

Government of India
Ministry of Environment, Forests and Climate Change (MoEF&CC)
Regional Office – Ranchi

MONITORING REPORT

PART I

DATA SHEET

File No: 103-156/07/EPE

1		Project Type	:	Mining
2		Name of the project	:	Tasra Coal Mining Project (4MTPA)
3		Clearance letter(s) / OM No. and dated	:	EC: J 11015/122/2007/I-A,II (M), dated – 13.10.2009
4		<u>Locations</u>	:	
	a.	Taluk(s) District	:	Dhanbad.
	b.	State (s)	:	Jharkhand
	c.	Latitudes / Longitudes	:	23,38'25" to 23 39' 58" N, 86 27' 12" to 86 29' 15" E.
5		<u>Address of correspondence</u>		General Manager Tasra, SAIL, Colliries Division Chasnalla, Dhanbad Jharkhand - 828135
	a.	Address of concerned project Chief Engineer (with Pin Code & telephone / telex / fax numbers)		General Manager Tasra, SAIL, Colliries Division Chasnalla, Dhanbad Jharkhand - 828135
	b.	Address of Executive Project Engineer/ Manager (with Pin Code/fax numbers)	:	Manager Tasra, SAIL, Colliries Division Chasnalla, Dhanbad Jharkhand - 828135
6		<u>Salient features:</u>		

	a. Salient features of the project	Tasra mining project is an Opencast mining Project is located in the Jharia coal field area with covering an area 860.59 Ha. The Latitude of the project site is - 23° 38' 25" - 23° 39' 58" N & Longitude - 86° 27' 12" - 86° 29' 15" E with toposheet No. 731/6. Topography of the area highest – 149 MRL & Lowest – 126 MRL. The highest Rainfall 2061 mm in the year 2006. The water table is Pre Monsoon – 5.65m to 7.45m & Post Monsoon – 2.98m to 4.05m. The extractable reserves 96.78 MT, Ultimate Depth of Working 260 m. Volume of Total OB, 423.90 Mcum. Target Capacity 4.00MTPA and Life of the Project 28 years.
	b. of the environmental management plans	<ol style="list-style-type: none"> 1. Storage and preservation of top soil 2. Reclamation of land affected by mining activities during and at the end of mining. 3. Afforestation shall be carried out in the area with a view to provide green belts and for controlling the fugitive emissions, impacts of noise etc. 4. Re-vegetation and stabilization of OB dumps. 5. Treatment and disposal of water from mine 6. Measures to minimize adverse effect on water regime. 7. Measures take for the suppression of dust. 8. Measures to minimize vibration due to blasting and check noise pollution.
7	<u>Breakup of the project area:</u>	

	a	Project area	:	SI.No	Particulars	Land Type	Total Requirements (Ha)
				1.	Quarry	Non Forest	371.33
				2	OB Dump	Non Forest	169.47
				3	Infrastructure, periphery & washery	Non Forest	280.79
				4	Colony & Rehabilitation	Non Forest	40.00
					Total (Ha)		860.59 Ha
8		Break up of project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers / artisans		PAP- 23007,			
	a	SC,ST/Adivasis	:	Sc- 2807, ST-1321			
	b	Others	:	18,879			
9		<u>Financial Details:</u>					
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	:	981.63 crores (to be revised)			
	b	Allocations made for environmental management plans, with item wise and year wise breakup	:	600.60 lakhs (capital cost) Rs. 35 Lakhs (annual recurring cost)			
	c	Benefit cost ratio / internal rate of return and the years of assessment	:	NA			
	d	Whether (c) includes the cost of environmental management as shown in (b) above	:	Yes			
	e	Total expenditure on the Project so far	:				

	f	Actual expenditure incurred on the environmental management plans so far	:	Total expenditure – 22.5 lakhs ETP construction – 10.0 lakhs Monitoring – 8.50 lakhs Instrument – 4.00 lakhs
10		<u>Forest land requirement:</u>	:	Details not made available
	a	The status of approval for a diversion of forest land for non-forestry use	:	Details not made available
	b	The status of compensatory afforestation, if any	:	Details not made available
	c	The status of clear felling	:	Details not made available
	d	Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	:	Details not made available
11		The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	:	Details not made available
12		<u>Status of construction:</u>		
	a	Date of commencement	:	05.12.2017
		Date of completion (actual and / or planned)	:	Details not made available
13		Reasons for the delay if the project is yet to start.	:	Details not made available
14		<u>Date of site visit:</u>		
	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	Nil
	b	Date of site visit for this monitoring report	:	15.03.2018

PART - II

Descriptive report on status of compliance to conditions of environmental clearance

1	Name of the project	Coal Mining
2	No & date of environmental clearance	EC: J 11015/122/2007/I-A,II (M), dated – 13.10.2009
3	Address for correspondence	
	(a) Project Office	General Manager Tasra, SAIL, Colliries Division Chasnalla, Dhanbad Jharkhand - 828135
	(b) Corporate Office	General Manager Tasra, SAIL, Colliries Division Chasnalla, Dhanbad Jharkhand - 828135
4	Date of site visits:	
	(a) Dates of earlier monitoring	
	(b) Date of Monitoring	15.03.2018

The project was monitored on 15.03.2018 along with Shri. Kumar Upendar Singh, Manager (Mine), Mr. Pankaj Mandal, (Manager) Mr. S. Ganesan (Senior Manager, planning and control head, from Thriveni Ramka Mining pvt. ltd), Mr. Karik Sinha (Deputy Manager, Geology, from Thriveni Ramka Mining pvt. ltd) and Mr. Amit Kislay (Officer Environment, from Thriveni Ramka Mining pvt. ltd). On the date of monitoring it has been seen that public inhabitant within leasehold area are striking in the project site to fulfill their demands. Based on the site visit, documents provided and discussion held with project officials, the point-wise status of compliance to the various environmental clearance conditions, are as follows:

Status of Compliance to Environmental Conditions

SPECIFIC CONDITIONS		
Sl. No.	Condition	Status of compliance
(i)	The environmental clearance is restricted to opencast operations only. A separate application shall be submitted for environmental clearance for Underground Mining Project proposed below 260m below ground level.	Reportedly complied: As per the submitted six monthly report project proponent stated that Tasra Coal Mining Project is planned for opencast mining upto 260m below ground level. The life of the mine is 28 years including 2 years of construction i.e. development period. Reserves below 260m depth will be extracted by underground mining method for which a separate application will be submitted for grant of Environmental Clearance before underground mining operations are undertaken.
(ii)	An application for environmental clearance shall be made within 3 months for the establishment of Coal Washery of 3.5 MTPA Capacity proposed within the ML area.	Complied: Environmental Clearance granted/obtained vide letter no. J-11015/365/2009-IA,II(M) pt dated 30.03.2017.

(iii)	Mining shall be carried out maintaining a minimum distance of 100m between the river Damodar and Quarry edge along northern boundary. The embankment to be constructed along the river Damodar adjoining quarry shall be based on peak flow and shall be at least 3m above HFL. The slope of the embankment shall be at least 2:1 towards the ML, compacted and stone pitching down towards the river and shall be stabilized with plantation. Material such as OB shall be tested for strength before using for construction of embankment.	<p>Partially complied: During the project site visit it was observed that Tasra Coal Mining Project planned to maintaining a minimum distance of 100m between river Damodar and the Quarry edge.</p> <p>It was informed to the project proponent that the embankment should be constructed on northern bank of the Damodar River and adjoining areas as per EC stipulation.</p>
(iv)	The plan for diversion and realignment of the Domohani Jore and Cilatu Jore and modification of the natural surface drainage and design of the diversion canal shall be following the natural topography of the region to be done in consultation and approval of the concerned State Flood and Irrigation Department Dimension and depth of the nala shall be finalized based on the peak flow of the water.	<p>Agreed to comply : As per the submitted six monthly report project proponent stated that the mining schedule of Tasra OCP, the diversion and realignment of Domohani Jore and Cilatu Jore is planned beyond 10th Year commencement of the project operations. All diversion of jores will be carried out in consultation and approval of the concerned authorities. Design of diversion canal will be finalized based on the peak flow of the water.</p>
(v)	Top soil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used within a year of generation for reclamation and development of green belt.	<p>Partially complied: On the date of monitoring it has been observed that no top soil dump was found in the project site. The project proponent stated that that Tasra OCP was previously worked by BCCL, so in initial few years, no top soil will be encountered. The present mining is carried in the broken land. However, after acquisition of fresh land, top soil will be removed.</p> <p>The year wise data of top soil generated and their uses should be submitted to this Regional Office Ranchi.</p>
(vi)	OB shall be stacked at earmarked external dump site within ML area of maximum height of 90m of 3 benches of 30m each. A garland drain of educate capacity, and toe wall along the OB dump shall be created to arrest the silt flow from the dumps. In addition to the garland drain, a separate 4-6m channel to serve as storm water drain shall also be created all along the mine based on peak data. Silt arrestor shall be constructed for both garland drain and storm water drain and the drain shall	<p>Partially complied: As per the submitted six monthly report project proponent was reported that the overburden material will be dumped internally within the pit. The waste generated during the first five year is proposed to be dumped partly outside and partly backfilled. After 6 years, the waste generated will completely be accommodated internally into the mined out voids. The external OB dump site has been proposed over the abandoned ash dumping site of FCIL. The proposed external dump height will be 90m in three decks of</p>

	<p>be regularly de-silted. Toe wall shall be constructed at the base of the dump shall be strengthened at critical patches with stones and compacted. Plantation using native species shall be developed between the dumps and River Damodar. For reclamation of dumps and quarry with plantation, no chemical fertilizer shall be used. The ultimate slope of the dump shall not exceed 28°. Reclamation of the OB Dumps of an area of 168.47 Ha with vegetation shall be completed by 10th Year. Monitoring and management of the reclaimed dump site shall continue until the vegetation becomes self-sustaining compliance status shall be submitted to MoEF and its Regional Office located at Ranchi on yearly basis.</p>	<p>height 30m each. A garland drain is proposed all around the dump to arrest surface runoff of rain water during monsoon. It is also proposed to stabilize the inactive slope of the dumps by plantation. Compliance status will be submitted to MoEF and its regional office located at Ranchi as directed.</p> <p>At the project site it was observed that, catch drains and siltation ponds around O/B dump was not constructed as can be seen from photos no 6&7. Near O/B dump toe wall needs to be extended to be able to arrest silt and sediment flows from dumps to the Damodar river. The height of the OB dump seemed more than the limit. It should be bench pattern. Cross section of the OB dumps showing their height and slope must be submitted. The year wise data of ore and sub-graded ore production and overburden removed, backfilled and excavated area should be submitted to this RO office from the date of starting the project.</p>
(vii)	<p>Catch drain and siltation pond of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mining area, road, greenbelt development etc. The drains shall be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mining site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.</p>	<p>Partially complied : During the project site visit project proponent has been stated that the storm water run-off from the mining area will be diverted to the sedimentation dams to arrest the suspended solids through garland drains from around the mine, dump yards, stock piles. The water so collected will be utilized for water spraying in the mining area, roads for dust suppression, green belt development etc. The drains will be regularly de-silted and maintained properly. Garland drains and sump capacity will be designed keeping safety margins over and above the peak. Garland drains, Catch drains and siltation ponds around O/B dump was not constructed completely. The catch drains around the OB dump towards river side should be made urgently.</p>
(viii)	<p>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and situation shall</p>	<p>Not complied yet: Dimension of the retaining wall at the toe of the dumps and OB benches showing their height and</p>

	be based on rainfall data.	breadth must be submitted.
(ix)	The approach road shall be blacked topped. A three tire avenue plantation shall be developed along the main approach roads and haul roads. Entire mine transportation shall be by rail mode only. Mineral transportation from the mine to the railway siding shall be by closed belt conveyor only. The railway siding shall be provided with Silo rapid loading system.	Not complied yet: As per the submitted document reported that mining activity has been started since 5 th Dec. 2017. During due course of mining operation, 3 tire avenue plantation will be done. On the date of site visit it was observed that main approach road was not black topped. A three tire avenue plantation is yet to be developed. Closed belt conveyor system for mineral transportation from the mine to the railway siding was not constructed.
(x)	Drills shall be wet operated only.	Compiled: In the project site it was observed that wet drilling process has been carried out.
(xi)	Controlled blasting shall be practised with the use of delay detonators. The mitigative measures for control of ground vibration and to arrest the fly rocks and boulders shall be implemented.	Reportedly complied: It is reported that muffled control blasting would be done by using the NONEL technology.
(xii)	Water sprinkling system shall be provided to check fugitive emissions from crushing operation, conveyor system, haulage roads, transfer points etc. Hopper of the coal crushing units and Washery unit shall be fitted with high efficiency bag filters and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operation, transfer point at railway siding.	Partially complied: As per the submitted documents project proponent stated that water sprinkling system will be installed to check fugitive emission from crushing operation, conveyor system, haulage roads, transfer points etc. Hopper of the Coal crushing units and washery unit will be fitted with high efficiency dust extraction system with bag filters and mist spray. Water sprinkling system will be installed and operated effectively at all times of operation to check fugitive emission from crushing operation, transfer points at railway siding. Fixed water sprinkling arrangements should be done in the dusty area. There was no permanent water sprinkler in the railway siding, loading and haul roads area, as can be seen from photos no 2&5. Copy of water tankers log book data mentioning running hours, fuel consumption and breakdown details must be submitted to Regional Office Ranchi.
(xiii)	No ground water (bore well) shall be used for mining operations. Additional water if any required for the project shall be used from recycled water or from mine discharge water or rain water collected in rain water harvesting pits within the project area	Reportedly complied: As per the submitted six monthly report project proponent reported that no ground water (bore well) would be used for mining operations. Required industrial water requirement would be met from mine pits water , as can be seen from photo no. 1.

(xiv)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new piezometer. The monitoring of quantity shall be done four times a year in pre monsoon (May), Monsoon (August), post monsoon (November) and winter (January) seasons and for the quality in may Data thus collected shall be located to MoEF and to the Central Pollution Control Board quarterly within one month of Monitoring. Rain water structures shall be erected in the core and buffer zone in case monitoring indicates a decline in water table.	<p>Partially complied: As per the submitted six monthly report project proponent reported that at present mining activity is limited to dewatering of old abandoned quarry previously worked by BCCL. As such there is no depletion of ground water resources. However, regular monitoring of ground water level and quality was carried out by “Enviro-Tech Services” an Environmental Analytical Laboratory. The ground water and surface water samples were collected and thereafter analyzed for 42 and 64 parameters respectively, on quarterly basis. The all the submitted ground water data was found within limits.</p> <p>At the project site no rainwater harvesting ponds and no piezometers were observed.</p>
(xv)	The project authorities shall meet water requirement of nearby villages in case of village well goes dry due to dewatering of mine.	<p>Reportedly complied: As per the submitted six monthly report project proponent reported that under the CSR scheme, SAIL has initiated efforts to meet the water requirements of nearby villages.</p>
(xvi)	Sewage treatment plant of adequate capacity shall be installed in the colony. ETP shall also be provided for workshop and CHP wastewater. Treated wastewater meeting prescribed norms only shall be recycled for mining operations to the extent possible and permitted to be discharged in to the natural watercourses only if it meets the prescribed standards.	<p>Partially complied : On the date of site visit it has been observed that Effluent Treatment Plant is under construction at the work shop area, as can be seen from photo no. 3. The project proponent reported that recorded data of waste water treatment would be submitted after commencement of plant.</p> <p>Sewage treatment plant is yet to be installed in the colony area.</p>
(xvii)	Total area that shall be brought under afforestation at the time of mine closure shall not be less than 444.49 Ha. which includes reclaimed top soil dump area external OB out in consultation with local dump (168.47 ha.), backfilled area (276.02 ha.) along ML boundary, embankment, undisturbed area, along roads and infrastructure, green belt and in township outside the lease by planning native species in consultation with the local DFO/ Agriculture Dept. The density of the tree shall be around 2500 plant/Ha.	<p>Not complied yet: Plantation work not yet started. List of plants species selected for plantation must be submitted to RO Ranchi.</p>
(xviii)	A progressive Mine Closure Plan shall be implemented by reclamation of 276.02 ha, of the total quarry area of 371.33ha, which shall be backfilled and afforested by planting native plants species in	<p>Not complied yet: In the project it has been observed that afforestation activity not yet carried out.</p>

	consultation with the local DFO/ Agriculture Department. The density of the plants shall be around 2500 plants per ha. The balance 95.33 ha of decoaled quarry area being converted into a water reservoir shall be gently sloped and the upper benches of the reservoir shall be terraced and stabilized with plantation. Only native species shall be used for plantation.	
(xix)	Beside carrying out regular periodic health check-up of their works, 10% of workers identified from workforce engaged in active mining operation shall be subjected to health check-up for occupational diseases and hearing impairment if any, through an agency as NIOH, Ahmedabad within a period of 1 year and the results reported to this ministry and to DGMS.	Reportedly complied: As per DGMS norms IME and PME i.e. initial medical examination and periodical medical check of work force would be done. Additionally 10% of the work force engaged in active mining operation will be subjected to health check-up through an agency as NIOH, Ahmedabad.
(xx)	An amount of Rs. 600.60/- lakhs as capital cost and Rs. 35/- lakhs towards annual recurring cost has been earmarked for environmental protection measures. The details of which shall be uploaded on the company web site every year.	Partially complied: As per the submitted report stated that the funds earmarked for environmental protection measures are as follows, <ol style="list-style-type: none"> 1. ETP – Rs. 10 Lakhs (work on progress) 2. Environmental monitoring-8.5 lakhs (up to Jan.2018) 3. Monitoring instrument – 4.0 lakhs <p>A copy of expenditure made on environmental protection measures should be uploaded in the company web site and hard copy must be submitted to RO, Ranchi.</p>
(xxi)	A detailed R&R plan for the life of the project, prepare comprising losers, homestead losers, and land and homestead losers and landless, including tribal to be displaced from the project area shall be prepared and implemented in stipulated time frame. A master plan for the R&R colony and specific plan for Phase – I consisting of 1642 PAF's shall be prepared within two months from the date of environmental clearance along with time schedule for completion of activities including construction of R&R colony and completion of various works	Partially complied: As per the submitted six monthly report stated that a detailed R&R plan has been prepared for the life of the project, comprising land losers, homestead losers, and land and homestead losers, and land less including tribal to be displaced from the project area in line with Govt. policies and the same has been approved by the SAIL board. A master plan for the R&R colony and specific plan for the phase –I consisting of 1642 PAF has been prepared and the same will be implemented in the due course after land acquisition. R&R activities related to the project including

	<p>for civic amenities in the colony. R&R shall include setting of an ITI for training & skill development amongst the persons to be employed and those not being absorbed for vocational training for alternate livelihood, particularly stimulation training for various skills, which may be for indirect employment. Annuities for the Vulnerable persons being displaced shall also be included in R&R person affected by double/triple displacement shall be compensated as per norms. R&R for Phase – I shall be completed within a year of grant of environmental clearance. A subcommittee comprising of three Experts of Appraisal Committee shall monitor the compliance of implementation of Phase-I of R&R and beyond if required</p>	<p>establishment of R&R colony, if required shall be taken up as per the R&R Plan as approved by concerned Authority.</p> <p>However, due to enactment of “THE RIGHT TO FAIR COMPENSATION AND TRANSPERANCY IN LAND ACQUISITION REHABILITATION AND RESETTLEMENT ACT 2013” (LARR ACT 2013) w.e.f. January 2014 by Govt. of India, R&R Plan may need to be revised as per the provision of LARR Act 2013.</p> <p>In addition to this it may also be noted that R & R scheme for the Project Affected Families (PAF) has been prepared by the District Administration in terms of new LARR Act, 2013 and Public Hearing was successfully conducted by the District Administrator R&R on 18.02.2016 for the same. The R & R Scheme prepared by District Administration has been approved.</p> <p>List of project affected family (PAF) shifted to new colony and action taken report on public hearing must be submitted to RO, Ranchi.</p>
(xxii)	<p>Peripheral village of Parasbania, Chattabad, Orbeta, Kurtand, SindriBasti, Manohartand, Chasnalabasti, Manpur, Jharna, Bogla, and Chandankyari shall be taken for socio economic activity under CSR, for which a sum of Rs. 65/- Crores shall be earmarked for capital cost and Rs. 4/- crore as revenue cost over the life of the project. The proponent shall constitute VDC for monitoring the implementation of CSR. In addition the Sub-Committee of EAC shall also monitored if required.</p>	<p>Not complied yet: A copy of constituted VDC/EAC for monitoring the implementation of CSR activity, must be submitted to RO , Ranchi</p>
(xxiii)	<p>The project authority shall carry out a detailed pre-mining socio-economic survey based on the UNDP Human Development Report and quality of life parameters and monitor the socio-economic status once every three years and maintain record thereof and report in their annual report, the socio-economic report of R&R and CSR Activities. The details of which shall be uploaded on the company’s web site every year. A post of GM to exclusively look after R&R & CSR shall be created.</p>	<p>Partially complied: As per the submitted six monthly report stated that Project Development India Limited, a Central Govt. PSU and by Abhiyan Samiti a Dhanbad based NGO in the year 2008 and 2009 respectively, i.e. prior to start of mining operation.</p> <p>Fresh socio-economic survey will be carried out based on the UNDP Human Development Report and quality life parameters to monitor the socio-economic status.</p> <p>A copy of communicating letter with PDIL and NGOs holders must be submitted</p>

(xxiv)	For monitoring land use pattern and post mining land use, a time series of land use maps based on satellite imagery (1:5000) of the core and buffer zone from the start of the project until end of the mine life shall be prepared once in three year from any one particular season which is consistent in the time series and the report submitted to MoEF and its regional office at Bhubneshwar.	Partially complied: As per the submitted six monthly report project proponent stated that satellite imagery of the core and buffer zone has been done before pre-mining activity i.e. on 2007 and land use map based on the satellite imagery has been prepared and submitted to MoEF. The latest satellite imagery land use map must be submitted to RO, Ranchi as per EC conditions.
(xxv)	A final mine closure plan along with details of Corpus Fund shall be submitted to the MoEF, 5 year in advance of the final mine for approval.	Agree to comply: A Final Mine Closure Plan along with details of Corpus Fund will be submitted to MoEF, 5 year in advance of the final Mine Closure for approval as directed.

B. General Condition

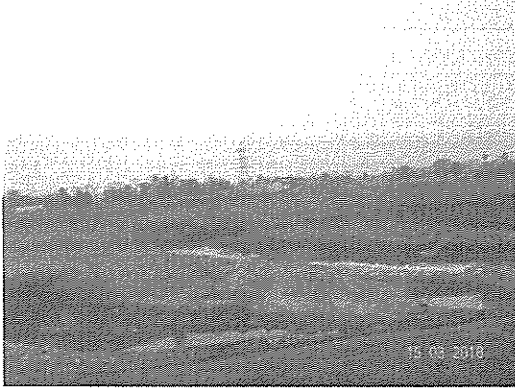
Sl. No.	Condition	Status of compliance
(i)	No change in technology and scope of work shall be made without prior approval of the Ministry of Environment and Forest	Reportedly complied. Project authorities assured that there will be no change in mining technology and scope of working without prior approval of the Ministry of Environment and Forests.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	Partially complied : As per the submitted document it has been reported that quantity of coal produced 81294 (MT) and quantity of OB generated 4,95,840 CUM (up to Feb. 2018) The year wise data on total mined out area, ore and sub-grade ore production, OB generated and backfilled area details should be submitted to this Regional office. Immediate action on this condition is required.
(iii)	Four ambient quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring SPM, RSPM, So ₂ and NO _x . Locations of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr in SPM and RSPM etc., shall be carried out at least once in 6 months	Being complied: Project proponent has submitted ambient air quality monitored data of four locations namely Amlabad (AAQ-BZ ₁), Baghmara (AAQ-BZ ₂), Jharia (AAQ-BZ ₃) and Joradih (AAQ-BZ ₄). RSPM, SPM, SO ₂ , and NO _x have been monitored and as per the latest data submitted for the month of Dec. 2017, all parameters are within the limits. It was informed that company authority don't have own ambient air quality monitoring station they hired 3 rd party (Envirotech Services, an environmental analytical laboratory) twice in a week.
(iv)	Data on ambient air quality (SPM, RSPM, So ₂ and NO _x and heavy metals such as Hg, As, Ni, Cr etc.) and other monitoring	Being complied: Project proponent has submitted ambient air quality monitored data of four locations namely Amlabad

	data shall be regularly submitted to the Ministry including its Regional Office at Bhubneshwar 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 recognised under the E (P) Rules, 1986 shall be furnished as part of compliance.	(AAQ-BZ ₁), Baghmara (AAQ-BZ ₂), Jharia (AAQ-BZ ₃) and Joradih (AAQ-BZ ₄). RSPM, SPM, SO ₂ , and NO _x have been monitored and as per the latest data submitted for the month of Dec. 2017, all parameters are within the limits.
(v)	Adequate measures shall be taken for control of noise level below 85 dBA in the work environment. Workers engaged in blasting operation, operation of HEMM etc. shall be provided with ear plugs/muffs.	Complied: It was reported that the details of Ear plug / muffle provided to worker engaged in the blasting and drilling operations for the year 2017-2018. Submitted noise level all parameters are within the limits.
(vi)	Industrial waste water (workshop and waste water from the mine) shall be properly collected treated so as to conform to the standards including for heavy metals, before discharge prescribed under GSR+22 (E) dated 19 May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	Not complied yet: At present no industrial waste water treatment plant and workshop was established in the project site.
(vii)	Vehicular emission shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	Being complied: It has been seen that all mineral transporting vehicles was maintained in good condition to control vehicular emissions. Tarpaulin covered vehicles are in use.
(viii)	Monitoring of environment 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 analysed through a laboratory recognised under EP Rules, 1986.	Reportedly complied. Environmental Monitoring is being done through NABL/MoEF Accredited Lab.
(ix)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational Health Surveillance Programme of the worker shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if required.	Partially complied: As per the submitted document it has been reported that personnel working in dusty areas was wear protective respiratory devices and provided with adequate training and information on safety and health aspects. Occupational Health Surveillance Programme of the worker will be undertaken periodically to observe any contractions due to exposure of dust and to take corrective measures, if required. Number of camps conducted, findings made

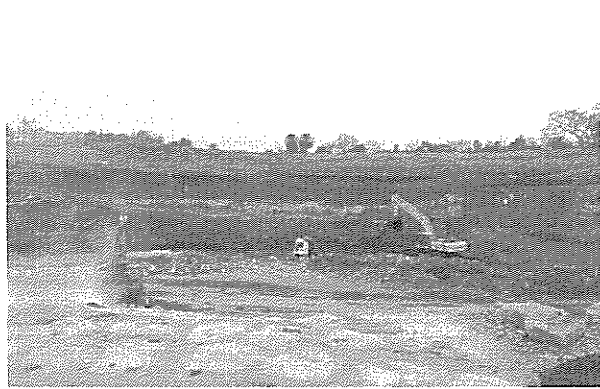
		on safety and health aspects and action taken needed to be submitted to Regional Office Ranchi.
(x)	Separate Environmental Management Cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organisation.	Partially complied. Separate Environmental Management Department has been set up and headed by Asst. General Manager, who reports directly to the Head of the Mine. In addition to this, SAIL is having a separate Corporate Environment Management Division (EMD) at Kolkata under the control of Executive Director, who facilitates in environmental management of all SAIL units. The name, designation and qualification of all the personnel looking after the Environmental Management cell must be submitted to RO, Ranchi
(xi)	The fund earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to the Ministry and its regional office located at Bhubneshwar.	Not complied yet: It was informed that year wise and item wise expenditure made on environment protection measures must be submitted to RO, Ranchi.
(xii)	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 7 day 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 also at website of the Ministry of Environment and Forest at http://www.envfor.nic.in	Partially complied: As per the submitted document it has been reported that advertisement was issued in two local newspapers widely circulated around the project. However, from the submitted copies of the date of advertisement and the name of newspaper are not clear.
(xiii)	A copy of the clearance letter shall be marked to concerned Panchyat/ZilaParishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom suggestion/representation has been received while processing the proposal. A copy of the clearance letter also to be displayed on the company's website.	Partially complied: As per the submitted document it has been reported that compliance has been done as per the EC condition. A copy of clearance letter has also been displayed on the company's web site. A copy of receipt of EC letter by Panchayat / local NGO must be submitted to RO Ranchi.
(xiv)	A copy of clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre	Complied : This condition is complied with.

	and Collector Office/Tehsildar Office for 30 days.	
(xv)	The Clearance letter shall be uploaded on the Company's website. The compliance status of stipulated EC 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 the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as SPM, RPM, SO ₂ , NO _x (ambient and stack if any) and critical sectorial parameters shall be displayed at the entrance of the project premises and mine office and in corporate office and on the company's website.	Reportedly complied: The Environmental Clearance has been uploaded on the company's website. The compliance status of stipulated EC conditions shall also be uploaded on the company's website and updated at least once in every six months after submission of the report to the concerned Authorities. The environmental monitoring data shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
(xvi)	The project proponent shall submit six monthly report on the status compliance of the environmental clearance conditions (both in hard copy and e-mail) to the respective Regional Office of the MoEF, the respective Zonal Office of CPCB and the SPCB.	Being complied: Six monthly reports on the status of implementation of the stipulated environmental safeguards are submitted regularly.
(xvii)	The Regional Officials of the Ministry located at Ranchi shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data information monitoring report.	Complied. This condition is complied with
(xviii)	The environmental statement for each financial year ending 31 st September Form V is mandate to be submitted by the Project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Act, 1986 as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by e-mail.	Agree to comply: The Environmental Statement for each financial year shall be submitted to the concerned State Pollution Control Board and also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by e-mail.

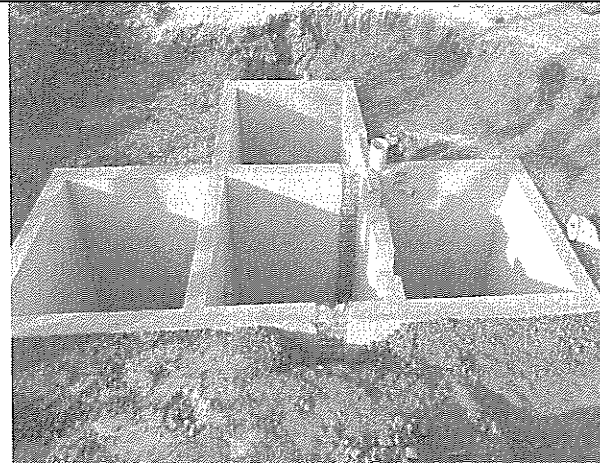
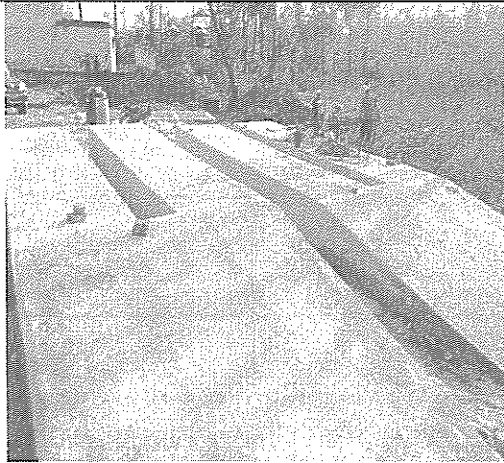
Some photographs of project site during project monitoring period (Dated 13.03.2018)



1. Photo of mine pit water



2. Photo of under progress mining operation



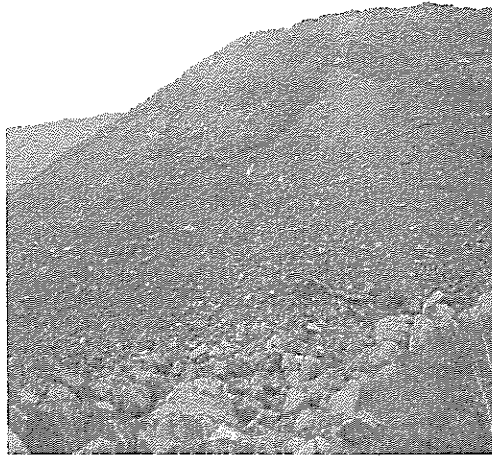
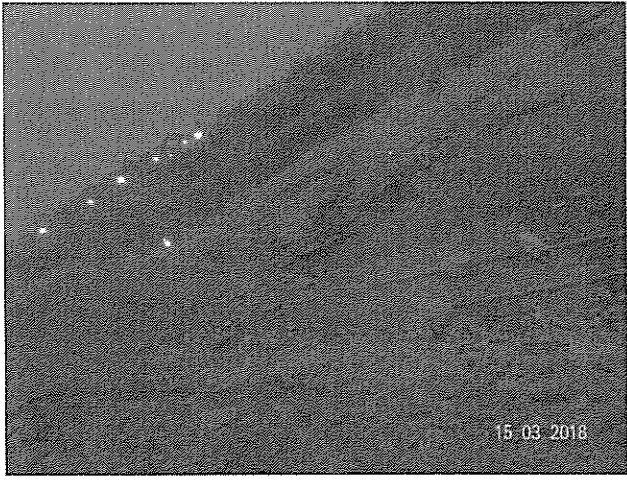
3. Photo of under construction ETP plant



4. Photo of water sprinkling by water tanker



5. Photo of railway siding

	
<p>6. Photo of OB dump</p>	<p>7. Photo of OB dump materials goes Damodar river</p>

Summary of the report

Site inspection of the project has been carried out on 15.03.2018. Following observations were made during the site inspection that needs special attention:

Following conditions were Not Complied:

Specific Conditions:

(Condition no. viii): Dimension of the retaining wall at the toe of the dumps and OB benches showing their height and breadth must be submitted.

(Condition no. ix): On the date of site visit it was observed that main approach road was not black topped. A three tire avenue plantation is yet to be developed. Closed belt conveyor system for mineral transportation from the mine to the railway siding was not constructed.

(Condition no. xvii): Plantation work not yet started. List of plants species selected for plantation must be submitted to RO Ranchi.

(Condition no. xviii): In the project site it has been observed that afforestation activity not yet carried out.

(Condition no. xxii): A copy of constituted VDC/EAC for monitoring the implementation of CSR activity, must be submitted to RO, Ranchi.

General Conditions:

(Condition no. vi): At present no industrial waste water treatment plant and workshop was established in the project site.

Following conditions were Partially Complied:

Specific Conditions :

(Condition no. iii): It was informed to the project proponent that the embankment should be constructed on northern bank of the Damodar River and adjoining areas as per EC stipulation.

(Condition no. v): The year wise data of top soil generated and their uses should be submitted to this Regional Office Ranchi.

(Condition no. vi): At the project site it was observed that, catch drains and siltation ponds around O/B dump was not constructed as can be seen from photos no 6&7. Near O/B dump toe wall needs to be extended to be able to arrest silt and sediment flows from dumps to the Damodar river. The height of the OB dump seemed more than the limit. It should be bench pattern. Cross section of the OB dumps showing their height and slope must be submitted. The year wise data of ore and sub-graded ore production and overburden removed, backfilled and excavated area should be submitted to this RO office from the date of starting the project.

(Condition no. vii): Garland drains, Catch drains and siltation ponds around O/B dump was not constructed completely. The catch drains around the OB dump towards river side should be made urgently.

(Condition no. xii): Fixed water sprinkling arrangements should be done in the dusty area. There was no permanent water sprinkler in the railway siding, loading and haul roads area, as can be seen from photos no 2&5. Copy of water tankers log book data mentioning running hours, fuel consumption and breakdown details must be submitted to Regional Office Ranchi.

(Condition no. xiv): At the project site no rainwater harvesting ponds and no piezometers were observed.

(Condition no. xvi): Sewage treatment plant is yet to be installed in the colony area.

(Condition no. xx): A copy of expenditure made on environmental protection measures should be uploaded in the company web site and hard copy must be submitted to RO, Ranchi.

(Condition no. xxi): List of project affected family (PAF) shifted to new colony and action taken report on public hearing must be submitted to RO, Ranchi.

(Condition no. xxiii): A copy of communicating letter with PDIL and NGOs holders must be submitted.

(Condition no. xxiv): The latest satellite imagery land use map must be submitted to RO, Ranchi as per EC conditions.

General Conditions :

(Condition no. ii): The year wise data on total mined out area, ore and sub-grade ore production, OB generated and backfilled area details should be submitted to this Regional office. Immediate action on this condition is required.

(Condition no. ix): Number of camps conducted, findings made on safety and health aspects and action taken needed to be submitted to Regional Office Ranchi.

(Condition no. x): The name, designation and qualification of all the personnel looking after the Environmental Management cell must be submitted to RO, Ranchi

(Condition no. xii): Submitted copies of the date of advertisement and the name of newspaper are not clear.

(Condition no. xiii): A copy of receipt of EC letter by Panchayat / local NGO must be submitted to RO Ranchi.

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

Yours faithfully,



Dr.Hemen Hazarika
Scientist "D"

