

**Status of compliance of conditions stipulated in the EC accorded for production of 2.4  
MT of Coal in favour of Basundhara (West) OCP.**

Sl. No.	Conditions	Compliance of the observations
	Specific Condition	
1	Topsoil should be stacked properly with proper slope at earmarked site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.	The mine is on the verge of exhaustion, and the total excavation area of 214.30 ha has been completely excavated, hence there is no production of topsoil.
2	OB dumps should be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps should not exceed 50 m in two stages of 20 m each. Overall slope of the dump should not exceed 28° Concurrent back filling should start from the 4 <sup>th</sup> year of operation Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on yearly basis.	OB Dumps have been stacked at earmarked sites which were started during the period of 2004-05. Back filling has been started in 2006-07 (4th year of mine operation) and a volume of 33.50 Mm <sup>3</sup> OB has been backfilled till 30.09.2023. The external OB dumps have nearly been rehandled and an area of 0.23 Ha is left out to be rehandled. 77.18 Mm <sup>3</sup> of OB from Siarmal OCP and 7.66 Mm <sup>3</sup> of OB from Basundhara (West) Extension OCP will be backfilled into the voids of the Basundhara (West) OCP. However, at present proper benching with slope less than 28° is being maintained.
3	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows soil, OB and mineral dumps. The water collected should be utilized for watering the mine area, roads, green belt development	The total runoff generated over the OB Dump & coal stock is collected back & is allowed to settle down for sufficient time for sedimentation of the suspended particles in the mine sump. Water so collected is being reused for dust suppression of mine road, and firefighting of coal stock yards. The drains are being regularly de-silted and maintained. Garland drains with check dams have been constructed all along the mine

	etc. The drains should be regularly desilted and maintained properly.	boundary so that the runoff is taken care off even in monsoons. Garland drains around external OB dump in North side of mine has been constructed up to a length of 1120 m. 3 nos. of check dams also have been constructed along this garland drain and on the eastern side of the mine lease area, 1480 m long garland drain have been constructed. Regular monitoring & Management of the measures are being taken to achieve zero discharge within the mines.
	Garland drains (size, gradient & length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material.	Garland drains with check dams have been constructed all along the mine boundary so that the runoff is taken care off even in monsoons. Garland drains around external OB dump in North side of mine has been constructed up to a length of 1120 m. 3 nos. of check dams also have been constructed along this garland drain and on the eastern side of the mine lease area, 1480 m long garland drain have been constructed. The total runoff generated over the OB Dump & coal stock is collected back in the mine sump inside the mine which has sufficient capacity for the peak rainfall. This runoff is allowed to settle down for sufficient time for sedimentation of the suspended particles. Water thus collected is being reused for dust suppression on mine road, and firefighting at coal stock yards.
4	Dimension of the retaining wall at the toe of dumps and OB benches within the mine of check run-off and siltation should be based on the rain fall date.	The external OB dump is currently being re-handled and will be used for technical reclamation of internal dump. 77.18 Mm <sup>3</sup> of OB from Siarmal OCP and 7.66 Mm <sup>3</sup> of OB from Basundhara (West) Extension OCP will be backfilled into the voids of the Basundhara (West) OCP. Once the dump stabilizes, retaining wall will be constructed.
5	While constructing an embankment on the northern bank of Basundhara river proper stone pitching towards slope should be undertaken and a toe wall should also be erected.	A dedicated Basundhara River Management Plan, duly approved by Water Resources department has been adopted for protection of Basundhara River and its rivulets. The work of constructing embankment on both sides of the river has been mentioned in the Basundhara River Management plan the currently the work is in progress. The works to be undertaken is attached herewith.



6	A detailed mine decommissioning plan should be submitted to the Ministry of Environment & Forests 5 years in advance for approval.	Basundhara (West) OCP is working under the directive of the 5 <sup>th</sup> addendum to the mining plan and mine closure plan, which is attached herewith for kind reference.
7	A green belt of adequate width should be raised by planting the native species around the ML area, Coal Handling Plan, roads, OB dump sites etc. consultation with the local DFO / Agriculture Department. The density of the trees around be around 2500 plants per ha.	Around 2,28,635 trees have been planted in an area of 92.42 ha as on date. The OB dump is being re-handled and will be used for technical reclamation of internal dump. The ICFRE Report is attached herewith for location wise plantation details.
8	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring should be done four times a year in pre monsoon (April / May), monsoon (August), post-monsoon (November) and Ministry of Environment & Forest and Central Ground Water Board quarterly.	Ground water monitoring is being done regularly by the CMPDIL at required interval. The ground water level is being measured at 3 dug wells located at Bankibahal village, Sardega village and Tiklipara village and at the required frequency. The quality of the water from these wells are also monitored monthly. The ground water level as seen in the ground water table shows an increasing trend.
9	Project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 Km from proposed mine.	An epidemiology study has been conducted considering the nearby villages and the report is attached herewith as well.
10	The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.	The project authorities provide water to the nearby villages on a routine basis even though when the wells of the nearby villages have not turned dry.
11	Appropriate mitigative measures should be taken to prevent pollution of Basundhara river in consultation	A dedicated Basundhara River Management Plan, duly approved by Water Resources department has been adopted for protection of Basundhara River and its rivulets. The work

	with the State Pollution Control Board.	of constructing embankment on both sides of the river has been mentioned in the Basundhara River Management plan the currently the work is in progress. The works to be undertaken is attached herewith. The State Pollution Control Board has been made aware of the river management plan.
12	Coal handling plant should be provided with adequate number of high efficiency, dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Coal Handling plant is not in operation.
13	Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and CHP wastewater.	Conventional safety tanks/soak pit arrangement is provided for the colony. ETP is provided in the Excavation workshop, (Dimensions; 1 <sup>st</sup> settling tank (16.1m*4.6m*2m*2), O&GT (3.6m*2m*2m*2, 2m*2m*2m*2, 1m*1m*1m*2) & the final settling tank (16.1m*4.6m*2m*2)). Further, mine effluent is stored in the abandoned quarry in Basundhara (East).
14	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MoEF and its regional office.	Digital processing of the entire lease area using remote sensing technique is being done regularly once in 3 years for monitoring land use pattern and the same is hereby attached for ready reference.
15	Vehicular emissions should be kept under control and regularly monitored.	Security check points have been established within the mine as well as at critical junctures to keep a check on the vehicle's speed and to ensure that the coal carrying vehicles are fully covered.
	<b>General conditions</b>	
1	No change in mining technology and scope of working should be made without prior approval of the	No change in technology and scope of work. The mine is using Shovel-Dumper technology for excavation of Overburden whereas for Coal extraction Surface Miner with



	Ministry of Environment, & Forests.	Pay loader & Tipper combination are employed which reduces dust emissions.						
2	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	<p>No change in the calendar plan including quantum of mineral coal and waste being produced will be made.</p> <p>The details of production of coal &amp; OB during the till date is as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Coal (Te)</th> <th>Oyer Burden (m<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>2023-24</td> <td>660937.18</td> <td>73312.70</td> </tr> </tbody> </table>	Year	Coal (Te)	Oyer Burden (m <sup>3</sup> )	2023-24	660937.18	73312.70
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3	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> & CO monitoring Location of the stations should be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive target in consultation with the State Pollution Control Board.	Air quality is presently being monitored at 05 stations in consultation with the State Pollution Control Board and the location has been finalized on the basis of environmental & ecological sensitivity.						
4	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> & CO) should be regularly submitted to the Ministry including its Regional office at Bhubaneswar and State Pollution Control Board / Central Pollution Control Board once in six months.	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> & CO) is being regularly submitted to the Ministry including its Regional office at Bhubaneswar and State Pollution Control Board / Central Pollution Control Board once in six months.						
5	Drill should be wet operated or with dust extractors and controlled blasting should be practiced.	Both wet drilling & NVE dust extraction are provided in the single departmental drill. Controlled blasting is being practiced and coal is being excavated with the help of eco-friendly surface miners.						
6	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying	<p>In order to suppress dust suspension, the following measures have been taken by the project proponent:</p> <ol style="list-style-type: none"> <li>1. sprinkling is being done by 02 nos. of 28Kl departmental water tanker.</li> </ol>						

	<p>arrangement on haul road, wagon loading, dump trucks (loading &amp; unloading) should be provided and properly maintained.</p>	<ol style="list-style-type: none"> <li>2. 25 nos. of fixed mist type Sprinklers have been installed in CHP, weigh bridge and at the Coal transportation road near east sump.</li> <li>3. Installation of 80 nos. of mist sprayers on a stretch of 2.2 km, from Bankibahal check gate to Basundhara check gate, has been completed. 02 instant water showering systems have been installed near the Basundhara check gate.</li> <li>4. A wheel washing system has also been installed at the exit of the mines.</li> <li>5. Additionally, 115 sprinklers have been installed along the coal transportation road within the mining lease area.</li> <li>6. 4 km of coal transportation road have been concreted within the mines</li> </ol>
7	<p>Adequate measures should be taken for control of noise levels below d BA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc should be provided with ear plugs muffs.</p>	<p>Adequate measures are being taken to control the noise level within the prescribed limits. Noise proof &amp; AC Cabins are being provided and maintained in HEMMs. The data regarding the noise levels are being properly recorded near the working environment. Reports for the last six months are being enclosed herewith along with the max. and min. noise levels.</p>
8	<p>Industrial wastewater (workshop and water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or a amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.</p>	<p>The mine effluent is being stored at the abandoned quarry in Basundhara (East) &amp; mine voids of Basundhara (W) OCP &amp; the industrial waste water is being reused for dust suppression of mine road, and fire-fighting of coal stocks. ETP &amp; OGT has been constructed and are in working condition. The treated water is being reused for washing purpose, (Dimensions; 1<sup>st</sup> settling tank (16.1m*4.6m*2m*2m), O&amp;GT (3.6m*2m*2m*2m, 2m*2m*2m*2m, 1m*1m*1m*2m) &amp; the final settling tank (16.1m*4.6m*2m*2m)).</p>
9	<p>Acid mine water, if any, has to be treated and disposed of after</p>	<p>There has been no instance of acid mine water since inception.</p>

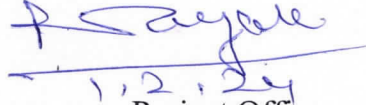


	conforming to the standard prescribed by the competent authority.											
10	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Boars.	The monitoring of pollution levels is being done by CMPDIL (NABL Accredited), which is controlled by the same parent company, i.e. Coal India Limited.										
11	<p>Personnel working in dust areas should wear protective respirator devices and they should also be provided with adequate training and information on safety and health aspects.</p> <p>Occupational health surveillance program of the workers should undertake periodically to observe any contractions due to exposure coal dust and take corrective measures, if needed.</p>	<p>Personnel working in dusty area have been provided with <b>76</b> pairs of mining shoes, 83 dust masks, <b>68</b> fluorescent jackets, <b>52</b> safety goggles and <b>32</b> rechargeable torches to protect themselves from occupational hazards.</p> <p>The workers are trained at VTC regarding safety &amp; health awareness. Their health is being monitored through Periodical Medical Examination which is held at every 5 years interval. Regular Periodic Medical Examination is being done and the reports are being communicated to, DGMS. The P.M.E. reports for past years are as follows:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">No of individuals undergone P.M.E.</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Departmental</th> <th>Contractual</th> </tr> </thead> <tbody> <tr> <td>2023-24</td> <td>38</td> <td>0</td> <td>Fit</td> </tr> </tbody> </table>	Year	No of individuals undergone P.M.E.		Remarks	Departmental	Contractual	2023-24	38	0	Fit
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12	A separate environmental management cell with suitable qualification personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Environment management cell has been established in Project as well as area and head quarter level. One Staff Officer (E&F) (E-5) level is heading the Area Environment Cell with an Assistant Manager (E&F) and reporting to the General Manager, Mahalaxmi area and to the G.M.(Env.) who is heading the company's environment dept. And reporting to Director (Tech., P&P)										
13	The funds earmarked for environmental protection measures should kept in separate account and should not be diverted for other	The environmental protection measures are being kept in separate account and are not diverted for other purpose. The year-wise expenditure in Form V that is being submitted to SPCB on yearly basis indicating the expenses on										

	purpose. Year wise expenditure be reported to the Ministry and its Regional Office located at Bhubaneshwar.	environmental management.																					
14	The Regional Office of this Ministry located at Bhubaneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnish the requisite data / information / monitoring reports.	Full cooperation is extended to the officer(s) of the Regional Office and required data submitted. The condition is being complied with.																					
15	A copy of clearance letter whom and suggestion / representation has been received while processing the proposal.	The condition has been complied with.																					
16	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's Office Tahsildar Office for 30 days.	Action has been taken to comply with.																					
17	The project authorities should advertise at least in two local newspaper widely circulated around the project, one of which shall be in vernacular language of the locality concerned within seven days of issue of the clearance letter information that the project has been accord environmental clearance and copy of the clearance letter is available with the State Pollution Control Board and may also seen at	<p>EC publication details of Basundhara (W) OCP are as follows:</p> <table border="1"> <tr> <td>1</td> <td><b>Dainik Jagran,</b></td> <td><b>04.03.2013</b></td> </tr> <tr> <td></td> <td><b>Jamshedpur</b></td> <td></td> </tr> <tr> <td>2</td> <td><b>The Samaja,</b></td> <td><b>02.03.2013</b></td> </tr> <tr> <td></td> <td><b>Rourkela</b></td> <td></td> </tr> <tr> <td>3</td> <td><b>The New Indian</b></td> <td><b>02.03.2013</b></td> </tr> <tr> <td></td> <td><b>Express,</b></td> <td></td> </tr> <tr> <td></td> <td><b>Bhubaneswar</b></td> <td></td> </tr> </table>	1	<b>Dainik Jagran,</b>	<b>04.03.2013</b>		<b>Jamshedpur</b>		2	<b>The Samaja,</b>	<b>02.03.2013</b>		<b>Rourkela</b>		3	<b>The New Indian</b>	<b>02.03.2013</b>		<b>Express,</b>			<b>Bhubaneswar</b>	
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web site of	the	
same should be forwarded to the		
Regional Office of this Ministry		
located at Bhubaneshwar.		

  
1.2.24  
Project Officer,

Basundhara (West) OCP,

Mahalaxmi Area, MCL.

**Project Officer, Basundhara (W) OCP**

**परियोजना अधिकारी, बसुंधरा (प) ओसीपी**