

HALF YEARLY
ENVIRONMENT CLEARANCE COMPLIANCE REPORT
OF
CLUSTER 10
J-11015/180/2011-IA.II(M)
FOR THE PERIOD OF
APRIL 2019 TO SEPTEMBER 2019



Eastern Coalfields Limited
(A subsidiary of Coal India Ltd.)



EASTERN COALFIELDS LIMITED

(A subsidiary of Coal India Limited)

Office of the Chief Manager (Mining)/ Agent: Nabajambad Group of Mines

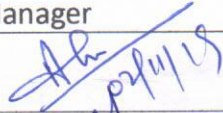
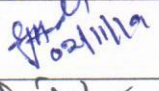
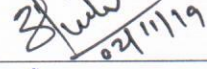

P.O. Kajoram – 713338, Dt. Burdwan

Ref. No. ECL/JC/Agent/EE/19-20/441

Date: 07-11-19

Undertaking

Information provided in Half yearly EC compliance report for the period April'19 to September'19 in respect of the following mines of cluster 10 is true to the best of my knowledge:

Sl.No.	Mines	Name of Manager	Signature of The Manager
1	JAMBAD OCP	Sri Amal Karmakar	 02/11/19
2	MADHABPUR COLLIERY (UG & OC)	Sri Gadadhar Mondal	 02/11/19
3	JAMBAD COLLIERY	Sri A. K. Sinha	 02/11/19
4	NABA KAJORA COLLIERY	Sri U. K. Poulik	 2/11/19

Kirti
14/11/19


5/11/19
Chief Manager (Mining)/Agent
Nabajambad Group of Mines

Agent
Naba Jambad Project

ENVIRONMENT DEPT
ECL, H. Q.
DATE 13.11.19
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No. 963



EASTERN COALFIELDS LIMITED

(A subsidiary of Coal India Limited)

Office of the Chief Manager (Mining)/ Agent: KHAS KAJORA GROUP OF MINES

P.O. Kajoram – 713338, Dt. Burdwan

Ref. No. *KXC/Agent/EC compliance/19-20/606*

Date: *09/11/2019*

Undertaking

Information provided in Half yearly EC compliance report for the period April'19 to September'19 in respect of the following mines of cluster 10 is true to the best of my knowledge:

Sl.No.	Mines	Name of Manager	Signature of The Manager
1	KHAS KAJORA COLLIERY	Sri S. Nanda	<i>[Signature]</i>
2	CENTRAL KAJORA COLLIERY	Sri Sanjay Kumar	<i>[Signature]</i>
3	GHANASHYAM COLLIERY	Work Suspended	Work Suspended
4	LACHIPUR COLLIERY		

[Signature]
09/11/19
Chief Manager (Mining)/Agent
Khas Kajora Group of Mines
मुख्य प्रबंधक, खास काजोड़ा
Ch. Manager (M) /Agent
खास काजोड़ा कोलियरी
Khas Kajora Colliery

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DATE *13.11.19*
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No. *964*



EASTERN COALFIELDS LIMITED

(A subsidiary of Coal India Limited)

Office of the Chief Manager (Mining)/ Agent: Madhusudanpur COLLIERY

P.O. Kajoram – 713338, Dt. Burdwan

Ref. No. MSP/Manager/EC compliance/19/311

Date: 05/11/19

Undertaking

Information provided in Half yearly EC compliance report for the period April'19 to September'19 in respect of the following mines of cluster 10 is true to the best of my knowledge:

Sl.No.	Mines	Name of Manager	Signature of The Manager
1	Madhusudanpur 7 Pit / Incline Colliery	Sri P. K. Tiwari	
2	Madhusudanpur 3/4 Pit Colliery	Sri M. K. Singh	
3	Madhujore Colliery		

9/11/19

Chief Manager (Mining)/Agent
Madhusudanpur Group of Mines
Ch. Manager (M)/Agent
Khas Kajora Gr. of Mines

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No. 965



EASTERN COALFIELDS LIMITED

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Office of the Chief Manager (Mining)/ Agent: PORASCOLE COLLIERY

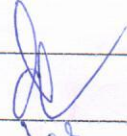

P.O. Kajoramgram – 713338, Dt. Burdwan

Ref. No. PSC/Agent/2019/887

Date: 13/11/2019

Undertaking

Information provided in Half yearly EC compliance report for the period April'19 to September'19 in respect of the following mines of cluster 10 is true to the best of my knowledge:

Sl.No.	Mines	Name of Manager	Signature of The Manager
1	PORASCOLE EAST COLLIERY	Sri Dilip Kumar	
2	PPRASCOLE WEST COLLIERY	Sri Biswajit Karmakar	

Chief Manager (Mining)/Agent
Porascole Group of Mines

Ch. Mg. (Mining) / Agent
Porascole Group of Mines
E.C.L.

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No. 966



Eastern Coalfields Limited
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Office of the General Manager
Kunustoria Area, P.O. Toposi, Dist. Burdwan (WB).

Ref. No: ECL/BC/Survey/19-20/S.84A

Date: 25.11.2019

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of April to September, 2019 in respect of the following mines of Cluster no. 10 is true to the best of my knowledge:

SL NO.	MINE	NAME OF THE MANAGER	SIGNATURE OF THE MANAGER
1.	North Searsole OCP	Arak Kumar Karmanew	
2.	Bansra UG	J.N. Halder	
3.	Bansra OC Patch	Deepak Kumar	

25/11/19
Agent/ Project Proponent
(Bansra Group of Mines)
Agent
Bansra O.C.P./Colliery



Eastern Coalfields Limited
(A Subsidiary of Coal India Limited)
Office of the General Manager
Kunustoria Area, P.O. Toposi, Dist. Burdwan (WB).

Ref. No: 1992

Date: 23-11-19

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of April to September, 2019 in respect of the following mines of Cluster no. 09 is true to the best of my knowledge:

SL NO.	MINE	NAME OF THE MANAGER	SIGNATURE OF THE MANAGER
1.	Amritnagar UG	AMITAVA DAS.	
2.	Narinkuri OC Patch	A K Ghos	
3.	Egara OC Patch	A K Ghos	

20/11/19
Agent/ Project Propohent
(Amritnagar Group of Mines)



Eastern Coalfields Limited
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Office of the General Manager
Kunustoria Area, P.O. Toposi, Dist. Burdwan (WB).

Ref. No: EC2/KNT/SURVEY/2019/2956

Date: 21/11/19

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of April to September, 2019 in respect of the following mines of Cluster no. 10 is true to the best of my knowledge:

SL NO.	MINE	NAME OF THE MANAGER	SIGNATURE OF THE MANAGER
1.	Kunustoria UG	R.K BANDOPADHYAY	for [Signature] 21/11/19
2.	Amrasota UG	R.K BANDOPADHYAY	for [Signature] 21/11/19

[Signature]
Agent/ Project Proponent
(Kunustoria Group of Mines)



Eastern Coalfields Limited
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Office of the General Manager
Kunustoria Area, P.O. Toposi, Dist. Burdwan (WB).

Ref. No: ECL/PC/Admin/19/1469

Date: 23/11/19

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of April to September, 2019 in respect of the following mines of Cluster no. 10 is true to the best of my knowledge:

SL NO.	MINE	NAME OF THE MANAGER	SIGNATURE OF THE MANAGER
1.	Belbaid UG	SURJIT SAMAL	
2.	Parasea UG	GUL AHAMMED	
3.	Parasea OC Patch	-	-

Agent/ Project Proponent
(Parasea Group of Mines)

EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager
Bankola Area



P.O. Ukhra
District : Paschim Burdwan
West Bengal-713363
Ph.: No. 0341-2665491/492/493/494
Fax No. 0341-2665366
Email: gmbankola@gmail.com

Ref. No.: *mc/AS/ENV/19/384*

Dated: *18/11/19*

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Moira Colliery of Cluster No.10 is true to the best of my knowledge.

[Signature]
16-11-19

Agent

Moira Colliery

[Signature]
16/11/19

Manager

Moira Colliery

EASTERN COALFIELDS LIMITED

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**Office of the General Manager
Bankola Area**



P.O. Ukhra

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Ph.: No. 0341-2665491/492/493/494

Fax No. 0341-2665366

Email: gmbankola@gmail.com

Ref. No.: *Asst/Ke/BHV/19/1333*

Dated: *18/11/19*

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Khandra Colliery of Cluster No.11 is true to the best of my knowledge.

[Signature]
16-11-19

Agent

Khandra Colliery

[Signature]
16/11/19

Manager

Khandra Colliery

EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager
Bankola Area



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Email: gmbankola@gmail.com

Ref. No.: SKP/MGR/019/288

Dated: 19/10/2019

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Shankarpur Colliery of Cluster No.11 is true to the best of my knowledge.

Shy 19/10/19

Agent

Shankarpur Colliery

B 18/10/19

Manager

Shankarpur Colliery

EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager
Bankola Area




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District : Paschim Burdwan
West Bengal-713363
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Fax No. 0341-2665366
Email: gmbankola@gmail.com


Ref. No.:

Dated:

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Bankola Colliery of Cluster No.12 is true to the best of my knowledge.


Agent 20/11/19
Bankola Colliery


Manager 20/11/19
Bankola Colliery

EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager
Bankola Area



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West Bengal-713363
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Email: gmbankola@gmail.com

Ref. No.:

Dated:

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Tilaboni Colliery of Cluster No.12 is true to the best of my knowledge.


Agent

Tilaboni Colliery


Manager

Tilaboni Colliery

EASTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

Office of the General Manager
Bankola Area



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District : Paschim Burdwan
West Bengal-713363

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Fax No. 0341-2665366

Email: gmbankola@gmail.com

Ref. No.:

Dated:

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of the Kumardihi-A Colliery of Cluster No.12 is true to the best of my knowledge.


Agent

Kumardihi 'A' Colliery


18.11.19
Manager

Kumardihi 'A' Colliery

EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager
Bankola Area



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West Bengal-713363
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Fax No. 0341-2665366
Email: gmbankola@gmail.com

Ref. No.:

Dated:

UNDERTAKING

Information provided in Half yearly EC compliance report for the period of Apr'19- Sep'19 in respect of Nakrakonda-Kumardihi-B UG & OC of Cluster No.12 is true to the best of my knowledge.

Agent

2/11/19

Kumardihi 'B' Colliery

Manager

Kumardihi 'B' Colliery

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(Apr 19 to Sept 19)

SPECIFIC CONDITION

Condition no. (i)	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.		
Compliance	Complied		
	<u>Mine</u>	<u>Peak EC Capacity (MTPA)</u>	<u>Total Production in FY 2019-20</u>
	North Searsole UG	2.0	0.276750
	North Searsole (East) OC Patch		
	North Searsole (West) OC Patch		
	Kunustoria UG	0.15	0.043148
	Amrasota UG		
	Belbaid UG	0.12	0.26566
	Bansra UG	0.735	0.383734
	Bansra OC Patch		
	Parasea UG	0.55	0.083569
	Parasea OC Patch		
	Parasea 6 &7 UG		
	Jambad OC	1.00	0.242360
	Jambad UG		0.094872
	Naba Kajora UG	2.23	0.029158
	Madhabpur UG		0.039594
	Madhabpur OC Patch		0.155800
	Lachipur UG	0.00	0.00
	Central Kajora UG	0.12	0.035814
	Khas Kajora UG	0.35	0.091015
	Moirra UG	0.12	0.00
	Madhusudanpur UG	0.12	0.021601
	Madhujore UG	0.00	0.00
	Ghanashyam UG	0.00	0.00
	Parascole East & West	0.26	PSC(E) – 0.053225 PSC(W) – 0.031491
	Total	7.70	1.847351
Condition (ii)	The validity of the EC is for the life of the mine or as specified in the EIA Notification, 2006, whichever is earlier.		
Compliance	Agreed		
Condition	There shall be no mine void and no external dumps at the end of mining.		

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(iii)	
Compliance	Agreed
Condition (iv)	Adequate measures shall be taken to mitigate subsidence as per DGMS stipulations.
Compliance	Regular inspection is being done by the pit safety committee headed by Safety Officer on the surface over and around the working area for any sign of subsidence.
Condition (v)	The flyash that has been dumped during past operations shall be covered with one meter top soil. No further flyash dumping shall be done in mines in the cluster.
Compliance	Kajora- The Flyash which was done prior to EC has been covered with top soil. The details of the flyash dumping is given in Annexure – A .
Condition (vi)	Adequate rain water harvesting and other facilities should be created for ground water recharge.
Compliance	<p>Kajora - Roof-top rainwater harvesting and ground water recharging initiatives have been taken up by the company at several places which face lowering of GWL during summer period. The mine discharge is being utilized to meet the domestic demands of the colonies thus reducing the strain on ground water resources.</p> <p>Bankola- Rainwater harvesting and ground water recharging initiatives have been taken up by the company at several places which face lowering of GWL during summer period. The mine discharge is being utilized to meet the domestic demands of the colonies thus reducing the strain on ground water resources.</p> <p>At present, two rainwater harvesting structure is installed at Bankola Area. The details are given below: Shyamsundarpur UG: Rainwater Harvesting system near SSpur Agent Office (Approximate quantity of the area covered: 1600 sqm) Tilaboni UG: Rainwater Harvesting system at Bankola Area Hospital (Approximate quantity of the area covered: 2500 sqm</p> <p>Kunustoria- Roof-top rainwater harvesting and ground water recharging initiatives have been taken up by the company at several places which face lowering of GWL during summer period. The mine discharge is being utilized to meet the domestic demands of the colonies thus reducing the strain on ground water resources.</p>
Condition (vii)	Surface run off must pass through the settling tank before discharging into the water body.
Compliance	Not applicable for UG mines in the Cluster. Surface run off in Open Cast mines is collected in settling ponds or sumps and are discharged after providing suitable retention time.
Condition (viii)	All safety measures shall be taken as per CMR, 1957 & related Circulars.
Compliance	All safety measures are being taken as per CMR, 2017 and related Circulars.

Six Monthly EC Compliance Report Eastern Coalfields Limited -Cluster 10
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Condition (ix)	The production shall be within the same Mining Lease area.
Compliance	The production is within the same Mining Lease area.
Condition (x)	Coal shall be transported by rail only. Coal transportation from mine to siding should be by conveyor belt. The loading to siding by pay loaders into railway wagons.
Compliance	<p>Kajora- There are currently active 3 railways sidings (Nabakajora- Madhabpur, Porascole (E) and Madhusudanpur sidings) serving to the mines in Kajora area. Coal is transported to railway sidings from the mines outlet by dedicated black-topped road especially constructed for the purpose. Coal transportation from mine to siding through belt conveyors is not feasible because, the capacity of the mines is less.</p> <p>Kunustoria - There are currently active 3 railways sidings (Parasea, Belbaid and Bansra sidings) serving to the mines in Cluster 10. Coal is transported to railway sidings from the mines outlet by dedicated black-topped road especially constructed for the purpose. Coal transportation from mine to siding through belt conveyors is not feasible because, the capacities of the mines are less.</p> <p>Bankola- Coal was transported to railway sidings from the mines outlet by dedicated black-topped road especially constructed for the purpose. Coal transportation from mines to siding through belt conveyors is not feasible because, the capacity of the mines is less. At present, the production of the mine is suspended.</p>
Condition (xi)	Independent network of railway siding inside cluster be developed. Railway sidings should be constructed at the earliest and till then proponent may use mechanically covered trucks for transportation of coal.
Compliance	<p>Kajora- There are currently active 6 railways sidings (Parasea, Belbaid, Bansra, Nabakajora- Madhabpur, Porascole (E) and Madhusudanpur sidings) serving to the mines in Cluster 10. Coal is transported to railway sidings from the mines outlet by dedicated black-topped road especially constructed for the purpose. Coal transportation from mine to siding through belt conveyors is not feasible because, the capacities of the mines are less.</p> <p>Kunustoria - There are currently active 3 railways sidings (Parasea, Belbaid and Bansra sidings) serving to the mines in Kunustoria area. Coal is transported to railway sidings from the mines by dedicated black-topped road especially constructed for the purpose. Coal transportation from mine to siding is being done by tarpaulin covered trucks.</p> <p>Bankola- There are currently 2 active railways sidings (Bankola I & Bankola II) serving Bankola Area in Cluster 10. Coal was transported to railway sidings from the mines outlet by dedicated black-topped road especially constructed for the purpose. As present the production is suspended.</p>
Condition	Three tier green belts shall be raised around the railway sidings and along the

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(xii)	road sides to prevent dust and noise pollution.
Compliance	<p>Kajora/ Kunustoria- At railway siding, plantation has been done to check dust and noise pollution. Both sides of connecting roadway are well vegetated naturally.</p> <p>Bankola- Both sides of connecting roadway are well vegetated naturally. Plantation along 5.5km roadways has been done along coal transportation road and siding.</p> <p>The species planted are as follows-</p> <ul style="list-style-type: none"> • Tagar nana • Duranta goldiana • Ixora nana • Hibiscus • Mosanda • Almunda • Phutus • Palm • Spathodia • Lagerstroema • Cassia delonix • Ashok • Polyalthia • Callistemon
Condition (xiii)	Stowing and depillaring shall be as per the recommendations of the DGMS.
Compliance	Stowing and depillaring done as per the recommendations of the DGMS.
Condition (xiv)	The proponent must comply with the Raniganj Action Plan. The unstable areas within the cluster will be brought under plantation after the population residing over these areas is rehabilitated under the Master Plan for Raniganj Coalfield to be implemented by ADDA.
Compliance	Work in progress and is being implemented by ADDA, Govt. of West Bengal.
Condition (xv)	Trees with deep rooted system should be planted so as to prevent soil erosion.
Compliance	Trees with deep-rooted system are planted in consultation with state forest dept. to prevent soil erosion. Deep rooted tree species planted are as follows- Neem, Seemul, Karanch, Shisham, Arjun, Babool & Sirish.
Condition (xvi)	Proponent should plant additional 10 Ha/year over the next 10 years at various locations in the cluster.
Compliance	<p>Kajora- A Combined 34.5 Ha was Planted in Lachipur and Jambad OCP in 2018-19. 15 Ha is in the process of plantation in Madhabpur OCP(H) under Kajora Area.</p> <p>Bankola- Agreed</p> <p>Kunustoria- For FY 2019-20, Plantation of 8 Ha in Parasea OCP is under progress.</p>
Condition (xvii)	River/Nallah shall be desilted and restored back to functional state.

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Compliance	Kajora -No mine water is discharged into River/Nallah but it is periodically desilted before the start of monsoon season to maintain flow of rain water. Bankola - No activity is carried out in Moira Colliery under Bankola Area which may cause siltation in any river/nallah in vicinity. At present the production is suspended.
Condition (xviii)	Wild life conservation plan be prepared and submitted to the MoEF & CC with the approval of the State Govt.
Compliance	Conservator of Forest (wildlife), Govt. of West Bengal has been requested to prepare Wildlife Conservation plan of entire Raniganj Coalfield.
Condition (xix)	Proponent shall use high resolution image of all clusters for evaluating land use, plantation etc.
Compliance	Land use pattern and plantation is being monitored by satellite surveillance based on satellite imagery.
Condition (xx)	Separate drainage pattern be provided.
Compliance	Separate drainage pattern will be provided where required.
Condition (xxi)	Sand stowing must be used as recommended by CMPDIL.
Compliance	Sand stowing is being used as recommended by CMPDIL.
Condition (xxii)	Action plan for prevention and mitigation of subsidence be prepared and implemented.
Compliance	Action plan for prevention and mitigation of subsidence has been prepared and implemented as per DGMS guidelines.
Condition (xxiii)	The OC Patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
Compliance	Noted and agreed.
Condition (xxiv)	The OB shall be completely re-handled at the end of the mining
Compliance	Noted and agreed.
Condition (xxv)	There shall be no OB dump after the mining
Compliance	Noted and agreed.
Condition (xxvi)	After completion of mining activities, the subsided areas shall be graded and planted upon.
Compliance	Noted and agreed, will be done as per approved Mine Closures Plan.
Condition (xxvii)	Coal Extraction shall also be optimized in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring and coal extraction should be carried out below habitation, H.T. lines and beneath road, water bodies
Compliance	No underground mining is carried out below within 45m of the Major Roads, Railway line, HT lines and nallah flowing through the cluster. Coal pillars are left intact vertically below and within the angle of draw of villages and other surface features. Depillaring is done with sand stowing in all mines except Moira UG. Coal Extraction is being carried out as per DGMS permissions and

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	guidelines.
Condition (xxviii)	The land excavated after mining must be brought back to original condition for agricultural / plantation purpose.
Compliance	Noted and agreed. And shall be done as per Mine Closure Plan
Condition (xxix)	Water discharged from the mine should be as good as surface drinking water.
Compliance	Mine discharge water is being treated in slow sand filter/ pressure filter along with chlorination and used for drinking water. Furthermore, Mine water is not acidic, as such there is no requirement of acid mine drainage treatment facility.
Condition (xxx)	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.
Compliance	Regular inspection is being done by the pit safety committee headed by Safety Officer on the surface over and around the working area for any sign of subsidence. Corrective measures are done in confirmation with DGMS.
Condition (xxxi)	If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
Compliance	Surface land is already acquired under CBA Act and Compensation as per Company's R&R Policy is given to the land owners prior to land acquisition.
Condition (xxxii)	Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.
Compliance	The coal transportation road from Mines to Railway Siding is black topped and Water Sprinkling is being done on the approach road with Mobile Water tankers.
Condition (xxxiii)	The CSR cost should be Rs 5 per Tonne of Coal produced which should be adjusted as per the annual inflation.
Compliance	Kajora- CSR cost at the rate of 2% of the net profit has kept for the purpose. Refer to Annexure B for expenditure incurred under CSR Activities. Bankola- CSR cost at the rate of 2% of the net profit has kept for the purpose. Kunustoria- Details of CSR is enclosed herewith.
Condition (xxxiv)	The mining in the existing mines should be phased out after expiry of the current mining lease and after reclamation of the mined out area. The operating mines may be analyzed and monitored for compliance of conditions, bearing with movement of wildlife and until such time they are closed/ phased out.
Compliance	Noted and Agreed .
Condition (xxxv)	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
Compliance	In order to provide protection against fugitive dust emission, dust masks are being provided to people working in the core area.
Condition	Dust mask to be provided to everyone working in the mining area.

Six Monthly EC Compliance Report Eastern Coalfields Limited -Cluster 10
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(xxxvi)	
Compliance	Dust mask have been provided to everyone working in the mining area.
Condition (xxxvii)	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
Compliance	Supervisory staff ensures compulsory wearing of the dust masks in the core area.
Condition (xxxviii)	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mining area.
Compliance	Kajora- 20 % of the work force is covered under periodic medical examination each year including lung diseases the cost of which is borne by the company. The PME report is enclosed as Annexure C . Bankola- 20 % of the work force is covered under periodic medical examination each year including lung diseases the cost of which is borne by the company. Report of PME is also attached (Annexure B). Kunustoria- 20 % of the work force is covered under periodic medical examination each year including lung diseases the cost of which is borne by the company. Total PME conducted for 1079 nos. of employees out of which 295 are contractual from a period of Jan 2019 to Oct 2019.
Condition (xxxix)	The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.
Compliance	Most of the mines in this cluster are UG mines and as such pollution load is concentrated in mine working faces. However, the region has Natural Vegetation. Additional Plantation is being done at the rate of 10Ha/year. A Combined 34.5 Ha with rate 2500 plants /Ha was Planted in Lachipur and Jambad OCP in 2018-19. Deep rooted tree species planted are as follows- Neem, Seemul, Karanch, Shisham, Arjun, Babool & Sirish.
Condition (xli)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers indentified from workforce engaged in the active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialized agency/institution within the District/State and the results reported to this ministry and to DGMS.
Compliance	We are carrying out Periodical Medical Examination (PME) for all employees once in every 5 years (@ 20% employees/year). This PME is mandatory for all employees. Special cases diagnosed during such PMEs are monitored at shorter intervals as directed by the PME Board of Doctors. The details are enclosed.
Condition (xlii)	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.
Compliance	Not applicable as there is no river within the mine leased area of the cluster.
Condition (xlii)	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
Compliance	Agreed.
Condition	Catch drains and siltation ponds of appropriate size shall be constructed to

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(xliii)	arrest silt and sediment flow from soil, OB and mineral dumps. The water so collected shall be regularly watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall 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 shall also provide adequate retention period to allow proper settling of silt material
Compliance	Permanent masonry drains of size range 200 to 600 mm, 0.90 m to 2 m and 0.6 m to 2 m depth and 1 in 30 gradients, depending on the catchment have been constructed for evacuation of rain water. The size of the drain is large enough to take care of heavy downpours. The drain is cleared of debris before start of the monsoon season as part of our annual monsoon preparation program.
Condition (xliv)	Garland drains (size, gradient & length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.
Compliance	Permanent masonry drains of size range 200 to 600 mm, 0.90 m to 2 m and 0.6 m to 2 m depth and 1 in 30 gradients, depending on the catchment have been constructed for evacuation of rain water. The size of the drain is large enough to take care of heavy downpours. The drain is cleared of debris before start of the monsoon season as part of our annual monsoon preparation program.
Condition (xlv)	Dimensions of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
Compliance	Not applicable for UG mines under the cluster10. Agreed for OCP mines.
Condition (xlvi)	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
Compliance	No crusher is installed at CHP.
Condition (xlvii)	Mine Discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.
Compliance	Mine water discharge quality complies with prescribed standards. Regular monitoring is done by CMPDI. Reports for Cluster are enclosed.
Condition (xlviii)	Drills shall be wet operated.
Compliance	Sprinkling arrangement is present at all the coal faces and water is sprinkled before and after blasting in underground mines. In open cast mines, drills are operated with dust suppression facility. Kajora -Some models are REL-600 – 3 Nos and IDM 30 – 1 Nos.
Condition (xlix)	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3- tier green belt comprising of a mix of native species shall be developed all along the major approach roads.

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Compliance	<p>As per requirement, Regular repairing and tarring of roads are being taken on priority basis. Both sides of approach roadway are well vegetated naturally.</p> <p>Kajora- A 2.5 km plantation has been done last year along coal transportation road from C Pit to Bansra siding. Some species are Kamini, Rangan, Krishnachura, Jaba, Karabi, Bougenvelia, Pathodia, Jamun, Radhachura etc.</p> <p>Bankola- Plantation done</p> <table border="1" data-bbox="381 478 1380 1108"> <thead> <tr> <th>Year</th> <th>Name of Species</th> <th>Area in Ha</th> <th>No. of saplings</th> <th>Density</th> <th>Survival rate</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>Kamini, Rangan, Krishnachura, Jaba, Karabi, Bougenvelia, Pathodia, Jamun, Radhachura etc.</td> <td>5.5 Km (Roadside)</td> <td>-</td> <td>-</td> <td>35%</td> </tr> <tr> <td>2016-17</td> <td>Chatim, Krishnachura, Radhachura, Karanch, Amla etc.</td> <td>12 Ha</td> <td>22500</td> <td>2500/Ha</td> <td>75%</td> </tr> </tbody> </table> <p>Kunustoria- Plantation of 8 Ha is under progress in Parasea OCP in Kunustoria area for FY 2019-20.</p>	Year	Name of Species	Area in Ha	No. of saplings	Density	Survival rate	2016-17	Kamini, Rangan, Krishnachura, Jaba, Karabi, Bougenvelia, Pathodia, Jamun, Radhachura etc.	5.5 Km (Roadside)	-	-	35%	2016-17	Chatim, Krishnachura, Radhachura, Karanch, Amla etc.	12 Ha	22500	2500/Ha	75%
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Condition (i)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.																		
Compliance	Complied. Controlled blasting is being done as per DGMS permission and conditions.																		
Condition (ii)	A Progressive afforestation plan shall be implemented covering an area of 1289 ha at the end of mining, which includes reclaimed Top-soil dump (30 Ha), Excavation area (805 Ha), External Waste Dump area (170 ha), Mine Infrastructure area (24.8 ha); Subsided (43.2 Ha) and Others land (196 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.																		
Compliance	The mine is in cluster 10 and it is proposed to plant 10 Ha per year within cluster 1 at the density of 2500 plants/Ha.																		
Condition (iii)	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner																		

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Compliance	Mine closure Plan has already been prepared for the purpose. Restoration and reclamation shall be done accordingly.																																																
Condition (lii)	Compensatory Ecological & Restoration of waste land, other degraded lands and OB dumps in lieu of breaking open the land be carried out.																																																
Compliance	Mine closure Plan has already been prepared for the purpose. Compensatory ecological and restoration of wasteland shall be done accordingly.																																																
Condition (liv)	No groundwater shall be used for mining operations																																																
Compliance	No ground water is being used for mining operations.																																																
Condition (lv)	An estimated total 19.74 Mm ³ of OB will be generated during entire life of the mine. Out of which 1.92 Mm ³ of OB will be dumped in one external dump covering area 7.60 Ha of land and 17.82 Mm ³ in internal OB dumps covering an area of 557 Ha of land. The OB dump height is upto 60 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF&CC and its Regional Office on yearly basis.																																																
Compliance	<p>Not applicable for UG mines under the Cluster. The Details OC dumps with their slope angle is given below:</p> <p><u>Kajora-</u> <u>Dumps of Madhabpur OC Patch</u></p> <table border="1"> <thead> <tr> <th>Dump No.</th> <th>Top R/L</th> <th>Bottom R/L</th> <th>Slope Angle</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Dump No 1</td> <td>95.34</td> <td>82.80</td> <td rowspan="2">26 °</td> </tr> <tr> <td>93.06</td> <td>84.20</td> </tr> <tr> <td rowspan="2">Dump No 2</td> <td>96.50</td> <td>81.65</td> <td rowspan="2">28 °</td> </tr> <tr> <td>97.05</td> <td>90.63</td> </tr> <tr> <td rowspan="3">Dump No 3</td> <td>96.02</td> <td>84.40</td> <td rowspan="3">27 °</td> </tr> <tr> <td>97.98</td> <td>78.05</td> </tr> <tr> <td>89.75</td> <td>79.88</td> </tr> </tbody> </table> <p><u>Dumps of Jambad OCP</u></p> <table border="1"> <thead> <tr> <th>Dump No.</th> <th>Top R/L</th> <th>Bottom R/L</th> <th>Slope Angle</th> </tr> </thead> <tbody> <tr> <td>Dump No 1</td> <td>114</td> <td>110</td> <td>25 °</td> </tr> <tr> <td>Dump No 2</td> <td>150</td> <td>114</td> <td>27 °</td> </tr> <tr> <td>Dump No 3</td> <td>138</td> <td>107</td> <td>26 °</td> </tr> <tr> <td>Dump No 4</td> <td>124</td> <td>108</td> <td>25 °</td> </tr> <tr> <td>Dump No 5</td> <td>120</td> <td>106</td> <td>27 °</td> </tr> </tbody> </table> <p>Bankola- Not applicable as no OCP is present under Bankola Area in Cluster-10.</p>	Dump No.	Top R/L	Bottom R/L	Slope Angle	Dump No 1	95.34	82.80	26 °	93.06	84.20	Dump No 2	96.50	81.65	28 °	97.05	90.63	Dump No 3	96.02	84.40	27 °	97.98	78.05	89.75	79.88	Dump No.	Top R/L	Bottom R/L	Slope Angle	Dump No 1	114	110	25 °	Dump No 2	150	114	27 °	Dump No 3	138	107	26 °	Dump No 4	124	108	25 °	Dump No 5	120	106	27 °
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Condition (lvi)	Of the total quarry area 805 Ha, the backfilled quarry area of (805 Ha) shall be reclaimed with plantation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of trees shall be around 2500 plants per ha.
Compliance	Not applicable for UG mines in the Cluster and Agreed for OCP.
Condition (lvii)	Regular monitoring of ground water level quality shall be carried out by establishing a network of existing wells and construction of new piezometer. The monitoring for quantity shall 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 shall be submitted to the Ministry of Environment, Forests & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.
Compliance	Ground water level monitoring is being done regularly by CMPDIL through a network of existing wells. Construction of new piezometers for ground water monitoring is under process. Work order already issued and work has been started.
Condition (lviii)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine
Compliance	Roof-top rainwater harvesting and ground water recharging initiatives have been taken up by the company at several places which face lowering of GWL during summer period. Since the mine is an underground mine, recharging of water at surface will further add to the quantum of water percolating into the underground workings. Also, no declining trend has been noticed in the mine leasehold. The mine discharge is being utilized to meet the domestic demands of the colonies thus reducing the strain on ground water resources. Bankola- Two artificial ground water recharging system is already installed under the leasehold of Bankola Area.
Condition (lix)	Sewage treatment plants shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
Compliance	No CHP is present in the mine. A small workshop which caters to small repairing jobs of day to day nature like welding, machining etc. discharges negligible amount of water, for which ETP is not feasible.
Condition (lx)	Land oustees shall be compensated as per the norms laid out R&R policy of CIL or the national R&R policy or R&R Policy of the state government whichever is higher.
Compliance	If required, Land oustees shall be compensated as per the norms laid out in R&R Policy of CIL
Condition (lxi)	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 1:5000) of the core zone and the buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years(for any one particular season which is consistent in the time series), and the report submitted to MOEF& CC and its

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	concerned Regional Office															
Compliance	Land use pattern and plantation is being monitored by satellite surveillance based on satellite imagery.															
Condition (Ixii)	A Detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest & Climate Change within 6 months of grant of Environment Clearance.															
Compliance	Mine closure plan have been prepared for the mine as per the guidelines of MOC.															
Condition (Ixiii)	The project authorities shall in consultation with the panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried on over the balance life of the mine															
Compliance	<p><u>Kajora Area</u></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Activity</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>Medical Camps, Training camps etc.</td> <td>2.40 Lakh</td> </tr> <tr> <td>2015-16</td> <td>Medical Camps etc.</td> <td>0.7 Lakh</td> </tr> <tr> <td>2016-17</td> <td>Medical Camps etc.</td> <td>1.07 Lakh</td> </tr> <tr> <td>2017-18</td> <td>Training camps. etc.</td> <td>0.77903 Lakh</td> </tr> </tbody> </table> <p>The details of expenditure in 2018-19 is given in Annexure – B.</p> <p>Kunustoria- The project authorities shall in consultation with the panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried on over the balance life of the mine</p>	Year	Activity	Expenditure	2014-15	Medical Camps, Training camps etc.	2.40 Lakh	2015-16	Medical Camps etc.	0.7 Lakh	2016-17	Medical Camps etc.	1.07 Lakh	2017-18	Training camps. etc.	0.77903 Lakh
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Condition (Ixiv)	<p>Corporate Environmental Responsibility:</p> <p>(a) The Company shall have a well laid down Environmental Policy approved by the Board of Directors.</p>															
Compliance	“Corporate Environmental Policy 2012” of Coal India Limited has already been formulated.															
(b)	The Environmental Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.															
Compliance	“Corporate Environmental Policy 2012” of Coal India Limited has prescribed standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/condition.															
(c)	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental conditions shall be furnished.															
Compliance	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions has been furnished in “Corporate Environmental Policy															

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	2012” of Coal India Limited.
(d)	To have proper checks and balances, the Company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the board of directors of the company and /or shareholders or stakeholders at large.
Compliance	It is already in place.

General Conditions	
Condition (i)	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forest & Climate Change
Compliance	Complied. Change in mining technology and scope of working, if any, shall be made with prior approval of the Ministry of Environment, Forests & Climate Change.
Condition (ii)	No change in the calendar plan of production of quantum of mineral cost shall be made.
Compliance	There shall be no change in the calendar plan of production for quantum of mineral coal.
Condition (iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ and NO _x monitoring. 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
Compliance	Air quality monitoring is carried out by CMPDIL on fortnightly basis and all desired parameters are well within the prescribed limits. The Reports are enclosed.
Condition (iv)	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification Of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.
Compliance	Air quality monitoring is carried out by CMPDI on fortnightly basis and data on ambient air quality shall be regularly submitted to the Ministry including its concerned Regional Officer and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
Condition (v)	Adequate measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
Compliance	Noise level monitoring is carried out by CMPDIL on fortnightly basis. Noise level has always been below 85 dBA. Reports are enclosed.
Condition (vi)	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 19 th May 1993 and 31 st December 1993 or as amended from

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	time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
Compliance	Mine discharge water samples are tested in laboratory at CMPDI on fortnightly basis. Mine water quality conforms to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993. The mine water quality report is enclosed.
Condition (vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the minerals shall be covered with tarpaulins and optimally loaded.
Compliance	Vehicular emissions are kept under control and regularly monitored. Coal transportation from the mine to railway siding is being done by tarpaulin covered trucks. All the vehicles have PUC Certificates.
Condition (viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA rules, 1986
Compliance	Monitoring of environmental parameters is carried out on regular basis by CMPDI. Laboratory at CMPDIL, Asansol is having all necessary facilities.
Condition (ix)	Personnel working under dusty area shall wear protective respiratory devices and they shall also be provided with adequate training and information and information safety and health aspects.
Compliance	All protective devices have been provided to workmen and are replaced periodically. Adequate training to all personnel has also been provided. New recruits are trained at the VTC before their deployment. PME's are carried out on all employees once in 5 years.
Condition (x)	Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of Environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
Compliance	We are carrying out Periodical Medical Examination (PME) for all employees once in every 5 years (@ 20% employees/year). This PME is mandatory for all employees. Special cases diagnosed during such PME's are monitored at shorter intervals as directed by the PME Board of Doctors. Kajora- The PME report is enclosed as Annexure – C. Bankola- PME of 828 workers has been conducted in Bankola Area in the year 2019-20 along with 18 Spirometry and 15 Audiometry tests. Details can be found in Annexure B . Kunustoria- PME of 1079 employees as done during a period from Jan 2019-Oct 2019, out of which 795 are contractual employees.
Condition (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
Compliance	A separate environmental management cell with qualified personnel has been established for all the Areas under Cluster 10. The cell reports to the respective

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	Area GM and GM, Environment and Forest; ECL.
Condition (xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office.
Compliance	Funds for environmental protection as kept in budget each year is not diverted for other purposes.
Condition (xiii)	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, Forest and Climate Change at http://envfor.nic.in .
Compliance	Complied.
Condition (xiv)	A copy of the environmental clearance letter shall be marked to concern Panchayat / Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestions/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on Company's website.
Compliance	A copy of the environmental clearance letter for cluster 10 has been marked to concerned Panchayat/ Zila Parishad, Municipal Corporation or Urban local body.
Condition (xv)	The EC letter is uploaded on the company's website.
Compliance	The EC letter is uploaded on the company's website.
Condition (xvi)	The clearance letter shall be uploaded on the Company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of the environmental quality parameters (air, water, noise & soil) and critical pollutant such as PM ₁₀ , PM _{2.5} , SO ₂ and NO _x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on Company's website.
Compliance	The monitoring data of environmental quality parameter (air, water and noise) and critical pollutant such as PM ₁₀ , PM _{2.5} , SO ₂ and NO _x (ambient) and critical sectorial parameters are being displayed on Company's website.
Condition (xvii)	The Project Proponent shall submit six monthly compliance reports on statue of compliance of the stipulated environmental clearance conditions (both in hard copy and in e- mail) to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.
Compliance	Six monthly compliance reports of the stipulated environmental clearance conditions are submitted to Regional Office of the Ministry, Bhubneshwar, CPCB and SPCB in Hard copy as well as e-mail.
Condition (xviii)	The Regional Office of the Ministry located in the Region shall monitor compliances of the stipulated conditions. The Project authorities shall extend

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	full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
Compliance	Agreed.
Condition (xix)	The environmental statement for each financial year ending 31 march in form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along the status of the EC conditions and shall be sent to the respective Regional Offices of the MOEFCC by e-mail.
Compliance	Agreed.

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FOR COMPANY USE ONLY RESTRICTED

The information given in this report is not to be communicated either directly or indirectly to the press or to any person not holding an official position in the CIL / GOVERNMENT.

**ENVIRONMENTAL MONITORING REPORT
OF
CLUSTER NO. 10**

(FOR THE MONTH OF AUGUST, 2019)

(BANKOLA, KAJORA & KUNUSTORIA AREA)

Eastern Coalfields Limited



**Regional Institute-1
Asansol (WB)**

ENVIRONMENT MONITORING REPORT FOR CLUSTER NO. 10

(For the Month of August, 2019)

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CHAPTER - I
INTRODUCTION

1.0 The environmental monitoring has been carried out as per conditions laid down by MoEF&CC while granting environmental clearance to different projects. CMPDIL has trained manpower and well equipped laboratory to carry out monitoring, analysis and R&D work in the field of environment.

Reports have been prepared for submission to MoEF&CC and SPCB and other statutory authorities.



CHAPTER-II

AMBIENT AIR QUALITY MONITORING

2.1 Location of sampling station and their rationale:

2.1.1 Ambient Air Quality Sampling Locations

I. Industrial Area Monitoring Location**i) GM office, Kunustoria (10A1): Industrial Area**

The sampler was placed at GM Office, Kunustoria to assess the ambient air quality of industrial area in the core zone where mining activities are in progress.

ii) Manager's office, Jambad OCP (10A2) : Industrial Area

The sampler was placed at manager's office of Jambad colliery. This station was selected to assess the ambient air quality of Industrial area in the core zone where mining activities as well as coal transport activities are in progress.

iii) Naba Kajora railway siding (10A3): Industrial Area

The sampler was placed at Naba Kajora railway siding. This station was selected to assess the ambient air quality of industrial area in the core zone where coal transportation activities are in progress.

iv) Lachipur Colliery Office (10A4): Industrial Area

The sampler was placed at Time office of Lachipur colliery. This site was selected to assess the present ambient air quality status in Industrial area of core zone.

v) Agent office, Jambad colliery (10A9): Industrial Area

The air sampler was placed at agent office of Jambad colliery which is in the core zone of Jambad OCP. This station was selected to assess the ambient air quality of industrial area in the core zone.

vi) Madhujore railway siding (10A11): Industrial Area

The sampler was placed at Madhujore railway siding. This site was selected to assess the present ambient air quality status in industrial area of core zone where coal transport activities are in progress.

vii) Mukundpur pit office near railway siding (10A12): Industrial Area

The sampler was placed at pit office of Mukundpur colliery to assess the present ambient air quality status in industrial area of core zone.

viii) Bansra railway siding (10A13): Industrial Area

The sampler was placed at Bansra railway siding to assess the present ambient air quality status in industrial area of core zone where coal transport is in progress.

ix) Managers' office, near Parasea railway siding (10A14): Industrial Area

The sampler was placed at managers' office of Parsea colliery. This station was selected to assess the ambient air quality of industrial area in the core zone where mining activities are in progress.

II. Residential Area Monitoring Location

x) Bhoot Banglow near Topsis railway siding (10A8): Residential Area.

The sampler was placed at Topsis colony, Bhoot Banglow to assess the present ambient air quality status in residential area.

xi) Khandra Workshop (10A10): Residential Area.

The sampler was placed in Khandra regional workshop to to assess the present ambient air quality status in residential area.

2.2 Methodology of sampling and analysis

Parameters chosen for assessment of ambient air quality were Particulate Matter (PM₁₀), Fine Particulate Matter (PM_{2.5}), Sulphur Di-oxide (SO₂) and Nitrogen Oxides (NO_x). Respirable Dust Sampler (RDS) & Fine Dust Sampler (FDS) were used for sampling of PM₁₀ & gaseous pollutants and PM_{2.5} respectively. The samples were analysed in Environmental Laboratory of CMPDI, RI-I, Asansol.

2.3 Results & Interpretations

The results of Ambient Air Quality are presented in tabular form along with for each monitoring station. Sampling stations have been chosen keeping in view predominant wind direction and have been classified as permanent, pre monsoon (April – September) & post monsoon (October – March) air sampling stations. The interpretations of different parameters are given below:

2.3.1 Ambient air quality

Particulate Matter (PM₁₀)

In Industrial area varies from 89.5 to 116.3 µg/m³ & in Residential area from 83.6 to 108.4 µg/m³.

Fine Particulate Matter (PM_{2.5})

In Industrial area from 31.4 to 43.8 µg/m³ & in Residential area from 30.7 to 38.6 µg/m³

Sulphur Dioxide (SO₂):

In Industrial area below 10 µg/m³ & in Residential area below 10 µg/m³.

Oxides of Nitrogen (NO_x):

In Industrial area varies from 16.3 to 19.8 µg/m³ & in Residential area from 12.8 to 14.6 µg/m³.

AMBIENT AIR QUALITY DATAName of the Company: **Eastern Coalfield Limited**Month: **August**. Year: **2019**Name of the Project : **Mines of Cluster No. 10****Industrial Area****1st fortnight**

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
10A1	Kunustoria GM office	7-Aug-19	97.6	41.2	<10.0	19.4
10A2	Manager's office, Jambad OCP	8-Aug-19	114.6	43.7	<10.0	18.7
10A3	Naba Kajora railway siding	8-Aug-19	105.7	39.5	<10.0	16.4
10A4	Lachipur colliery office	8-Aug-19	97.6	42.8	<10.0	18.2
10A9	Agent office, Jambad colliery	8-Aug-19	98.5	37.7	<10.0	17.6
10A11	Madhujore railway siding	7-Aug-19	105.4	39.8	<10.0	18.5
10A12	Mukundpur pit office near railway siding	9-Aug-19	111.5	42.6	<10.0	17.6
10A13	Bansra railway siding	9-Aug-19	103.7	41.3	<10.0	19.8
10A14	Managers' office, near Parasea railway siding	8-Aug-19	116.3	40.9	<10.0	18.3

2nd fortnight

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
10A1	Kunustoria GM office	16-Aug-19	89.5	42.8	<10.0	18.6
10A2	Manager's office, Jambad OCP	16-Aug-19	94.5	43.7	<10.0	19.4
10A3	Naba Kajora railway siding	21-Aug-19	93.6	39.2	<10.0	17.3
10A4	Lachipur colliery office	22-Aug-19	98.7	40.7	<10.0	16.4
10A9	Agent office, Jambad colliery	21-Aug-19	97.2	42.6	<10.0	17.5
10A11	Madhujore railway siding	21-Aug-19	104.5	43.8	<10.0	18.4
10A12	Mukundpur pit office near railway siding	22-Aug-19	94.6	33.6	<10.0	19.2
10A13	Bansra railway siding	16-Aug-19	98.7	37.8	<10.0	16.3
10A14	Managers' office, near Parasea railway siding	21-Aug-19	93.4	31.4	<10.0	18.5

AMBIENT AIR QUALITY DATA

Name of the Company: **Eastern Coalfield Limited**Month: **August**. Year: **2019**Name of the Project : **Mines of Cluster No. 10**

Residential Area

1st fortnight

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
10A8	Bhoot banglow near Topsi railway siding	7-Aug-19	108.4	38.6	<10.0	13.2
10A10	Khandra workshop	7-Aug-19	89.6	31.3	<10.0	12.8

2nd fortnight

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
10A8	Bhoot banglow near Topsi railway siding	16-Aug-19	94.7	30.7	<10.0	13.7
10A10	Khandra workshop	19-Aug-19	83.6	32.6	<10.0	14.6

Environmental Standards for Ambient Air Quality (AAQ) :

Station Category	<i>Environmental standard for Raniganj Coalfield vide MOEF, Govt. of India, Gazette Notification No. GSR 742 (E) dated 25.09.2000 for 24 hourly samples at 500 meters from dust generating point</i>			<i>National Ambient Air Quality Standards (NAAQS), 2009 for industrial, residential and rural areas for 24 hours samples</i>	
	Pollutant Concentration (µg/m ³)				
	PM ₁₀	SO ₂	NO _x	PM _{2.5}	
Industrial	300.0	120.0	120.0	60.0	
Residential	100.00	80.0	80.0		

:

CHAPTER – III

WATER QUALITY MONITORING

3.1 Location of sampling sites and their rationale

- i) **Amrasota UG (10MW1)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- ii) **Belbaid UG (10MW2)**
This location has been selected to monitor the discharge quality of mine effluent. The water being used for sand packing of UG and remaining discharge to natural surface streams.
- iii) **Belbaid OC Patch (10MW3)**
This location has been selected to monitor the discharge quality of mine effluent after sedimentation tank.
- iv) **Bansra UG (10MW4)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- v) **Parasea UG (10MW5)**
This location has been selected to monitor the discharge quality of mine effluent after sedimentation pond.
- vi) **Jambad OC (10MW6)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- vii) **Jambad UG (10MW7)**
This location has been selected to monitor the discharge quality of mine effluent which is being used for sand packing.
- viii) **Nabakajora UG (10MW8)**
This location has been selected to monitor the discharge quality of mine effluent.
- ix) **Madhabpur UG (10MW9)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams after siltation pond.
- x) **Madhabpur OC Patch (10MW10)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- xi) **Lachipur UG (10MW11)**
This location has been selected to monitor the discharge quality of mine effluent after sedimentation tank.

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- xii) **Central Kajora UG (10MW12)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- xiii) **Khas Kajora UG (10MW13)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams after siltation pond.
- xiv) **Madhusudanpur UG (10MW14)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams
- xv) **Parascole East (10MW15)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams after sedimentation tank.
- xvi) **Parascole West (10MW16)**
This location has been selected to monitor the discharge quality of mine effluent.
- xvii) **North Searsole UG (10MW17)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.
- xviii) **Moira UG (10MW18)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams after sedimentation tank.
- xix) **Madhujore UG (10MW19)**
This location has been selected to monitor the discharge quality of mine effluent to natural surface streams.

3.2 Methodology of sampling and analysis

Water samples were collected as per standard practice. The effluent samples were collected and analysed for five parameters on fortnightly basis and all parameters on Half-yearly basis. The Ground water samples were collected and analysed for all parameters on annual basis. Parameters like pH and Free Residual Chlorine were analysed on-site while collecting the samples. Thereafter the samples were preserved and analysed at the field laboratory located at RI-I Office campus.

3.3 Results & Interpretations

The results are given in tabular form along with the applicable standards. Results are compared with General Standards for Discharge of Effluent (Schedule VI) in case of effluent/mine water sample and compared with IS.10500: 2012 in case of drinking water sample. Results show that most of the parameters are within the permissible limits.

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WATER QUALITY DATA (Effluent Water)

Name of the Company: **Eastern Coalfield Limited**

Month: **August**. Year: **2019**.

Name of the Project: **Mines of Cluster No. 10**

Name of the Stations & Code: **1. 10MW1- Amrasota UG. 2. 10MW2- Belbaid UG. 3. 10MW4- Bansra UG.**
 4. 10MW5- Parasea UG. 5. 10MW6- Jambad OC.

First Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW1	10MW2	10MW4	10MW5	10MW6			
	Date of sampling	7-Aug-19	6-Aug-19	7-Aug-19	6-Aug-19	6-Aug-19			
1	pH	8.01	8.20	8.31	8.42	7.62	5.5 - 9.0	Electrometric	0.01
2	TSS	36	28	22	40	30	100 (Max)	Gravimetric Method	10.0
3	TDS	494	536	876	568	712	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	36	28	32	40	36	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW1	10MW2	10MW4	10MW5	10MW6			
	Date of sampling	23-Aug-19	22-Aug-19	23-Aug-19	22-Aug-19	22-Aug-19			
1	pH	8.31	8.45	8.61	8.71	7.10	5.5 - 9.0	Electrometric	0.01
2	TSS	40	30	22	42	34	100 (Max)	Gravimetric Method	10.0
3	TDS	506	612	868	574	686	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	32	36	40	28	32	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

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WATER QUALITY DATA (Effluent Water)

Name of the Company: **Eastern Coalfield Limited**

Month: **August**. Year: **2019**.

Name of the Project: **Mines of Cluster No. 10**

Name of the Stations & Code: **6. 10MW7 - Nabakajora UG. 7. 10MW8- Madhabpur UG. 8. 10MW9- Madhabpur UG.
9. 10MW10- Madhabpur OC Patch. 10. 10MW11- Lachipur UG**

First Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW7	10MW8	10MW9	10MW10	10MW11			
	Date of sampling	6-Aug-19	6-Aug-19	6-Aug-19	6-Aug-19	6-Aug-19			
1	pH	7.39	7.23	8.13	8.20	7.31	5.5 - 9.0	Electrometric	0.01
2	TSS	28	32	30	36	40	100 (Max)	Gravimetric Method	10.0
3	TDS	676	608	306	538	746	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	40	32	40	32	28	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW7	10MW8	10MW9	10MW10	10MW11			
	Date of sampling	22-Aug-19	22-Aug-19	22-Aug-19	22-Aug-19	22-Aug-19			
1	pH	7.09	7.32	8.65	8.30	7.10	5.5 - 9.0	Electrometric	0.01
2	TSS	30	28	30	34	38	100 (Max)	Gravimetric Method	10.0
3	TDS	578	594	296	618	758	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	28	36	40	24	28	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

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WATER QUALITY DATA (Effluent Water)

Name of the Company: **Eastern Coalfield Limited**

Month: **August**. Year: **2019**.

Name of the Project: **Mines of Cluster No. 10**

Name of the Stations & Code: **11. 10MW12- Central Kajora UG. 12. 10MW13- Khas Kajora UG.**

13. 10MW14- Madhusudanpur UG.14. 10MW15- Parascole East. 15. 10MW16- Parascole West

First Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW12	10MW13	10MW14	10MW15	10MW16			
	Date of sampling	6-Aug-19	6-Aug-19	6-Aug-19	6-Aug-19	6-Aug-19			
1	pH	7.61	8.42	6.39	7.15	8.31	5.5 - 9.0	Electrometric	0.01
2	TSS	38	44	32	44	38	100 (Max)	Gravimetric Method	10.0
3	TDS	434	596	536	684	694	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	24	32	36	40	28	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Analytical results					General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station Code	10MW12	10MW13	10MW14	10MW15	10MW16			
	Date of sampling	22-Aug-19	22-Aug-19	22-Aug-19	22-Aug-19	22-Aug-19			
1	pH	7.28	8.35	6.62	7.71	8.29	5.5 - 9.0	Electrometric	0.01
2	TSS	40	42	30	44	36	100 (Max)	Gravimetric Method	10.0
3	TDS	468	612	578	738	716	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	20	24	32	36	28	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

Cluster No. 10

CMPDIL

WATER QUALITY DATA (Effluent Water)

Name of the Company: **Eastern Coalfield Limited**

Month: **August**. Year: **2019**.

Name of the Project: **Mines of Cluster No. 10**

Name of the Stations & Code: **16. 10MW17- North Searsole UG 17. 10MW18- Moira UG. 18. 10MW19- Madhujore UG.**

First Fortnight data

Sl. No.	Parameters	Analytical results			General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station code	10MW17	10MW18	10MW19			
	Date of Sampling	7-Aug-19	6-Aug-19	6-Aug-19			
1	pH	7.62	8.30	8.10	5.5 - 9.0	Electrometric	0.01
2	TSS	28	28	22	100 (Max)	Gravimetric Method	10.0
3	TDS	728	648	702	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	24	32	28	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Analytical results			General Standards for Discharge of Effluent (Schedule VI)	Method of Detection	Detection Limit
	Station code	10MW17	10MW18	10MW19			
	Date of Sampling	23-Aug-19	22-Aug-19	22-Aug-19			
1	pH	7.31	8.62	8.35	5.5 - 9.0	Electrometric	0.01
2	TSS	30	28	26	100 (Max)	Gravimetric Method	10.0
3	TDS	722	654	732	Not specified	Gravimetric Method	25.0
4	Oil & Grease	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	40	32	36	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

Cluster No. 10

CMPDIL

Dugwell water level for the month of August, 2019

Sl. No.	Station Code	Location of Dugwell	Date of measurement	Water level (in Meters) Below Ground Level	MP (m)	Depth (m)	Dia (m)	Owner	Utility
1	10GWL1	Dugwell at Jambad Benedi Shiv Mandir	21-Aug-19	1.50	0.75	6	1.05	ECL	Domestic
2	10GWL2	Dugwell at Ashram Mandir near Manager's office of Lachipur UG	21-Aug-19	1.80	1.05	11.4	2.1	Govt.	Domestic
3	10GWL3	Dugwell at Kunustoria old Agent's bungalow	21-Aug-19	1.65	0.7	17.1	3.2	ECL	Domestic
4	10GWL4	Dugwell at Andal hindi high school	21-Aug-19	1.45	0.8	19.5	0.8	Govt. School	Domestic

CHAPTER - IV

NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites and their rationale

- i) **Amrasota UG (10N1)**
Noise level meter placed at Amrasota UG pit - top to assess the noise level at workplace.
- ii) **Belbaid UG (10N2)**
Noise level meter placed at Belbaid UG pit - top to assess the noise level at workplace.
- iii) **Bansra UG (10N3)**
Noise level meter placed at Bansra UG pit - top to assess the noise level at workplace.
- iv) **Parasea UG (10N4)**
Noise level meter placed at Parasea UG pit - top to assess the noise level at workplace.
- v) **Jambad OC (10N5)**
Noise level meter placed at mine site to assess the noise level at workplace.
- vi) **Jambad UG (10N6)**
Noise level meter placed at Jambad UG pit - top to assess the noise level at workplace.
- vii) **Nabakajora UG (10N7)**
Noise level meter placed at Nabakajora UG pit - top to assess the noise level at workplace.
- viii) **Madhabpur UG (10N8)**
Noise level meter placed at Madhabpur UG pit - top to assess the noise level at workplace.
- ix) **Madhabpur OCP (10N9)**
Noise level meter placed at mine site to assess the noise level at workplace.
- x) **Central Kajora UG (10N10)**
Noise level meter placed at Central Kajora UG pit - top to assess the noise level at workplace.
- xi) **Khas Kajora UG (10N11)**
Noise level meter placed at Khas Kajora UG pit - top to assess the noise level at workplace.

- xii) **Madhusudanpur UG (10N12)**
Noise level meter placed at Madhusudanpur UG pit - top to assess the noise level at workplace.
- xiii) **Parascole East & West (10N13)**
Noise level meter placed at Parascole East & West UG pit - top to assess the noise level at workplace.
- xiv) **North Searsole OCP (10N14)**
Noise level meter placed at mine site to assess the noise level at workplace.
- xv) **Moira UG (10N15)**
Noise level meter placed at Moira UG pit - top to assess the noise level at workplace.
- xvi) **Bansara OCP (10N16)**
Noise level meter placed at mine site to assess the noise level at workplace.
- xvii) **Kunustoria UG (10N17)**
Noise level meter placed at Kunustoria UG pit - top to assess the noise level at workplace.

4.2 Methodology of sampling and analysis

Noise level monitoring is being carried out on quarterly basis. Noise level measurements were taken in form of 'Leq' using Integrated Data Logging Sound Level Meter (Make: RION, Model: NL-52). Noise levels were measured for about one hour. Noise levels were measured in Decibels, 'A' weighted average, i.e. dB(A).

4.3 Results & Interpretations

Ambient noise levels were recorded during day time only. The observed values were compared with standards prescribed in NAAQS, 2009 in respect of noise for Industrial, Commercial and residential areas. The observed values at all the monitoring locations are found to be within permissible limits.

The monitored values are presented in tabular form along with the applicable standard permissible limits.

Cluster 10

CMPDIL

NOISE LEVEL DATA

Name of the Company: **Eastern Coalfield Limited** Month. : **August** Year: **2019**.

Name of the Project : **Bankola, Kajora & Kunustoria Area**

Name of the

Stations & Code : 1. 10N1- Amrasota UG 2. 10N2- Belbaid UG 3. 10N3- Bansra UG
 4. 10N4- Parasea UG 5. 10N5- Jambad OC 6. 10N6- Jambad UG
 7. 10N7- Nabakajora UG 8. 10N8- Madhabpur UG 9. 10N9- Madhabpur OCP
 10. 10N10- Central Kajora UG 11. 10N11- Khas Kajora UG
 12. 10N12- Madhusudanpur UG 13. 10N13- Parascole E & W OC
 14. 10N14- North Searsole OCP 15. 10N15- Moira UG
 16. 10N16- Bansara OCP 17. 10N17- Kunustoria UG

Sl. No.	Station Code	Station Name	Measurement Details			*Permissible Limit of Noise level in dB(A)
			Date	Duration (In Hrs.)	Noise level dB(A)LEQ	
1	10N1	Amrasota UG	7-Aug-19	10.00 to 11.00	69.8	75
2	10N2	Belbaid UG	7-Aug-19	11.30 to 12.30	71.3	75
3	10N3	Bansra UG	21-Aug-19	12.00 to 13.00	62.1	75
4	10N4	Parasea UG	21-Aug-19	10.30 to 11.30	69.4	75
5	10N5	Jambad OC	21-Aug-19	9.00 to 10.00	61.5	75
6	10N6	Jambad UG	21-Aug-19	7.30 to 8.30	62.7	75
7	10N7	Nabakajora UG	9-Aug-19	12.30 to 13.30	66.8	75
8	10N8	Madhabpur UG	9-Aug-19	9.30 to 10.30	63.4	75
9	10N9	Madhabpur OCP	9-Aug-19	8.00 to 9.00	68.2	75
10	10N10	Central Kajora UG	9-Aug-19	11.00 to 12.00	72.5	75
11	10N11	Khas Kajora UG	22-Aug-19	12.30 to 13.30	68.7	75
12	10N12	Madhusudanpur UG	22-Aug-19	14.00 to 15.00	63.4	75
13	10N13	Parascole East & West OCP	22-Aug-19	8.00 to 9.00	68.9	75
14	10N14	North Searsole OCP	22-Aug-19	9.30 to 10.30	67.6	75
15	10N15	Moira UG	22-Aug-19	11.00 to 12.00	63.1	75
16	10N16	Bansara OCP	8-Aug-19	9.30 to 10.30	70.8	75
17	10N17	Kunustoria UG	8-Aug-19	11.00 to 12.00	68.3	75

National Ambient Air Quality Standards (NAAQS) in respect of noise for Industrial, commercial and residential areas.

Station Category	Limits for noise (Leq dB (A))	
	Day Time: 6.00 AM to 10.00 PM	Night Time: 10.00 PM to 6.00 AM.
Industrial	75.0	70.0
Commercial	65.0	55.0
Residential	55.0	45.0

CSR Activites details KAJORA area

S.NO	Total Expenditure (2018-19)	Amount
1	Sri Sri Ravi Shankar (Art of Living)	3492359.94
2	Mining Sirdar Training	19398
3	Special Diet	62900
4	Health Camp	20000
	Total Expenditure	3594657.94

FLYASH DETAILS KAJORA AREA

Sl No.	Name of the Projects	Name of The Power Producer Agency	EC No. and date	Fly Ash production & Utilization (In Cum)					
				2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (Till 30-6-14)
1	Parascole Old OCP	MTPS, DVC	Not Available		1393347.25	1478239.64	2739088.12	1667882.57	1467126.539
2	Dhandadih OCP	DTPS, DVC	Not Available	836695.27	746203.86	468317.74	665759.48	390658.72	



EASTERN COALFIELDS LIMITED
(A subsidiary of Coal India Limited)

Office of the General Manager, Kajora Area

Ref.No. GM/KAJ/AMO/19/ 0 6 5 2

Date – 02.08.19

Total PME done on Month of Jan to July– 2019

Colliery	Total ManPower	Yearly Target	Monthly Target	Jan-19 Achieved	Feb - 19 Achieved	Mar - 19 Achieved	April – 19 Achieved	May - 19 Achieved	June – 19 Achieved	July - 19 Achieved	August - 19 Achieved	Total Achieved
Madhusudanpur	496	99	08	08	14	08	09	10	03	14	14	80
Naba Kajora	485	97	08	00	00	16	03	00	00	00	00	19
Madhabpur	444	89	07	10	09	21	05	01	03	00	15	64
Porascole (E)	712	142	12	03	09	03	10	00	00	11	24	60
Porascole (W)	611	122	10	09	07	14	11	05	00	11	10	67
Jambad (UG)	851	170	14	21	09	04	13	18	00	08	17	90
Khas Kajora	1461	292	24	21	21	31	30	34	04	14	29	184
Jambad OCP	402	80	07	06	07	00	00	13	00	09	01	36
Central Kajora	514	103	09	07	16	09	11	19	00	11	14	87
KajoraArea Office	280	56	05	00	00	00	00	00	00	00	00	00
Total	6256	1250	104	85	92	106	92	100	10	78	124	687

P.T.O

Contractual Workers PME done on Jan to Aug- 19

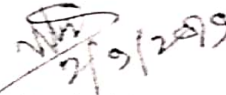
Month	-45	+45	Total
Jan	12	02	14
Feb	04	01	05
Mar	03	02	05
April	00	00	00
May	04	09	13
June	00	00	00
July	02	12	14
August	00	00	00
Total	25	26	51

Departmental IME done on Jan to Aug'19

Month	Jan	Feb	Mar	April	May	June	July	August	Total
IME	06	06	09	05	06	10	05	07	54

C.C. to :-

- CMO (I/C), ECL, HQ
- General Manager, Kajora Area
- Area Safety Officer, Kajora Area
- PME (I/C), Kajora Area
- Office Copy


Area Medical Officer,
Kajora Area



EASTERN COALFIELDS LIMITED
(A subsidiary of Coal India Limited)

Office of the General Manager, Kajora Area

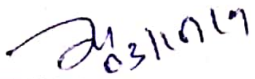
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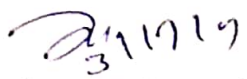
Date :- 03.10.19

To,
The CMO (I/C),
ECL, HQ,
Sanctoria

P.M.E. Report of the Month of September 2019

Total Nos. of employee	-	Above 45 years	Below 45 years
Male	-	87	22
Female	-	01	03
Contractual P.M.E.	-	09	
Total No. of P.M.E. done	-	113	
Total No. of X- Ray	-	113	
Total No. of ECG	-	90	
Total No. of Audiometry	-	113	
Total No. of P.F.T.	-	113	
Toatal No. of I.M.E.	-	05	
Total No. of Disease Profile			
1. Diabetes	-	15	
2. Hypertension	-	09	
3. Neurological ds.	-	01	
4. G.B. Stone	-	01	
5. Hearing Impairment	-	01	
6. Tenia Vercicular (skin disease)	-	01	


PME (I/C) / M.S.,
Kajora Area


Area Medical Officer,
Kajora Area

C.C. to -

- General Manager, Kajora Area
- Area Safety ~~officer~~, Kajora Area
- AMPCD, Kajora Area
- PME (I/C), Kajora Area

Status of PME done till 31st October 2019 KUNSTORIA AREA

Sl. No.	Name of the PME Centre (Cov Area)	PME Yearly Target for 2016 (1/5th of the total manpower)	Mont Wise Cumu-lative upto Oct-19		Balance
			Employee	Contractual	
		1115			
1.	Jan-19		221	155	36
2.	Feb-19		102	03	
3.	Mar-19		109	50	
4.	Apr-19		76	23	
5.	May-19		122	24	
6.	Jun-19		75	16	
7.	Jul-19		82	06	
8.	Aug-19		139	03	
9.	Sep-19		64	09	
10.	Oct-19		89	06	
Total PME done from Jan'19 to October'19			1079	295	

D. dden
25/10/19

CSR EXPENSES

For The Period Ended 31-03-2019

(Figure in Lakhs)


KUNUSTORIA AREA					PAID IN CASH/BANK			
Sr No	WORK DESCRIPTION	NAME OF AGENCY	WORK ORDER NO	DATE	WORK ORDER VALUE	AGAINST LIABILITY OF PREVIOUS YEAR	AGAINST ORDER ISSUED DURING CURRENT YEAR	LIABILITY CREATED DURING THE CURRENT YEAR
1	Construction of Burning Ghat at Dhasana village at Nilbon Burning Ghat	Ganguly & Company	ECL/GM/KNT/W.O/Civil/18-19/171	01-06-18				20.45
2	Special Diet for Selected Player Football Academy under CSR, Kunustoria Area	Amit Dutta	A-KNT/P&IR/CSR/Football-Academy/2018-19/604(A)	12-05-18			0.92	
3	Construction of Individual Household Latrine (IHL) out of Baseline Survey at Amrasota Gram Panchayat	Block Development Office, Raniganj					9.1	
4	Medical Camp under CSR 2018-19	Medical Department						0.47
Total CSR EXPENDITURE AS PER AUDITED ACCOUNTS							10.02	20.92

CONTRACTOR ADVANCE

(Figure in Lakhs)

Sr No	NAME OF PARTY	FINANCIAL CODE OF ADVANCE	Voucher No	Date	Amount

Total


 General Manager
 Kunustoria Area
 22/05/19


 Area Finance Officer
 Kunustoria Area
 Anup

Letter No :- 1260

Date :- 11/05/19



Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.


Monthly Report of PME done for the Month of Apr. 2019.

Sl. No.	Name of Colliery	PME done		
1	Bankola Colliery	25		
2	S.S.Pur Colliery	79		
3	Khandra Colliery	13	Pathology	88
4	Kumardihi A Colliery	1	X Ray	122
5	Kumardihi B Colliery	2	ECG	10
6	Moira Colliery	0	Spirometry	03
7	Tilaboni Colliery	7	Audiometry	03
8	Sankarpur Colliery	6		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital	0		
12	U.R.W	0		
	TOTAL	133		
*	Contra.Wkr	0		
*	Female Wkr	1		
*	> 45	93		
*	< 45	40		

Dated 6th May.2019.

Forwarded to
Area Safety Officer,
Bankola Area

X
CMS (I/C) Sanetia
for necessary action
Anshuman Das
11/5/19


P.M.E. In Charge,
Bankola Area Hospital
Bankola Area E.C.L



O/C

Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.

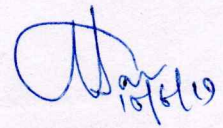
L = 1347
Dt: 13/06/19.


Monthly Report of PME done for the Month of May.2019.

Sl. No.	Name of Colliery	PME done		
1	Bankola Colliery	23		
2	S.S.Pur Colliery	82		
3	Khandra Colliery	06	Pathology	148
4	Kumardihi A Colliery	12	X Ray	133
5	Kumardihi B Colliery	16	ECG	14
6	Moirra Colliery	0	Spirometry	02
7	Tilaboni Colliery	13	Audiometry	03
8	Sankarpur Colliery	13		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital	0		
12	U.R.W	0		
	TOTAL	165		
*	Contrac.Wkr	17		
*	Female Wkr	1		
*	> 45	130		
*	< 45	35		

True

Dated 10th May.2019.


 P.M.E. In Charge,
 Bankola Area Hospital


 19/5/19
 ASO/BA
 CMS/HS

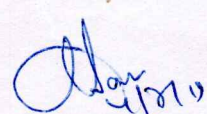


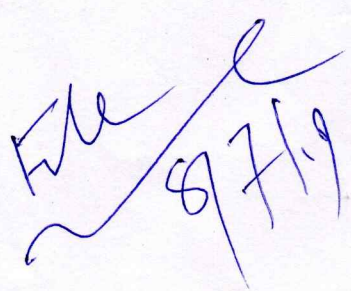
Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.

Monthly Report of PME done for the Month of Jun. 2019.

Sl. No.	Name of Colliery	PME done		
1	Bankola Colliery	28		
2	S.S.Pur Colliery	43		
3	Khandra Colliery	10	Pathology	135
4	Kumardihi A Colliery	26	X Ray	138
5	Kumardihi B Colliery	16	ECG	13
6	Moirā Colliery	0	Spirometry	3
7	Tilaboni Colliery	35	Audiometry	2
8	Sankarpur Colliery	7		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital & RW	0		
	Total	165		
*	Contract labour	4		
*	Female Worker	14		
*	Worker Aged >45	114		
*	Worker Aged < 45	51		

Dated 04th July. 2019.


P.M.E. In Charge,
Bankola Area Hospital


9/7/19



Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.

Monthly Report of PME done for the Month of July. 2019.

Sl. No.	Name of Colliery	PME done		
1	Bankola Colliery	26		
2	S.S.Pur Colliery	38		
3	Khandra Colliery	5	Pathology	135
4	Kumardihi A Colliery	15	X Ray	125
5	Kumardihi B Colliery	9	ECG	5
6	Moirra Colliery	0	Spirometry	3
7	Tilaboni Colliery	36	Audiometry	2
8	Sankarpur Colliery	6		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital & RW	0		
	Total	135		
*	Contract labour	2		
*	Female Worker	3		
*	Worker Aged >45	99		
*	Worker Aged < 45	36		

Dated 05th Aug.2019.

P.M.E. In Charge,
 Bankola Area Hospital

*Filed to
 1) ASO IB Area
 2) CMEs IC
 RCL. H.Q. Sundergarh*

L = 1543, Dt :- 20/09/19



OIC

Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.

Monthly Report of PME done for the Month of Aug. 2019.

Sl. No.	Name of Colliery	PME done		
1	Bankola Colliery	29		
2	S.S.Pur Colliery	37		
3	Khandra Colliery	15	Pathology	136
4	Kumardihi A Colliery	03	X Ray	130
5	Kumardihi B Colliery	8	ECG	5
6	Moira Colliery	0	Spirometry	3
7	Tilaboni Colliery	19	Audiometry	2
8	Sankarpur Colliery	27		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital & RW	0		
	Total	138		
*	Contract labour	9		
*	Female Worker	2		
*	Worker Aged >45	109		
*	Worker Aged < 45	29		

Dated 05th Sept. 2019.

P.M.E. In Charge,
Bankola Area Hospital

Endorsed
1. C.A. & I.C. BCL HQ
2. ASO, Bankola Area
12/9/19



Eastern Coalfields Limited.
Bankola Area Hospital, PME Section
Bankola Area.

Monthly Report of PME done for the Month of Sept. 2019.

SI NO	Name of Coll	PME done		
1	Bankola Colliery	21		
2	S.S.Pur Colliery	30		
3	Khandra Colliery	11	Pathology	92
4	Kumardihi A Colliery	1	X Ray	79
5	Kumardihi B Colliery	9	ECG	8
6	Moira Colliery	0	Spirometry	4
7	Tilaboni Colliery	3	Audiometry	3
8	Sankarpur Colliery	17		
9	Nakrakonda Colliery	0		
10	GM Office	0		
11	Area Hospital	0		
	Total	92		
*	Contract labour	14		
*	Female Worker	0		
*	Worker Aged >45	69		
*	Worker Aged < 45	23		

Dated 8th Oct. 19.

P.M.E. In Charge,
Bankola Area Hospital