



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

Ref.: P&D/Sitanala/Envr/2017/06

Date: 21/04/2017

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 Sitanala Underground Coking Coal Project (EC granted by vide letter no. J-11015/62/2009-I.A.II (M), dated 20th December, 2010 & revalidation/transfer of Environmental Clearance Orderno: J-11015/62/2009/IA-II(M)Pt, dated 29th November, 2016) for the period ending 31<sup>st</sup> March, 2017.**

Dear Sir,

Sitanala Underground Coking Coal Block was allotted to SAIL by MoC, Govt. of India vide allotment order no.103/17/2015/NA/ dated.31/08/2015.

Prior to de-allocation of the block as per Supreme Court order, the statutory clearance like approval of Mine Plan accorded by MoC, vide letter no.13016/15/2008-CA-I dated.19/01/2009 and Environmental Clearance accorded by MoEF vide letter no. J-11015/62/2009-I.A.II (M) dated 20/12/2010.

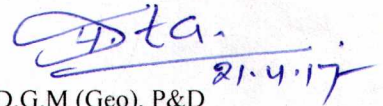
Now, in accordance with Allotment Order fresh lease application submitted to State Government on 08/09/2015 and same is under consideration. Similarly application submitted on 05/02/2016 to MoEF&CC for transfer of EC and same has been revalidated/ transferred in favour of SAIL vides Order no: J-11015/62/2009/IA-II (M) Pt, dated 29th November, 2016.

Further, project is yet to commence as activities like acquisition of private land, transfer of BCCL land and grant of Mining Lease are under process.

However, the six monthly compliance status of conditions stipulated in the Environmental Clearance granted for Sitanala Underground Coking Coal Block for the period ending 31st March, 2017 is being submitted for kind information.

Thanking you,

Yours faithfully

  
 21.4.17

D.G.M (Geo), P&D  
 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)

Six Monthly

**COMPLIANCE REPORT**

**OF**

**ENVIRONMENTAL CLEARANCE CONDITIONS**

**(Grant Order no: J-11015/62/2009-I.A.II (M), dated 20<sup>th</sup> December, 2010 & revalidation/transfer of Environmental Clearance Order no: J-11015/62/2009/IA-II (M) Pt, dated 29<sup>th</sup> November, 2016)**

**OF**

**Sitanala Underground Coking Coal Project (0.3 MTPA)**

**In Bokaro District of Jharkhand**

**For the Period October, 2016 –March, 2017**



**स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड**  
**STEEL AUTHORITY OF INDIA LIMITED**

**COLLIERIES DIVISION**

**CHASNALLA COLLIERY COMPLEX**

**P.O. CHASNALLA, DT. DHANBAD -828135 (JHARKHAND)**



**Status of compliance to the conditions stipulated in the Environmental Clearance granted by MoEF for Sitanala Underground Coking Coal Project (0.3MTPA) for the period ending September, 2015 (EC granted by vide no. J-11015/62/2009-I.A.II (M), dated 20<sup>th</sup> December, 2010 & revalidated/transferred vide no. J-11015/62/2009/IA-II (M) Pt, dated 29<sup>th</sup> November, 2016)**

**(A) Specific Conditions :**

Cond. No	Conditions Imposed	Status as on March'2017
(i)	Prior permission of DGMS shall be obtained for the mine operations and for working below and adjoining River Damodar.	<i>Presently Mining Activities are not being undertaken at Sitanala Underground Coking Coal Project due to want of Mining Lease &amp; acquisition of Land. Meantime, the block was de-allocated on 25th Sept. 2014 as per Supreme Court order. Fresh application for grant of Mining Lease for 321ha area submitted to Director (Mines), Dept. of Mining &amp; Geology, Govt. of Jharkhand, Ranchi on 08/09/2015 after the block was again allotted to Steel Authority of India Limited by Government of India under the Govt dispensation route to the PSUs vide letter no. 103/17/2015/NA dated 31/08/2015. However, State Govt. has recommended 214Ha area for grant of Mining Lease excluding Damodar River bed area (66Ha) and ONGC CBM block overlapping area(41Ha) for Mining Lease. Total 35.92 ha of land is required for project, out of which 32.26 ha belong to BCCL land and 3.66 ha is private land. At present BCCL has handed over land documents for an area 60.58 Ha and matter is being pursued with BCCL authorities for transfer of remaining land. Additionally, applied for NOC to the JSPCB, Ranchi on 23.07.2009. Matter is being pursued with the respective authorities. However, mining operations shall be started only after obtaining prior permission from the DGMS for the mine operations and for working below adjoining River Damodar.</i>
(ii)	A minimum distance of 500m should be maintained from River Damodar. Mining should be carried out as per statute at a safe distance from the surface water bodies/streams flowing within/adjacent to the lease boundary.	A minimum distance of 500m shall be maintained from River Damodar. Mining shall be carried out as per statute at a safe distance from the surface water bodies/streams flowing within/adjacent to the lease boundary.
(iii)	A detailed risk Assessment and HAZARD on the potential risk of accidents from the various stages and	A detailed risk Assessment and HAZARD shall be undertaken on the potential risk of accidents from the various stages and steps of mine operations.

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	steps of mine operations.	
(iv)	A detailed Disaster Management Plan shall be prepared on the potential disasters such as mine flooding, explosions from gassiness, mine subsidence etc.	A detailed Disaster Management Plan shall be prepared on the potential disasters such as mine flooding, explosions from gassiness, mine subsidence etc.
(v)	Hydraulic sand stowing shall be undertaken and subsidence monitored and compared to Subsidence Prediction Modeling and suitable remedial measures taken to prevent and check further subsidence. Mine seepage shall be regularly monitored for possible mine inundation.	<u>During operation of the project</u> , hydraulic sand stowing shall be undertaken and subsidence will be monitored and compared to Subsidence Prediction Modeling and suitable remedial measures to be taken to prevent and check further subsidence. Mine seepage shall be regularly monitored for possible mine inundation.
(vi)	Panel size and sequence of extraction of the panels vertically below River Damodar shall be such that the strain at the surface does not exceed 3mm/m, which shall be verified by suitable studies.	<u>During operation of the project</u> , it shall be ensured that the strain at surface does not exceed 3mm/m, Panel size by proper sequence of extraction of the panels vertically below River Damodar. The strain shall be periodically verified by suitable studies.
(vii)	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil / suitable material.	<u>During operation of the project</u> , regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. All other necessary & effective corrective measures shall be taken to avoid loss of life and material.
(viii)	The Disaster Management Plan shall be tested (mock drills) from time to time to check emergency preparedness in case of disaster.	The Disaster Management Plan shall be prepared & tested (mock drills) from time to time to check emergency preparedness.
(ix)	Continuous monitoring of the levels of methane shall be recorded and appropriate ventilation system shall be put in place to keep the levels of	Continuous monitoring of the levels of methane shall be recorded and appropriate ventilation system shall be put in place to keep the levels of methane within limits when the project is started. <u>Meantime, M/s S&amp;T Mining Co. Pvt. Ltd. was</u>

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	methane within limits.	<u>engaged for study for degassing of Sitanala Coal Block and other related studies like degasification, Injection Fallout Test (IFT), Geophysical logging, Rock characteristics etc.</u>
(x)	In view of the highly gassy, watery nature of the deposits within the mine and the fact that old workings survey reports are not available as informed by the project proponents and the planned inclines of 1:2.5 gradient for safety of men and mine and heat and humidity also adding to the problem of methane gas; special attention is required for the supervision of the underground workings, as electricity is in use. For better supervision, man riding facility needs to be provided in both the inclines and adequate manpower for upkeep of electrical apparatus and other equipments.	<u>M/s S&amp;T Mining Co. Pvt. Ltd. engaged for study for degassing of Sitanala Coal Block and other related studies like degasification, Injection Fallout Test (IFT), Geophysical logging, Rock characteristics etc.</u>  <u>Additionally, M/s ISM, Dhanbad was engaged for Land Surveying &amp; Contouring job within the lease hold area of Sitanala. As desired Geo-referenced cadastral map prepared by ISM, Dhanbad and same has been submitted to DMO, Bokaro on 18.01.2016.</u>
(xi)	High capacity pumps shall be deployed for dewatering of mines and also in stand-by which are tested regularly.	<u>During operation of the project</u> , high capacity pumps shall be deployed for dewatering of mines with stand-by arrangement.
(xii)	All proposed mine entries shall be 3m above HFL.	All proposed mine entries shall be maintained to be 3m above HFL.
(xiii)	Garland drains (size, gradient and length) around the safety areas such as mine opening and mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also be provided adequate retention period to allow proper settling of silt material.	Proper garland drains around the safety areas such as mine opening and mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also be provided adequate retention period to allow proper settling of silt material.
(xiv)	A 3-tier avenue plantation shall be developed using native species (Prosopis juliflora shall not be used) along the main approach roads and coal transportation roads. A plan for plantation of areas with surface	A 3 tier plantation shall be made around fan house, along the road sides both in the project and mine complex and in the vacant land or the residential area within the mine premises and the mine take area using the native species as per adoptability of the area.

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	rights shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development , areas along roads, infrastructure along ML boundary and township etc. by planting native species in consultation with the local DFO /Agriculture Department.	The plantation program envisaged in the EIA-EMP report already submitted shall be complied.
(xv)	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
(xvi)	Quality of water provided to villages shall be within prescribed limits. Water quality shall be tested for levels of fluoride and TDS and treated to prescribed standards before use for domestic consumption.	Quality of water provided to villages shall be maintained to be within prescribed limits. Water quality shall be tested for levels of fluoride and TDS and treated to prescribed standards before use for domestic consumption.
(xvii)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre monsoon (May), Monsoon (August), post monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to MoEF and to the Central Pollution Control Board quarterly within one month of Monitoring. The quality of groundwater should be got analyzed at random through laboratories recognized under the EPA Rules 1986.	Monitoring of ground water level and quality shall be started.
(xviii)	The company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	<u>During operation of the project</u> , artificial groundwater recharge measures for augmentation of groundwater resource shall be taken up, in case water table shows a declining trend. The water requirement of nearby village(s) shall be met in case the village wells go dry due to dewatering of mine.

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(xix)	Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	<u>During operation of the project</u> , regular periodic health check -up of the workers including any other additional health check-up shall be undertaken as directed.
(xx)	A provision of Rs-5/tonne of coal shall be earmarked for CSR activities to be undertaken for the adjoining villages. Village-wise details of activities along with budgetary expenditure thereon shall be updated regularly (at least once a year) on the company website.	A provision Rs.5/tonne of coal shall be made for under taking CSR activities in adjoining village falling in core and buffering zone and shall be complied as per the condition laid down by MoEF.
(xxi)	A Final Mine Closure Plan along with details of corpus fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Corpus fund towards the Mine Closure cost shall be created as per the guideline of Ministry of Coal and a final Mine Closure Plan along with details of corpus fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of Final Closure as per the directive laid down in the condition. Separate Mine Closure plan has been prepared by CMPDIL, Ranchi, and same has been approved by Ministry of Coal (MoC), GOI on 31.08.2016.

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**(B) General Conditions :**

Cond. No	Conditions Imposed	Status as on March'2017
(i)	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	<u>When the project is started</u> , no change in the calendar plan including quantum of mineral coal and waste being produced shall be made.
(iii)	Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO <sub>2</sub> and NO <sub>x</sub> . Location 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.	<u>When the project is started</u> , ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO <sub>2</sub> and NO <sub>x</sub> as directed.
(iv)	Data on ambient air quality (PM10, PM2.5, SO <sub>2</sub> and NO <sub>x</sub> 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 Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the E(P) Rules, 1986 shall be furnished as part of the compliance report.	Data on ambient air quality (PM10, PM2.5, SO <sub>2</sub> and NO <sub>x</sub> 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 Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months as directed during operation of the project.
(v)	Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting operations, operations of HEMM, etc. shall be provided with ear plugs / muffs.	<u>During operation of the project</u> , adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment as directed.
(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 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents. Mine water	At presently no mining activity is being undertaken, so no industrial wastewater is generated from the mine and no workshop has been established till date. <u>When the project is started</u> , the condition shall be complied with

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	shall be treated to prescribe limits in case discharged outside the premises.	
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	<u>When the project is started</u> , vehicular emissions shall be kept under control and regularly monitored as directed.
(viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EP Rules, 1986.	Chasnalla Coal Complex is having an Environmental Lab. Regular environmental quality monitoring is being done in the Chasnalla Coal Complex. This lab may also cater to the needs of Sitanala Underground Coking Coal Project
(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 workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	<u>When the project is started</u> , 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 workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.
(x)	A separate Environmental Management Cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Company.	Separate Environmental Management Dept. has been set up and headed by Asst. General Manager, who reports directly to the Head of Mines.  In addition to this, SAIL is having a separate Corporate Environment Management Division (EMD) at Kolkata under the control of an Executive Director, who facilitates in environmental management of all SAIL units.
(xi)	The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to this Ministry and its Regional Office located at Bhubaneswar.	<u>When the project is started</u> , the funds earmarked for environmental protection measures shall be kept in separate account and would not be diverted for other purpose. Year wise expenditure shall be reported to this Ministry and its Regional Office located at Bhubaneswar.

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(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 days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Advertisement was published in two local newspapers widely circulated, one of which was in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance. A copy of the clearance letter was also made available to the State Pollution Control Board.
(xiii)	A copy of the clearance letter shall be marked to concerned Panchayat /Zilla Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion / representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.	Copy of the Environmental clearance letter has been made available to Panchayat.  A copy of the clearance letter has also been 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's Office / Tehsildar's Office for 30 days.	Copy of the Environmental clearance letter has been made available to the State Pollution Control Board.
(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 in every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as SPM, RPM, SO <sub>2</sub> and NO <sub>x</sub> (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines 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, when the project is started.
(xvi)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MoEF, the	<u>The project is in the preliminary stage of Mining Lease approval &amp; acquisition of Land &amp; presently Mining Activities are not being undertaken.</u> Started sending compliance status on six monthly basis to MoEF, Bhubaneswar,

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	respective Zonal offices of CPCB and the SPCB.	CPCB, Kolkata and SPCB.
(xvii)	The Regional Office of this Ministry located at Bhubaneswar 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 reports.	Full co-operation is always extended to State and Central Govt. Officials.
(xviii)	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form - V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Act, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by e-mail.	The environmental statement for each financial year shall be submitted to the concerned State Pollution Control Board <u>when the project is started</u> and 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.

*gpr*