



स्टील अथॉरिटी ऑफ़ इंडिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
कोलियरीज डिवीज़न,
COLLIERIES DIVISION

सन्दर्भ: जी० एम०/तासरा/40

दिनांक: 19/05/2017

सेवा में

एडिशनल डायरेक्टर (S),

ईआई प्रभाग, पर्यावरण एवं वन मंत्रालय,

पर्यावरण भवन, सीजीओ कॉम्प्लेक्स, लोधी रोड,

नई दिल्ली - 110003

विषय: तासराकोयला खनन परियोजना (Tasra Opencast Project) के लिए पर्यावरण एवं वन मंत्रालय द्वारा दी गई पर्यावरण मंजूरी (Environmental Clearance) (EC granted by vide letter no. J-1105/122/2007-IA-II (M), dated 13th October, 2009) में निर्धारित शर्तों के अनुपालन के सम्बन्ध में छह मासिक स्थिति (अवधि: 31 मार्च, 2017 की समाप्ति तक)

महोदय,

स्टील अथॉरिटी ऑफ़ इंडिया लिमिटेड (SAIL) के तासराकोयला खनन परियोजना (Tasra Opencast Project) के लिए पर्यावरण एवं वन मंत्रालय द्वारा दी गई पर्यावरण मंजूरी (Environmental Clearance) (EC granted by vide letter no. J-1105/122/2007-IA-II (M), dated 13th October, 2009) में निर्धारित शर्तों के अनुपालन के सम्बन्ध में छह मासिक (अवधि: 31 मार्च, 2017 की समाप्ति तक) अनुपालन रिपोर्ट आपके अवलोकन हेतु संलग्न की जा रही है।

हार्ड कॉपी और अनुपालन रिपोर्ट की सॉफ्ट कॉपी संलग्न हैं।

भवदीय,

(शिव प्रसाद)
(एन० शिव प्रसाद)

महाप्रबंधक (चा० एवं ता०)

संलग्नक: यथोक्त।

प्रतिलिपि:

1. एडिशनल डायरेक्टर (S),

पर्यावरण और वन मंत्रालय (MoEF), भारत सरकार,
क्षेत्रीय कार्यालय, पूर्वी जोन, ए / 3, Chandrasekharpur,

भुवनेश्वर - 751 023 (ओडिशा)

2. सदस्य सचिव,

केंद्रीय प्रदूषण नियंत्रण बोर्ड (CPCB),

Parivesh भवन, सीबीडी-सह-कार्यालय परिसर ईस्ट अर्जुन नगर,

दिल्ली - 110 032.

3. सदस्य सचिव,

झारखंड राज्य प्रदूषण नियंत्रण बोर्ड (JSPCB),

H.E.C., धुर्वा, रांची - 834004 (झारखंड)

कोलियरीज डिवीज़न, चासनाला, धनबाद, झारखण्ड-828135, दूरभाष: +91-326-2385-001, 2385-002; फ़ैक्स: +91-2385-003, ईमेल: gmchasnalla@gmail.com, वेबसाइट: www.sail.co.in
Collieries Division, Chasnalla, Dhanbad, Jharkhand-828135, Telephone: +91-326-2385-001, 2385-002; Fax: +91-2385-003, email: gmchasnalla@gmail.com, website: www.sail.co.in

हर किसी की ज़िन्दगी से जुड़ा हुआ है सेल

There's a little bit of SAIL in everybody's



स्टील अथॉरिटी ऑफ इंडिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
कोलियरीज डिवीज़न,
COLLIERIES DIVISION

Ref.: GM/Tasra/40.

Date: 19/05/2017

To,
The Additional Director (S),
EI Division, Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110003

Sub: Six monthly status of compliance to the conditions stipulated in the Environmental Clearance granted by MoEF for Tasra Coal Mining Project (EC granted by vide letter no. J-1105/122/2007-IA-II (M), dated 13th October, 2009) for the period ending 31st March, 2017.

Dear Sir,

Please find enclosed herewith the updated six monthly compliance report for the period ending 31st March, 2017 with respect to the conditions stipulated in the Environmental Clearance granted by the Ministry of Environment & Forests, New Delhi vide letter no. J-1105/122/2007-IA-II (M), dated 13th October, 2009 for the Tasra Coal Mining Project of M/s Steel Authority Of India Ltd for your kind perusal please.

Hard copy and soft copy of the compliance report are enclosed.

Thanking you Sir,

Yours faithfully

NS Prasad
(NS Prasad)
General Manager (C&T)
SAIL- Chasnalla

Encl.: As above

Copy:

1. The Additional Director (S),
Ministry of Environment & Forests, Govt of India,
Regional Office, Eastern Zone, A/3, Chandrasekharapur,
Bhubaneswar – 751 023 (Odisha)

2. The Member-Secretary,
Central Pollution Control Board,
Parivesh Bhawan, CBD-cum-Office Complex East Arjun Nagar,
DELHI - 110 032, INDIA

3. The Member-Secretary,
Jharkhand State Pollution Control Board,
H.E.C., Dhurwa, Ranchi - 834004 (Jharkhand)

कोलियरीज डिवीज़न, चसनाला, धनबाद, झारखण्ड-828135, दूरभाष: +91-326-2385-001, 2385-002; फ़ैक्स: +91-2385-003, ईमेल: gmchasnalla@gmail.com, वेबसाइट: www.sai
Collieries Division, Chasnalla, Dhanbad, Jharkhand-828135, Telephone: +91-326-2385-001, 2385-002; Fax: +91-2385-003, email: gmchasnalla@gmail.com, website: www

हर किसी की ज़िन्दगी से जुड़ा हुआ है सेल

There's a little bit of SAIL in everybody's life

Status of Compliance to the Condition stipulated in the Environmental Clearance granted by MoEF for Tasra Coal Mining Project (4 MTPA) for the period up to March' 2017

(EC granted vide Ref. No. J-1105/122/2007-IA-II(M) dated 13th October, 2009)

(A) Specific Conditions:-

Cond.No.	Conditions Imposed	Status as on March' 2017
(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.	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.	Application for Environmental Clearance for establishment of Coal Washery of 3.5 MTPA submitted to MoEF on 9 th December, 2009 and as per the directives of MoEF, application for Environmental Clearance submitted in amended Form 1 on 18 th January, 2010. TOR of EIA Study for Coal Washery was issued by MoEF on 25.02.2013 with extension of one year vide letter no. J-11015/365/2009-IA-II (M)(Part File) dated July 27, 2015. EIAEMP Report has been prepared and submitted to JSPCB Ranchi. Public Hearing was successfully conducted on 30.01.2016 and Final EIA Report with Public Hearing Proceedings submitted to MoEF& CC on 19/02/2016. Presentation at EAC Committee successfully conducted on 30.01.2017 & Environmental Clearance granted 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 atleast 3m above HFL. The slope of the embankment shall be atleast 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	Tasra Coal Mining Project has been planned maintaining a minimum distance of 100m between the river Damodar and the Quarry edge. Embankment will be constructed on northern bank of River Damaodar, adjoining to the quarry as per the conditions specified in the Environmental Clearance granted by MoEF. This will be strictly adhered to when the project take off. In fact as per the approved Mining Plan a minimum barrier of 100m (including space for embankment) has been considered between the mine boundary and Damodar River.

N. Singh

Cond. No.	Conditions Imposed	Status as on March' 2017
	for strength before using for construction of embankment.	
(iv)	The plan for diversion and realignment of the DomohaniJore and CilatuJore 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.	As per the mining schedule of Tasra OCP, the diversion and realignment of DomohaniJore and CilatuJore is planned beyond 10 th 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.
(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.	It is prudent to mention that Tasra OCP was previously worked by BCCL, so in initial few years, no top soil will be encountered as mining will be carried in the broken land. However after acquisition of fresh land, top soil will be removed and placed in separate stock piles near the main dump and will used in reclamation of waste dumps and development of green belt.
(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 adequate 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 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 10 th Year. Monitoring and management of the reclaimed dump site shall continue until the vegetation becomes self-sustaining compliance status shall be submitted to	All mining activity will be carried out as per mining plan approved by Ministry of Coal and the conditions stipulated in the Environmental clearance. At Tasra OCP most of 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 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 Bhubneshwar as directed. As per the EC of Tasra OCP, under specific condition point no. VI it was mentioned that OB shall be stacked at earmarked external OB dump site within ML area. However, as per approved mine plan and EIA/EMP submitted to MoEF, the external dump site has been proposed over the abandoned ash dumping site of FCIL land which is located outside the ML area of Tasra OCP.

Cond. No.	Conditions Imposed	Status as on March' 2017
	MoEF and its Regional Office located at Bhubneshwar on yearly basis.	
(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.</p> <p>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>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 sudden rainfall and maximum discharge in the area adjoining the mining site.</p>
(viii)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and situation shall be based on rainfall data.	Retaining wall will be designed based on the rainfall data of the area.
(ix)	<p>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.</p> <p>The railway siding shall be provided with Silo rapid loading system.</p>	<p>The main approach road will be black topped. A three tire avenue plantation will be also developed along the main roads and haul roads. ROM coal will be transported to CHP end through haul road along southern pit limit and the crushed coal from CHP will be transported to the proposed Washery by closed belt conveyor. Further washed coal from the Washery to the Steel Plants will be transported by rail.</p>
(x)	Drills shall be wet operated only.	There will be no dry drilling. In fact SAIL has already resorted to wet drilling in all of its mines.
(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.	Muffled control blasting will be practiced with the use of NONEL detonators to arrest fly rocks. Appropriate pattern and maximum charge per delay as per DGMS norms will be followed.
(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,	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.

	transfer point at railway siding.	
Cond. No.	Conditions Imposed	Status as on March' 2017
(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	No ground water (bore well) will be used for mining operations. Required industrial water requirement will be met from mine pit water.
(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.	At present our 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 will be carried out by establishing a network of existing wells and construction of new piezometer as directed.
(xv)	The project authorities shall meet water requirement of nearby villages in case of village well goes dry due to dewatering of mine.	Under CSR scheme, SAIL has initiated efforts to meet the water requirements of nearby villages.
(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 water courses only if it meets the prescribed standards.	An R&R colony will be set up for displaced persons of the project area. There is provision for setting of sewage treatment plant in the colony. ETP will also be installed for workshop and CHP wastewater. Treated wastewater (meeting prescribed norms only) will be recycled for mining operations to the extent possible and permitted to be discharged in to the natural water courses only if it meets the prescribed standards.
(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	After completion of mining operations Mine closure will be done as per Mine Closure Plan. Plantation will be carried out in consultation with local DFO/ Agriculture Department.

	shall be around 2500 plant/Ha.	
Cond. No.	Conditions Imposed	Status as on March' 2017
(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 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 quarryarea 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.	Out of the total quarry area of 371.33 Ha, progressive mine closure plan will be implemented covering 276.02 ha. Quarry area through backfilling & Afforestation by planting native species in consultation with the local DFO/Agriculture Department.
(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.	As per DGMS norms IME and PME i.e. initial medical examination and periodical medical check of work force will 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.	An amount of Rs. 600.60/- lakhs as capital cost has been earmarked for environment protection measures. Provision of Rs. 35/- lakhs will be made towards annual recurring cost as directed.
(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 for civic amenities in the colony. R&R shall include setting of an ITI for training	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 establishment of R&R colony, if required shall be taken up as per the R&R Plan as approved by concerned Authority. However, due to enactment of "THE RIGHT TO FAIR COMPENSATION AND TRANSPERANCY IN LAND ACQUISITION REHABILITATION AND

	& skill development amongst the persons	RESETTLEMENT ACT 2013" (LARR ACT 2013) w.e.f.
Cond. No.	Conditions Imposed	Status as on March' 2017
	<p>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.</p> <p>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>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.</p> <p>The R&R Scheme prepared by District Administration has been approved.</p>
(xxii)	Peripheral village of Parasbania, Chattabad, Orbetta, 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 continue VDC for monitoring the implementation of CSR. In addition the Sub-Committee of EAC shall also monitored if required.	VDC will be constituted as directed.
(xxiii)	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>PDIL i.e. Project Development India Limited, a Central Govt. PSU and by AbhiyanSamiti 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>
(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	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.

	of the project until end of the mine life	Further land use maps will be prepared and
Cond. No.	Conditions Imposed	Status as on March' 2017
	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.	submitted as directed during the operation.
(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.	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.

General Conditions:-

Cond. No.	Conditions Imposed	Status as on March' 2017
(i)	No change in technology and scope of work shall be made without prior approval of the Ministry of Environment and Forest	Noted
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	Quantum of mineral coal and waste dumping will be kept within the planned quantities as per approved mining plan.
(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	Four nos. of air quality monitoring station in and around Tasra Coal Block are being monitored.
(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 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.	Air quality data for the period of October 2016 to March 2017 is placed in Annexure – I.
(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.	Noise level will be maintained below 85 dBA and person engaged in drilling and blasting operation will be provided with ear muffs.
(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	At present no industrial water is generated from the mine and no workshop has been established till date for Tasra OCP. There is provision for installation of effluent treatment plants for treatment of waste water from mine as well as workshop.

Cond. No.	Conditions Imposed	Status as on March' 2017
	effluents.	
(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.	All vehicles, transporting mineral will be maintained in good condition to control vehicular emissions. Vehicle transporting coal will be optimally loaded and covered with tarpaulins.
(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.	Environmental Monitoring is being done through NABL Accredited Laboratory.
(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.	Personnel working in dusty areas will wear protective respiratory devices and they will be 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.
(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.	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.
(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.	Noted
(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	Complied. Advertisement was issued in two local newspaper widely circulated around the project.

Cond. No.	Conditions Imposed	Status as on March' 2017
	Ministry of Environment and Forest at http://www.envfor.nic.in	
(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.	Compliance has been done as per the EC condition. A copy of clearance letter has also been displayed on the company's web site.
(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 and Collector Office/Tehsildar Office for 30 days.	Compliance has been done as per the EC condition.
(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, SO2, NOx (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.	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
(xvii)	The Regional Officials of the Ministry located at Bhubneshwar 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.	Full Co-operation will be extended by SAIL to State and Central Govt. Authorities as required.
(xviii)	The environmental statement for each financial year ending 31 st September Form V is mandate to be submitted by the	The Environmental Statement for each financial year shall be submitted to the concerned State Pollution Control Board and shall also be uploaded

Cond. No.	Conditions Imposed	Status as on March' 2017
	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.	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.



KALYANI LABORATORIES PVT. LTD.

KALYANI LABORATORIES PVT. LTD. BBSR

TEST REPORT

Test Report No.: KLPL-TR/10/16/S- 1013

Issue date: 29.10.2016

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL / L&A / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 21.10.2016 Testing Dt.: 21.10.2016 Test completion Dt.: 28.10.2016

Sample Description: Ambient Air Quality No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL No.	DATE OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	18-19/10/2016	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	68	100 µg/m ³	KLPL/ SOP/Air-01
	18-19/10/2016		Mohan Bazar	65		
	19-20/10/2016		Chasnalla	82		
	19-20/10/2016		Rohrabandh	61		
2.	18-19/10/2016	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	35	60 µg/m ³	KLPL/ SOP/Air-02
	18-19/10/2016		Mohan Bazar	32		
	19-20/10/2016		Chasnalla	45		
	19-20/10/2016		Rohrabandh	29		
3.	18-19/10/2016	SO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	10.8	80 µg/m ³	IS 5182 (P-2): 2001
	18-19/10/2016		Mohan Bazar	10.5		
	19-20/10/2016		Chasnalla	12.1		
	19-20/10/2016		Rohrabandh	9.2		
4.	18-19/10/2016	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	12.5	80 µg/m ³	IS 5182 (P-6): 2006
	18-19/10/2016		Mohan Bazar	15.5		
	19-20/10/2016		Chasnalla	18.2		
	19-20/10/2016		Rohrabandh	10.8		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Reeha Kalyan
29/10/2016
Authorized Signatory
Kalyani Laboratories Private Limited
BBSR



KALYANI LABORATORIES PVT. LTD.

W-1A, RAJULGARH, BHU BAHESWAR, SINGUR, ODISHA

TEST REPORT

Test Report No.: KLPL-TR/11/16/S- 1014

Issue date: 03.12.2016

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL / LoA / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 26.11.2016 Testing Dt.: 26.11.2016 Test completion Dt.: 03.12.2016

Sample Description: Ambient Air Quality No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL. No.	DATE OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	22-23/11/2016	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	65	100 µg/m ³	-KLPL/ SOP/Air- 01
	22-23/11/2016		Mohan Bazar	72		
	23-24/11/2016		Chasnalla	88		
	23-24/11/2016		Rohrabandh	63		
2.	22-23/11/2016	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	36	60 µg/m ³	KLPL/ SOP/Air- 02
	22-23/11/2016		Mohan Bazar	38		
	23-24/11/2016		Chasnalla	50		
	23-24/11/2016		Rohrabandh	30		
3.	22-23/11/2016	SO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	11.2	80 µg/m ³	IS 5182 (P-2): 2001
	22-23/11/2016		Mohan Bazar	11.2		
	23-24/11/2016		Chasnalla	13.1		
	23-24/11/2016		Rohrabandh	9.8		
4.	22-23/11/2016	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	13.5	80 µg/m ³	IS 5182 (P-6): 2006
	22-23/11/2016		Mohan Bazar	16.2		
	23-24/11/2016		Chasnalla	19.5		
	23-24/11/2016		Rohrabandh	10.5		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Pertha Kalyan
Authorized Signatory 3/12/2016
Kalyani Laboratories Private Limited





KALYANI LABORATORIES PVT. LTD.

ISO 9001:2015 CERTIFIED

TEST REPORT

Test Report No.: KLPL-TR/12/16/S- 1015

Issue date: 23.12.2016

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL / LoA / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 15.12.2016 Testing Dt.: 15.12.2016 Test completion Dt.: 22.12.2016

Sample Description: Ambient Air Quality No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL. No.	DATE OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	12-13/12/2016	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	58	100 µg/m ³	KLPL/ SOP/Air-01
	12-13/12/2016		Mohan Bazar	70		
	13-14/12/2016		Chasnalla	84		
	13-14/12/2016		Rohrabandh	68		
2.	12-13/12/2016	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	35	60 µg/m ³	KLPL/ SOP/Air-02
	12-13/12/2016		Mohan Bazar	36		
	13-14/12/2016		Chasnalla	48		
	13-14/12/2016		Rohrabandh	32		
3.	12-13/12/2016	SO ₂ µg/m ³	Tasra 0.0km ⁺ - (Centre of lease)	9.8	80 µg/m ³	IS 5182 (P-2): 2001
	12-13/12/2016		Mohan Bazar	10.8		
	13-14/12/2016		Chasnalla	14.1		
	13-14/12/2016		Rohrabandh	11.1		
4.	12-13/12/2016	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	10.6	80 µg/m ³	IS 5182 (P-6): 2006
	12-13/12/2016		Mohan Bazar	15.9		
	13-14/12/2016		Chasnalla	18.4		
	13-14/12/2016		Rohrabandh	13.2		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Reeta Chatterjee
23/12/2016
Authorized Signatory
Kalyani Laboratories Private Limited





KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

TEST REPORT

Test Report No.: KLPL-TR/01/17/S- 1016

Issue date: 27.01.2017

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL/ LoA / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 19.01.2017 Testing Dt.: 19.01.2017 Test completion Dt.: 26.01.2017

Sample Description: Ambient Air Quality No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL NO	DATE OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	16-17/01/2017	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	62	100 µg/m ³	KLPL/ SOP/Air-01
	16-17/01/2017		Mohan Bazar	82		
	17-18/01/2017		Chasnalla	91		
	17-18/01/2017		Rohrabandh	74		
2.	16-17/01/2017	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	36	60 µg/m ³	KLPL/ SOP/Air-02
	16-17/01/2017		Mohan Bazar	40		
	17-18/01/2017		Chasnalla	52		
	17-18/01/2017		Rohrabandh	38		
3.	16-17/01/2017	SO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	10.5	80 µg/m ³	IS 5182 (P-2): 2001
	16-17/01/2017		Mohan Bazar	14.1		
	17-18/01/2017		Chasnalla	15.1		
	17-18/01/2017		Rohrabandh	10.3		
4.	16-17/01/2017	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	11.7	80 µg/m ³	IS 5182 (P-6): 2006
	16-17/01/2017		Mohan Bazar	16.5		
	17-18/01/2017		Chasnalla	20.5		
	17-18/01/2017		Rohrabandh	15.3		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Pooja Nayak
27/01/2017
Authorized Signatory
Kalyani Laboratories Private Limited





KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

TEST REPORT

Test Report No.: KLPL-TR/02/17/S- 1017

Issue date: 18.02.2017

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL / LoA / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 11.02.2017 Testing Dt.: 11.02.2017 Test completion Dt.: 18.02.2017

Sample Description: Ambient Air Quality

No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample-absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL. NO	DATE OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	08-09/02/2017	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	55	100 µg/m ³	KLPL/ SOP/Air-01
	08-09/02/2017		Mohan Bazar	60		
	09-10/02/2017		Chasnalla	85		
	09-10/02/2017		Rohrabandh	68		
2.	08-09/02/2017	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	28	60 µg/m ³	KLPL/ SOP/Air-02
	08-09/02/2017		Mohan Bazar	32		
	09-10/02/2017		Chasnalla	39		
	09-10/02/2017		Rohrabandh	33		
3.	08-09/02/2017	SO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	8.6	80 µg/m ³	IS 5182 (P-2): 2001
	08-09/02/2017		Mohan Bazar	11.5		
	09-10/02/2017		Chasnalla	12.5		
	09-10/02/2017		Rohrabandh	9.2		
4.	08-09/02/2017	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	10.5	80 µg/m ³	IS 5182 (P-6): 2006
	08-09/02/2017		Mohan Bazar	15.2		
	09-10/02/2017		Chasnalla	16.5		
	09-10/02/2017		Rohrabandh	11.3		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Authorized Signatory
Kalyani Laboratories Private Limited





KALYANI LABORATORIES PVT. LTD.

K.L.S. RASHTAGARH, BHUBANESWAR, INDIA, 751004

TEST REPORT

Test Report No.: KLPL-TR/03/17/S- 1018

Issue date: 06.04.2017

Name and address of the Customer: Tasra Mining and Energy Company Pvt. Ltd.,
Dhanbad, Jharkhand.

Customer's reference: TMECPL / LoA / Kalyani Laboratories / 2017 / 226

Date of Sample Receipt: 29.03.2017 Testing Dt.: 29.03.2017 Test completion Dt.: 06.04.2017

Sample Description: Ambient Air Quality No. of Samples: 4 Locations (1 Sample Each)

Sample Condition: Gaseous sample absorbing solutions refrigerated

Sampling Method used, if any: KLPL/SOP/ Air-06

SL. NO	DATE -OF SAMPLING	PARAMETER	SAMPLING LOCATION	OBSERVED VALUE	NATIONAL AMBIENT AIR QUALITY STANDARD, 2009	TEST METHOD
1.	27-28/03/2017	PM ₁₀ µg/m ³	Tasra 0.0km (Centre of lease)	60	100 µg/m ³	KLPL/ SOP/Air-01
	27-28/03/2017		Mohan Bazar	71		
	28-29/03/2017		Chasnalla	87		
	28-29/03/2017		Rohrabandh	78		
2.	27-28/03/2017	PM _{2.5} µg/m ³	Tasra 0.0km (Centre of lease)	25	60 µg/m ³	KLPL/ SOP/Air-02
	27-28/03/2017		Mohan Bazar	30		
	28-29/03/2017		Chasnalla	32		
	28-29/03/2017		Rohrabandh	34		
3.	27-28/03/2017	SO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	9.2	80 µg/m ³	IS 5182 (P-2): 2001
	27-28/03/2017		Mohan Bazar	10.8		
	28-29/03/2017		Chasnalla	13.1		
	28-29/03/2017		Rohrabandh	10.8		
4.	27-28/03/2017	NO ₂ µg/m ³	Tasra 0.0km (Centre of lease)	11.5	80 µg/m ³	IS 5182 (P-6): 2006
	27-28/03/2017		Mohan Bazar	13.2		
	28-29/03/2017		Chasnalla	20.2		
	28-29/03/2017		Rohrabandh	19.5		
Remarks:		Nil				
Any unusual feature observed during determination				Nil		

End of Test Report

Authorized Signatory
Kalyani Laboratories Private Limited





NABL

National Accreditation Board for
Testing and Calibration Laboratories

(An Autonomous Body under Department of Science & Technology, Govt. of India)

CERTIFICATE OF ACCREDITATION

KALYANI LABORATORIES PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Plot No. 841-A, Rasulgarh, Bhubaneswar, Odisha

in the discipline of

CHEMICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number: T-2851

Issue Date: 08/10/2015

Valid Until: 07/10/2017



This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

N. Venkateswaran

N. Venkateswaran
Program Manager

Anil Rella

Anil Rella
Director

S. K. Joshi

Prof. S. K. Joshi
Chairman

18572
21/11



NABL

National Accreditation Board for
Testing and Calibration Laboratories

(An Autonomous Body under Department of Science & Technology, Govt. of India)

CERTIFICATE OF ACCREDITATION

KALYANI LABORATORIES PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

'General Requirements for the Competence of Testing & Calibration Laboratories'

for its facilities at

Plot No. 841-A, Rasulgarh, Bhubaneswar, Odisha

in the discipline of

BIOLOGICAL TESTING

On the scope of accreditation of this laboratory you refer to NABL website www.nabl.in

Certificate Number T-3879

Issue Date 01/05/2016

Valid Until 07/05/2017

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

N. Vankateswaran

N. Vankateswaran
Program Manager

Anil Rella

Anil Rella
Director

Prof. S. K. Joshi

Prof. S. K. Joshi
Chairman

- Asmita 21/11

- Anil

