

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

Date: - 01/12/2017

### Ref: Gm/TASRA/214

To,
The Additional Director(s),
El Division,
Ministry of Environment, Forest and Climate Change,
ParyavaranBhawan, CGO Complex, Lodhi Road,
New Delhi – 110003

Sub:

Six Monthly Status of Compliance to the conditions stipulated in the EC granted by MoEF and Climate Change for Tasra Coal Mining Project (EC granted vide letter no. J-1105/122/2007-IA-II(M) dated 13<sup>th</sup> October, 2009) for the period ending 30<sup>th</sup> September, 2017.

Dear Sir,

Please find enclosed herewith the updated six monthly compliance report for the period ending 30<sup>th</sup> September 2017 with respect to the condition stipulated in the Environmental Clearance granted by Ministry of Environment, Forest and Climate Change, New Delhi vide letter no. J-1105/122/2007-IA-II(M) dated 13<sup>th</sup> October, 2009 for the Tasra Coal Mining Project of M/s Steel Authority of India Limited for your kind perusal please.

Hard Copy and Soft copy of the report is enclosed.

Thanking you,

Yours faithfully

GM (C&T)

Encl: As above.

Copy

- The Additional Director (s)
   Ministry of Environment Forest and Climate Change
   Regional Office, Eastern Zone, A/3 Chandrasekharpur,
   Bhubaneshwar 751023 (ODISHA)
- The Member Secretary
   Central Pollution Control Board,
   PariveshBhawan, CBD-cum-Office Complex,
   East Arjun Nagar, Delhi 110032 (INDIA)
- The Menber Secretary
   Jharkhand State Pollution Control Board,
   H.E.C., Dhurwa, Ranchi 834004 (JHARKHAND)

4. J.S.P.C.B

Regional Office,

Dhanbad (JHARKHAND)

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# Status of Compliance to the Condition stipulated in the Environmental Clearance granted by MoEF for Tasra Coal Mining Project (4 MTPA) for the period September' 2017 (EC granted vide Ref. No. J-1105/122/2007-IA-II(M) dated 13<sup>th</sup> October, 2009)

### (A) Specific Conditions:-

Cond. No.	Conditions Imposed	Status as on September' 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.	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	Tasra Coal Mining Project has been planned maintaining a minimum distance of 100m between 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.
(iv)	embankment.  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.	As per the mining schedule of Tasra OCP, the diversion and realignment of Domohani Jore and Cilatu Jore is planned beyond 10 <sup>th</sup> 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



Cond. No.	Conditions Imposed	Status as on September' 2017
		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	All mining activity will be carried out as per mining
	dump site within ML area of maximum	plan approved by Ministry of Coal and the
	height of 90m of 3 benches of 30m each. A	conditions stipulated in the Environmental
	garland drain of educate capacity, and toe	clearance. At Tasra OCP most of the overburden
	wall along the OB dump shall be created	material will be dumped internally within the pit.
	to arrest the silt flow from the dumps. In	The waste generated during the first five year is
	addition to the garland drain, a separate 4-	proposed to be dumped partly outside and partly
	6m channel to serve as storm water drain	backfilled. After 6 years, the waste generated will
	shall also be created all along the mine	completely be accommodated internally into the
	based on peak data. Silt arrestor shall be	mined out voids. The external OB Dump site has
	constructed for both garland drain and	been proposed over the abandoned ash dumping
	storm water drain and the drain shall be	site of FCIL. The proposed external dump height
	regularly de-silted.	will be 90m in three decks of height 30m each. A
	Toe wall shall be constructed at the base of the dump shall be strengthened at	garland drain is proposed all around the dump to arrest surface runoff of rain water during
	critical patches with stones and	monsoon. It is also proposed to stabilize the
	compacted. Plantation using native	inactive slope of the dumps by plantation.
	species shall be developed between the	Compliance status will be submitted to MoEF and
	dumps and River Damodar. For	its regional office located at Bhubneshwar as
	reclamation of dumps and quarry with	directed.
	plantation, no chemical fertilizer shall be	As per the EC of Tasra OCP, under specific
	used. The ultimate slope of the dump shall	condition point no. VI it was mentioned that OB
	not exceed 28°. Reclamation of the OB	shall be stacked at earmarked external OB dump
	Dumps of an area of 168.47 Ha with	site within ML area. However, as per approved
	vegetation shall be completed by 10 <sup>th</sup>	mine plan and EIA/EMP submitted to MoEF, the
	Year. Monitoring and management of the	external dump site has been proposed over the
	reclaimed dump site shall continue until	abandoned ash dumping site of FCIL land which is
	the vegetation becomes self-sustaining	located outside the ML area of Tasra OCP.
	compliance status shall be submitted to	
	MoEF and its Regional Office located at	
	Bhubneshwar on yearly basis.	
(vii)	Catch drain and siltation pond of	The storm water run-off from the mining area will
ļ	appropriate size shall be constructed to	be diverted to the sedimentation dams to arrest
	arrest silt and sediment flows from soil,	the suspended solids through garland drains from
	OB and mineral dumps. The water so	around the mine, dump yards, stock piles. The
	collected shall be utilized for watering the	water so collected will be utilized for water
	mining area, road, greenbelt development	spraying in the mining area, roads for dust
	etc. The drains shall be regularly de-silted	suppression, green belt development etc. The drains will be regularly de-silted and maintained
	and maintained properly.  Garland drains (size, gradient and length)	properly Garland drains and sump capacity will be
	and sump capacity shall be designed	designed keeping safety margins over and above
	keeping safety margin over and above the	the peak sudden rainfall and maximum discharge
	peak sudden rainfall and maximum	in the area adjoining the mining site.
	discharge in the area adjoining the mining	a.c a.ca aajanning and mining site.
	site. Sump capacity shall also provide	
	adequate retention period to allow proper	
	settling of silt material.	
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Cond. No.	Conditions Imposed	Status as on September' 2017
(viii)	Dimension of the retaining wall at the toe	Retaining wall will be designed based on the
	of the dumps and OB benches within the	rainfall data of the area.
	mine to check run-off and situation shall	
	be based on rainfall data.	
(ix)	The approach road shall be blacked	The main approach road will be black topped. A
	topped. A three tire avenue plantation	three tire avenue plantation will be also
	shall be developed along the main	developed along the main roads and haul roads.
	approach roads and haul roads. Entire	ROM coal will be transported to CHP end through
	mine transportation shall be by rail mode	haul road along southern pit limit and the crushed
	only. Mineral transportation from the	coal from CHP will be transported to the proposed
	mine to the railway siding shall be by	Washery by closed belt conveyor. Further washed
	closed belt conveyor only.	coal from the Washery to the Steel Plants will be
	The railway siding shall be provided with	transported by rail.
	Silo rapid loading system.	The second of th
(x)	Drills shall be wet operated only.	There will be no dry drilling. In fact SAIL has
/	Controlled blooting shall be assessed with	already resorted to wet drilling in all of its mines.
(xi)	Controlled blasting shall be practised with the use of delay detonators. The mitigative	Muffled control blasting will be practiced with the use of NONEL detonators to arrest fly rocks.
	measures for control of ground vibration	Appropriate pattern and maximum charge per
	and to arrest the fly rocks and boulders	delay as per DGMS norms will be followed.
	shall be implemented.	delay as per Botto norms will be relieved.
(xii)	Water sprinkling system shall be provided	Water sprinkling system will be installed to check
(۸)	to check fugitive emissions from crushing	fugitive emission from crushing operation,
	operation, conveyor system, haulage	conveyor system, haulage roads, transfer points
	roads, transfer points etc. Hopper of the	etc. Hopper of the Coal crushing units and
]	coal crushing units and Washery unit shall	washery unit will be fitted with high efficiency
	be fitted with high efficiency bag filters	dust extraction system with bag filters and mist
	and mist spray water sprinkling system	spray. Water sprinkling system will be installed
	shall be installed and operated effectively	and operated effectively at all times of operation
	at all times of operation to check fugitive	to check fugitive emission from crushing
	emissions from crushing operation,	operation, transfer points at railway siding.
	transfer point at railway siding.	
(xiii)	No ground water (bore well) shall be used	No ground water (bore well) will be used for
	for mining operations. Additional water if	mining operations. Required industrial water
	any required for the project shall be used	requirement will be met from mine pit water.
	from recycled water or from mine	
	discharge water or rain water collected in	
	rain water harvesting pits within the	
fort. A	project area	At present our mining activity is limited to
(xiv)	Regular monitoring of ground water level	At present our mining activity is limited to dewatering of old abandoned quarry previously
	and quality shall be carried out by establishing a network of existing wells	worked byBCCL. As such there is nodepletion of
	and construction of new piezometer. The	ground water resources. However regular
	monitoring of quantity shall be done four	monitoring of ground water level and quality will
	times a year in pre monsoon (May),	be carried out by establishing a network
	Monsoon (August), post monsoon	of existing wells and construction of new
	(November) and winter (January)seasons	piezometer as directed.
	and for the quality in may Data thus	•
	collected shall be located to MoEF and to	
	the Central Pollution Control Board	



Cond. No.	Conditions Imposed	Status as on September' 2017
	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.	
(xv)	The project authorities shall meet water	Under CSR scheme, SAIL has initiated efforts to
	requirement of nearby villages in case of	meet the water requirements of nearby villages.
	village well goes dry due to dewatering of	
	mine.	
(xvi)	Sewage treatment plant of adequate	An R&R colony will be set up for displaced persons
	capacity shall be installed in the colony.	of the project area. There is provision for setting
	ETP shall also be provided for workshop	of sewage treatment plant in the colony. ETP will
	and CHP wastewater. Treated wastewater	also be installed for workshop and CHP
	meeting prescribed norms only shall be	wastewater. Treated wastewater (meeting
	recycled for mining operations to the	prescribed norms only) will be recycled for mining
	extent possible and permitted to be	operations to the extent possible and permitted to
	discharged m to the natural watercourses	be discharged in to the natural water courses only
	only if it meets the prescribed standards.	if it meets the prescribed standards.
(xvii)	Total area that shall be brought under	After completion of mining operations Mine
	afforestation at the time of mine closure	closure will be done as per Mine ClosurePlan.
	shall not be less than 444.49 Ha. which	Plantation will be carried outin consultation with
	includes reclaimed top soil dump area	İ
	external OB out in consultation with local	Local DFO/Agriculture Department.
	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.	
(xviii)	A progressive Mine Closure Plan shall be	Out of the total quarry area of 371.33 Ha,
	implemented by reclamation of 276.02	progressive mine closure plan will be
	ha, of the total quarry area of 371.33ha,	implemented covering 276.02 ha. Quarry area
	which shall be backfilled and afforested	through backfilling & Afforestation by planting
	by planting native plants species in	native species in consultation with the local
	consultation with the local DFO/	DFO/Agriculture Department.
	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.	
(xix)	Beside carrying out regular periodic	As per DGMS norms IME and PME i.e. initial
ļ	health check-up of their works, 10% of	medical examination and periodical medical check
	workers identified from workforce	of work force will be done. Additionally 10% of the
		work force engaged in active mining operation will



Cond. No.	Conditions Imposed	Status as on September' 2017
	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.	be subjected to health check-up through an agency as NIOH, Ahmedabad.  An amount of Rs. 600.60/- lakhs as capital cost has
(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.	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 & 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 displaces 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	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 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.  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.

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Cond. No.	Conditions Imposed	Status as on September' 2017
(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.	PDIL i.e. 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.  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.
(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.	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. Further land use maps will be prepared and 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 September' 2017
(i)	No change in technology and scope of	
• •	work shall be made without prior approval	
	of the Ministry of Environment and Forest	
(ii)	No change in the calendar plan including	Quantum of mineral coal and waste dumping will
	quantum of mineral coal and waste being	be kept within the planned quantities as per
	produced shall be made.	approved mining plan.
(iii)	Four ambient quality monitoring stations	Four nos. of air quality monitoring station in and
	shall be established in the core zone as	around Tasra Coal Block are being monitored.
I	well as in the buffer zone for monitoring	_
	SPM, RSPM, So2 and NOx. Locations of	
	the stations should be decided based on	,
	the meteorological data, topographical	
i	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	
(iv)	Data on ambient air quality (SPM, RSPM,	Air quality data for the paried of A 11 2047
(,	So2 and NOx and heavy metals such as Hg,	Air quality data for the period of April 2017 to September 2017 is placed in Annexure – I.
1	As, Ni, Cr etc.) and other monitoring data	September 2017 is placed in Affinexure – I.
	shall be regularly submitted to the	
1	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.	
	Adequate measures shall be taken for	Noise level will be maintained below 85 dBA and
	control of noise level below 85 dBA in the	person engaged in drilling and blasting operation
	work environment. Workers engaged in	will be provided with ear muffs.
1	blasting operation, operation of HEMM	
	etc. shall be provided with ear	
	plugs/muffs.	
	Industrial waste water (workshop and	At present no industrial water is generated from
	waste water from the mine)shall be	the mine and no workshop has been established
	properly collected treated so as to confirm to the standards including for heavy	till date for Tasra OCP. There is provision for
	metals, before discharge prescribed under	installation of effluent treatment plants for
	GSR+22 (E) dated 19 May, 1993 and 31st	treatment of waste water from mine as well as workshop.
	December, 1993 or as amended from time	workshop.
	to time. Oil and grease trap shall be	,
	installed before discharge of workshop	
	effluents.	
	i	



Cond. No.	Conditions Imposed	Status as on September' 2017
(vii)	Vehicular emission shall be kept under	Allmineral transporting vehicles will be maintained
(*")	control and regularly monitored. Vehicles	in good condition to control vehicular emissions.
	used for transportation of the mineral	Vehicle transporting coal will be optimally loaded
	shall be covered with tarpaulins and	and covered with tarpaulins.
	optimally loaded.	and covered with tarpaulits.
(viii)	Monitoring of environment quality	Environmental Monitoring is being done through
(******)	parameters shall be carried out through	NABL/MoeF Accredited Lab.
	establishment of adequate number and	TVADE/WOEF Accredited Lab.
	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.	
(ix)	Personnel working in dusty areas shall	Personnel working in dusty areas will wear
` ,	wear protective respiratory devices and	protective respiratory devices and they will be
	they shall also be provided with adequate	provided with adequate training and information
	training and information on safety and	on safety and health aspects.
	health aspects.	Occupational Health Surveillance Programme of
	Occupational Health Surveillance	the worker will be undertaken periodically to
	Programme of the worker shall be	observe any contractions due to exposure of dust
	undertaken periodically to observe any	and to take corrective measures, if required.
	contractions due to exposure to dust and	,
	to take corrective measures, if required.	
(x)	Separate Environmental Management Cell	Separate Environmental Management
	with suitable qualified personnel should	Department has been set up and headed by Asst.
	be set-up under the control of a Senior	General Manager, who reports directly to the
	Executive, who will report directly to the	Head of the Mine.
	Head of the Organisation.	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	Noted
	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.	
(xii)	The project authorities shall advertise at	Complied. Advertisement was issued in two local
	least in two local newspapers widely	newspaper widely circulated around the project.
	circulated around the project, one of	
	which shall be in the vernacular language	
	of the locality concerned, within 7 day of	
İ	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	

Cond. No.	Conditions Imposed	Status as on September' 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	Compliance has been done as per the EC condition. A copy of clearance letter has also been displayed on the company's web site.
	suggestion/representation has been received while processing the proposal. A copy of the clearance letter also to be displayed on the company's website.	
(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 31stSeptember 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 September' 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 email.





An Environmental Analytical Laboratory

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Acc. No.- M31112041N

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email: etslab2012@gmail.com | Website: www.etslab.asia Ph.: 9811736063, 9911516076

#### **TEST REPORT**

TEST REPORT NO: ETS/8445A/04/2017

**DATE OF REPORT: 10-04-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA. .

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 02-04-2017

**Analysis Start Date** 

: 05-04-2017

**Analysis End Date** 

: 06-04-2017

**Duration Of Sampling** 

: 02-04-2017 To 03-04-2017 **24.0 HOURS** 

Sample ID No

: 8445A

Sampling Done By

: ETS STAFF

**Sampling Location** 

: TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

; 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

**Ambient Temperature** 

: 32.5°C

S.No. Parameter	Unit	Result	Specification/ Limit	Test Method
			(As Per CPCB)	
1 Particulate Matters (PM10)	h8/w <sub>3</sub>	71.3	For 24 Hrs=100	IS:5182 (Part-23)
2 Particulate Matters (PM2.5)	μg/m³	42.5	For 24 Hrs.=60	Gravimetric Metho
3 Sulphur Dioxide (SO2)	h8/w <sub>s</sub>	12.8	For 24 Hrs.= 80	IS:5182 (Part-2)
4 Nitrogen Dioxide (NO2)	hð/w <sub>3</sub>	18.5	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

**SERVICES** 

SIGNATORY Md. Humrai

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### **TEST REPORT**

TEST REPORT NO: ETS/8445B/10-2017

**DATE OF REPORT: 10-04-2017** 

### **AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT**

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 03-04-2017

**Analysis Start Date** 

: 06-04-2017

**Analysis End Date** 

: 07-04-2017

**Duration Of Sampling** 

: 03-04-2017

To 04-04-2017

**24.0 HOURS** 

Sample ID No

: 8445B

Sampling Done By

: ETS STAFF

**Sampling Location** 

: MOHAN BAZAR

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

: 32.5°C

Weather Condition

: CLEAR

**Ambient Temperature** 

Parameter	Unit	Result	Specification/ Limit	Test Method
			(As Per CPCB)	
Particulate Matters (PM10)	hā/w <sub>3</sub>	82.5	For 24 Hrs=100	IS:5182 (Part-23)
Particulate Matters (PM2 5)	hā/w <sub>3</sub>	47.3	For 24 Hrs.=60	Gravimetric Method
Sulphur Dioxide (SO2)	µg/m³	18.0	For 24 Hrs.= 80	IS:5182 (Part-2)
Nitrogen Dioxide (NO2)	μg/m³	26 5	For 24 Hrs.=80	IS:5182 (Part-6)
	Particulate Matters (PM10) Particulate Matters (PM2 5) Sulphur Dioxide (SO2)	Particulate Matters (PM10) μg/m³  Particulate Matters (PM2 5) μg/m³  Sulphur Dioxide (SO2) μg/m³	Particulate Matters (PM10)         μg/m³         82.5           Particulate Matters (PM2 5)         μg/m³         47.3           Sulphur Dioxide (SO2)         μg/m³         18.0	(As Per CPCB)         Particulate Matters (PM10)       μg/m³       82.5       For 24 Hrs=100         Particulate Matters (PM2 5)       μg/m³       47.3       For 24 Hrs.=60         Sulphur Dioxide (SO2)       μg/m³       18.0       For 24 Hrs.= 80

\*\*\*\* End Of Report\*\*\*\*

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### **TEST REPORT**

TEST REPORT NO: ETS/8445C/04/2017

**DATE OF REPORT: 10-04-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 04-04-2017

**Analysis Start Date** 

: 07-04-2017

Analysis End Date

: 08-04-2017

**Duration Of Sampling** 

: 04-04-2017

Sample ID No

: 8445C

Sampling Done By

: ETS STAFF

Sampling Location

: CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

To 05-04-2017

Weather Condition

: CLEAR

**Ambient Temperature** : 32.5°C

**24.0 HOURS** 

S.No. Parameter	Unit Resul	t Specification/ Limit (As Per CPCB)	Test Method
1 Particulate Matters (PM10)	μg/m³ 79.5	For 24 Hrs=100	IS:5182 (Part-23)
2 Particulate Matters (PM2.5)	μg/m³ 43.0	For 24 Hrs.=60	Gravimetric Method
3 Sulphur Dioxide (SO2)	µg/m³ 16.5	For 24 Hrs.= 80	IS:5182 (Part-2)
4 Nitrogen Dioxide (NO2)	μg/m³ 23.7	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

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For Enviro Tech Services

AUTHORIZED SIGNATORY Md. Humraj

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**24.0 HOURS** 

### **TEST REPORT**

TEST REPORT NO: ETS/8445D/04/2017

**DATE OF REPORT: 10-04-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 05-04-2017

**Analysis Start Date** 

: 08-04-2017

**Analysis End Date** 

: 09-04-2017

**Duration Of Sampling** 

: 05-04-2017

Sample ID No

Sampling Done By

: 8445D

: ETS STAFF

Sampling Location

DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

To 06-04-2017

5°C

weather Condition	: CLEAR	Ambient Temperature : 32 5
S.No. Parameter	Unit Res	ult Specification/ Limit
1 Particulate Matters (PM10)		(As Per CPCB)
Paroculate Matters (PM10)	μ <b>g/m³</b> 77.	9 For 24 Hrs=100

	Unit	Result	Specification/ Limit	Test Method
		1	(As Per CPCB)	
1 Particulate Matters (PM10)	h8/w <sub>3</sub>	77.9	For 24 Hrs=100	IS:5182 (Part-23)
2 Particulate Matters (PM2.5)	h8/u <sub>g</sub>	42.5	For 24 Hrs.=60	Gravimetric Method
3 Sulphur Dioxide (SO2)	ha/w <sub>3</sub>	14.8	For 24 Hrs.= 80	IS:5182 (Part-2)
4 Nitrogen Dioxide (NO2)	hð/m³	24.0	For 24 Hrs.=80	IS:5182 (Part-6)
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\*\*\*\* End Of Report\*\*\*\*

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### **TEST REPORT**

TEST REPORT NO: ETS/8845D/05/2017

**DATE OF REPORT: 10-05-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA, .

**24.0 HOURS** 

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 02-05-2017

**Analysis Start Date** 

: 05-05-2017

Analysis End Date

: 06-05-2017

**Duration Of Sampling** 

: 02-05-2017 To 03-05-2017

Sampling Done By

Sample ID No

: 8845D/05 : ETS STAFF

Sampling Location

: TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

: 32.5°C

Weather Condition

: CLEAR

**Ambient Temperature** 

S.No. Parameter		Unit	Result	Specification/ Limit (As Per CPCB)	Test Method
S.NO. Farameter	- Oint	Nesult			
Interview of the second	Particulate Matters (PM10)	µg/m³	72.3	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hō/w <sub>3</sub>	40.6	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	hð/w <sub>3</sub>	13.8	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	ha/w <sub>s</sub>	16.9	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

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#### **TEST REPORT**

TEST REPORT NO: ETS/8845E/05/2017

**DATE OF REPORT: 10-05-2017** 

**AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT** 

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 03-05-2017

**Analysis Start Date** 

: 06-05-2017

Analysis End Date

: 07-05-2017

**Duration Of Sampling** 

: 03-05-2017 To 04-05-2017

24.0 HOURS

Sample ID No

: 8845E/05

Sampling Done By Sampling Location : ETS STAFF : MOHAN BAZAR

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

Ambient Temperature :

: 32.5°C

S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
			(As Per CPCB)		
1	Particulate Matters (PM10)	ha\w_3	81.7	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hā/ш³	45.0	For 24 Hrs =60	Gravimetric Method
3	Sulphur Dioxide (SO2)	hð/w <sub>3</sub>	16.9	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	h8/w <sub>3</sub>	25.0	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

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Page 1 Of 1

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### **TEST REPORT**

TEST REPORT NO: ETS/8845F/05/2017

**DATE OF REPORT: 10-05-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

: 05-05-2017 **Date Of Sampling Analysis Start Date** : 07-05-2017 Analysis End Date

: 08-05-2017

**Duration Of Sampling** : 05-05-2017 To 06-05-2017

Sample ID No : 8845F/05 Sampling Done By : ETS STAFF Sampling Location : CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

· CLEAR

**Ambient Temperature** 

**24.0 HOURS** 

· 32.5°C

				Antonomic remporatore , all a		
S.No.	Parameter	Unit	Result	Specification/ Limit (As Per CPCB)	Test Method	
. 1	Particulate Matters (PM10)	no	77.6	For 24 Hrs=100	IS:5182 (Part-23)	
2	Particulate Matters (PM2.5)	hā/w <sub>a</sub>	40.8	For 24 Hrs.=60	Gravimetric Method	
3	Sulphur Dioxide (SO2)	h8,w <sub>3</sub>	14.2	For 24 Hrs. = 80	IS:5182 (Part-2)	
4	Nitrogen Dioxide (NO2)	µg/m³	20.8	For 24 Hrs.=80	IS:5182 (Part-6)	

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For Enviro-Tech Services

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Note:-



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### **TEST REPORT**

TEST REPORT NO: ETS/8845G/05/2017

**DATE OF REPORT: 10-05-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 05-05-2017

**Analysis Start Date** 

: 08-05-2017

**Analysis End Date** 

: 09-05-2017

**Duration Of Sampling** 

: 05-05-2017 To 06-05-2017

Sample ID No

: 8845G/05

Sampling Done By

: ETS STAFF

Sampling Location

: DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

**24.0 HOURS** 

Weather Condition		: CLEAR		Ambient Temperature	32.5°C
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
		*	š	(As Per CPCB)	
1	Particulate Matters (PM10)	ha/w <sub>a</sub>	68.9	For 24 Hrs=100	IS 5182 (Part-23)
2	Particulate Matters (PM2.5)	µg/m³	40.3	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	h0 <sub>l</sub> w <sub>3</sub>	12.7	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	µg/m³	22.0	For 24 Hrs.=80	IS:5182 (Part-6)
			1		

\*\*\*\* End Of Report\*\*\*\*

1 SERVICES

Of 1

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#### **TEST REPORT**

TEST REPORT NO : ETS/99A/06/2017

**DATE OF REPORT: 10-06-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 02-06-2017

**Analysis Start Date** 

: 05-06-2017

**Analysis End Date** 

: 06-06-2017

**Duration Of Sampling** 

: 02-06-2017 To 03-06-2017

**24.0 HOURS** 

Sample ID No

· 99A

Sampling Done By

: ETS STAFF

Sampling Location

: TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

**Ambient Temperature** : 34.2°C

	***************************************	Committee Company Company				
S.No. Parameter	Unit	Result	Specification/ Limit (As Per CPCB)	Test Method		
1 Particulate Matters (PM10)	hB <sub>l</sub> w <sub>3</sub>	74.5	For 24 Hrs=100	IS:5182 (Part-23)		
2 Particulate Matters (PM2.5)	hQ/m³	40.2	For 24 Hrs.=60	Gravimetric Method		
3 Sulphur Dioxide (SO2)	ha/w <sub>a</sub>	14.8	For 24 Hrs.= 80	IS:5182 (Part-2)		
4 Nitrogen Dioxide (NO2)	hā/m³	22.5	For 24 Hrs.=80	IS:5182 (Part-6)		

\*\*\*\* End Of Report\*\*\*\*

CH SERVICES

Of 1

For Enviro-Tech Services

ITHORIZED SIGNATORY Md. Humrai

Dy. Quality manager

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### **TEST REPORT**

**TEST REPORT NO: ETS/99B/06/2017** 

**DATE OF REPORT: 10-06-2017** 

### **AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT**

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 03-06-2017

**Analysis Start Date** 

: 06-06-2017

**Analysis End Date** 

: 07-06-2017

**Duration Of Sampling** 

: 03-06-2017 To 04-06-2017

**24 0 HOURS** 

Sample ID No

Sampling Done By

: 99B

Sampling Location

: ETS STAFF : MOHAN BAZAR

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

· CLEAR

TYEAL	ilei Condidon	. OLEAN		Ambient remperature	. 34,1 0	
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method	
;				(As Per CPCB)		
1	Particulate Matters (PM10)	μg/m³	85.0	For 24 Hrs=100	IS:5182 (Part-23)	
2	Particulate Matters (PM2.5)	µg/m³	45.5	For 24 Hrs.=60	Gravimetric Method	
3	Sulphur Dioxide (SO2)	μg/m³	22.0	For 24 Hrs.= 80	IS:5182 (Part-2)	
4	Nitrogen Dioxide (NO2)	hô <sub>\wa</sub>	28.5	For 24 Hrs.=80	IS:5182 (Part-6)	

\*\*\*\* End Of Report\*\*\*\*

**SERVICES** 

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Ph.: 9811736063, 9911516076

### **TEST REPORT**

TEST REPORT NO: ETS/99C/06/2017

**DATE OF REPORT: 10-06-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT .

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 04-06-2017

**Analysis Start Date** 

: 07-06-2017

Analysis End Date

: 08-06-2017

**Duration Of Sampling** 

: 04-06-2017

Sample ID No

: 99C

Sampling Done By

: ETS STAFF

Sampling Location

: CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

To 05-06-2017

Weather Condition

**24.0 HOURS** 

		: CLEAR		Ambient Temperature	: 33.0°C
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
<u></u>				(As Per CPCB)	1
1	Particulate Matters (PM10)	hð\w <sub>3</sub>	82.5	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	μg/m³	38.4	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	hô/w <sub>3</sub>	19.5	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	hā <sub>\w</sub>	26.4	For 24 Hrs.=80	IS:5182 (Part-6)
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\*\*\*\* End Of Report\*\*\*\*

**ECH SERVICES** 

For Environtech Services

Md. Humraj

Format no ETS/LAB/TR-01 Issue No 04 dt 01/06/2016 Rev No 03 dt 01/06/2016

Dy. Quality manager

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email: etslab2012@gmail.com | Website: www.etslab.asia l Ph.: 9811736063, 9911516076

### **TEST REPORT**

TEST REPORT NO: ETS/99D/06/2017

**DATE OF REPORT: 10-06-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, .

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 05-06-2017

**Analysis Start Date** 

: 08-06-2017

Analysis End Date

: 09-06-2017

**Duration Of Sampling** 

: 05-06-2017 To 06-06-2017 **24.0 HOURS** 

Sample ID No

: 99D

Sampling Done By

: ETS STAFF

Sampling Location

: DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

: 31.6°C

Weather Condition

: CLEAR

**Ambient Temperature** 

S.No. Parameter	Parameter	Unit	Result	Specification/ Limit	Test Method
	·			(As Per CPCB)	
1	Particulate Matters (PM10)	µg/m³	75.2	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	µg/m³	44.0	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	µg/m³	16.5	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	µg/m³	28.5	For 24 Hrs =80	IS:5182 (Part-6)
1	·		1		

\*\*\*\* End Of Report\*\*\*\*

**SERVICES** 

For Enviro-Tech Services

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An Environmental Analytical Laboratory



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Ph.: 9811736063, 9911516076

### **TEST REPORT**

TEST REPORT NO : ETS/13B/07/2017

**DATE OF REPORT: 10-07-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 02-07-2017

**Analysis Start Date** 

: 05-07-2017

**Analysis End Date** 

: 06-07-2017

**Duration Of Sampling** 

To 03-07-2017 : 02-07-2017

**24.0 HOURS** 

Sample ID No

· 138

Sampling Done By

: ETS STAFF

Sampling Location

: TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

: 35.1°C **Ambient Temperature** 

Specification/ Limit **Test Method** Result Unit S.No. Parameter (As Per CPCB) IS:5182 (Part-23) For 24 Hrs=100 µg/m³ 76.2 Particulate Matters (PM10) Gravimetric Method For 24 Hrs.=60 38.8 µg/m³ Particulate Maiters (PM2.5) IS:5182 (Part-2) For 24 Hrs.= 80 16.5 Sulphur Dioxide (SO2) µg/m³ IS:5182 (Part-6) For 24 Hrs.=80 24.3 µg/m³ Nitrogen Dioxide (NO2)

\*\*\*\* End Of Report\*\*\*\*

CH SERVICES

For Enviro-Tesh Services

SIGNATORY Mð. Humrai

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email: etslab2012@gmail.com | Website: www.etslab.asia | Ph.: 9811736063, 9911516076

**TEST REPORT** 

TEST REPORT NO : ETS/13C/07/2017

**DATE OF REPORT: 10-07-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 03-07-2017

**Analysis Start Date** 

: 06-07-2017

Analysis End Date

: 07-07-2017

**Duration Of Sampling** 

: 03-07-2017 To 04-07-2017

**24.0 HOURS** 

Sample ID No

: 13C

Sampling Done By

: ETS STAFF

Sampling Location

: MOHAN BAZAR

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

- 34 1°C

Weather Condition

: CLEAR

Ambient Temperature

S.No. Parameter	Parameter	Unit	Result	Specification/ Limit	Test Method
				(As Per CPCB)	
1	Particulate Matters (PM10)	µg/m³	81.5	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	μg/m³	42.8	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	µg/m³	20.4	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	hð/w <sub>3</sub>	25.2	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

ECH SERVICES

Page 1

Of 1

For Enviro-Tech Services

16 Dy. Quality manager

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**TEST REPORT** 

TEST REPORT NO : ETS/13D/07/2017

**DATE OF REPORT: 10-07-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

**Analysis Start Date** 

: 04-07-2017 : 07-07-2017

Analysis End Date

: 08-07-2017

**Duration Of Sampling** 

: 04-07-2017 To 05-07-2017

Sample ID No

: 13D

Sampling Done By

: ETS STAFF

Sampling Location

: CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

· CLEAR

**24.0 HOURS** 

		· OLLOW		Ambient Temperature	: 36.0°C
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
				(As Per CPCB)	
1	Particulate Matters (PM10)	hã\w <sub>1</sub>	78.5	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hð/m³	40.0	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	ha <sub>l</sub> w <sub>1</sub>	21.8	For 24 Hrs.= 80	IS.5182 (Part-2)
4	Nitrogen Dioxide (NO2)	µg/m³	28.0	For 24 Hrs =80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

CH SERVICES

For Environtech Services

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#### **TEST REPORT**

TEST REPORT NO: ETS/13E/07/2017

**DATE OF REPORT: 10-07-2017** 

### AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, .

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 05-07-2017

**Analysis Start Date** 

: 08-07-2017

**Analysis End Date** 

: 09-07-2017

**Duration Of Sampling** 

: 05-07-2017

To 06-07-2017

**24.0 HOURS** 

Sample ID No

Sampling Done By

: 13E

Sampling Location

: ETS STAFF : DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

Ambient Temperature

S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
		*		(As Per CPCB)	
1	Particulate Matters (PM10)	µg/m³	78.0	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hB/w₃	42.4	For 24 Hrs.=50	Gravimetric Method
3	Sulphur Dioxide (SO2)	µg/m³	17.9	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	ha\w <sub>s</sub>	26.2	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

SERVICES

Of 1

For Enviro-Tech Services

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#### **TEST REPORT**

TEST REPORT NO: ETS/351C/08/2017

**DATE OF REPORT: 10-08-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 02-08-2017

Analysis Start Date

: 05-08-2017

Analysis End Date

: 06-08-2017

**Duration Of Sampling** 

: 02-08-2017 To 03-08-2017

24.0 HOURS

Sample ID No

: 351C

Sampling Done By

: ETS STAFF

Sampling Location

: TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

· CI FAR

Ambient Temperature :

: 32.7°C

ner Condition	, OLLAIL Ambiett fortpointers				
Parameter	Unit	Result	Specification/ Limit	Test Method	
			(As Per CPCB)		
Particulate Matters (PM10)	ha <sub>w</sub> ,	79.0	For 24 Hrs=100	IS:5182 (Part-23)	
Particulate Matters (PM2.5)	ha/w <sub>3</sub>	35.2	For 24 Hrs.=60	Gravimetric Method	
Sulphur Dioxide (SO2)	ha\w <sub>3</sub>	18.7	For 24 Hrs.= 80	IS:5182 (Part-2)	
Nitrogen Dioxide (NO2)	h8/ш <sub>3</sub>	22.0	For 24 Hrs.=80	IS:5182 (Part-6)	
	Particulate Matters (PM10) Particulate Matters (PM2.5) Sulphur Dioxide (SO2)	Parameter  Unit  Particulate Matters (PM10)  Particulate Matters (PM2.5)  Sulphur Dioxide (SO2)   Unit  µg/m³  µg/m³	Parameter  Unit Result  Particulate Matters (PM10)  Particulate Matters (PM2.5)  Particulate Matters (PM2.5)  Sulphur Dioxide (SO2)  Pag/m³ 18.7	Parameter  Unit Result Specification/ Limit (As Per CPCB)  Particulate Matters (PM10)  Particulate Matters (PM2.5)  Particulate Matters (PM2.5)  pg/m² 35.2  For 24 Hrs.=60  Sulphur Dioxide (SO2)  pg/m² 18.7  For 24 Hrs.= 80	

\*\*\*\* End Of Report\*\*\*\*

ECH SERVICES

Page 1 (

For Enviro-Tech Services

AUTHORIZED SIGNATORY Md. Humraj

Dy. Quality manager





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l Ph.: 9811736063, 9911516076

#### **TEST REPORT**

TEST REPORT NO: ETS/351D/08/2017

**DATE OF REPORT: 10-08-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA,

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 03-08-2017

**Analysis Start Date** 

: 06-08-2017

**Analysis End Date** 

: 07-08-2017

**Duration Of Sampling** 

: 03-08-2017 To 04-08-2017

**24.0 HOURS** 

Sample ID No

: 351D

Sampling Done By

: ETS STAFF

Sampling Location

: MOHAN BAZAR

Sampling Method

141--41----

: ETS/STP/AIR-01

Sampling Machine Placed At Height

Nitrogen Dioxide (NO2)

: 3.5 mtr

(From Ground)

For 24 Hrs.=80

weather Condition		: CLEAR	: CLEAR		: 33.3°C
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
				(As Per CPCB)	
1	Particulate Matters (PM10)	h8\w <sub>3</sub>	84.3	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hð/w₃	40.2	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	hð/w <sub>a</sub>	20.8	For 24 Hrs. = 80	IS:5182 (Part-2)

µg/m³

26.4

"" End Of Report""

IS:5182 (Part-6)

**ECH SERVICES** 

Of 1

For Enviro Tech Services

SIGNATORY Md. Humrai

Dy. Quality manager

Format no ETS/LAB/TR-01 Issue No 04 dt 01/06/2016 Rev. No 03 dt 01/06/2016

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Ph.: 9811736063, 9911516076

#### **TEST REPORT**

TEST REPORT NO: ETS/351E/08/2017

**DATE OF REPORT: 10-08-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 04-08-2017

**Analysis Start Date** 

: 07-08-2017

**Analysis End Date** 

: 08-08-2017

**Duration Of Sampling** 

: 04-08-2017 To 05-08-2017

**24.0 HOURS** 

Sample ID No

: 351E

Sampling Done By

: ETS STAFF

Sampling Location

: CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

· CLEAR

· 32 7°C **Ambient Temperature** 

Her Condition	. Older ii t		Minipelature . Star O		
Parameter	Unit	Result	Specification/ Limit (As Per CPCB)	Test Method	
Particulate Matters (PM10)	h8/w <sub>3</sub>	80.5	For 24 Hrs=100	IS:5182 (Part-23)	
Particulate Matters (PM2.5)	ha/w <sub>3</sub>	42.2	For 24 Hrs.=60	Gravimetric Method	
Sulphur Dioxide (SO2)	h8/ш <sub>3</sub>	23.9	For 24 Hrs.= 80	IS:5182 (Part-2)	
Nitrogen Dioxide (NO2)	hð/w <sub>2</sub>	31.0	For 24 Hrs.=80	IS:5182 (Part-6)	
	Parameter  Particulate Matters (PM10)  Particulate Matters (PM2.5)  Suiphur Dioxide (SO2)	Parameter Unit  Particulate Matters (PM10) µg/m³  Particulate Matters (PM2.5) µg/m³  Sulphur Dioxide (SO2) µg/m³	Parameter Unit Result  Particulate Matters (PM10) µg/m³ 80.5  Particulate Matters (PM2.5) µg/m³ 42.2  Sulphur Dioxide (SO2) µg/m³ 23.9	Parameter         Unit (As Per CPCB)         Result (As Per CPCB)           Particulate Matters (PM10)         μg/m³ 80.5         For 24 Hrs=100           Particulate Matters (PM2.5)         μg/m³ 42.2         For 24 Hrs.=60           Suiphur Dioxide (SO2)         μg/m³ 23.9         For 24 Hrs.= 80	

\*\*\*\* End Of Report\*\*\*\*

H SERVICES

Of 1

For Enviro-Tech Services

Dy. Quality manager





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! Ph.: 9811736063, 9911516076

**24.0 HOURS** 

#### **TEST REPORT**

TEST REPORT NO: ETS/351F/08/2017

**DATE OF REPORT: 10-08-2017** 

**AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT** 

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA, .

DHANBAD, JHARKHAND, INDIA

To 06-08-2017

**Date Of Sampling** 

05-08-2017

**Analysis Start Date** 

: 08-08-2017

**Analysis End Date** 

: 09-08-2017

**Duration Of Sampling** 

: 05-08-2017

Sample ID No

Sampling Done By

: 351F : ETS STAFF

Sampling Location

: DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

**Ambient Temperature** 

: 32.4°C

S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method
				(As Per CPCB)	
	Particulate Matters (PM10)	h8\w <sub>3</sub>	76.5	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hð/ш <sub>3</sub>	38.3	For 24 Hrs.=60	Gravimetric Method
3	Sulphur Dioxide (SO2)	hō/ɯ³,	19.0	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	µg/m³	27.9	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

**SERVICES** 

For Enviro-Tech Services

d. Humrai Dy. Quality manager

Format no ETS/LAB/TR-01 Issue No 04 dt 01/06/2016 Rev No 03 dt 01/06/2016

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### **TEST REPORT**

TEST REPORT NO: ETS/S-05K3/09/2017

**DATE OF REPORT: 10-09-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 02-09-2017

Analysis Start Date

: 05**-09**-2017

Analysis End Date

: 06-09-2017

**Duration Of Sampling** 

: 02-09-2017 To 03-09-2017

24.0 HOURS

Sample ID No

: S-05K3

Sampling Done By

: ETS STAFF

**Sampling Location** 

; TASRA (COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

; 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

**Ambient Temperature** 

: 31.9°C

		· · · · · · · · · · · · · · · · · · ·					
S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method		
				(As Per CPCB)			
1	Particulate Matters (PM10)	hâlu,	77.4	For 24 Hrs=100	IS:5182 (Parl-23)		
2	Particulate Matters (PM2.5)	па/ш <sub>2</sub>	38 4	For 24 Hrs.=60	Gravimetric Method		
3	Sulphur Dioxide (SO2)	µg/m³	21 2	For 24 Hrs.= 80	IS:5182 (Part-2)		
4	Nitrogen Dioxide (NO2)	µg/m³	24.5	For 24 Hrs.=80	IS:5182 (Part-6)		
	The state of the s						

\*\*\*\* End Of Report\*\*\*\*

ECH SERVICES

Page 1 Of 1

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AUTHORIZED SIGNATORY

Dy. Quality m

Note:-





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email: etslab2012@gmail.com | Website: www.etslab.asia | Ph.: 9811736063, 9911516076

### **TEST REPORT**

TEST REPORT NO: ETS/S-05K4/09/2017

**DATE OF REPORT: 10-09-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

**24.0 HOURS** 

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 03-09-2017

**Analysis Start Date** 

: 06-09-2017

**Analysis End Date** 

: 07-09-2017

**Duration Of Sampling** 

: 03-09-2017 To

Sample ID No

: S-05K4

Sampling Done By

: ETS STAFF

Sampling Location

: MOHAN BAZAR

Sampling Method

: ETS/STP/AIR-01

(From Ground)

04-09-2017

Sampling Machine Placed At Height

: 3.5 mtr

Ambient Temperature

Weather Condition		: CLEAR		Ambient Temperature : 32.5°C	
S.No.	Parameter	Unit	Result	Specification/ Limit (As Per CPCB)	Test Method
1	Particulate Matters (PM10)	h8/w <sub>3</sub>	82.5	For 24 Hrs=100	IS:5182 (Part-23)
2	Particulate Matters (PM2.5)	hð/ш <sub>3</sub>	38.8	For 24 Hrs =60	Gravimetric Method
3	Sulphur Dioxide (SO2)	h8/w <sub>3</sub>	18.2	For 24 Hrs.= 80	IS:5182 (Part-2)
4	Nitrogen Dioxide (NO2)	hð/w <sub>s</sub>	28.8	For 24 Hrs.=80	IS:5182 (Part-6)

\*\*\*\* End Of Report\*\*\*\*

CH SERVICES

Page

For Enviro-Tech Services

Dy. Quality manager

Format no ETS/LAB/TR-01 Issue No 04 dt 01/06/2016 Rev. No 03 dt 01/06/2016

Note:-

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ISO 9001/14001/OHSAS 18001

G-232, M.G. Road Industrial Area, Hapur-Ghaziabad. (U.P.)-201015 email: etslab2012@gmail.com | Website: www.etslab.asia

### **TEST REPORT**

TEST REPORT NO: ETS/S-05K5/09/2017

**DATE OF REPORT: 10-09-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S. STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA,

l Ph.: 9811736063, 9911516076

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 04-09-2017

**Analysis Start Date** 

: 07-09-2017

Analysis End Date

: 08-09-2017

**Duration Of Sampling** 

: 04-09-2017 To 05-09-2017

Sample ID No

: S-05K5

Sampling Done By

: ETS STAFF

Sampling Location

: CHASNALLA

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

**Ambient Temperature** 

**24.0 HOURS** 

: 33.7°C

S.No.	Parameter	Unit	Result	Specification/ Limit	Test Method	
				(As Per CPCB)		
1	Particulate Matters (PM10)	hā\w <sub>2</sub>	77.6	For 24 Hrs=100	IS:5182 (Part-23)	
2	Particulate Matters (PM2.5)	hā/u <sub>3</sub>	41.2	For 24 Hrs.=60	Gravimetric Method	
3	Sulphur Dioxide (SO2)	ha/w <sub>3</sub>	21.5	For 24 Hrs = 80	IS:5182 (Part-2)	
4	Nitrogen Dioxide (NO2)	hð/w <sub>3</sub>	29.6	For 24 Hrs.=80	IS:5182 (Part-6)	

\*\*\*\* End Of Report\*\*\*\*

ECH SERVICES

For Enviro-Tech Services

Dy. Quality manager



An Environmental Analytical Laboratory



ISO 9001/14001/OHSAS 18001

Acc. No.- M31112041N

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#### **TEST REPORT**

TEST REPORT NO : ETS/S-05K6/09/2017

**DATE OF REPORT: 10-09-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, .

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 05-09-2017

Analysis Start Date

: 08-09-2017

Analysis End Date

: 09-09-2017

**Duration Of Sampling** 

: 05-09-2017 To 06-09-2017

24.0 HOURS

Sample ID No

: S-05K6

Sampling Done By

: ETS STAFF

Sampling Location

DIGWADIH

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Monther Condition

: CLEAR

Ambient Temperature

: 31.5°C

		T
Unit Result	Specification/ Limit	Test Method
	(As Per CPCB)	
μ <b>g/m³</b> 78.2	For 24 Hrs=100	IS 5182 (Part-23)
μ <b>g/m³</b> 39.7	For 24 Hrs.=60	Gravimetric Method
μg/m³ 21.8	For 24 Hrs = 80	IS:5182 (Part-2)
μg/m³ 25.5	For 24 Hrs =80	IS-5182 (Part-6)
	μ <mark>g/m³ 78.2</mark> μg/m³ 39.7 μg/m³ 21.8	(As Per CPCB)  μg/m³ 78.2 For 24 Hrs=100  μg/m³ 39.7 For 24 Hrs.=60  μg/m³ 21.8 For 24 Hrs = 80

\*\*\*\* End Of Report\*\*\*\*

CH SERVICES

Page 1 Of 1

For Enviro-Tech Services

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### **TEST REPORT**

TEST REPORT NO : ETS/8445E/04/2017

**DATE OF REPORT: 10-04-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA,

DHANBAD, JHARKHAND, INDIA

Date Of Sampling

: 07-04-2017

**Analysis Start Date** 

: 09-04-2017

**Analysis End Date** 

: 10-04-2017

**Duration Of Sampling** 

: 07-04-2017 To 08-04-2017

**24.0 HOURS** 

Sample ID No

: 8445E

Sampling Done By

: ETS STAFF

Sampling Location

: TASRA ( COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

Weather Condition

: CLEAR

Ambient Temperature

: 33.5°C

No.	Parameter	Unit	Result	Specification/ Limit	Test Method
				(As Per CPCB)	
1	Nickel (Ni)	ng/m²	0.091	For Annual=20	IS: 5182 (Part-22)
2	Arsenic (As)	ng/m³	N.D.	For Annual=6	IS: 5182 (Part-22)
3	Murcury (Hg)	hð <sub>i,w</sub>	N.D.	Not Specified	A.A.S. Metlod
4	Cadmium (Cd)	hð/w <sub>3</sub>	N.D.	Not Specified	A.A.S. Method
5	Cromium (Cr)	no/w <sub>3</sub>	N.D.	Not Specified	A.A.S. Method

\*\*\*\* End Of Report\*\*\*\*

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For Enviro-Tech Services

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**TEST REPORT** 

TEST REPORT NO: ETS/6-6/09/2017

**DATE OF REPORT: 10-09-2017** 

AMBIENT AIR QUALITY MONITORING AND ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO- CHASNALA, ,

**24.0 HOURS** 

DHANBAD, JHARKHAND, INDIA

**Date Of Sampling** 

: 06-09-2017

**Analysis Start Date** 

: 09-09-2017

Analysis End Date

: 10-09-2017

**Duration Of Sampling** 

: 06-09-2017

To 07-09-2017

Sample ID No

: 6-6/09

Sampling Done By

: ETS STAFF

Sampling Location

: TASRA ( COAL BLOCK CORE ZONE)

Sampling Method

: ETS/STP/AIR-01

Sampling Machine Placed At Height

: 3.5 mtr

(From Ground)

**Weather Condition** 

: CLEAR

**Ambient Temperature** 

: 33.5°C

Parameter	Unit	Result	Specification/ Limit	Test Method
			(As Per CPCB)	
Nickel (Ni)	D0/10 <sup>2</sup>	0.095	For Annual=20	IS: 5182 (Part-22)
Arsenic (As)	ng/m³	N.D.	For Annual=6	IS: 5182 (Part-22)
Murcury (Hg)	hā\w <sub>3</sub>	N.D.	Not Specified	A.A.S. Metfod
Cadmium (Cd)	hð/w <sub>3</sub>	N.D.	Not Specified	A.A.S. Method
Cromium (Cr)	h0\u_1	N.D.	Not Specified	A.A.S. Method
	Nickel (Ni) Arsenic (As) Murcury (Hg) Cadmium (Cd)	Nickel (Ni)         ng/m³           Arsenic (As)         ng/m³           Murcury (Hg)         μg/m³           Cadmium (Cd)         μg/m²	Nickel (Ni)         ng/m³         0.095           Arsenic (As)         ng/m³         N.D.           Murcury (Hg)         μg/m³         N.D.           Cadmium (Cd)         μg/m²         N.D.	(As Per CPCB)   Nickel (Ni)   ng/m³   0.095   For Annual=20     Arsenic (As)   ng/m³   N.D.   For Annual=6     Murcury (Hg)   μg/m³   N.D.   Not Specified     Cadmium (Cd)   μg/m²   N.D.   Not Specified

\*\*\*\* End Of Report\*\*\*\*

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H SERVICES

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ED SIGNATORY Md. Humraj

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#### **TEST REPORT**

TEST REPORT NO : ETS/S-05K8/9/2017

**DATE OF REPORT: 10-09-2017** 

WATER SAMPLE ANALYSIS REPORT

Name And Address Of Customer

: TASRA COAL MINING PROJECT

M/S, STEEL AUTHORITY OF INDIA LIMITED, PO-CHASNALA, , DHANBAD, JHARKHAND,

INDIA

Date of Sampling

: 03-09-2017

Analysis Start Date

: 06-09-2017

Analysis End Date

: 10-09-2017

Sampling ID No.

: S-05K8

Sampling Done By

: ETS STAFF

Sampling Description

: GROUND WATER

Sampling Location

: BORE WELL

Sampling Method

: ETS/STP/WATER-02

Sampling Quantity

: 2.0+0.5 Lt : SEALED

**Packing Condition** Packed in

: PVC CANE AND GLASS

S.No.	S.No. Parameter		Result	Drinking Water Standards / Limit (IS :10500-2012)		Test Method
				Desirable Limit	Permissible Limit	
1	Colour	Hazen	<50	5	15	IS: 3025 (Pt-4)
2	Odour		Agreeable	Agreeable	Agreeable	(S. 3025 (Pt-5)
3	Tasle		Agreeable	Agreeable	Agreeable	i6: 3025 (Pt-6)
4	рН		7.23	6.5 - 8.5	No Relaxation	is: 3025 (Pt-(1)
5	Total Hardness (CaCO3)	mg/L	450.0	200	600	IS: 3025 (Pt-21)
6	Iron (Fe)	mg/L	<0.05	0.3	No Relaxation	IS: 3025 (Pt-53)
7	Chloride (CI)	mg/L	117 0	250	1000	IS: 3025(Pt-32)
8 -	Free Residual Chlorine (RFC)	mg/L	<0.2	0.2	1	IS: 3025 (PI-26)
9	Total Dissolved Solids (TDS)	mg/L	1343.0	500	2000	i5: 3025 (Pt-15)
10	Calcium (Ca)	mg/L	124.0	75	200	iS: 3025 (Pt-40)
11	Magnesium (Mg)	mg/L	33.6	30	100	is: 3025 (Pt-45)
12	Copper (Cu)	mg/L	N.D	0.05	1.5	APHA-31 (1 ⊕)
13	Manganese (Mn)	mg/L	<0.05	. 0.1	0.3	APHA-3111 (B)
14	Sulphate (SO4)	mg/L	28.6	200	400	IS: 3025 (Pt-24)
15	Nitrate (NO3)	mg/L	1.85	45	No Relaxation ,	IS: 3025 (PI-34)
16	Fluoride (F)	mg/L	1.05	1	1.5	is 3025 (PI-60)
17	Cadmium (Cd)	mg/L	ND	0.003	No Relaxation	APHA-31:1 (B)

SERVICES

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- 2. The samples received shall be destroyed after one month from the date of test report issued.
- 3. The results indicated only refer to the tested samples and listed applicable parameters.
- 4. Our liability is limited to invoice value only.



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### **TEST REPORT**

TEST REPORT NO : ET9/9-05K8/9/2017

**DATE OF REPORT: 10-09-2017** 

		WATE	R SAMPL	E ANALYSI	S REPORT	
18	Selenium (Se)	mg/L	N.D	C.01	No Relaxation	APHA-3113 (B)
19	Arsenic (As)	mg/L	N.D	0.01	0.05	APHA-3500 (B)
20	Lead (Pb)	mg/L	N.D	0.01	No Relaxation	APHA-3111 (B)
21	Zinc (Zn)	mg/L	N.D	5	15	APHA-3111 (B)
22	Chromium (Cr+6)	mg/L	N.D	0.05	No Relaxation	APHA-3500 Cr-13
23	Total Alkalinity	mg/L	232.0	200	600	APHA-2320 (B)
24	Aluminium (Al)	mg/L	ND	0.03	0.2	APHA-3500 (B)
25	Boron (B)	mg/L	<0.05	0.5	1	APHA-4500 (B)
26	Ammonia (Total Ammonia-N)	mg/L	ND	0.5	No Relaxation	APHA-4500 (C)
27	Barium (Be)	mg/L	N.D	0.1 .	No Relaxation	APHA-3111 (D)
28	Nickel (Ni)	mg/L	N.D	0.02	No Relaxation	APHA-3111 (3)
29	E.Coli		Absent	Shall Not Be Detectable		IS:1622 1981
30	Total Coliform	MPN/100	Absent	Shall Not Be Detectable	•••	S 1622-1981
31	Silver (Ag)	mg/L	N.D.	0.1	No relaxation	APHA-3111 (B)
32	Total Chromium ( as Cr)	mg/L	N.D.	0.05	No Relaxation	APHA-3500 C'-C

\*\*\*\* End Of Report\*\*\*\*

FOR SWIRO-TECHNERVICES

Page 2 Of 2

For Enviro-Tech Services

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   The results indicated only refer to the tested samples and listed applicable parameters.
- 4. Our liability is limited to invoice value only.



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(ii) Sub-PE-E Sub-II frift

PART II—Section 3—Sub-section (ii)

**ज़**धीतकप्र क्त मतकशीार

### PUBLISHED BY AUTHORITY

नई दिल्ली, शुक्रवस, जून ३, 2016/JYAISTHA 13, 1938

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### परनिरण, बन एवं जलबायु परिवर्तन मंत्रालय अधिसुचना

### crec tesé

नई दिल्ली, 2 जून, 2016

णप्होग्ग 10 मम्मी के 3861 ,मम्मी (णक्षरम्) एप्होग्ग निशेष सम के पारूपम एक्टिक्—,(क्र). 1953(क्र). कि तक्ष्म 10 मम्मी के एक्टिक्न क्रिक्स के क्ष्म क्ष

–,में किलीत नलेस में किन्मुक्षीर कट

并 810S.80.S0 1S0S.80.10	म्मांस्पी गाणकृ सह सीमक्ष कि (१) नामकृ इसिटी ग्रक्कीमग्राङ्ग कि (८) ईगभगप्रहाइ इस्टिंग मक्ष मिश्लाष्ट्रझिकृ (६)	ेंसमं डेराक्स की मेरोग्राम प्राप्त प्रमाचार के सम्हें प्रिस् उ कि के मेरे के मेरे अवरात समाचार केस के स्वाहें, फिर्स् केस के स्वरंत, गुजरात - 395002	<b>4</b> 8
₩ 8102.80.20 1202.80.10	ी) शिक्ष सम्बन्ध प्रक्रिस शिक्ष सम्बन्ध सामी शिक्ष सम्बन्ध सामी	ਜੈਸਮ पोल्लकोन लेबोररटरीस प्रा. लि 544, बेलिजयम टावरम, गिर्म रोड, लिनियर बस स्टैंड फीलें, भूपन, गुजरात-395006	so
# 8102.80.20 1202.80.10	,ईरास किम गणेष्ट क्षिम (१) रुकाक शक्ष्य गिगेम्य द्वाप क्षिम (८) रुक्ताइसाम इंगिस्ट शंतनी क्षि (६)	मैगरी अक्षमेश इंगीनियमी एंड कंसलटैंट, मर्ने स. 102, प्लाट सं. 26, वडाला पाथीडी रोड, इंडिरा नगर, नामिक, महाराष्ट्र – 422009	Þl
₩ 810S.80.20 1S0S.80.10	,5ोगमालाम ड्विर ाब्ल्स .ाड (१) ,ड्विर माक्रिसिश कि मग क्षि (ऽ) प्रामकृ शर्मग्राह्म ग्रिम्प्रध क्षि (६)	मैसमे त्रिमता लैबस लिमेटड 142 आई डी ए, फेस - 2, चेरालापलई, हैदराबाद, आधाप्रदेश-500051	<b>9.</b>
(4)	(£)	(2)	(1)

	(८) श्रीमिति वंदना मिथा	अला सीनीयत, हरियाणा-131028	
: 1202.80.10	(2) भी आशुतोप भीवास्तव	272 सै-57,फेस - 4, एच एस आई आई डी सी-क़ेडली,	
₩ 810S.80.S0	प्रकार हुंसी इन्र्रीक कि (t)	मैसरी अरिहंत एनालीडीकल लेबोरटरी प्रा. लिमिटेड,	143
	(2) 2 2	उदयपुर राजस्थान-313003.	
1202.80.10	(3) श्री दिनेश कुमार कुमाबत	ई-102, मेबार इंडस्ट्रीयल ऐरिया, मादी, पी बी सं. 21,	
	आग्रु मक्तश्च कि (S)	ं(फिडर्गकर्	
ή 810S.80.S0	हाए प्राप्तकृ क्षिते .ाड (I)	किनिक इंग उमैरपाठ-इ). शि ाष्टी इं मर्काह सेम्स	142
1202.80.10	इामप्र शेड़ कि कि (8)	कुकतपल्ली आई डी ए, हैदराबाद, आंध्र प्रदेश-500072	
	(S) श्रीमिल गागा स्रामादेवी	ल्लाह सं. 203, हा. नं. 5-36/203, प्रशांशीनगर,	
并 8102.80.20	ाष्ट्रीकृष्ट कि कि (१)	,इर्जीलि .ार क्रीकम् इकांम मेमर्स	141
1202.80.10	(3) श्री सुदीप मुख्ती	कोलकाता, पश्चिम बंगाल - 700015	
	हाइ ाहडीह क्षिप्त (S)	क्रि. उद्यान इंडस्ट्रीयल एस्टेट, 3, पगलादंगा रोड,	
<b>育 02.00.20</b>	ाभार निक्त मिल्ली मिल्लि (१)	,रुईमीठी .ार के मग्र ास्मी मेममें	140
1202:00:10	ाइमहं िम ग्र कि (६)	910016	
1202.80.10	रामकृ कीर .मग्र .गि क्षि (S)	294 ए, हब्बल इंडस्ट्रीयल एरिया, मैसूर, कर्नाटक-	
μ̄ 9102.30.20	(1) भी भी. एस. सुभाष	मैसर्म गणेश एंड कंसलटैंसी एनालीटीकल सर्विभिज,	139
		0.014	
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### [फा. सं. क्यू-15018/07/2003-सीपीडब्ल्यू ]

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Signed for and on behalf of NABL

Irenletton-

N. Venkateswaran Program Manager Anil Relia

Anii Relia Director Prof. S. K. Joshi

Chairman