

**Investigation into Alleged Environmental Violations by
Central Coalfields Ltd in Piparwar OCP:**

**Report of Committee appointed by Hon'ble National Green
Tribunal in *Sanjay Chauhan vs CCL & Ors (OA 39/2020/EZ)*
*vide order dt.22.06.2020***

Date of submission: 14 September 2020

1. INTRODUCTION

The North Karanpura coal belt in Jharkhand state straddles the districts of Ranchi, Chatra and Hazaribagh and contains a large number of coal mines of various vintages and size, as well as some coal washeries and thermal power plants. In spite of the existence of multiple environmental regulations, there has been repeated public concern at the extent of environmental pollution in this region.

The Hon'ble National Green Tribunal is currently hearing a case (OA No. 39/2020/EZ) in which the petitioner (Sanjay Chauhan, a resident of Dakra village of Ranchi district) has complained of non-compliance of environmental clearance (EC) conditions in the case of Piparwar Opencast Coal Mining Project (OCP) of M/s Central Coalfields Ltd.

The Tribunal, vide its order dt.22.06.2020 constituted a 4-person committee to verify the factual position on the ground. The committee consisted of:

1. Dr. Sharachchandra Lele (Distinguished Fellow in Environmental Policy & Governance, ATREE, Bengaluru)
2. Dr. Hemen Hazarika (Scientist D, representing Ministry of Environment, Forests and Climate Change (MOEFCC), Regional Office, Ranchi)
3. Dr. G. P. Singh (Scientist D, representing Central Pollution Control Board (CPCB), Regional Office, Kolkata), and
4. Shri. A. K. Yadav (Regional Officer, Hazaribagh, representing Jharkhand State Pollution Control Board (JSPCB), which acted as the Nodal Agency).

Due to the COVID-19 pandemic and the consequent restrictions on travel, the committee's field visit was delayed, and the committee requested and was granted time till 16 September 2020 to submit its report. The committee conducted its visit to Piparwar OCP on 2nd September 2020. This report presents the findings emerging observations made and discussions held with the petitioner and the respondent during the field visit, and perusal of related documents by the committee. We begin with a brief description of the coal mining project. We then summarise key points that emerged from recent inspection reports and/or notices issued by MOEFCC and JSPCB, followed by our own field observations. Where we have observed significant

non-compliance, we have given our estimates of the duration of non-compliance, and also added recommendations for how remediation may be carried for the immediate future. We end with a wider observation of the environmental trajectory of the region.

2. BASIC INFORMATION REGARDING THE PIPARWAR OCP

The Piparwar OCP is located in Tehsil Tandwa of District Chatra of Jharkhand state. The mine lease area is 1120.25 ha (see Figure 1). The OCP was commissioned much before the EIA notification with a normative capacity of 6.5 MTPA, and was subsequently granted an EC for a normative capacity of 10 MTPA (vide EC dt. 11.06.2007). This was later modified to allow for a peak production of 11.5 MTPA (vide EC dt.28.02.2012) and further allowed to expand to a normative capacity of 12.5 MTPA (vide EC dt. 20.05.2014).



Figure 1. Piparwar OCP as seen from Google Earth (red line is mine lease boundary, yellow line is district boundary)

3. SUMMARY OF MOEFCC AND JSPCB REPORTS PRIOR TO THE NGT COMMITTEE'S FIELD VISIT

The MOEFCC's Ranchi office had submitted a monitoring report dt. 15.02.2019 (Annexure 1) in which various instances of non-compliance and partial compliance with EC conditions were noted.

The major issues noted in these reports were:

- a) Delayed construction of dedicated railway siding (at Rajdhar),
- b) Poor arrangements for coal dust suppression and runoff collection at the currently used railway siding at Bachra,
- c) Poor management of stormwater drains and high level of pollutants in effluents from workshop.

4. OBSERVATIONS REGARDING CURRENT NON-COMPLIANCE AND RECOMMENDATIONS FOR THE FUTURE

When the Committee visited the Piparwar OCP, it was informed that the OCP had shut down operations on 10 June 2020, and no coal extraction was taking place and only the existing stock of coal was being despatched. However, keeping in mind that the non-compliance is alleged to have been in existence for many years, the Committee visiting various parts of the OCP with representatives of the project proponent and the petitioner, and obtained various documents, to ascertain the history of the OCP operations.

4.1 Major issues:

Petitioner's Allegation: Non-construction of CHP, and non-construction of railway siding resulting in coal transport by road

The petitioner alleged that a) the CHP had not been constructed [pt.7] and b) the railway siding had not been constructed [pt.10-12], and consequently, c) coal transport was happening by road, which was in violation of the EC conditions [pt.13].

[At the outset, it needs to be clarified that the issue of Coal Handling Plant (CHP), conveyor belts and final transport of coal are integrally linked. In a system where CHPs are used, conveyor belts bring the coal from the mine pit to the CHP, which includes a covered crusher and a silo into which the coal is automatically loaded. The silo is supposed to sit astride a railway siding so that it can drop the coal into the railway wagons; this entire arrangement minimises the emission of coal dust. The CHP is supposed to be equipped with sprinklers

to further minimise dust emissions. Note that the CHP cannot be operated meaningfully if the coal transport is being done by road. If trucks are used, they are loaded using JCBs or front loaders.]

Requirement as per the EC conditions: It is clear from the various ECs that a conveyor belt, CHP and dedicated railway siding were an integral part of the project. The original EC dt. 11.06.2007 permitted coal transportation “by road using about 1500 vehicles to nearby railhead at a distance of 8km”, which in this case is the Bachra rail siding. At the same time, Specific Condition (x) required that the “railway siding [already] under construction with Rapid Loading System to replace transportation of coal by road, shall be constructed in a time bound manner and have adequate arrangements for dust suppression”. Again, as per the EC dt. 28.02.2012, Specific Condition (ii) required that “Mechanised silo and wagon loading shall be commissioned by March 2013 and a railway siding shall be established for coal transportation to reduce the dust pollution in the area” [by the same date]. Finally, the MOEFCC superseded the EC dt.28.02.2012 and granted a new EC dt. 20.05.2014, which requires that (Specific Condition iv) “two sidings shall be completed by June 2014” and (Specific Condition v) “No coal transportation by road shall be permitted thereafter”. The EC of 2012 also clearly mentions that transport of coal from the mine is by conveyor system after pit crushing.

In short, it is clear that while CCL was allowed to transport coal by road to the Bachra rail siding initially (in 2007), it was required to construct a (dedicated railway siding) in a ‘time-bound manner’, which it subsequently committed completing by 2013 and then again by June 2014. The last EC specified that no road transport was to be carried out thereafter.

Observations by this Committee:

- a) **CHP:** From documents provided by CCL and from the field visit, it is clear that the CHP itself had been constructed many years ago, even before 2007, and is visible today (see Figure 2). As such, the non-construction of the CHP itself is not the issue. **However,** the railway siding linked to this CHP did not get completed by 2014 as committed, but only mid-2017 (see

point c below), and so the Silo was never used between 2007 and mid-2017 (as per information provided by CCL).



Figure 2. Coal Handling Plant with Silo inside Piparwar OCP above tracks of the Piparwar/Rajdhara siding

- b) **Conveyor:** A conveyor system is in place from the pit to the CHP (see Figure 3). However, as mining operations had ceased when the Committee visited the mine, it could not be determined whether the conveyor system was actually being used. Since this part of coal transport occurs within the mine lease area, we have not pursued this matter further.



Figure 3. Conveyor belt inside mine (see arrow), now non-operational.

However, the field visit showed that the coal from the mine was being stocked largely on the ground in a coal yard (see Figure 4) near the (mostly unused) CHP and the coal washery (which is also part of the project). The coal yard did contain sprinklers for dust suppression. But the arrangements for containing and treating the runoff water (rain and sprinkler) from the coal yard were inadequate: There was no catch drain around the coal yard, and the runoff was pooling in various low-lying areas (see Figure 4) before reaching the settling tank. (This non-compliance was also pointed out in the MOEFCC report of 15.02.2019).



Figure 4. Status of coal yard near CHP (left) and the poorly managed runoff from the coal yard (right)

- c) **Dedicated Siding:** As per information provided by CCL, the dedicated siding (hereinafter Piparwar/Rajdhar siding) over which the CHP is located became 'operational' only in July 2017. Therefore, coal transport to the Bachra siding by road (a distance of 8km) **continued for 5.5 years beyond the date permitted by the EC of 2014**.
- d) **Loading at Piparwar/Rajdhar siding:** It may be noted that rail wagons can be loaded in two ways: from the silo in the CHP, or simply by using front loaders or dumper trucks. When the committee visited the site, the CHP (silo) was not being used, and **the loading of wagons was clearly taking place elsewhere along the siding with the help front loaders**, which generates much more dust as compared to the use of the CHP with silo.

Upon repeated questioning, CCL conceded that the CHP was used for despatching only 17 rakes so far (about 57,000 tonnes of coal: see , and all the rest of the coal had been despatched primarily via the Bachra siding (7km away) and a small amount in recent times via the Piparwar/Rajdhar siding located within the mine area.

Table 1. Breakup of coal despatch from Piparwar OCP by different routes

Sl. No.	Year	Coal Production (Million Tonnes)	Despatch to					
			CPP (Tonne)	Bachra Siding (Tonne)	SILo on Piparwar/Rajdhar siding No. of Rakes (Tonne)	Direct loading on Piparwar/Rajdhar Siding (Tonne)	By Road / RCR (Tonne)	Transfer (Tonne)
1.	2017-2018	9.45	5,353,305	490,932	Nil	Nil	3,454,455	1,003,940
2.	2018-2019	7.00	4,482,201	509,990	9 Nos. (29,950)	294,686	2,658,999	
3.	2019-2020	4.32	3,507,414	120,747	7 Nos. (23,441)	Nil	2,493,495	
4.	2020-till date	0.516	483,470	Nil*	1 No. (3,876)	Nil	622195	

Note: 1. Coal produced from Piparwar OCP is washed at Piparwar CPP (coal processing plant or washery) and then the washed coal from Piparwar CPP is despatched from either the Bachra Siding or Piparwar/Rajdhar siding, or buyer directly transported the coal by road from the OCP (RCR column).

2. The above data are as provided by CCL. The figure of "Nil" for Bachra siding despatch in 2020-till date is incorrect, as CCL officials acknowledged that the trucks in Figure 8 below were indeed going from Piparwar OCP to Bachra siding. Even though mining operations are closed, the stock of coal in the coal yard is being despatched.

- e) **Status of Piparwar/Rajdhar siding: The arrangements at the siding (where front loaders were being deployed) did not conform to the 2015 CPCB guidelines for railway sidings, viz., there was no screen, no green belt, and no arrangements (drains, settlings or settling tanks) for containing the runoff of contaminated water (see Figure 5).**



Figure 5. The Piparwar/Rajdhar siding inside Piparwar OCP commissioned in 2017, with no screen, 3-tier plantation or runoff collection system

- f) **Further serious violations during coal transport by road to Bachra siding:** Not only is the coal transport to Bachra siding happening in non-compliance of the EC conditions, but further serious violations were noted even in this transportation activity:
- i. Road transport of coal was resulting in much spillage on the road and consequent air and water pollution (see Figure 6).



Figure 6. Road from Piparwar OCP to Bachra siding covered with coal dust

- ii. Following the sinking of the pillars of a bridge on the Damodar river, rather than take a longer route, the truck transporters have dumped debris onto the river to create a temporary crossing in complete violation of rules regarding river protection. Although this crossing was removed by the district authorities once in early 2020, the debris continue to block the Damodar river (see Figure 7), and it seemed that the siding might still have been in use at the time of the NGT Committee's visit.



Figure 7. Bridge on Damodar River under repairs, with temporary crossing created at the back (left) and close-up of temporary crossing (right).

- iii. Finally, the trucks were operating without any tarpaulin covering on the coal (see Figure 8). This is in violation of the EC General Condition to use ‘trucks covered with tarpaulin at all times’, for the obvious reason of reducing spillage and the pollution that follows from it. **This was the most egregious and blatant form of EC non-compliance observed by this Committee.**



Figure 8. Trucks loaded with coal without tarpaulin covering waiting in line outside Bachra settlement

g) **Non-compliance of norms at Bachra railway siding:** Finally, the manner in which the Bachra siding is managed again is in non-compliance with basic norms for such coal sidings (see Figure 9):

- i. The platform is piled with a thick layer of coal dust, which eventually gets washed off onto the tracks and elsewhere;
- ii. No catch drains to catch the runoff and settling tank to remove the coal dust have been provided;
- iii. No walls and 20 ft screens have been provided around the siding;
- iv. No 3-tier plantation has been provided outside the walls to act as a wind barrier.

It may be noted that these non-compliances were also pointed out in the MOEFCC monitoring report of 15.02.2019.

It may also be noted that there is a primary school right next to the Bachra siding; therefore, non-compliance with dust pollution control norms at the siding directly endangers the health of the school children.



Figure 9. Status of Bachra rail siding

4.2 Other observations:

The Project Proponent informed the Committee that Piparwar OCP has been closed since 10.06.2020, although MOEFCC is yet to receive any official communication of closure of operations and coal remaining in the coal yard is still being transported. It is recommended that the Project Proponent should implement the conditions of Mine Closure Plan as per rule, and take all necessary maintenance and environmentally protective actions going forward.

4.3 Summary observations and recommendations

Air, water and soil pollution created by fugitive emission of coal dust from the handling and transportation of coal constitute the most important public health impacts of coal mining operations. It is clear that the Piparwar OCP, although currently no longer extracting more coal, has been in **non-compliance of a number of EC conditions** imposed in the interest of minimising this public health impact, and that this non-compliance has **persisted for many years**.

The past environmental harm can neither be condoned nor can it be rectified. Going forward, the obvious recommendation is to completely and immediately cease all coal transport by road outside the mine lease area. Further, the ECs of other mines from

where coal is being brought to the RCM or Bachra siding, or perhaps being despatched via the Piparwar/Rajdhar siding, need to be scrutinised and if necessary modified to minimise this impact. Clean-up and remedial operations need to be initiated at all the sidings and the coal yards to prevent further fugitive emissions through wind and runoff.

Finally, two policy issues need to be noted. First, as Table 1 shows, **about 2/3rd of the coal despatch is actually taking place purely by road (i.e., never going to any siding)**. This is the consequence of the policy permitting “on-road sales” and “e-auctions” Therefore, any EC condition specifying that “no further transport of coal by road shall be permitted after such-and-such date” is rendered completely infructuous. This policy needs to be **seriously re-examined** and amended by the MOEFCC and Ministry of Coal.

Second, the focus of EC conditions is on various measures to be adopted towards pollution control (transport by rail, use of conveyors and CHP, transport by rail, use of sprinklers, etc.). But the only way to know whether these measures are having the desired outcomes is to carry out frequent and continuous monitoring of ambient environmental conditions at multiple locations that are most relevant to public health and ecosystem impacts. . For instance, EC condition specifies the monitoring of air quality outcomes at select locations. But this monitoring (done 4 times a year) is typically being done within the mine lease area, where pollution is naturally expected to be quite high and where the air quality standards also permit those high levels (e.g., the standard for PM₁₀ inside the mine lease area is 300 µg/m³ for Karanpura coal belt as per EPA Rules 1986, whereas the NAAQ standard for residential areas is 100 µg/m³). No independent air quality monitoring is happening in the nearby township or settlements lying along the roads used for coal transport. Only recently (28.02.2019) JSPCB issued a notification asking that Continuous Ambient Air Quality Monitoring Systems (CAAQMS) be set up at railway sidings. **While welcome, this is still insufficient**. Data submitted by the petitioner to this Committee, of 24-hour AAQ measurements done at 5 public locations in the Dakra area by a NABL-accredited lab, indicate very high levels of PM₁₀ (>300 µg/ m³) and PM_{2.5} (>150 µg/m³) when the standard is 100 and 60 respectively (see Annexure 2)! No data are available publicly from any other source to cross-check this. Similarly, with so many rivers in the region,

one would expect ambient river water quality to be checked regularly by an independent agency, but again, such a system is missing. **This gap in ambient environmental quality monitoring and linking it to enforcement needs to be addressed urgently at a policy level.**

5. THE LARGER ENVIRONMENTAL CHALLENGE IN THE NORTH KARANPURA COAL MINE BELT

As the map in Figure 10 shows, the North Karanpura region has a large number of coal deposits, and even though some old mines are supposedly reaching the end of their lives (such as Piparwar OCP), mining activity is likely to expand very significantly in the coming years with the opening of new large mines (e.g., Sanghamitra OCP, Ashoka West OCP, and Piparwar Expansion OCP). Equally important, attracted by the coal deposits, the region is seeing an expansion in coal-based thermal power plants (TPPs). The 2400 MW Tandwa TPP by NTPC is about to be commissioned, and several TPPs are planned in a 25km radius of Dakra.

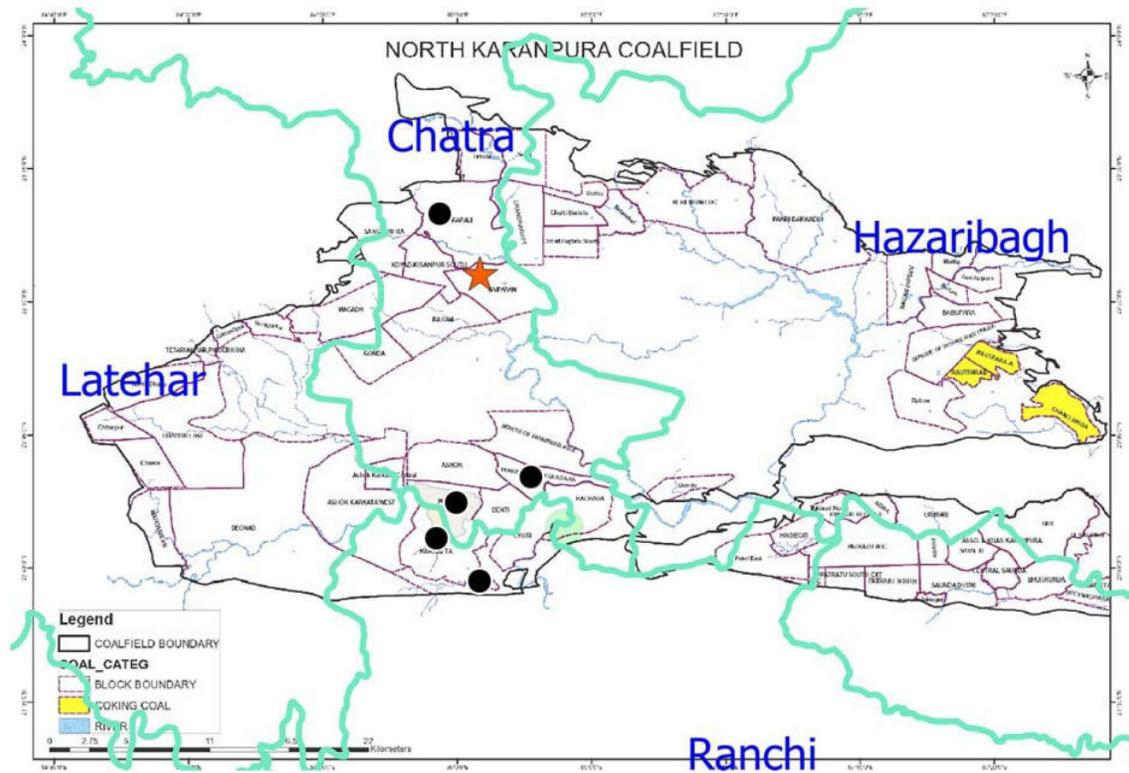


Figure 10. Overview of North Karanpura Coal field region, showing all the notified coal blocks. Black dots indicate the mines of Amrapali (northernmost dot), and Piparwar, Purnadih, Rohini and Dakra; red star indicates Tandwa TPP. Green lines indicate district boundaries and blue lines indicate rivers.

The **cumulative environmental impacts of these developments** cannot be understood through individual EIAs or investigations of individual projects. In particular, coal transport occurs outside project premises on public roads or via common railway sidings used by multiple projects. Similarly, in a region rich in rivers, the impact of cumulative forest loss and mining activity on rivers and groundwater hydrology can only be understood at the catchment or sub-basin scale. The public health and socio-economic impacts of such large-scale mining and TPP activity again will be non-linear and complex.

Experience from elsewhere, such as Dhanbad (Jharkhand), Singrauli (Madhya Pradesh/Uttar Pradesh), Jharsuguda (Odisha), and Tamnar-Ghargoda (Chhattisgarh), shows that, in the absence of forethought, such coal-rich regions **quickly end up as “critically polluted areas”**, with enormous damage to public health and the wider environment, unending environmental litigation, and social conflict.

- X To avoid this region having a similar fate, we urge that a wider and long-term perspective be adopted, that a process for region-scale environmental carrying capacity estimation be carried out, and that future project planning and environmental clearances be based on such an understanding and through some mechanisms for region-scale coordination.

Signed by



(Dr. Sharachchandra Lele)
Distinguished Fellow, ATREE



(Dr. Hemen Hazarika)
Scientist D, MOEFCC, Ranchi



(Dr. G. P. Singh)
Scientist-D, CPCB, Kolkata

I am not agree with point no.5.

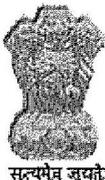


(Shri. A. K. Yadav)
Regional Officer, JSPCB Hazaribagh

- x I donot agree with region scale environmental carrying capacity estimation. It would be better to ensure 100% compliance of existing EC condition along with compliance of order by Hon'ble N&T (OA 284 /2019 dated 19.9.2019) which states all mines in the nearby area using road for coal transportation should maintain a free board of minimum 5cm in loaded vehicles along with properly covering with impervious material to prevent escape of fines.

ANNEXURES

1. Monitoring Report of Piparwar OCP submitted by MOEFCC Regional Office Ranchi on 15.02.2019.
2. Results of 24-hour ambient air quality monitoring in the Dakra region submitted by the petitioner to the Committee.



सत्यमेव जयते

Government of India / भारत सरकार
 Ministry of Environment, Forest & Climate Change
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
 Regional office (Eastern Central Zone) / (पूर्वी मध्य क्षेत्रीय कार्यालय)
 Bungalow No.A-2, Shyamali Colony, Ranchi – 834 002
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नहों है खिगाही ।
 बहों है खुशहाली ॥

No. 103-459/EPE/ 2933

Dated: 14.02.2019
15

To,

The Director,
 Monitoring Cell,
 Ministry of Environment, Forest and Climate Change
 Indira Paryavaran Bhavan, Jorbagh Road, Aliganj,
 New Delhi – 110 003.

Sub: Monitoring report of Piparwar Opencast Project of M/s Central Coalfields Ltd. located in District- Chatra, Jharkhand – regarding.

Ref: Ministry's Clearance letter no. J-11015/76/2013 - IA II (M) dated: 20.05.2014

Sir,

I am directed to inform you that Piparwar Opencast Project of M/s Central Coalfields Ltd. located in District Chatra, Jharkhand was monitored by Regional Office Ranchi on 20.12.2017 and the monitoring report is being sent to you as annexure with this letter. The project authorities have submitted the requisite data on 18.01.2019 and so the monitoring report is being submitted late. It was observed that the following conditions need special attention:

Specific Conditions:**Following conditions was not complied:**

(Condition no. lvii): Latest time series of land use maps based on satellite imagery has not been submitted by project proponent.

Following conditions were partially complied:

(Condition no. iv): Construction of railway sidings was being done late compared to EC condition. It was told to provide fixed water sprinkling system at the railway siding. Also plantations should be developed along the new siding.

(Condition no. ix): Cross section of the benches mentioning their slope must be submitted. A progressive action plan on the issues with proper sloping has not been submitted. It is requested to submit the same as per stipulated EC condition.

(Condition no. xii): The level of particulate matter (PM2.5) ranges from 24 to 70 µg/m³.

(Condition no. xxiii): At workshop discharge after oil & grease trap station, COD, O&G and TSS were higher than prescribed limit.

(Condition no. xxiv): The CSR expenditure for the year 2014-15, 2015-16, 2016-17 & 2017-18 is less than the EC stipulations.

(Condition no. xxvii): The drains in the CHP area created by project authorities were silted and not maintained properly and coal dust spilled from edges. Drains should be well maintained/desilted regularly. Pucca drains should be made. For CHP no separate ETP was found.

(Condition no. xxviii): In monitoring data of quarter endings September 18 of the year 2018-19, COD, O&G and TSS are higher than prescribed limit at Workshop Discharge after oil and grease trap.

(Condition no. xli): No fixed water sprinkler was observed in the railway siding. There was some water sprinkling done by water tankers but it was not sufficient as thick dust layers were observed on the roads of railway siding. Fixed water sprinklers must be installed at the railway siding. Boundary walls were also observed at the railway siding but it was too short to act as dust barrier. It was suggested to plant trees at the railway siding. It was also suggested to use bamboo sticks and grow creepers on them at the boundary walls that would act as dust barrier.

In the route to both of the railway siding coal dust layers were observed and these would get carried away (with rainwater) into the low lying areas and natural nallas. Project authorities also showed another railway siding. Fixed water sprinkling system was not installed at this railway siding also. Water sprinkling was done by water tanker there. Some plantations were developed/grown along the road to railway siding and near railway siding. But project authorities must make more serious efforts/arrangements to control/minimize coal dust pollution at the railway siding.

Dust layers were observed on the floors of coal handling plant area. Scrapping of coal dust from floors may be done regularly to control coal dust pollution. Fixed water sprinklers may also be provided in the area.

(Condition no. xliii): At some places roads were not maintained and it was told to project authorities to regularly maintain the roads. Some plantation has been developed in the project and along the roads. But 3 tier green belt development has not been done along all major approach roads.

(Condition no. xlv): More efforts should be made to develop massive plantation in open spaces in and around the mine and 3-tier avenue plantation along the main approach roads to the mine.

(Condition no. lii): Water level on the piezometer could not be ascertained due to some fault. It was told to maintain the piezometers so that ground water level could be verified. In the monitoring data of quarter endings March 18 of the year 2017-2018, Fluoride (F) & Nitrate (NO₃) are higher than prescribed limit.

(Condition no. liiv): STP was not observed. The drain in the CHP area created by project authorities were silted and not maintained properly and coal dust spilled from edges. Drains should be well maintained/desilted regularly. Pucca drains should be made. For CHP no separate ETP was found.

(Condition no. lxi (b): A copy of standard operating procedures to bring into focus any deviation/violation etc. of environmental or forest norms/conditions must be submitted to Regional Office Ranchi.

Following conditions were being/reportedly complied but further action needed:

(Condition no. vii): Project authorities could not show water level in the piezometer. Project authorities must also submit report to CGWB as per this EC Condition.

(Condition no. viii): Project Proponent should submit copy of Pollution under Control (PUC) certificate of few vehicles (operating in the mines) as sample.

(Condition no. x): At many places roads were broken and needed repairing.

(Condition no. xiv): Project Proponent should submit names of environmental engineers/ ecologist with their designation working for the project.

(Condition no. xvii): Project authorities have submitted working plan which is signed in the year 2014. A latest surface plan showing lease area and other features rivers, dumps (O/B, soil, coal, etc), green belt developed, etc must be submitted to Regional Office Ranchi.

(Condition no. xxi): No other embankment was shown on any other river/nallah. It is requested to make other embankments (if any) on river/nallah on the latest surface plan to be submitted.

(Condition no. xxv): In the plan submitted by project authorities Safi Nala is not shown/ marked. It is requested to show Safi Nala in surface plan to be submitted to Regional Office Ranchi.

- (Condition no. xxix): STP was not provided.
- (Condition no. xxx): Project proponent should submit copy of CTE issued by JSPCB and compliance status to CTE & CTO.
- (Condition no. xxxi): Project authorities should submit the number of dust masks issued to workers in the year 2017 & 2018.
- (Condition no. xxxii): Project authorities should submit the number of dust masks issued to workers in the year 2017 & 2018.
- (Condition no. xxxiv): Project authorities should submit the copy of medical examination reports (5 reports as a sample) showing the types of test conducted on employees (both regular and contractual). (Condition no. xxxv): More efforts should be made by project authorities to develop close thick canopy of the tree cover.
- (Condition no. xxxvii): Massive plantation of native species must be developed between river and the project.
- (Condition no. xxxviii): Cross section of O/B dumps showing slopes of dumps may be submitted to Regional Office Ranchi.
- (Condition no. xxxix): Some of the catch drains was found silted and it was told to project proponent to regularly clean the drains.
- (Condition no. xliv): It was suggested to take all necessary precautions during blasting so that adverse effects of blasting viz. flyrocks, ground vibration do not occur. It is also requested to provide blasting design and pattern, stemming, explosives used per hole, total explosives blasted per delay, types of detonators used, burden, spacing, etc.
- (Condition no. xlvi): Cross section of O/B dumps showing slopes of dumps may be submitted to Regional Office Ranchi.
- (Condition no. liii): It is requested to provide groundwater level in the nearby villages for last five years.
- (Condition no. lviii): Project Proponent should submit a copy of the mine closure plan to Regional Office Ranchi.
- (Condition no. lix): Project authorities should submit some documents supporting that consultation with Panchayat and administration have been done for doing welfare measures under CSR.
- (Condition no. lx): It is requested to submit documentary evidence in support of implementation of public hearing commitments.

Following conditions were partially complied but action initiated/work in progress:

- (Condition v): Coal transportation was being done in the project by road. Project authorities assured that after completion of railway siding there will not be any coal transportation by road.
- (Conditionvi):Project authorities must make efforts to take CGWA/CGWB approval as soon as possible.
- (Condition no. lvi): It was told to expedite the R&R of remaining PAFs.

General Conditions

Following conditions were partially complied:

- (Condition no. i): Surface miner was being used in the project for wining coal. Project authorities told they were using surface miner for coal wining in addition to shovel dumper combination. However, prior approval for surface miner has not been taken from Ministry of Environment, Forest & Climate Change.
- (Condition no. iii): The level of particulate matter (PM_{2.5}) ranges from 24 to 70 µg/m³. NAAQS-2009 has not been followed. At some places in the mine spontaneous combustion was observed. It was told to project authorities to make arrangements to stop the spontaneous combustion of coal urgently.

(Condition no. iv): The level of particulate matter (PM_{2.5}) ranges from 24 to 70 µg/m³. Monitoring data of heavy metals such as Hg, As, Ni, Cd, Cr, etc. has not been submitted.

(Condition no. vi): At workshop discharge after oil & grease trap station, COD, O&G and TSS were higher than prescribed limit. A natural nala was observed flowing in the project area. Coal dust/coal was observed placed/dumped besides the nala. It was told to project authorities to stop placing coal along the nala. Arrangements should also be made so that coal dust doesn't go into the nala.

(Condition no. xiv): Project authorities have not submitted the copy of receipt of EC from concerned Panchayat/ Zila Parishad, Municipal Corporation, etc.

(Condition no. xvi): Six monthly compliance reports for the year 2018 was not uploaded on company's website.

(Condition no. xix): Project Proponent has not uploaded latest Environmental Statement on company website.

Following conditions were being/reportedly complied but further action needed:

(Condition no. v): Project authorities should submit the number of ear plugs/muffs issued to workers during last 3 years.

(Condition no. vii): Project Proponent should submit copy of Pollution under Control (PUC) certificate of few vehicles (operating in the mines) as sample.

(Condition no. ix): Project Proponent should inform distribution of Protective Respiratory Device from 2017 to till date.

(Condition no. x): Project authorities should submit the IME& PME conducted on contractual workers. Also training on health and safety issues imparted to number of contractual workers must be submitted.

(Condition no. xii): Project Proponent should submit year wise & item wise expenditure details on Environmental activity Protection measures for last five years.

(Condition no. xiii): Project authorities should submit copy of EC advertisement in newspapers showing date of publication & newspaper name to Regional Office.

(Condition no. xvii): Project authorities have not submitted half yearly compliance report for May 2014 – September 2014, October 2014- March 15 & October 2015- March 16.

This issues with the approval of the Additional PCCF (Central).

Yours faithfully,

(Rajeev Ranjan)
Scientist 'D'

Enclosure: As stated.

Copy to:

- ✓ 1. Scientist 'E', (Kind attention: Shri SK Srivastava), IA(Coal Mining), Vayu Wing, 3rd floor, IA division, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, Aliganj, New Delhi-110003 (for kind information and necessary action please).
2. The Member Secretary, JSPCB, T.A Division Building, HEC Dhurwa, Ranchi. 834004.
3. Deputy General Manager & HOD (Environment), M/s Central Coalfields Ltd., Darbhanga House, Ranchi. Jharkhand. Ranchi- 834001.
4. Project Officer, Piparwar OCP, Piparwar area, M/s Central Coalfields Ltd., Block- Tandwa, District- Chatra, Jharkhand – 829201. (Action taken report/reply to the non complied/partially complied conditions, other observations must be sent to Regional office, Ranchi within 15 days of receipt of this letter).

Yours faithfully,

Rajeev Ranjan
(Rajeev Ranjan)
Scientist 'D'



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

LAB ACCREDITED BY National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi
Jharkhand State Pollution Control Board (JSPCB)

Ambient Air Quality Report		URL		TC78131820000121F	
Report Release Date	30 th November 2018	Ref. No.	YBAEEL/WA/LA/Nov.-18		
Report ID	YBAEEL/RNC/18 - 11--24/AAQ/01	Sample Description	Ambient Air Quality		
Sampling Date	24 th to 25 th November, 2018	Project Name	Dakra Project (RANCHI)		
Sampling Duration	24 hrs.	Sampling Locations	Site A	CCL, Office, Manual Siding	
Name of Industry	M/s Environmental Care Organisation Near Pushpanjali Cinema Hall Shree Ram Road, K.D. Khalari, P.O. - Khalari, Dist. Ranchi, Jharkhand		Site B	Monat Coal Washery Unit	
		Work Order No.		
		Weather Condition	Clear		
		Relative Humidity	69%		
		Avg. Ambient Temp.	27°C		
Customer Ref.		Mr. Anand Jha	Sample drawn by	Mr. Angad Munda & Team	
Monitored Parameters	Method	Sampling Location		Units	NAAQS Industrial Area
		Site A	Site B		
Particulate Matter (PM10)	IS 5182 Part 23	687.66	481.88	µg/m ³	100 µg/m ³
Particulate Matter (PM2.5)	CPCB Guideline	182.17	193.81	µg/m ³	60 µg/m ³

***** End of Report*****

Remarks Note	All values are observed beyond the prescribed limit
	All values are expressed in as unit.
	The results listed refer only to the tested sample and applicable parameter.
	This report, in full or in part, shall not be used for advertising or as evidence in any court of law
	This report cannot be reproduced, except when in full, without the written permission of the Lab In-charge
	The samples collected shall be destroyed after 45 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount
	All disputes are subjected to the Ranchi Jurisdiction

Mukesh Singh

Tested by
Mukesh Singh
Analyst

Amit Kumar Sinha

Verified by
Amit Kumar Sinha
Lab Analyst

Umesh Das
30/11/18

Issued by
Umesh Das
Technical Manager

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



ISO 9001:2008 & OHSAS 18001:2007 Certified Laboratory

MS-ANZ



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 Jharkhand State Pollution Control Board (JSPCB)

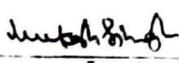
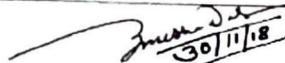
Ambient Air Quality Report		URL	TC78131820000120F
Report Release Date	30 th November 2018	Ref. No.	YBAEEL/WA/L/A/Nov.-18
Report ID	YBAEEL/RNC/18-11-23/AAQ/01	Sample Description	Ambient Air Quality
Sampling Date	23 rd - 24 th November, 2018	Project Name	Dakra Project (RANCHI)
Sampling Duration	24 hrs.	Sampling Locations	Site A Mines Rescue Station
Name of Industry M/s Environmental Care Organisation Near Pushpanjali Cinema Hall Shree Ram Road, K.D. Khalari, P.O. - Khalari, Dist.- Ranchi, Jharkhand			Site B Lions Club CISF Duty Post
			Site C K.D.P.H. Office
		Work Order No.	-----
		Weather Condition	Clear
		Relative Humidity	69%
		Avg. Ambient Temp.	27°C
Customer Ref.	Mr. Anand Jha	Sample drawn by	Mr. Argad Munda & Team

Monitored Parameters	Method	Sampling Location			Units	NAAQS Industrial Area
		Site A	Site B	Site C		
Particulate Matter (PM10)	IS 5162 Part 23	301.09	302.89	412.20	µg/m ³	100 µg/m ³
Particulate Matter (PM2.5)	CPCB Guideline	167.86	153.64	171.36	µg/m ³	60 µg/m ³

***** End of Report*****

Remarks All values are observed beyond the prescribed limit

Note All values are expressed in as unit.
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 Tested by Mukesh Singh Analyst	 Verified by Amit Kumar Sinha Lab Analyst	 Issued by Umesh Das Technical Manager
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Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

