

HALF YEARLY
ENVIRONMENT CLEARANCE COMPLIANCE REPORT
OF
CLUSTER 9
J-11015/38/2011-IA.II(M)
FOR THE PERIOD OF
April 2018 TO September 2018



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



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

Ref. No: ECL/PC/SOR/18-19/119

Date: 14.11.2018

UNDERTAKING

Information provided in Half yearly EC compliance report for the period April to September, 2018 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 SHAMAL	
2.	Belbaid OC Patch		
3.	Parasea UG	GUL AHAMMED	
4.	Parasea OC Patch		
5.	Parasea 6&7 UG		

14.11.18
Agent/ Project Proponent
(Parasea Group of Mines)



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

Ref. No:ANC/Agent/EC COMP/2018-19/ 55

Date:03.11.2018

UNDERTAKING

Information provided in Half yearly EC compliance report for the period April to September, 2018 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	<i>Das</i>
2.	Mahabir UG	Ashok Kumar Karmakar	<i>AK</i>
3.	Mahabir OC	Ashok Kumar Karmakar	<i>AK</i>
4.	Narinkuri OC Patch	Ashok Kumar Karmakar	<i>AK</i>
5.	Egara OC Patch	Ashok Kumar Karmakar	<i>AK</i>
6.	Narainkuri UGP	Ashok Kumar Karmakar	<i>AK</i>

AK
Agent/ Project Proponent
(Amritnagar Group of Mines)



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

Ref. No: ECL/BC/18-19/S-120 .

Date: 5/11/18 .

UNDERTAKING

Information provided in Half yearly EC compliance report for the period April to September, 2018 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 UG		
2.	North Searsole (East) OC Patch	A . K . Singh	
3.	North Searsole (West) OC Patch		
4.	Bansra UG	Jay Narayan Halder	
5.	Bansra OC Patch	Jay Narayan Halder	

Agent/ Project Proponent
(Bansra Group of Mines)



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

Ref. No: AGENT/KNT/18-19/4135

Date: 28.11.18

UNDERTAKING

Information provided in Half yearly EC compliance report for the period April to September, 2018 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. Bandyopadhyaya.	
2.	Amrasota UG		

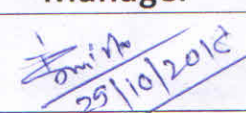

Agent/ Project Proponent
(Kunustoria Group of Mines)






EASTERN COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
Office of the Agent, Kalipahari Group of Mines, Sripur Area
P.O Kalipahari, PIN: 713339, Dist. Burdwan (WB)

UNDERTAKING

Information provided in Half Yearly EC Compliance report for the period April, 2018 to September, 2018 in respect of the following mines in Cluster No. 9 is true to the best of my knowledge:

SI No	Name of the mine	Name of the Manager	Signature of the Manager
1	Ghusick UG	Shri Prasoon Smriti	 25/10/2018
2	Kalipahari UG	Shri Anil Kumar	 29/10/2018 AGENT Kalipahari Group of Mines
	Kalipahari OCP		


Agent/Project Proponent
Kalipahari Group of Mines
(Signature with Seal)
AGENT
Kalipahari Group of Mines





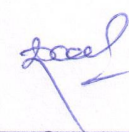


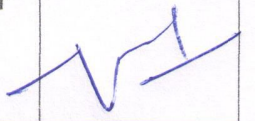
<p>EASTERN COALFIELDS LIMITED (A Subsidiary of coal India Limited) Office of the General Manager Satgram Area, District : Paschim Burdwan P.O Devchandnagar Pin:713332 W.B Email: gm.satgram@gmail.com Department of Environment, Satgram Area</p>	 	<p>ईस्टर्न कोलफील्ड लिमिटेड (कोल् इंडिया का सब्सिडियरी) महाप्रबंधक का कार्यालय-सातग्राम क्षेत्र जिला: पश्चिम बर्दमान पोस्ट ऑफिस: देवचंदनगर पिनकोड:713332 पश्चिमबंगाल ईमेल: gm.satgram@gmail.com वातावरण विभाग सातग्राम क्षेत्र</p>
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Ref:GM/SAT/EC-COMP/18-19/10

dt 10.11.18

UNDERTAKING

Information provided in half yearly EC compliance report for the period April'18 to September'18 in respect of the following group of mines mentioned under Satgram area of respective Clusters no. 8 and 9 is true to the best of my knowledge:

EC Cluster	SL NO.	MINES	NAME OF THE MANAGER	SIGNATURE OF THE MANAGER	NAME OF THE AGENT	SIGNATURE OF THE AGENT
Cluster 9	JK Nagar Group	JK Nagar UG	D.K Singh		Kamlesh Prasad	
	Ratibati Group	Chapuikhas UG	Rajiv Kr Sinha		Shyamal Banerjee	
	Nimcha Group	Nimcha UG & Amkola OCP	Asim Kr Mondal		Subhash Chandra Moitra	
Cluster 8	Satgram Group	Satgram UG	Kusal Kr Chatterjee		Apurba Kr Pal	



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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>Production in MT (April to Sept 18)</u>
	Ratibati UG	0.04	Production suspended
	Chapuikhas UG	0.06	0.018076
	Chapuikhas OCP (7Ha)	0.15	Production not Started
	Amritnagar UG	0.60	0.059169
	Tirat UG & Kuardih UG	0.15	Production Suspended
	Kuardih OCP (20Ha)	0.25	Production not Started
	Nimcha UG	1.08	0.087808
	Damalia OCP (5Ha)	0.40	Production suspended
	Amkola/Nimcha OCP	0.25	0.147437
	Kalipahari UG	0.10	0.001540
	Kalipahari OCP patch A (24 Ha)	0.30	0.068030
	Kalipahari OCP patch B (20 Ha)		Production not started
	Kalipahari OCP patch C (10 Ha)		Production suspended
	Kalipahari OCP patch D (10Ha)		Production not started
	Ghusick UG	1.93	Production suspended
	Musila UG		Production suspended
	Musila OCP (140Ha)		Production not started
	New Ghusick UG		Production suspended
	Jemehari UG	0.04	Production Suspended
	JK Nagar UG	0.2	0.075143
	JK Nagar OCP (21Ha)	0.40	Production not Started
	Puresearsol OCP(8Ha)	0.12	Production not Started
	Mallik Basti OCP(8Ha)	0.26	Production suspended
	Damara UG	0.05	Production Suspended
	Mahabir UG & Egara OC	0.38	0.235155
	Narainkuri OCP	2.50	0.275861
Condition no. 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 no. iii)	The quality of water should conform to the prescribed standards before discharged into nallahs.		
Compliance	Regular monitoring of quality of water is carried out by CMPDIL and found to conform to standards prescribed by CPCB.		

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Condition no. iv)	The EC be only for peak value only. PP should ensure the mine water discharge shall comply to the prescribed standards.
Compliance	Agreed.
Condition no. v)	All commitments made in the Public Hearing shall be fully implemented.
Compliance	All efforts are made to implement the commitments made in the Public Hearing.
Condition no. vi)	Adequate measures shall be taken to mitigate subsidence as per DGMS stipulations.
Compliance	Regular inspection is being done by pit Safety committee headed by Safety Officers on the surface over and around the working area for any sign of subsidence.
Condition no. vii)	There shall be no voids and OB dumps after the end of mining.
Compliance	Agreed and Noted
Condition no. viii)	The lands shall be brought back for agricultural use at the end of mining.
Compliance	Agreed and Noted
Condition no. ix)	Existing voids shall be brought back to atleast to a level adequate for pisciculture.
Compliance	Agreed and Noted
Condition no. x)	New voids shall be completely filled up to near ground position.
Compliance	Agreed and Noted
Condition no. xi)	50% of old voids shall be filled up and other 50% of old voids shall be filled upto 15 meter for the purpose of pisciculture.
Compliance	Agreed and noted
Condition no. xii)	There shall be no flyash utilization in the mine voids. Fire in the OBDs shall be quenched by blanketing and shall be re-vegetated.
Compliance	Agreed
Condition no. xiii)	The surface drainages shall be preserved.
Compliance	Surface drainages are being preserved.
Condition no. xiv)	All safety measures shall be taken as per CMR, 1957 and related Circulars.

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Compliance	All safety measures are being taken as provided in CMR- 1957 & related Circulars.
Condition no. xv)	The production shall be within the same Mining Lease area.
Compliance	The production is within the same Mining Lease
Condition no. xvi)	Coal shall be transported by rail only. Coal transportation from mine to siding should be by conveyor belt. The loading to siding by payloaders into railway wagons.
Compliance	As of now, Coal transportation from the mines to railway siding are being done by tarpaulin covered trucks. The loaded trucks are made wet and then covered with tarpaulins for transportation.
Condition no. xvii)	Independent network of railway sidings 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	Satgram: There are currently two railway sidings (MS Siding & Nimcha Railway Siding) serving to the mines under cluster 9. 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 through belt conveyors is not feasible because, the capacity of the mines are less.
Condition no. xviii)	Three tier green belts shall be raised around the railway sidings and along the road sides to prevent dust and noise pollution.
Compliance	Healthy natural vegetation is already present along the road sides and railway siding to prevent air and noise pollution and due to restriction of space no further plantation around railway siding is possible. Further a thick brick wall of 10 feet height approx... is present around the siding to prevent air and noise pollution.
Condition no. xix)	Stowing and depillaring shall be as per the recommendations of the DGMS.
Compliance	Stowing and depillaring are being done as per the recommendations of the DGMS
Condition no. xx)	The proponent must comply with 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	Is complied with the master plan for Raniganj coalfields which is implemented by ADDA, Govt. of West Bengal
Condition no. xxi)	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.
Condition no. xxii)	Proponent should plant additional 10 Ha/ year over the next 10 years at various locations within this Cluster.

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Compliance	Agreed and noted.
Condition no. xxiii)	River/ nallahs shall be desilted and restored back to functional state.
Compliance	Agreed and noted
Condition no. xxiv)	Wild life conservation plan be prepared and submitted to the MOEFCC with the approval of State Gov.
Compliance	Addl. PCCF (wildlife), Govt. of West Bengal has been requested to prepare Wildlife Conservation plan of entire Raniganj Coalfield.
Condition no. xxv)	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 no. xxvi)	Separate drainage pattern be provided.
Compliance	Separate drainage pattern will be provided where required.
Condition no. xxvii)	Sand stowing must be used as recommended by CMPDI.
Compliance	Sand stowing is being used as recommended by CMPDI.
Condition no. xxviii)	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 no. xxix)	The OC Patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
Compliance	Noted and Agreed
Condition no. xxx)	The OB shall be completely re-handled at the end of the mining.
Compliance	Noted and Agreed
Condition no. xxxi)	There shall be no residual OB dump after the mining.
Compliance	Noted and Agreed
Condition no. xxxii)	After completion of mining activities, the subsided areas shall be graded and planted upon.
Compliance	Noted and Agreed
Condition	Coal Extraction shall also be optimized in areas where agricultural production is

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no. xxxiii)	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	Coal Extraction is being carried out as per DGMS permissions and guidelines
Condition no. xxxiv)	The land excavated after mining must be brought back to original condition for agricultural / plantation purpose
Compliance	Noted and Agreed
Condition no. xxxv)	Mine discharge water is being treated in slow sand filter/ pressure filter along with chlorination and used for drinking water.
Compliance	Mine water discharge is being treated by rapid sand, slow sand and pressure filters for drinking purpose where ever necessary under Satgram Area. Note: No Rapid or Slow Sand Filters in Sripur.
Condition no. xxxvi)	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.
Condition no. xxxvii)	If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
Compliance	Noted and agreed
Condition no. xxxviii)	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	Water sprinkling system have been provided and major approach road has been blacktopped and properly maintained
Condition no. xxxix)	The CSR cost should be Rs. 5 per Tonne of Coal produced which should be adjusted as per the annual inflation.
Compliance	CSR cost at the rate of 2% of the net profit has kept for the purpose.
Condition no. xl)	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 analysed and monitored for compliance of conditions, bearing with movement of wildlife and until such time they are closed/ phased out.
Compliance	Noted and Agreed

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Condition no. xli)	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 no. xlii)	Dust mask to be provided to everyone working in the mining area.
Compliance	Dust mask have been provided to everyone working in the mining area
Condition no. xliii)	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 no. xliv)	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	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
Condition no. xlv)	The mining area should be grounded 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.
Condition no. xlvi)	Besides carrying out regular periodic health check-up of their workers,10% of the workers identified 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	Periodical Medical Examination (PME) are carried out 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. All serious diseases and impairments are reported to DGMS at regular intervals.
Condition no. xlvii)	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	Agreed and noted
Condition no. xlviii)	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 arrest

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no. xlix)	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 m, 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 no. I	Garland drains (size, gradient & length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be resigned 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 m, 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 no. li)	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	Agreed and Noted
Condition no. lii)	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 CHP is present in the cluster: water sprinkling system is being done by mobile sprinklers and manual sprinkling to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
Condition no. liii)	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 discharge quality complies with prescribed standards. Regular monitoring is done by CMPDI.
Condition no. liv)	Drills shall be wet operated.
Compliance	Sprinkling arrangement is present at all the coal faces and water is sprinkled

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e	before and after blasting in underground mines.
Condition no. lv)	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.
Compliance	As per requirement, Regular repairing and tarring of roads are being taken on priority basis. Both sides of approach roadway are well vegetated naturally.
Condition no. lvi)	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	Delay detonators are being used in OCP however in UG mines solid blasting is used and no restriction on timing of blasting is required.
Condition no. lvii)	A progressive afforestation plan shall be implemented covering an area of 972.84 ha at the end of mining, which includes Excavation area (441.25 Ha), OB dump area (53.11 ha), Mine Infrastructure/ Built-up area (100 ha); F\Green Belt (20 Ha), built up area (118.37 Ha) and subsidence area (240.11 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 plantation along the main approach roads to the mine.
Compliance	It is proposed to plant 10Ha per year within cluster 9 at the density of 2500 plants/Ha by planting native species in consultation with the local DFO.
Condition no. lviii)	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
Compliance	Plan Mine closure has already been prepared for the purpose. Restoration and reclamation shall be done accordingly.
Condition no. lix)	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 no. lx)	No groundwater shall be used for mining operations

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Compliance	No ground water is being used for mining operation.
Condition no. Ixi)	An estimated total 56.98 Mm ³ of OB will be generated during the entire life of the mine. Out of which 32.56 Mm ³ of OB will be dumped in fourteen external dumps 24.42 Mm ³ in eight internal OB Dumps. 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	Agreed and noted
Condition no. Ixii)	Of the total quarry area 378 Ha. The backfilled quarry area of 378 Ha shall be reclaimed with plantation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
Compliance	Agreed and noted
Condition no. Ixiii)	Regular monitoring of ground water level quality shall be carried out by establishing a network of existing wells and construction of new peizometer. 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	Regular monitoring of ground water quality and level is being done by CMPDIL, Asansol. The monitoring reports indicate that the quality of the water is meeting the drinking water quality standards. The measurement of water level is being carried out and the water level data shows that there no significant impact on ground water level.
Condition no. Ixiv)	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 initiative have been taken up by the company at several places which face lowering of GWL during

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	summer period.
Condition no. Ixv)	Sewage treatment plants shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
Compliance	No CHP is in operation 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, say about 10 litres/day for which ETP is not required.
Condition no. Ixvi)	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy of the State Government whichever is higher.
Compliance	If required, Land outees shall be compensated as per the norms laid out in R & R Policy of CIL.
Condition no. Ixvii)	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 concerned Regional Office.
Compliance	Land use pattern and plantation is being monitored by satellite surveillance based on satellite imagery.
Condition no. Ixviii)	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	Complied
Condition no. Ixix)	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	CSR activities are being carried out in consultation with local panchayats.
Condition no. Ixx)	Corporate Environmental Responsibility:
(a)	The Company shall have a well laid down Environmental Policy approved by the Board of Directors

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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 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	The Company is having a well laid down system of reporting of non-compliance/violation of environmental norms to the Board of Directors of the company.
General conditions	
Condition no. 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	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 no. 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 no. iii)	Four ambient air quality monitoring stations shall be established in the core s\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

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	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.
Condition no. 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 no. 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.
Condition no. 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 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.
Condition no. 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.
Condition no. 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 no. 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.

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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 no. 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	Periodical Medical Examination (PME) for all employees are carried out 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. All serious diseases and impairments are reported to DGMS at regular intervals.
Condition no. 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 established for the Area. The cell reports to the GM of the concerned Area under the cluster.
Condition no. 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 any other purposes.
Condition no. 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	All the ECs are published in two local newspapers widely circulated around the project area.
Condition no. 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 Panchayats.
Condition no. xv)	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also

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	be displayed at the regional office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.
Compliance	The EC letter is uploaded on the company's website.
Condition no. 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 sectoral parameters are being displayed on Company's website.
Condition no. 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	The EC letter is uploaded on the company's website. The link is given below: www.easterncoal.gov.in
Condition no. xviii)	The Regional Office of the Ministry located in the Region shall monitor compliances of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
Compliance	Agreed and noted.
Condition no. 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 and being implemented.

STRICTLY RESTRICTED
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. 9
(FOR THE MONTH OF AUGUST, 2018)
(SRIPUR, SATGRAM & KUNUSTORIA AREA)**

Eastern Coalfields Limited



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

ENVIRONMENT MONITORING REPORT FOR CLUSTER NO. 9

(For the Month of August, 2018)

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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. CMPDI has trained manpower and well equipped laboratory to carry out monitoring, analysis and R&D work in the field of environment.

Reports have prepared for submission to MoEFCC & 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) Kurtidanga village (9A1): Industrial Area**

The sampler was placed at Ghusik Colliery near Kutidanga Village. This station was selected to assess the ambient air quality of Industrial area in the core zone where mining activities are not in progress.

ii) Jamari village (9A2) : Industrial Area

The sampler was placed at JK Nagar near Satgram Railway Siding. This station was selected to assess the ambient air quality of Industrial area in the core zone to represent the impact of coal transport activities of the siding.

iii) Amritnagar village (9A3): Industrial Area

The sampler was placed at Agent office of Amritnagar 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**iv) Raniganj Railway Siding Polytechnic (9A4): Residential Area**

The sampler was placed at Raniganj Mining college. This site was selected to assess the present ambient air quality status in residential area of core zone.

v) Murgachori Village CMPF (9A8): Residential Area

The Air sampler was placed CMPF Office which is in the buffer zone of Ghusik Colliery. The station was selected to represent the impact of mining activities of Ghusik Colliery in buffer zone.

vi) Chanda village (9A9): Residential Area.

The sampler was placed in Satgram Guest House. This site was selected to assess the present ambient air quality status in residential area of core zone of Satgram Project.

vii) Mithapur village (9A10): Residential Area

The sampler was placed at Mithapur Village. This site was selected to assess the present ambient air quality status in residential area of core zone

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 88.4 to 91.5 µg/m³ & in Residential area from 87.5 to 90.6 µg/m³.

Fine Particulate Matter (PM_{2.5})

In Industrial area from 34.3 to 36.2 µg/m³ & in Residential area from 34.4 to 37.2 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 14.9 to 17.8 µg/m³ & in Residential area from 15.7 to 19.1 µg/m³.

AMBIENT AIR QUALITY DATAName of the Company: **Eastern Coalfield Limited**Year : **2018**Name of the Project : **Mines of Cluster No. 9**Month. : **August.****Industrial Area****1st fortnight**

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀	PM _{2.5}	SO ₂	NO _x
9A1	Kurtidanga village	10-Aug-18	91.1	35.7	<10.0	17.6
9A2	Jamari village	14-Aug-18	88.4	33.9	<10.0	16.2
9A3	Amritnagar village	4-Aug-18	89.2	34.2	<10.0	14.6

2nd fortnight

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀	PM _{2.5}	SO ₂	NO _x
9A1	Kurtidanga village	27-Aug-18	91.5	36.2	<10.0	17.8
9A2	Jamari village	22-Aug-18	87.9	34.3	<10.0	16.5
9A3	Amritnagar village	22-Aug-18	90.3	35.9	<10.0	14.9

Residential Area**1st fortnight**

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀	PM _{2.5}	SO ₂	NO _x
9A4	Near Raniganj Railway Siding	4-Aug-18	86.7	33.4	<10.0	15.2
9A8	Murgachori village	10-Aug-18	89.9	35.6	<10.0	17.7
9A9	Chanda village	7-Aug-18	88.7	35.3	<10.0	19.1
9A10	Mithapur village	6-Aug-18	90.6	37.2	<10.0	16.7

2nd fortnight

Station Code	Station Name	Date of Sampling	Parameters			
			PM ₁₀	PM _{2.5}	SO ₂	NO _x
9A4	Near Raniganj Railway Siding	18-Aug-18	87.5	34.4	<10.0	15.7
9A8	Murgachori village	31-Aug-18	90.3	35.7	<10.0	17.9
9A9	Chanda village	31-Aug-18	88.1	34.9	<10.0	18.6
9A10	Mithapur village	31-Aug-18	89.7	36.5	<10.0	16.2

National Ambient Air Quality Standards (NAAQS)

National Ambient Air Quality Standards (NAAQS) for industrial, residential and rural areas for 24 hours samples:

Pollutant	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Concentration	100.0	60.0	80.0	80.0

➤ All values are expressed in microgram per cubic meter.

CHAPTER – III

WATER QUALITY MONITORING

3.1 Location of sampling sites and their rationale

- i) **Rotibati UG (9MW1)**
This location has been selected to monitor the discharge quality of Mine effluent to natural surface streams
- ii) **Chapuikhas UG (9MW2)**
This location has been selected to monitor the discharge quality of Mine effluent to natural surface streams
- iii) **Amritnagar UG (9MW3)**
This location has been selected to monitor the discharge quality of Mine effluent to natural surface streams after siltation pond.
- iv) **Kuardih UG (9MW4)**
This location has been selected to monitor the discharge quality of Mine effluent to natural surface streams after siltation pond.
- v) **Nimcha UG (9MW5)**
This location has been selected to monitor the discharge quality of Mine effluent supply to colony quarter after sedimentation tank for domestic purposes and also use for boiler.
- vi) **Kalipahari UG (9MW6)**
This location has been selected to monitor the discharge quality of Mine effluent use for boiler and discharge to natural surface streams
- vii) **Muslia UG (9MW7)**
This location has been selected to monitor the discharge quality of Mine effluent to natural surface streams
- viii) **New Ghusick UG (9MW8)**
This location has been selected to monitor the discharge quality of Mine effluent to sedimentation tank and overflow discharge to natural surface streams
- ix) **J K Nagar UG (9MW9)**
This location has been selected to monitor the discharge quality of Mine effluent to sedimentation tank and supply to colony quarter for domestic purposes and also use in boiler.

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 annualy 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 Schedule - VI, effluent prescribed by MOEF and IS.10500 (Drinking water). Results show that most of the parmeters are within the permissible limits.

Cluster No. 9

CMPDI

WATER QUALITY DATA (Effluent Water)

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

Year : **2018.**

Name of the Project : **Mines of Cluster No. 9**

Month: **August.**

Name of the Stations & Code : **1. 9MW1- Rotibati UG 2. 9MW2- Chapuikhas UG 3. 9MW3- Amritnagar UG**
4. 9MW4- Kuardih UG 5. 9MW5- Nimcha UG

First Fortnight data

Sl. No.	Parameters	Sampling station & sampling date					As per MOEF General Standards for schedule VI	Method of Detection	Detection Limit
		9MW1	9MW2	9MW3	9MW4	9MW5			
		10-Aug-18	14-Aug-18	4-Aug-18	4-Aug-18	4-Aug-18			
1	pH	7.44	8.23	8.07	8.71	8.00	5.5 - 9.0	Electrometric	0.01
2	TSS	17	16	20	12	18	100 (Max)	Gravimetric Method	5.0
3	TDS	612	740	638	616	736	Not specified	Gravimetric Method	1.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	20	28	32	16	24	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Sampling station & sampling date					As per MOEF General Standards for schedule VI	Method of Detection	Detection Limit
		9MW1	9MW2	9MW3	9MW4	9MW5			
		23-Aug-18	22-Aug-18	23-Aug-18	22-Aug-18	17-Aug-18			
1	pH	7.56	8.24	8.18	7.81	8.00	5.5 - 9.0	Electrometric	0.01
2	TSS	14	28	20	16	20	100 (Max)	Gravimetric Method	5.0
3	TDS	644	782	608	638	690	Not specified	Gravimetric Method	1.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	12	32	24	12	28	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

Cluster No. 9

CMPDI

WATER QUALITY DATA (Effluent Water)

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

Year : **2018.**

Name of the Project : **Mines of Cluster No. 9**

Month: **August.**

Name of the Stations & Code :

6. 9MW6- Kalipahari UG	7. 9MW7- Muslia UG
8. 9MW8- New Ghusick UG	9. 9MW9- J K Nagar UG

First Fortnight data

Sl. No.	Parameters	Sampling station & sampling date				As per MOEF General Standards for schedule VI	Method of Detection	Detection Limit
		9MW6	9MW7	9MW8	9MW9			
		7-Aug-18	6-Aug-18	6-Aug-18	14-Aug-18			
1	pH	8.59	8.29	7.85	8.49	5.5 - 9.0	Electrometric	0.01
2	TSS	28	34	20	18	100 (Max)	Gravimetric Method	5.0
3	TDS	570	595	617	614	Not specified	Gravimetric Method	1.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	32	48	28	20	250 (Max)	Closed Reflux	4.0

Second Fortnight data

Sl. No.	Parameters	Sampling station & sampling date				As per MOEF General Standards for schedule VI	Method of Detection	Detection Limit
		9MW6	9MW7	9MW8	9MW9			
		22-Aug-18	18-Aug-18	31-Aug-18	31-Aug-18			
1	pH	8.21	8.43	7.84	8.12	5.5 - 9.0	Electrometric	0.01
2	TSS	18	28	16	28	100 (Max)	Gravimetric Method	5.0
3	TDS	342	550	648	656	Not specified	Gravimetric Method	1.0
4	Oil & Grease	<2.0	<2.0	<2.0	<2.0	10 (Max)	Partition Gravimetric	2.0
5	COD	16	40	24	32	250 (Max)	Closed Reflux	4.0

All values are expressed in mg/L unless specified.

Well water level for the month of August, 2018

Sl. No.	Sample Code	Location of Dug well	Date of measurement	Water level (in Meters) Below Ground Level
1	9GW1	Dugwell at Bakulia High School	18-Aug-18	1.30
2	9GW2	Dugwell at Perabad Kalikapur village	18-Aug-18	1.46
3	9GW3	Dugwell at Majia forest department	18-Aug-18	2.42
4	9GW4	Dugwell at northside of Institute of Mining Raniganj	18-Aug-18	2.30
5	9GW5	Dugwell at NHS Qtrs backside Nageswar Manager office, Mithapur village	14-Aug-18	7.07
6	9GW6	Dugwell at J K Nagar old Miners colony	17-Aug-18	1.28
7	9GW7	Dugwell near Manager's Bungalow of Amritnagar UGP	23-Aug-18	0.45
8	9GW8	Dugwell at backside of Ghusik colliery Mandir	23-Aug-18	1.05

CHAPTER - IV

NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites and their rationale (Refer Fig. No. - II)

- i) **Ratibati UG (9N1)**
Noise level meter was placed Rotibati Colliery Pit office to assess the noise level in mine site.
- ii) **Chapuikhas UG (9N2)**
Noise level meter was placed Chapuikhas UG Pit office to assess the noise level in mine site.
- iii) **Amritnagar UG (9N3)**
Noise level meter was placed Amritnagar UG Pit office to assess the noise level in mine site.
- iv) **Kuardih UG (9N4)**
Noise level meter was placed Kuardih UG Pit office to assess the noise level in mine site.
- v) **Nimcha UG (9N5)**
Noise level meter was placed Nimcha UG Pit office to assess the noise level in mine site.
- vi) **Kalipahari UG (9N6)**
Noise level meter was placed Kalipahari UG Pit office to assess the noise level in mine site.
- vii) **Muslia UG (9N7)**
Noise level meter was placed Muslia UG Pit office to assess the noise level in mine site.
- viii) **New Ghusick UG (9N8)**
Noise level meter was placed New Ghusick UG Pit office to assess the noise level in mine site.
- ix) **J K Nagar UG (9N9)**
Noise level meter was placed J K Nagar UG Pit office to assess the noise level in mine site.

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 9

CMPDI

NOISE LEVEL DATA

Name of the Company: **Eastern Coalfield Limited** Year : **2018**

Name of the Project: **Sripur, Satgram & Kunustoria Area** Month. : **August.**

Name of the Stations & Code :

1. 9N1- Ratibati UG	2. 9N2- Chapuikhas UG
3. 9N3- Amritnagar UG	4. 9N4- Kuardih UG
5. 9N5- Nimcha UG	6. 9N6- Kalipahari UG
7. 9N7- Muslia UG	8. 9N8- New Ghusick UG
9. 9N9- J K Nagar 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	9N1	Ratibati UG	14-Aug-18	9.30 to 10.30	66.8	75
2	9N2	Chapuikhas UG	14-Aug-18	8.00 to 9.00	67.4	75
3	9N3	Amritnagar UG	14-Aug-18	11.00 to 12.00	69.3	75
4	9N4	Kuardih UG	10-Aug-18	8.30 to 9.30	64.2	75
5	9N5	Nimcha UG	10-Aug-18	7.00 to 8.00	68.3	75
6	9N6	Kalipahari UG	7-Aug-18	10.00 to 11.00	65.4	75
7	9N7	Muslia UG	7-Aug-18	8.30 to 9.30	65.9	75
8	9N8	New Ghusick UG	7-Aug-18	7.00 to 8.00	68.3	75
9	9N9	J K Nagar UG	7-Aug-18	11.30 to 12.30	61.7	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