69.2 | 62.9 | | | | | | Leqdb(A) | 73.6 | 64.9 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज. बा. प्र. प्र. (पर्यावरण प्रबंधन) - DGM (ENVT. MGMT.)
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कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF MAY 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF MAY2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 05.05.2023 | ANL-5 | Average | 68.3 | 66.4 | 75/90 | 70 | 1 | 05.05.2023 | ANL-6 | Average | 72.2 | 66.1 | 75/90 | 70 |
| | | | Maximum | 74.1 | 70.1 | | | | | | Maximum | 73.4 | 68.5 | | |
| | | | Minimum | 62.4 | 62.6 | | | | | | Minimum | 68.9 | 63.6 | | |
| | | | Leqdb(A) | 72.5 | 68.2 | | | | | | Leqdb(A) | 73.8 | 67.1 | | |
| 2 | 20.05.2023 | ANL-5 | Average | 72.3 | 59.7 | 75/90 | 70 | 2 | 21.05.2023 | ANL-6 | Average | 70.9 | 66.8 | 75/90 | 70 |
| | | | Maximum | 75.4 | 61.8 | | | | | | Maximum | 73.9 | 69.6 | | |
| | | | Minimum | 69.2 | 57.6 | | | | | | Minimum | 67.9 | 63.9 | | |
| | | | Leqdb(A) | 73.1 | 60.9 | | | | | | Leqdb(A) | 71.8 | 68.1 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 07.05.2023 | ANL-7 | Average | 70.4 | 66.9 | 75/90 | 70 | 1 | 08.05.2023 | ANL-8 | Average | 70.8 | 65.5 | 75 | 70 |
| | | | Maximum | 72.5 | 69.9 | | | | | | Maximum | 74.6 | 67.4 | | |
| | | | Minimum | 68.2 | 63.8 | | | | | | Minimum | 66.9 | 63.5 | | |
| | | | Leqdb(A) | 71.6 | 68.1 | | | | | | Leqdb(A) | 72.5 | 66.5 | | |
| 2 | 22.05.2023 | ANL-7 | Average | 70.8 | 63.9 | 75/90 | 70 | 2 | 23.05.2023 | ANL-8 | Average | 70.5 | 66.3 | 75 | 70 |
| | | | Maximum | 75.7 | 69.6 | | | | | | Maximum | 75.2 | 68.9 | | |
| | | | Minimum | 65.9 | 58.1 | | | | | | Minimum | 65.8 | 63.7 | | |
| | | | Leqdb(A) | 72.1 | 64.9 | | | | | | Leqdb(A) | 73.7 | 67.2 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
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कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name & Address of Customer: **M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.**
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF MAY2023 | | | | | | | | NOISE MONITORING DATA MONTH OF MAY 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 15.05.2023 | ANL-9 | Average | 68.5 | 64.8 | 75/90 | 70 | 1 | 10.05.2023 | BNL-10 | Average | 48.5 | 39.2 | 55 | 45 |
| | | | Maximum | 73.2 | 68.4 | | | | | | Maximum | 51.4 | 44.5 | | |
| | | | Minimum | 63.8 | 61.2 | | | | | | Minimum | 45.6 | 33.9 | | |
| | | | Leqdb(A) | 70.4 | 66.1 | | | | | | Leqdb(A) | 49.1 | 42.1 | | |
| 2 | 30.05.2023 | ANL-9 | Average | 70.1 | 62.8 | 75/90 | 70 | 2 | 25.05.2023 | BNL-10 | Average | 49.6 | 39.65 | 55 | 45 |
| | | | Maximum | 73.6 | 64.8 | | | | | | Maximum | 53.3 | 44.8 | | |
| | | | Minimum | 66.5 | 60.7 | | | | | | Minimum | 45.9 | 34.5 | | |
| | | | Leqdb(A) | 71.8 | 63.6 | | | | | | Leqdb(A) | 51.8 | 42.5 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 11.05.2023 | BNL-11 | Average | 50.5 | 39.4 | 55 | 45 | 1 | 12.05.2023 | BNL-12 | Average | 49.2 | 40.3 | 55 | 45 |
| | | | Maximum | 55.2 | 43.9 | | | | | | Maximum | 53.1 | 43.8 | | |
| | | | Minimum | 45.8 | 34.9 | | | | | | Minimum | 45.3 | 36.7 | | |
| | | | Leqdb(A) | 52.2 | 40.2 | | | | | | Leqdb(A) | 50.6 | 40.5 | | |
| 2 | 26.05.2023 | BNL-11 | Average | 52.7 | 39.9 | 55 | 45 | 2 | 27.05.2023 | BNL-12 | Average | 48.7 | 41.9 | 55 | 45 |
| | | | Maximum | 58.6 | 45.6 | | | | | | Maximum | 55.6 | 44.5 | | |
| | | | Minimum | 46.7 | 34.2 | | | | | | Minimum | 42.2 | 39.2 | | |
| | | | Leqdb(A) | 54.2 | 42.6 | | | | | | Leqdb(A) | 50.9 | 42.8 | | |

FOR GLOBAL ENVIRO LABORATORIES

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Navin Kumar
नवीन कुमार / NAVIN KUMAR
आ. प्र. प्र. प्र. (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF MAY 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
 LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|
| NOISE MONITORING DATA MONTH OF MAY 2023 | | | | | | | NOISE MONITORING DATA MONTH OF MAY 2023 | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) |
| | | | | Day | Night | Day Night | | | | | Day | Night | Day Night |
| 1 | 13.05.2023 | BNL-13 | Average | 49.7 | 41.3 | 55 45 | 1 | 14.05.2023 | BNL-14 | Average | 50.4 | 39.2 | 55 45 |
| | | | Maximum | 53.5 | 43.8 | | | | | Maximum | 53.6 | 43.9 | |
| | | | Minimum | 45.8 | 38.8 | | | | | Minimum | 47.2 | 34.4 | |
| | | | Leqdb(A) | 50.6 | 42.2 | | | | | Leqdb(A) | 51.8 | 40.3 | |
| 2 | 28.05.2023 | BNL-13 | Average | 48.8 | 39.0 | 55 45 | 2 | 29.05.2023 | BNL-14 | Average | 50.8 | 41.1 | 55 45 |
| | | | Maximum | 51.6 | 41.4 | | | | | Maximum | 56.3 | 46.7 | |
| | | | Minimum | 45.9 | 36.6 | | | | | Minimum | 45.2 | 35.5 | |
| | | | Leqdb(A) | 50.1 | 40.6 | | | | | Leqdb(A) | 52.9 | 43.9 | |

FOR GLOBAL ENVIRO LABORATORIES

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 (INTEKHAB KHAN)

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 जल प्रदूषण (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
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 कोयला खनन परियोजना / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
 (ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| PAKRI BARWADIH COAL MINING PROJECT | | | | | | | | PAKRI BARWADIH COAL MINING PROJECT | | | | | | | |
|---|------------|-----------------|-------------------------------|--------|-------|------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|------------------------------|-------|
| MONITORING LOCATION :- EXCAVATION AREA(WORK ZONE) | | | | | | | | MONITORING LOCATION :- HAUL ROAD (WORK ZONE) | | | | | | | |
| NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 01.04.2023 | ANL-1 | Average | 68.0 | 65.1 | 75/90 | 70 | 1 | 01.04.2023 | ANL-2 | Average | 65.8 | 62.9 | 75/90 | 70 |
| | | | Maximum | 71.8 | 67.4 | | | | | | Maximum | 67.6 | 64.8 | | |
| | | | Minimum | 64.1 | 62.7 | | | | | | Minimum | 63.6 | 60.9 | | |
| | | | Leq db(A) | 69.7 | 65.9 | | | | | | Leq db(A) | 66.1 | 65.2 | | |
| 2 | 15.04.2023 | ANL-1 | Average | 71.0 | 65.5 | 75/90 | 70 | 2 | 16.04.2023 | ANL-2 | Average | 68.5 | 64 | 75/90 | 70 |
| | | | Maximum | 72.8 | 69.1 | | | | | | Maximum | 73.1 | 68.1 | | |
| | | | Minimum | 69.1 | 61.8 | | | | | | Minimum | 63.5 | 59.9 | | |
| | | | Leq db(A) | 71.4 | 66.1 | | | | | | Leq db(A) | 69.7 | 65.1 | | |
| MONITORING LOCATION :- WASTE DUMP,(WORK ZONE) | | | | | | | | MONITORING LOCATION :- TOP SOIL DUMP(WORK ZONE) | | | | | | | |
| Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | | Sl. No | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORY ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 03.04.2023 | ANL-3 | Average | 69.2 | 63.3 | 75/90 | 70 | 1 | 04.04.2023 | ANL-4 | Average | 69.4 | 65.2 | 75/90 | 70 |
| | | | Maximum | 71.6 | 65.2 | | | | | | Maximum | 71.2 | 67.2 | | |
| | | | Minimum | 66.8 | 61.4 | | | | | | Minimum | 67.5 | 63.1 | | |
| | | | Leq db(A) | 70.1 | 64.1 | | | | | | Leq db(A) | 70.1 | 66 | | |
| 2 | 17.04.2023 | ANL-3 | Average | 68.7 | 63.7 | 75/90 | 70 | 2 | 18.04.2023 | ANL-4 | Average | 69.5 | 65.1 | 75/90 | 70 |
| | | | Maximum | 71.8 | 67.4 | | | | | | Maximum | 71.9 | 68.2 | | |
| | | | Minimum | 65.6 | 59.9 | | | | | | Minimum | 67.1 | 61.9 | | |
| | | | Leq db(A) | 69.2 | 64.7 | | | | | | Leq db(A) | 70.4 | 66.9 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

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हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- WORK SHOP(WORK ZONE) | | | | | | | | MONITORING LOCATION :- DRILLING LOCATION(WORK ZONE) | | | | | | | |
|---|------------|---------------------|---------------------------------------|--------|-------|---------------------------------------|-------|---|------------|---------------------|---------------------------------------|--------|-------|---------------------------------------|-------|
| NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | |
| Sl. No | Date | Monitor ing Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitorin g Code | Description noise level db(A) | Result | | Standards (CPCB/FACTO RIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 05.04.2023 | ANL-5 | Average | 68.5 | 66.5 | 75/90 | 70 | 1 | 06.04.2023 | ANL-6 | Average | 70.9 | 66.6 | 75/90 | 70 |
| | | | Maximum | 71.9 | 69.1 | | | | | | Maximum | 72.8 | 67.9 | | |
| | | | Minimum | 65.8 | 63.8 | | | | | | Minimum | 68.9 | 65.2 | | |
| | | | Leq db(A) | 69.5 | 67.1 | | | | | | Leq db(A) | 71.8 | 67.1 | | |
| 2 | 19.04.2023 | ANL-5 | Average | 72.0 | 62.5 | 75/90 | 70 | 2 | 20.04.2023 | ANL-6 | Average | 70.7 | 66.3 | 75/90 | 70 |
| | | | Maximum | 74.6 | 67.3 | | | | | | Maximum | 73.3 | 68.7 | | |
| | | | Minimum | 69.4 | 57.7 | | | | | | Minimum | 68.1 | 63.9 | | |
| | | | Leq db(A) | 73.1 | 64.9 | | | | | | Leq db(A) | 71.8 | 67.5 | | |
| Monitoring Location :- OPERATOR CABIN(WORK ZONE) | | | | | | | | Monitoring Location :- PSS AREA-1 (NAGARI) (WORK ZONE) | | | | | | | |
| Sl. No. | Date | Monitor ing Code | Description n noise level db(A) | Result | | Standards (CPCB/FACTO RIES ACT) | | Sl. No. | Date | Monitor ing Code | Description n noise level db(A) | Result | | Standards (CPCB/FACTO RIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 07.04.2023 | ANL-7 | Average | 70.7 | 65.5 | 75/90 | 70 | 1 | 08.04.2023 | ANL-8 | Average | 69.4 | 65.9 | 75 | 70 |
| | | | Maximum | 73.1 | 67.8 | | | | | | Maximum | 71.8 | 68.3 | | |
| | | | Minimum | 68.2 | 63.9 | | | | | | Minimum | 66.9 | 63.5 | | |
| | | | Leq db(A) | 71.1 | 66.2 | | | | | | Leq db(A) | 70.2 | 66.8 | | |
| 2 | 21.04.2023 | ANL-7 | Average | 69.0 | 59.7 | 75/90 | 70 | 2 | 22.04.2023 | ANL-8 | Average | 68.9 | 60.8 | 75 | 70 |
| | | | Maximum | 72.4 | 61.8 | | | | | | Maximum | 71.8 | 67.4 | | |
| | | | Minimum | 65.6 | 57.6 | | | | | | Minimum | 65.9 | 64.2 | | |
| | | | Leq db(A) | 70.1 | 60.9 | | | | | | Leq db(A) | 69.7 | 66.6 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जल संसाधन (पर्यावरण प्रबंधन) / DGM (ENVY. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- PSS AREA-2 (NAGARI) (WORK ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE KANDABER (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|--------------------------------|-------|
| NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 08.04.2023 | ANL-9 | Average | 69 | 63.2 | 75/90 | 70 | 1 | 09.04.2023 | BNL-10 | Average | 51.15 | 40.9 | 55 | 45 |
| | | | Maximum | 73.2 | 66.4 | | | | | | Maximum | 53.4 | 44.6 | | |
| | | | Minimum | 64.8 | 60.0 | | | | | | Minimum | 48.9 | 37.1 | | |
| | | | Leq db(A) | 70.4 | 64.5 | | | | | | Leq db(A) | 51.1 | 41.0 | | |
| 2 | 21.04.2023 | ANL-9 | Average | 70.9 | 63.4 | 75/90 | 70 | 2 | 23.04.2023 | BNL-10 | Average | 49.5 | 39 | 55 | 45 |
| | | | Maximum | 73.4 | 65.9 | | | | | | Maximum | 53.2 | 43.2 | | |
| | | | Minimum | 68.4 | 60.8 | | | | | | Minimum | 45.8 | 34.8 | | |
| | | | Leq db(A) | 71.7 | 64.6 | | | | | | Leq db(A) | 50.8 | 41.5 | | |
| MONITORING LOCATION :- VILLAGE GARIKALAN (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- VILLAGE DHENGA (AMBIENT ZONE) | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACTORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 10.04.2023 | BNL-11 | Average | 47.6 | 38.0 | 55 | 45 | 1 | 11.04.2023 | BNL-12 | Average | 48.5 | 40.0 | 55 | 45 |
| | | | Maximum | 51.2 | 41.8 | | | | | | Maximum | 51.8 | 43.1 | | |
| | | | Minimum | 43.9 | 34.1 | | | | | | Minimum | 45.2 | 36.8 | | |
| | | | Leq db(A) | 48.1 | 38.6 | | | | | | Leq db(A) | 49.2 | 40.5 | | |
| 2 | 24.04.2023 | BNL-11 | Average | 50.8 | 39 | 55 | 45 | 2 | 25.04.2023 | BNL-12 | Average | 47.2 | 39.2 | 55 | 45 |
| | | | Maximum | 54.3 | 43.8 | | | | | | Maximum | 52.1 | 43.2 | | |
| | | | Minimum | 47.2 | 34.2 | | | | | | Minimum | 42.2 | 35.1 | | |
| | | | Leq db(A) | 51.2 | 40.6 | | | | | | Leq db(A) | 48.9 | 40.8 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्वायनरक (पर्यावरण प्रबंध) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

AUTHORISED SIGNATORY
(ARVIND KUMAR)



GLOBAL ENVIRO Laboratories

PLOT NO. 4, KHASRA NO. 45, OPPOSITE SHREE MANAN DHAM TEMPLE,
8TH K.M. MILE STONE, INDUSTRIAL AREA, MEERUT ROAD, GHAZIABAD -201003 (U.P.)
MOBILE : +91-9810317145, +91-8826028116
E-mail : global_enviro@rediffmail.com, globalenvirolab@gmail.com
MoEF&CC Recognized Environmental Laboratory

NOISE LEVEL MONITORING SUMMARY REPORT FOR THE MONTH OF APRIL 2023

Name & Address of Customer: M/S. PAKRI BARWADIH COAL MINING, NTPC LTD.
LANGTU, BARKAGAON, HAZARIBAGH, JHARKHAND (INDIA)

| MONITORING LOCATION :- VILLAGE KUSUMBHA (AMBIENT ZONE) | | | | | | | | MONITORING LOCATION :- BLOCK OFFICE AREA (BARKAGAON) (AMBIENT ZONE) | | | | | | | |
|--|------------|-----------------|-------------------------------|--------|-------|-------------------------------|-------|---|------------|-----------------|-------------------------------|--------|-------|-------------------------------|-------|
| NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | | NOISE MONITORING DATA MONTH OF APRIL 2023 | | | | | | | |
| Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACORIES ACT) | | Sl. No. | Date | Monitoring Code | Description noise level db(A) | Result | | Standards (CPCB/FACORIES ACT) | |
| | | | | Day | Night | Day | Night | | | | | Day | Night | Day | Night |
| 1 | 12.04.2023 | BNL-13 | Average | 49.5 | 39.3 | 55 | 45 | 1 | 13.04.2023 | BNL-14 | Average | 50.1 | 39.0 | 55 | 45 |
| | | | Maximum | 53.1 | 43.8 | | | | | | Maximum | 52.9 | 43.1 | | |
| | | | Minimum | 45.8 | 34.8 | | | | | | Minimum | 47.2 | 34.9 | | |
| | | | Leq db(A) | 50.6 | 40.2 | | | | | | Leq db(A) | 50.8 | 40.3 | | |
| 2 | 26.04.2023 | BNL-13 | Average | 50.9 | 38.8 | 55 | 45 | 2 | 27.04.2023 | BNL-14 | Average | 48.2 | 38.7 | 55 | 45 |
| | | | Maximum | 54.6 | 41.2 | | | | | | Maximum | 51.2 | 42.8 | | |
| | | | Minimum | 47.2 | 36.4 | | | | | | Minimum | 45.2 | 34.6 | | |
| | | | Leq db(A) | 52.1 | 39.6 | | | | | | Leq db(A) | 49.9 | 39.9 | | |

FOR GLOBAL ENVIRO LABORATORIES

CHECKED BY
(INTEKHAB KHAN)

AUTHORISED SIGNATORY
(ARVIND KUMAR)

Navin Kumar
नवीन कुमार / NAVIN KUMAR
जय प्रकाश (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECT
हजारीबाग / Hazaribag

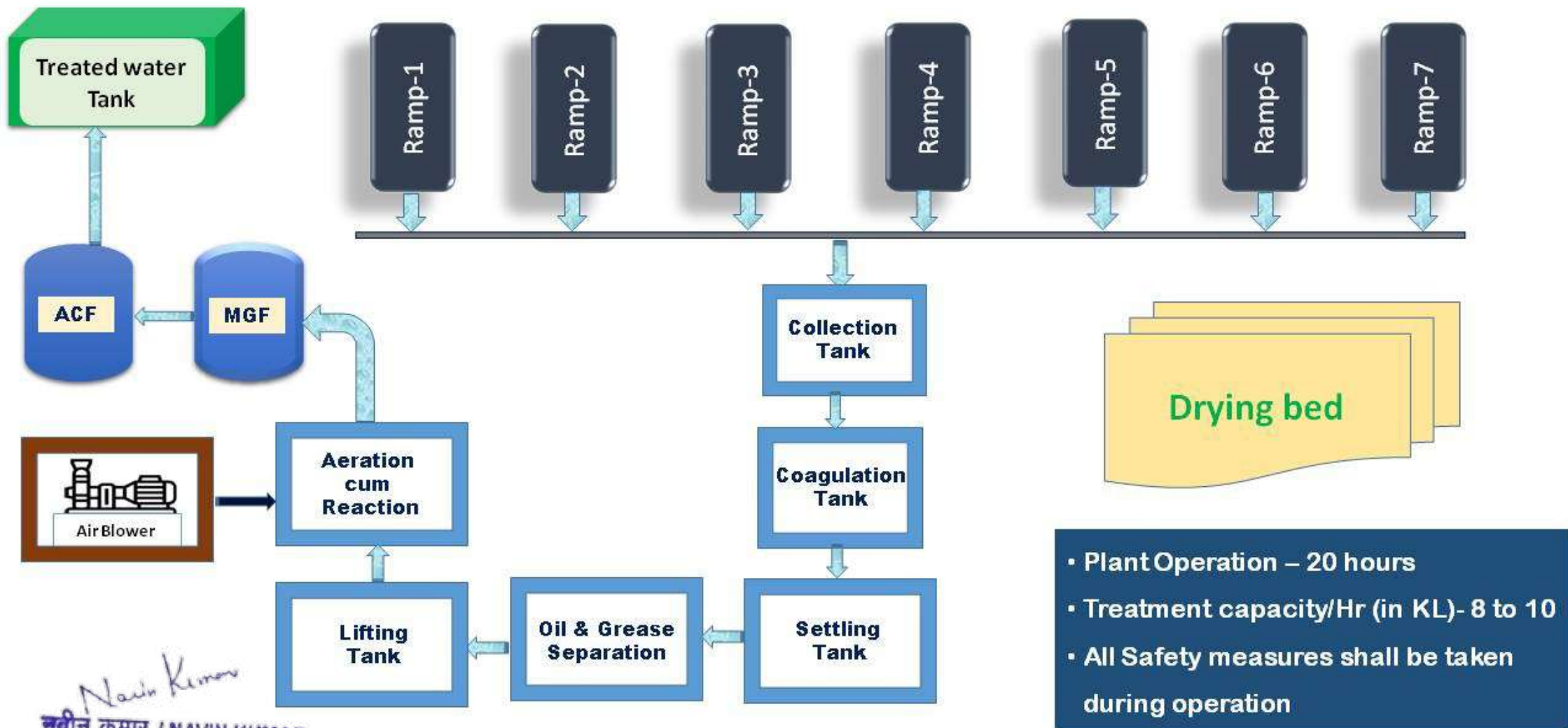


THRIVENI SAINIK


Flow Diagram of 200 KLD Effluent Treatment Plant

PAKRI BARWADIH COAL MINING PROJECT

एनटीपीसी
NTPC






Navin Kumar
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ज्येष्ठ सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag


| | | | |
|---|---|---|---------------------------------|
|  | NTPC LIMITED PAKRI BARWADIH COAL MINING PROJECT | IMS OPERATIONAL CONTROL PROCEDURE | Environment Management Group |
|---|---|---|---------------------------------|


| | |
|--------------------------|---------------------|
| EFFLUENT TREATMENT PLANT | DOC NO: EMP - 3 /15 |
| | REVISION NO: 0 |
| | DATE: |
| | PAGE: 1/2 |

- PURPOSE:** This procedure defines the guidelines for effluent treatment plant activities to ensure eco-friendly environment.
- SCOPE:** This Procedure is applicable to all the personnel involved in the activities of all effluent treatment plants.
- RESPONSIBILITY:** HOD-Mechanical and Environment is responsible to ensure that the applicable procedures are followed.
- PROCEDURE:**
 - Ensure that the workers and helpers are wearing all the applicable PPEs while doing the oil servicing.
 - Ensure the HEMM (Heavy Earth Moving Machines) are mainly washed on the designated washing ramps.
 - Ensure that the used water is collected and diverted to the main chamber of ETP center.
 - Ensure that the used water come to the 1st chamber.
 - Ensure in the 1st chamber that the waste oils separated by floating mechanism from 1st tank to 3rd tank.
 - Ensure that the remaining water with oil content comes to 2nd tank.
 - Ensure that the oil is collected manually and kept for safe disposal to CPCB authorized dealer.
 - Ensure that the filtration tank should be made up off 4 layers of filtrating materials.
 - Ensure that the bottom most part is covered with boulders which are 30-80mm diameter and extents up to 1 feet height.
 - Ensure that there should be 1 feet of height of charcoal layer is laid down. Then 1 feet height layer of graded sand (5-8mm) is spread over that.
 - Ensure that in between each layer there is a filtrating net which will result into better filtration and recovery of water from the mixed form.
 - Ensure that the treated water should go out and is used for plantation purposes.
 - Ensure the proper disposal of the waste oils after collection and should be disposed to the CPCB authorized reprocesses.
- Applicable PPEs:** Safety shoes, Helmet, Gloves etc.
- ENVIRONMENTAL IMPACT:** Soil and water pollution in case of spillage of waste oils while collection.
- CORRECTIVE ACTION IN CASE OF DEVIATION:**
 - If there is spillage of oil or grease, while washing collect the waste oil and grease in the specified barrels.

| | | |
|---|--|---|
|  |  |  |
| Prepared by Engg. (Envt. Mngt.) | Reviewed by DGM (Envt. Mngt.) | Approved by AGM (Envt. Mngt. & S/IT/FES) |

25


नवीन कुमार / NAVIN KUMAR
 सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

| | | | |
|---|---|---|---------------------------------|
|  | NTPC LIMITED PAKRI BARWADIH COAL MINING PROJECT | IMS OPERATIONAL CONTROL PROCEDURE | Environment Management Group |
|---|---|---|---------------------------------|

| | |
|--------------------------|----------------------|
| EFFLUENT TREATMENT PLANT | DOC NO : EMP - 3 /15 |
| | REVISION NO: 0 |
| | DATE |
| | PAGE: 2/2 |

- Instruct the people to work according to operational criteria if there is any deviation.
- Access the first aid kit and if required transfer him to hospital for further treatment based on the magnitude of the injury.

8. CORRECTIVE ACTION IN CASE OF DEVIATION:



- If there is any deviation in the process of the ETP, it should be checked.

9. CROSS REFERENCE IF ANY:

- ▶ ETP manual.
- ▶ Waste oil register.
- ▶ Service center register

10. REVISION HISTORY:

| Revision No | | Brief details of the Revision |
|-------------|----|-------------------------------|
| From | To | |
| | | |
| | | |
| | | |

| | | | |
|---|--|---|----|
|  |  |  | 26 |
| Prepared by Engg (Env't Mngt.) | Reviewed by DGM (Env't Mngt.) | Approved by AGM (Env't Mngt & S/IT/FES) | |

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : **07/04/2023**
Time : **17:33:06 PM**
Validity upto : **06/10/2023**



Certificate SL. No. : JH00400080020749
Registration No. : JH02AQ1654
Date of Registration : 21/Apr/2017
Month & Year of Manufacturing : March-2017
Valid Mobile Number : *****5555
Emission Norms : BHARAT STAGE III
Fuel : DIESEL
PUC Code : JH0040008
GSTIN :
Fees : Rs.300.00
(GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|--|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 2.02 |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature. | | | | |

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECT
हजारीबाग / Hazaribag

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : **07/04/2023**
Time : **15:48:16 PM**
Validity upto : **06/10/2023**



Certificate SL. No. : JH00400080020717
Registration No. : JH02AD7499
Date of Registration : 19/Sep/2014
Month & Year of Manufacturing : August-2014
Valid Mobile Number : *****5555
Emission Norms : BHARAT STAGE III
Fuel : DIESEL
PUC Code : JH0040008
GSTIN :
Fees : Rs.300.00
(GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|--|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 2.4 |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature. | | | | |

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन सीएस (परिवहन प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : **22/02/2023**
Time : **15:08:29 PM**
Validity upto : **21/08/2023**



Certificate SL. No. : JH00400080019078
Registration No. : JH10CP1452
Date of Registration : 25/Nov/2013
Month & Year of Manufacturing : September-2013
Valid Mobile Number : *****9281
Emission Norms : BHARAT STAGE III
Fuel : DIESEL
PUC Code : JH0040008
GSTIN :
Fees : Rs.300.00
(GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|--|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 0.39 |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature. | | | | |

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन एनटीपीसी लिमिटेड (एनवीएमटी)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECT
हजारीबाग / Hazaribag

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : **19/06/2023**
Time : **17:20:13 PM**
Validity upto : **18/12/2023**



Certificate SL. No. : JH00400080023142
Registration No. : OD09A9699
Date of Registration : 26/May/2015
Month & Year of Manufacturing : April-2015
Valid Mobile Number : *****5555
Emission Norms : BHARAT STAGE III
Fuel : DIESEL
PUC Code : JH0040008
GSTIN :
Fees : Rs.120.00
(GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|--|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 2.24 |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature. | | | | |

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Navin Kumar
नवीन कुमार / NAVIN KUMAR
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एन सी पी सी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : **10/07/2023**
Time : **11:47:39 AM**
Validity upto : **09/01/2024**



Certificate SL. No. : JH00400080024007
Registration No. : JH01AU5799
Date of Registration : 22/Aug/2012
Month & Year of Manufacturing : August-2012
Valid Mobile Number : *****5555
Emission Norms : BHARAT STAGE III
Fuel : DIESEL
PUC Code : JH0040008
GSTIN :
Fees : Rs.120.0
(GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|--|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 2.28 |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature. | | | | |

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://vahan.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन सी ई डी सी लिमिटेड / DGM (ENVT. MGMT.)
एन टी पी सी लिमिटेड / NTPC Limited
कोयला खनन परियोजना / COAL MINING PROJECTS
हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of March -2023

A: Status of IME/PME :


| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Mar.-2023) | Medical Examination Conducted upto last month (Jan'23 to Mar'23) | Medical Examination conducted in the month (March-2023) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|--|--|---|---|
| 1 | IME | 52 | 91 | 52 | 0 |
| 2 | PME | 809 | 421 | 275 | 388 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 458 | 0 | 0 | 458 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 87 | 0 | 24.12.2023 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 01.2023 18.01.2023 Portable |
| 2. | Next Due results | 15.04.2023 |


नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of February-2023

A: Status of IME/PME :


| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Feb-2023) | Medical Examination Conducted upto last month (Jan'23 to Feb'23) | Medical Examination conducted in the month (Feb-2023) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|---|--|---|---|
| 1 | IME | 26 | 39 | 26 | 0 |
| 2 | PME | 227 | 146 | 50 | 81 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 458 | 0 | 0 | 458 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 87 | 0 | 24.12.2023 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 01.2023 18.01.2023 Portable |
| 2. | Next Due results | 15.04.2023 |


नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of January-2023

A: Status of IME/PME :


| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Jan.-2023) | Medical Examination Conducted upto last month (Jan'23 to Jan'23) | Medical Examination conducted in the month (Jan-2023) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|--|--|---|---|
| 1 | IME | 13 | 13 | 13 | 0 |
| 2 | PME | 227 | 96 | 96 | 131 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 458 | 0 | 0 | 458 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 87 | 0 | 24.12.2023 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 01.2023 18.01.2023 Portable |
| 2. | Next Due results | 15.04.2023 |


नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of December -2022

A: Status of IME/PME :


| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Dec.-2022) | Medical Examination Conducted upto last month (Jan'22 to Dec'22) | Medical Examination conducted in the month (Dec-2022) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|--|--|---|---|
| 1 | IME | 11 | 133 | 11 | 0 |
| 2 | PME | 120 | 243 | 0 | 227 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 382 | 432 | 382 | 458 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 87 | 87 | 24.12.2023 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 10.2022 18.10.2022 Portable |
| 2. | Next Due results | 20.01.2023 |


नवीन कुमार / NAVIN KUMAR
 ज्य. सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of November -2022

A: Status of IME/PME :

| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Nov.-2022) | Medical Examination Conducted upto last month (Jan'22 to Nov'22) | Medical Examination conducted in the month (Nov -2022) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|--|--|--|---|
| 1 | IME | 13 | 122 | 13 | 0 |
| 2 | PME | 120 | 243 | 23 | 227 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 0 | 50 | 0 | 840 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 61 | 61 | 24.12.2022 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 10.2022 18.10.2022 Portable |
| 2. | Next Due results | 20.01.2023 |


नवीन कुमार / NAVIN KUMAR
 ज्वायन प्रमुख (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Occupational health related compliances
Format to be included in Monthly Reports
For the month of October -2022

A: Status of IME/PME :


| S. No. | Medical Exam | No. of Persons required to undergo medical examination (Oct-2022) | Medical Examination Conducted upto last month (Jan'22 to Oct'22) | Medical Examination conducted in the month (Oct-2022) | Balance Medical Examination to be conducted in the year |
|--------|---------------------|---|--|---|---|
| 1 | IME | 8 | 109 | 8 | 0 |
| 2 | PME | 120 | 220 | 47 | 240 |
| 3 | Radiological Tests | 61 | 0 | 0 | 61 |
| 4 | Eye Refraction Test | 0 | 50 | 0 | 840 |

B: Stool Tests and sputum for AFB and chest radiography conducted for canteen workers.

| S. No. | No. of Persons employed in canteen | Details of tests conducted during current year | Next due Date/ Remarks |
|--------|------------------------------------|--|------------------------|
| 1 | 61 | 61 | 24.12.2022 |

C: Details of portability test for drinking water : -

| | | |
|----|---|---|
| 1. | Details of Last test conducted <ul style="list-style-type: none"> Sample location Date of Sampling Testing Date Report results | PBCMP, Langatu 16. 10.2022 18.10.2022 Portable |
| 2. | Next Due results | 20.01.2023 |


नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

Ref. No: 1040/PBCMP/Min/2017/114

Date: 20.04.2017

OFFICE ORDER No 23A / 2017

Further to the office order regarding the reconstitution of Environment Management Cell for Pakribarwadih Coal Mining Project, the following enclosed structure shall function for the Environment Management with immediate effect for the Pakribarwadih Coal Mining Project.


The cell is responsible for

1. Compliance of statutory conditions given in the Environment , Forest Clearance groundwater clearance etc.
2. Organize the visit of various officials and implementing the suggestions for betterment of the environment.
3. Submit the statutory compliance reports.
4. Organize Environment awareness programs.
5. Implement the innovative measures for the environment protection
6. Documentation etc.

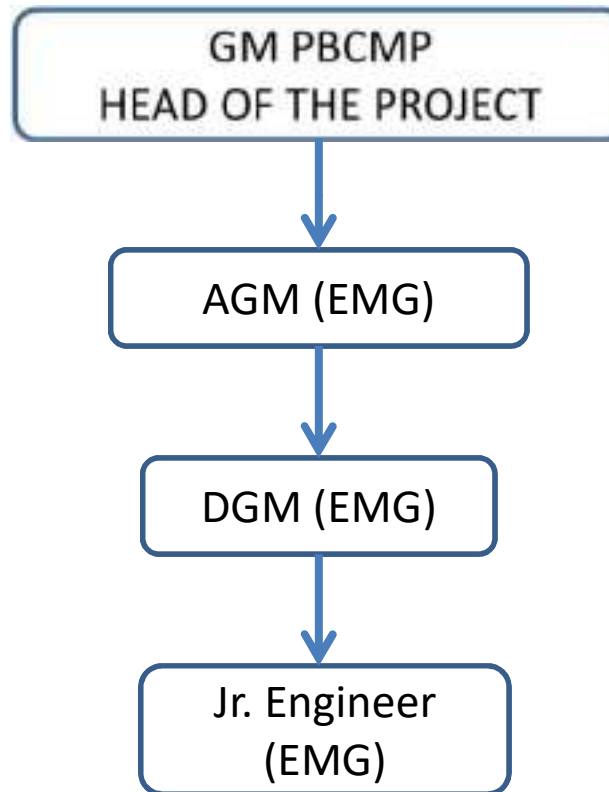
This issues with the approval of the competent authority.


T. Gopalakrishna
Group General Manager,

CC:
All HODs – For Kind information please.
Concerned executives.

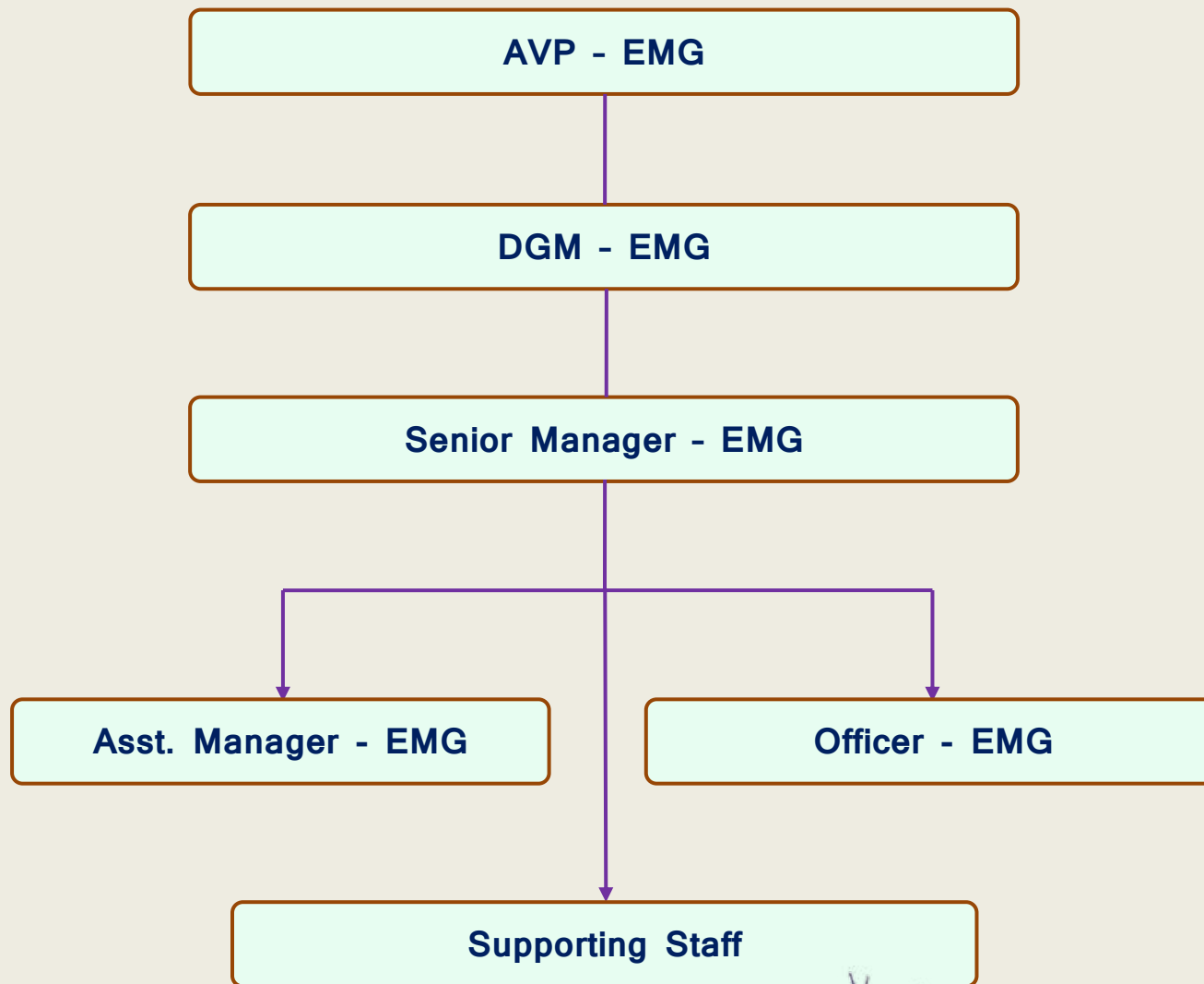

नवीन कुमार / NAVIN KUMAR
असistant डायरेक्टर (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

ENVIRONMENT MANAGEMENT CELL AT NTPC - PBCMP




Navin Kumar
नवीन कुमार / NAVIN KUMAR
जूनियर इंजीनियर (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

ENVIRONMENT MANAGEMENT CELL
THRIVENI SAINIK MINING PVT. LTD.
PAKRI BARWADIH COAL MINING PROJECT




Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्य. सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag


| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|---|--------------------|
| Environmental Expenditure for the FY (April-23 to Sept.-23) | | |
| SI NO | Purpose of Expense | Amount (in Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Coir Mating, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 9405476.86 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Water tanker and its maintenance | 34523421.03 |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 3223161.00 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 3217472.00 |
| (E) Environment Staff Salary | | 3282600.00 |
| (F) Scientific Study | | 1000000.00 |
| Total Amount | | 54652130.89 |


नवीन कुमार / NAVIN KUMAR
 डी.जी.एम. (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|---|--------------------|
| Environmental Expenditure for the FY (October-22 to March-2023) | | |
| SI NO | Purpose of Expense | Amount (in Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Coir Mating, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 5687293.45 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 41358982.83 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 3365670.00 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 2441932.00 |
| (E) Environment Staff Salary | | 2742600.00 |
| (F) Water treatment & ETP Maintainace | | 1069000.00 |
| (G) Scientific Study | | 0.00 |
| Total Amount | | 56665478.28 |


नवीन कुमार / NAVIN KUMAR
 ज्य. महानिरीक्षक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|--|---|--------------------|
| Environmental Expenditure for the FY (April to September-2022) | | |
| SI NO | Purpose of Expense | Amount (in Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Coir Mating, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 8443390.00 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 33734029.83 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 3393215.00 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 2233075.00 |
| (E) Environment Staff Salary | | 3109200.00 |
| (F) Water treatment & ETP Maintainace | | 399000.00 |
| (G) Scientific Study | | 687500.00 |
| Total Amount | | 51999409.83 |


नवीन कुमार / NAVIN KUMAR
 सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

TO WHOM SO EVER IT MAY CONCERN

Based on our examination of the books of accounts and records, as produced before us for verification, of Thriveni Sainik Mining Private Limited ("the Company") having its registered office at 7th Floor, Corporate Tower, Ambience Mall, NH-8, Gurgaon, Haryana-122001, we hereby certify that the Company has incurred expenditure towards environmental expenditure for its project **NTPC LTD-PAKRI GARWADIIH COAL PROJECT, BARKAGON** from April 2021 to March 2022 is Rs 926.43 Lakhs (Rupees Nine Hundered Twenty Six Lakhs and Forty Three Thousand only) as per details given in Annexure 1

This certificate has been provided at the request of the Company is not intended for general circulation or publication

The above figures are true and correct as per documents and information provided to us for our verification.

For PANKAJ DHINGRA & Co.

Chartered Accountants

FR No. 0230834



(CA Pankaj Dhingra)

Partner

MN. No. 510815

UDIN : 22510815AQMITT4220

Place : Rohtak

Date : 25.07.2022

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन वन प्रमोड (एन वन प्रमोड) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|--|---------------------|
| Environmental Expenditure for the FY (April-2021 to March-2022) | | |
| SINO | Purpose of Expense | Amount in INR Lakhs |
| (A) For dump slope stabilization | | |
| 1 | Coir Matting, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 151.14 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 564.12 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 70.32 |
| 2 | Environmental Monitoring (AQI, Water, Noise etc) | |
| (D) Nursery development and plantation | | 21.77 |
| (E) Environment Staff Salary | | 30.69 |
| (F) Water treatment & ETP Maintainace | | 45.71 |
| (G) Certification | | 0.85 |
| (H) Scientific Study | | 4.63 |
| (I) Water Recharge Measures | | 36.71 |
| (J) Miscellaneous Expense | | 0.48 |
| Total Amount | | 926.43 |

Navin Kumar
नवीन कुमार / NAVIN KUMAR
ज्य. सहायक (पर्यावरण प्रबंधन) / JGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag



GAURAV CHOPRA & ASSOCIATES

Chartered Accountants

Ref. No.

Date : 02/07/2021

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that I have examined the related documents for environmental expenses incurred for **TRIVENI SAINIK MINING PRIVATE LIMITED (PROJECT-NTPC LTD, PAKRI BARWADIH COAL PROJECT BARKAGON)** from April 2020 to March 2021 which amounting to 9,74,54,170/- (Nine Crore Seventy Four Lacs Fifty Four Thousand and Seventy Rupees Only). These Expenses Consist of following Annexure-A which is attached herewith.

FOR GAURAV CHOPRA & ASSOCIATES

GAURAV CHOPRA

(M. NO- 418565)

UDIN: 21418565AAAABO8898



नवीन कुमार / NAVIN KUMAR
जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

104, AKS Heights 9th & 10th Sardapura C Road, Jodhpur (Raj.)

Contact No. 0291-2641122, 94144-98356

Email : gauravchopraca@gmail.com

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|---|----------------------|
| Environmental Expenditure for the FY (April-2020 to March-2021) | | |
| SI NO | Purpose of Expense | Amount (in Rs.) |
| (A) For dump slope stabillization | | |
| 1 | Cair Mating, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 28,984,191.42 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 43,973,816.69 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 7,817,473.30 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 6,568,550.42 |
| (E) Environment Staff Salary | | 7,384,800.00 |
| (F) Water treatment & ETP Maintainace | | 2,118,350.00 |
| (G) Certification | | 468,900.00 |
| (H) Miscellaneous Expense | | 138,088.00 |
| Total Amount | | 97,454,169.83 |



Navin Kumar
नवीन कुमार / NAVIN KUMAR
 डीएम (पर्यावरण प्रबंधन) / DGM (ENVY. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
 हजारीबाग / Hazaribag



GAURAV CHOPRA & ASSOCIATES

Chartered Accountants

Ref. No.

Date : 26/11/2020

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that I have examined the related documents for environmental expenses incurred for **TRIVENI SAINIK MINING PRIVATE LIMITED (PROJECT-NTPC LTD, PAKRI BARWADIH COAL PROJECT BARKAGON)** from April 2019 to March 2020 which amounting to 16,20,82,483/- (Sixteen Crore Twenty Lacs Eighty Two Thousand Four Hundred Eighty Three Only). These Expenses Consist of following Annexure-A which is attached herewith.

FOR GAURAV CHOPRA & ASSOCIATES

GAURAV CHOPRA

(M. NO- 418565)

UDIN: 20418565AAAAAT5479



नवीन कुमार / NAVIN KUMAR
एन सी ई सी (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एन टी पी सी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

104, AKS Heights 9th & 10th Sardapura C Road, Jodhpur (Raj.)

Contact No. 0291-2641122, 94144-98356

Email : gauravchopraca@gmail.com

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|---|-----------------|
| Environmental Expenditure for the FY (April 2019 to March 2020) | | |
| SI NO | Purpose of Expense | Amount (In Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Coir Matting, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintenance | 73,099,492.70 |
| 2 | Dozer Operator Salary, HSD Cost and Maintenance charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 60,393,753.17 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 9,391,214.70 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 5,466,338.00 |
| (E) Environment Staff Salary | | 7,741,440.00 |
| (F) Water treatment & ETP Maintenance | | 3,662,742.00 |
| (G) Surface Runoff Recharge | | 3,100,000.00 |
| (H) Certification | | 1,950,799.88 |
| (I) Miscellaneous Expense | | 376,702.20 |
| Total Amount | | 162,082,482.65 |

(Signature)



Navin Kumar
नवीन कुमार / NAVIN KUMAR
 जल सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag



GAURAV CHOPRA & ASSOCIATES

Chartered Accountants

Ref. No.

Date : 25/09/2019

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that I have examined the related documents for environmental expenses incurred for **TRIVENI SAINIK MINING PRIVATE LIMITED** (PROJECT- **NTPC LTD, PAKRI BARWADIH COAL PROJECT BARKAGON**) from April 2018 to March 2019 which amounting to 11,62,03,315/- (Eleven Crore Sixty Two Lacs Three Thousand Three Hundred Fifteen Only). These Expenses Consist of following Annexure-A which is attached herewith.

FOR Gaurav Chopra & Associates

GAURAV CHOPRA

(M. NO- 418565)

UDIN- 19418565AAAAA04381



नवीन कुमार / NAVIN KUMAR
एन वन प्रजेक्ट (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

104, AKS Heights 9th & 10th Sardapura C Road, Jodhpur (Raj.)

Contact No. 0291-2641122, 94144-98356

Email : gauravchopraca@gmail.com

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|--|-----------------|
| Environmental Expenditure for the FY (April 2018 to March 2019) | | |
| Sl NO | Purpose of Expense | Amount (In Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Cair Matting, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 4,73,78,336.60 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 4,87,49,865.45 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Annual Maintenance Contract of Instruments | 74,18,667.00 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 17,08,699.00 |
| (E) Environment Staff Salary | | 66,12,000.00 |
| (F) Water treatment & ETP Maintainace | | 34,47,729.00 |
| (G) Certification | | 7,35,076.00 |
| (H) Miscellaneous Expense | | 1,52,941.72 |
| Total Amount | | 11,62,03,314.77 |

(Saw)



Navin Kumar
नवीन कुमार / NAVIN KUMAR
 ज्येष्ठ सहायक (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
 एनटीपीसी लिमिटेड / NTPC Limited
 कोयला खनन परियोजनाएं / COAL MINING PROJECTS
 हजारीबाग / Hazaribag

ACGC & Associates

Chartered Accountants

104, Aks Heights 9th & 10th Sardarpura, 'C' Road, JODHPUR (Raj.)
Contact No. : 0291-2641122, 9772591864, 9414498356
E-mail: acgcassociates@gmail.com
Website : www.acgcassociates.icai.org



Ref. No.

Date 18/05/2018

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that I have examined the related documents for environmental expenses incurred for TRIVENI SAINIK MINING PRIVATE LIMITED (PROJECT- NTPC LTD, PAKRI BARWADIH COAL PROJECT BARKAGON) from April 2017 to March 2018 which amounting to 10,84,21,227/- (Ten Crore Eighty Four Lacs Twenty One Thousand Two Hundred Twenty Seven Only). These Expenses Consist of following Annexure-A which is attached herewith.

FOR ACGC & ASSOCIATES

GAURAV CHOPRA

(M. NO- 418565)



Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन एम डी ई (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एन टी पी सी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएँ / COAL MINING PROJECTS
हजारीबाग / Hazaribag

| PAKRI BARWADIH COAL MINING PROJECT OF NTPC | | |
|---|--|-----------------|
| Environmental Expenditure for the FY (April 2017 to March 2018) | | |
| Sl NO | Purpose of Expense | Amount (in Rs.) |
| (A) For dump slope stabilization | | |
| 1 | Coir Matting, Gabion Box, Retaining Wall, Garland Drain, Settling Pit and its Maintainance | 77,304,660.54 |
| 2 | Dozer Operator Salary, HSD Cost and Maintainace charge | |
| (B) For dust suppression | | |
| 1 | Permanent Sprinkler | 22,704,829.36 |
| 2 | Water tanker and its maintenance | |
| (C) Environmental Monitoring | | |
| 1 | Recalibration of Instruments / equipments | 4,133,096.00 |
| 2 | Environmental Monitoring (AAQ, Water, Noise etc.) | |
| (D) Nursery development and plantation | | 1,033,287.00 |
| (E) Environment Staff Salary | | 2,517,864.00 |
| (F) Water treatment & ETP Maintainace | | 727,490.00 |
| Total Amount | | 108,421,226.90 |



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A C G C & Associates

Chartered Accountants

104, Aks Heights 9th & 10th Sardarpura, 'C' Road, JODHPUR (Raj.)
Contact No. : 0291-2641122, 9772591864, 9414498356
E-mail: acgcassociates@gmail.com
Website : www.acgcassociates.icai.org



Ref. No.

Date 23/03/2018

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that I have examined the related documents for environmental expenses incurred for **TRIVENI SAINIK MINING PRIVATE LIMITED (PROJECT- NTPC LTD, PAKRI BARWADIH COAL PROJECT BARKAGON)** from May 2016 to March 2017 which amounting to 3,47,65,165/- (Three Crore Forty Seven Lacs Sixty Five Thousand One Hundred Sixty Five Only). These Expenses Consist of following Annexure-A which is attached herewith.

FOR A C G C & ASSOCIATES

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| 3 | Coal Mining | Half Yearly Compliance Report for Period April 2022 to Sep 2022 for Durlanga Coal Mining Project of NTPC Ltd | Click to View/Download |
| 4 | Coal Mining | Half Yearly EC Compliance Report of Pakri Barwadih Coal Mining Project for the period of Oct. 2022 to March 2023 | Click to View/Download |
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Hand
Presentation
18.05.2008 (Mins/PPS)

18.05.2008

18.05.2008 (Mins/PPS)

THE TIMES OF INDIA, BANGALORE
SATURDAY, JULY 20, 2008

BRIGADIER GENERAL
The Brigadier General is the senior-most rank in the Indian Army. It is a one-star rank and is equivalent to the rank of Major General in the Indian Air Force and the rank of Rear Admiral in the Indian Navy. The Brigadier General is usually appointed to command a brigade or a division in the Indian Army.

EASTERN RAILWAY
WASHING AND DRY CLEANING
The Eastern Railway is one of the largest railway systems in India. It covers a vast area of the eastern part of the country. The railway is known for its extensive network of tracks and its commitment to providing reliable and efficient services to its passengers and freight customers.

EAST CENTRAL RAILWAY
NOTICE FOR ALL CONCERNED
The East Central Railway is a major railway system in India. It is responsible for the transportation of passengers and freight in the central part of the country. The railway is known for its extensive network of tracks and its commitment to providing reliable and efficient services to its passengers and freight customers.

NORTH EASTERN RAILWAY
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Government of Bihar
P R A N J A L
Bihar State Water and Sanitation Mission
189, Patliputra Colony, Patna - 13
Invitation Proposal for Hiring Accounts Firms

1. Public funds employed by Government of Bihar for the purpose of providing water supply and sanitation facilities to the people of Bihar. The Government of Bihar is now inviting proposals from interested firms for hiring accounts firms to assist in the management of the Bihar State Water and Sanitation Mission.

2. The firm engaged for the purpose of providing water supply and sanitation facilities to the people of Bihar. The firm should be a registered firm and should have a minimum experience of five years in the field of accounts and finance.

3. The firm should be a registered firm and should have a minimum experience of five years in the field of accounts and finance. The firm should also have a minimum turnover of Rs. 10 lakhs per annum.

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नवीन कुमार / NAVIN KUMAR
एन वटर सप्लाय मिशन (पब्लिक प्रवर्धन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
कोयला खनन परियोजनाएं / COAL MINING PROJECTS
हजारीबाग / Hazaribag

31-03-24 अंक का 2.36 प्रतिशत की
बढ़ाई के साथ 14805.25 अंक का
बंद हुआ।

कक्षा संख्या - बीजत संख्या

दक्षिण पूर्ण रेलवे
बेदाय रेलवे

DOI: 10.1002/for

PR-28252/Education/02-10

Navin Kumar
नवीन कुमार / NAVIN KUMAR
एन एमएलएस (पर्यावरण प्रबंधन) / DGM (ENVT. MGMT.)
एनटीपीसी लिमिटेड / NTPC Limited
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