

ମହାନଦୀ କୋଲ ଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्ड्स लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

OFFICE OF THE PROJECT OFFICER (N&N)
NANDIRA COLLIERY
AT/PO: N.S.NAGAR, BHARATPUR, DIST:
ANGUL (ODISHA), PIN:759148
E_mail: ndr.po2018@gmail.com
aeotalmcl@gmail.com



Ref.No: PO(N&N)/NDR/EC Compliance/2023-24/162

Dt 25.11.2023

To
The Additional Director,
Ministry of Environment Forest & Climate Change,
Eastern Zonal Office,
A-3, Chandrashekharapur,
Bhubaneswar-751023.

Sub:-Submission of Half Yearly Compliance Report of Environmental Clearance condition in respect of NANDIRA U/G Mine (0.33 MTY).

Dear Sir,

Please find enclosed herewith Half Yearly Compliance Report along with Form-I, II & III and abstract of the monitoring report of Ambient Air, Noise level & Water Effluent quality in respect of NANDIRA U/G Mine (0.33 MTY) for the period from APRIL'2023 to SEPTEMBER'2023.

This is for your kind information & necessary action.

Encl: As above.

Yours faithfully,

25/11/23
Project Officer (N&N)
Nandira Colliery

Copy for Kind information to:

1. The Director, E.I.A Monitoring Cell, Ministry of Environment & Forest, Paryavaran Bhawan, C.G.O.Complex, New Delhi-100003 (With Encl.)
2. The Member Secretary, State Pollution Control Board (Odisha), A/118, Nilakanthanagar, Unit-VIII, BBSR-751012 (With Encl.).
3. The Regional Officer, SPCB (Odisha), Regional Office, Industrial Estate, Angul. (With Encl.).

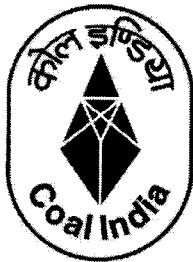
Copy to:

1. The General Manager, Talcher Area for kind information
2. The General Manager (Envt. & Forests), MCL HQ for kind information
3. The Area Environment Officer, Talcher Area
4. The Nodal Officer (Envt.), Nandira Colliery (with Encl.)
5. Office file.

HALF YEARLY PROGRESS REPORT
OF COMPLIANCE WITH
ENVIROMENTAL CLEARANCE
CONDITIONS

(APRIL-2023 TO SEPTEMBER-2023)

NANDIRA U/G MINE (0.33 MTY)



MCL

MAHANADI COALFIELDS LIMITED
TALCHER AREA
AT/PO: N.S.NAGAR, BHARATPUR,
ANGUL, ODISHA
PIN-759148.

HALF-YEARLY REPORT OF COMPLIANCE WITH ENVIROMENTAL CLEARANCE CONDITIONS

(HALF-YEARLY FROM APRIL'2023 TO SEPTEMBER'2023)

Name of the Project: Nandira Colliery. (0.33 Mty), MCL.

No. & date of MoEF clearance letter No: J-11015/866/2007-IA.II (M), dated 18th June 2007

Revalidated Vide No: J-11015/866/2007-IA.II(M), Dt: 15.11.2020

Amended Vide No: J-11015/866/2007-IA.II(M), Dt: 16.09.2021

Amended Vide No: J-11015/866/2007-IA.II(M), Dt: 02.05.2022

A)	SPECIFIC CONDITIONS	COMPLIANCE STATUS
(i)	No depillaring operation shall be carried out below village and other surface structures.	No depillaring operation has been carried out below village and other surface structures.
(ii)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to road.	Solid barriers have been left below the roads falling within the blocks to avoid any damage to the blocks.
(iii)	Regular monitoring of subsidence movement on the surface over and around working area and impact on natural drainage pattern, water bodies, vegetation, structure, road and surrounding should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoided loss life and material. Crack should be effectively plugged with ballast and clayey soil/suitable material.	Regular monitoring of subsidence movement on the surface over and around the depillared area is being done. No subsidence has been observed so far, no cracks have been observed anywhere.
(iv)	Garland /surface drain (size, gradient and length) around the safety area such as mine shaft outside the active subsidence area to divert the surface water from the ML and from low lying areas. Sump capacity should be designed keeping 50% safety margin over an above the pack sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide adequate retention period to allow proper setting of site material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.	Garland drains are provided around the mine area. Adequate sump capacity has been established below ground keeping in view maximum rainfall & adequate retention time, sufficient number of pumps of adequate capacity have been installed below ground to pump out mine water during peak rainfall.
(v)	While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.	No lower seam below a goaved out upper seam is being presently worked.
(vi)	Crusher at the CHP should operate with high efficiency bag filters. Water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage road, transfer point etc.	There is no crusher plant at the mine. Adequate water spraying through fixed water sprinklers and mobile water tanker is being done to prevent fugitive emission from conveyor system, transfer points, coal stockyard and CT road etc.
(vii)	Conveyor belt for transportation of coal from coal face to CHP shall be a closed unit.	Blasted coal is loaded from face by SDLs onto pony belts/gate belts and further transported to

		surface via series of gate and trunk belts. Conveyor belts at surface fully covered. Moreover, all the belt conveyors have arrangement for water sprinkling through mist nozzles over it at regular intervals.																																																																													
(viii)	Drills should be wet operated.	All the drilling machines are equipped and operated with wet drilling system.																																																																													
(ix)	A progressive afforestation plan shall be prepared and implemented for the undisturbed area and shall include area brought under green belt development, area along road, infrastructure ,over surface where mining is being done below, along ML boundary and township outside the lease area, etc. by planting native species in consultation with the local DFO/Agriculture department. The density of the tree should be around 2500 plants per ha.	<p>Total lease area of the project is 370 Ha involving 325 Ha of forest land. Only 9.10 Ha has been disturbed at surface for mine opening & surface infrastructure. Rest of the area is undisturbed.</p> <p>Block plantation of about 3832 plants have already been done over 2.908 Ha of land at Nandira Colliery premises, Near Coal Stockyard, Near Worker's Institute, Nandira U.P. school, Sisu Mandir Vidhyalaya etc. (wherever, surface rights vested with MCL) for increasing green cover.</p> <p>Green belt has been developed by planting 1732 no. of plants along CT road & colony road for a length of 4.601 RKM respectively.</p> <p>Adequate plantation has been done in the ML Area of the mine as per the advice of forest department. Last 3 years plantation details are given below:-</p> <table border="1"> <thead> <tr> <th>Year</th> <th>No of Plants</th> <th>Area (Ha)</th> <th>Expenditure (Rs.)</th> </tr> </thead> <tbody> <tr> <td>2020-21</td> <td>50</td> <td>0.02</td> <td>5000</td> </tr> <tr> <td>2021-22</td> <td>650</td> <td>1.20</td> <td>250000</td> </tr> <tr> <td>2022-23</td> <td>300</td> <td>0.40</td> <td>60000</td> </tr> <tr> <td>2023-24</td> <td>350</td> <td>0.40</td> <td>50000</td> </tr> </tbody> </table> <p>In addition to the above plantation works, fruit bearing plants are also being distributed to surrounding villagers as per their demand, during monsoon of every year at free of cost for raising green cover. Detail of such plant distribution to the specified surrounding villages in last 03 years is given below:-</p> <table border="1"> <thead> <tr> <th rowspan="2">Name of the village</th> <th colspan="5">No. of plants distributed</th> </tr> <tr> <th>2019-20</th> <th>2020-21</th> <th>2021-22</th> <th>2022-23</th> <th>2023-24</th> </tr> </thead> <tbody> <tr> <td>Karnapur</td> <td>1000</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Sanjorada</td> <td rowspan="2">628</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Badajorada</td> <td>1215</td> <td>245</td> <td>546</td> <td>2470</td> </tr> <tr> <td>Sansingda</td> <td rowspan="2">1000</td> <td>-</td> <td>212</td> <td>56</td> <td>-</td> </tr> <tr> <td>Badasingda</td> <td>-</td> <td>-</td> <td>124</td> <td>-</td> </tr> <tr> <td>Natedi</td> <td>576</td> <td>-</td> <td>124</td> <td>-</td> <td>-</td> </tr> <tr> <td>Danara</td> <td>2693</td> <td>1935</td> <td>564</td> <td>-</td> <td>120</td> </tr> <tr> <td>Jambubahal</td> <td>2394</td> <td>1521</td> <td>-</td> <td>212</td> <td>112</td> </tr> </tbody> </table>	Year	No of Plants	Area (Ha)	Expenditure (Rs.)	2020-21	50	0.02	5000	2021-22	650	1.20	250000	2022-23	300	0.40	60000	2023-24	350	0.40	50000	Name of the village	No. of plants distributed					2019-20	2020-21	2021-22	2022-23	2023-24	Karnapur	1000	-	-	-	-	Sanjorada	628	-	-	-	-	Badajorada	1215	245	546	2470	Sansingda	1000	-	212	56	-	Badasingda	-	-	124	-	Natedi	576	-	124	-	-	Danara	2693	1935	564	-	120	Jambubahal	2394	1521	-	212	112
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(x)	<p>Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (may), monsoon (August), post monsoon (November) and winter (January) seasons and for quality in May. Date thus collected should be submitted to the ministry of Environment & forest and to the central pollution control board quarterly within one month of monitoring.</p>	<p>The ground water level and quality is being monitored through a network of existing wells and piezometers established in Talcher Coalfields. The water quantity monitored in a piezometer established under the jurisdiction of Nandira Colliery and a village well is given below:-</p> <table border="1" data-bbox="922 353 1474 544"> <thead> <tr> <th>Date</th> <th>Location</th> <th>Water Depth from Ground Level(in m)</th> </tr> </thead> <tbody> <tr> <td>22.05.2023</td> <td>Natedi Village well</td> <td>8.02</td> </tr> <tr> <td>26.08.2023</td> <td>Natedi Village well</td> <td>4.85</td> </tr> </tbody> </table> <table border="1" data-bbox="922 566 1474 808"> <thead> <tr> <th>Date</th> <th>Location</th> <th>Water Depth from Ground Level (in m)</th> </tr> </thead> <tbody> <tr> <td>22.05.2023</td> <td>Piezometer No. MTP-11</td> <td>8.12</td> </tr> <tr> <td>22.05.2023</td> <td>Piezometer No. MTP-10</td> <td>15.24</td> </tr> <tr> <td>24.08.2023</td> <td>Piezometer No. MTP-11</td> <td>7.25</td> </tr> <tr> <td>25.08.2023</td> <td>Piezometer No. MTP-10</td> <td>13.25</td> </tr> </tbody> </table> <p>Data thus collected is being submitted to MoEF&CC & CPCB at regular intervals and also made available at MCL website.</p>	Date	Location	Water Depth from Ground Level(in m)	22.05.2023	Natedi Village well	8.02	26.08.2023	Natedi Village well	4.85	Date	Location	Water Depth from Ground Level (in m)	22.05.2023	Piezometer No. MTP-11	8.12	22.05.2023	Piezometer No. MTP-10	15.24	24.08.2023	Piezometer No. MTP-11	7.25	25.08.2023	Piezometer No. MTP-10	13.25				
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(xi)	<p>The company shall put up artificial ground water recharge measures for augmentation of ground water resource if monitoring of water table indicates declining trend. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.</p>	<p>Ground water & surface water level are being monitored at regular intervals. The water table is found to be normal and there is no declining trend observed. Moreover, 02 no. of roof top rainwater harvesting structures have been developed at Nandira Dispensary and Worker's institute during 2020-21. Moreover, water is being supplied through pipeline, water tankers etc. to nearby villages for their domestic purposes as per their demand. The details of water supplied through tankers during last 3/4 year details are as follows:</p> <table border="1" data-bbox="922 1261 1474 1485"> <thead> <tr> <th>Year</th> <th>No. of villages</th> <th>Quantity (KL)</th> <th>Expenditure (In Rupees)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>13</td> <td>38392</td> <td>50,69,300</td> </tr> <tr> <td>2019-20</td> <td>13</td> <td>38400</td> <td>51,00,000</td> </tr> <tr> <td>2020-21</td> <td>13</td> <td>38400</td> <td>55,00,000</td> </tr> <tr> <td>2021-22</td> <td>13</td> <td>38400</td> <td>52,12,000</td> </tr> <tr> <td>2022-23</td> <td>13</td> <td>38400</td> <td>54,00,000</td> </tr> <tr> <td>2023-24</td> <td>13</td> <td>38400</td> <td>54,00,000</td> </tr> </tbody> </table>	Year	No. of villages	Quantity (KL)	Expenditure (In Rupees)	2018-19	13	38392	50,69,300	2019-20	13	38400	51,00,000	2020-21	13	38400	55,00,000	2021-22	13	38400	52,12,000	2022-23	13	38400	54,00,000	2023-24	13	38400	54,00,000
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(xii)	<p>The company shall obtain prior approval of CGWA/CGWB Regional office for use of ground water if any, for mining operation.</p>	<p>NoC has been obtained from Central Ground Water Authority vide No. CGWA/NOC/MIN/ORIG/20020/9385, Dt: 16.12.2020 with validity upto : 15.12.2022. Application for renewal of NoC is also submitted on dtd: 02.12.2022 which is under consideration for grant of renewal NOC at CGWA, New Delhi.</p>																												
(xiii)	<p>Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP waste water.</p>	<p>Septic tank soak pit arrangement is available at each and every quarter. The domestic effluent is being discharged to soak pit through septic tank.</p> <p>STP (MBBR technology) for a capacity of 0.5 MLD has been constructed and commissioned very recently.</p> <p>No effluent generated from workshop, as there is no vehicle washing takes place. No CHP involved</p>																												

		in the mine, hence ETP is not needed, as there is no waste water generated at the mine.																								
(xiv)	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged active mining operations shall be subjected to health checkup for occupational diseases and nearing 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.	Occupational health surveillance programme of the workers are being made regularly. Moreover, Nandira dispensary, Regional Hospital, Dera and Central Hospital are also available for the purpose of health check up of employees. Health check up of employees engaged in active mining activities has also been carried out by an outside agency. Details of IME & PME status is as follows; <table border="1"> <thead> <tr> <th>Year</th> <th>Man Power</th> <th>Target PME</th> <th>PME Done</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>1194</td> <td>358</td> <td>187</td> </tr> <tr> <td>2020-21</td> <td>1785</td> <td>500</td> <td>483</td> </tr> <tr> <td>2021-22</td> <td>1752</td> <td>529</td> <td>564</td> </tr> <tr> <td>2022-23</td> <td>1591</td> <td>460</td> <td>467</td> </tr> <tr> <td>2023-24</td> <td>1550</td> <td>455</td> <td>310 (as on 30.09.2023)</td> </tr> </tbody> </table>	Year	Man Power	Target PME	PME Done	2019-20	1194	358	187	2020-21	1785	500	483	2021-22	1752	529	564	2022-23	1591	460	467	2023-24	1550	455	310 (as on 30.09.2023)
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(xv)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land used pattern and report submitted to a MOEF and its Regional office at Bhopal.	Digital processing of the entire lease area using remote sensing technique is being done regularly once in 3 years for monitoring the land use pattern. It was carried out recently in the year 2019 and prior to that it was done in the year 2016 and reports submitted to MoEF And the details are given below: Total Leasehold area = 370 Ha Area under agriculture = 15.78 Ha Area under water body = 0.43 Waste land = Nil Forest land = 325.38 Ha Area under habitation = Nil Other Govt. land = 28.41 Ha																								
(xvi)	A final Mine closure plan along with details of corpus fund should be submitted to the Ministry of Environment & forest 5 years in advance of final mine closure for approval.	A mine closure plan with details of corpus fund already submitted to MoEF. Accordingly a progressive mine closure report for the 1 st phase period from 2011-12 to 2015-16 has been submitted at CCO and got 50% reimbursement of deposited amount as per the latest guidelines. Report for 2 nd phase i.e. 2016-17 to 2020-21 has been prepared and recommended to COCO, New Delhi for reimbursement upto 50%.																								

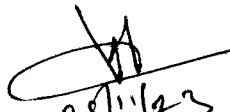
ADDITIONAL CONDITIONS PROVIDED IN THE REVALIDATED EC & AMENDED THEREBY

4)	ADDITIONAL SPECIFIC CONDITIONS	COMPLIANCE STATUS
(i)	<p><u>Revalidated EC:</u> Construction of Sewage Treatment Plant (latest technology SBR/MBBR/MBR) should be completed by July 2021 and treated water shall be reused for plantation. As documentary proof, STP photograph after its commission to be submitted to RO, MoEF&CC with copies of its CTE and CTO.</p>	<p>Construction & Commissioning of STP (MBBR based) for the capacity of 0.5 MLD has been completed and the treated water is being reused for plantation.</p> <p>As documentary proof, STP photograph after its commission had been submitted to RO, MoEF&CC with copies of its CTE and CTO.</p>
(ii)	<p>SPCB shall ensure no CTO shall be granted to project on fulfillment of condition no.1</p> <p><u>Amended EC:</u> Time extension provided upto April'2023 to comply the condition no.4(ii)</p>	<p>After compliance of Condition 4(i), CTO renewal had been obtained from SPCB, Odisha for the period upto 31.03.2025 in accordance to our earlier application.</p>
(iii)	<p>No untreated wastewater or treated water shall be discharged to any water bodies including river. All efforts to be made to reuse the water.</p>	<p>The treated water is being reused at plantation site near STP.</p>
(iv)	<p>PP shall obtain No Objection Certificate from Central Ground Water Authority within six months and submit it Ministry's Regional Office.</p>	<p>No Objection Certificate (NoC) has been obtained from Central Ground Water Authority vide No. CGWA/NOC/MIN/ ORIG/20020/9385, Dt: 16.12.2020 with validity upto: 15.12.2022. Compliance of conditions stipulated therein is under progress. Application along with processing & advance water abstraction fee has been submitted at CGWA/CGWB for renewal of NoC on dtd: 12.12.2022 and it is under consideration for renewal of NOC at CGWA, New Delhi.</p>
(v)	<p>As proposed additional fixed type water sprinklers all around the coal stockyard/at the extension portion of firefighting system should be completed by March 2021 as the work of extension of pipeline for firefighting is in progress.</p>	<p>05 no. of additional Fixed type water sprinklers have been provided at the extension portion of firefighting system.</p>
(vi)	<p>PP shall complete the work of blacktopping of existing WBM road (for a length of 460m) used for coal transportation by May 2021.</p>	<p>The work of conversion of existing CT road from WBM to blacktopping of existing WBM for a length of 460m has been completed.</p>
(vii)	<p>Green belt shall be enhanced up to 33% beyond the proposal plan of five years submitted by PP vide its letter dated 2nd October, 2020</p>	<p>Plantation (Green belt) is being done as per the condition. 2021-22: 650 nos. over 1.20 Ha 2022-23: 300 nos. over 0.4 Ha 2023-24: 350 nos. over 0.4 Ha</p>
(viii)	<p>Compliance report of above EC conditions shall be submitted to RO, MoEF&CC under intimation to MoEF&CC, Delhi.</p>	<p>It is hereby submitted</p>

B.	GENERAL CONDITIONS	COMPLIANCE STATUS																																										
(i)	No change of mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.	There has been no change in mining technology and scope of working so far.																																										
(ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	<p>There has been no change in calendar plan of extraction quantum of coal. EC capacity of the mine is 0.33 Million tonne. Details of coal production during the recent years are given below:-</p> <table border="1" data-bbox="820 477 1250 656"> <thead> <tr> <th>Year</th> <th>Production year wise (Met.te)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>1,07,000</td> </tr> <tr> <td>2019-20</td> <td>85,000</td> </tr> <tr> <td>2020-21</td> <td>75,832</td> </tr> <tr> <td>2021-22</td> <td>60,160</td> </tr> <tr> <td>2022-23</td> <td>60,830</td> </tr> <tr> <td>2023-24</td> <td>28155 (as on 30.09.2023)</td> </tr> </tbody> </table>	Year	Production year wise (Met.te)	2018-19	1,07,000	2019-20	85,000	2020-21	75,832	2021-22	60,160	2022-23	60,830	2023-24	28155 (as on 30.09.2023)																												
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(iii)	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RSPM, Sox and Nox monitoring, 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.	<p>Ambient air quality monitoring station has been established in consultation with state pollution control board. The data on AAQ parameters are provided in Annexure - I & average values are given below:-</p> <p>1) Table-1: Compliance Stations:</p> <table border="1" data-bbox="820 824 1453 1003"> <thead> <tr> <th>Location</th> <th>Parameters</th> <th>SPM</th> <th>PM10</th> <th>PM2.5</th> <th>SO2</th> <th>NOx</th> </tr> </thead> <tbody> <tr> <td>Project Office</td> <td>Avg.</td> <td>175</td> <td>78</td> <td>31</td> <td>14.5</td> <td>14.6</td> </tr> <tr> <td>Substation</td> <td>Avg.</td> <td>168</td> <td>75</td> <td>29</td> <td>14.02</td> <td>13.35</td> </tr> </tbody> </table> <p>2) Table-2: NAAQs Stations:-</p> <table border="1" data-bbox="820 1070 1453 1249"> <thead> <tr> <th>Location</th> <th>Parameters</th> <th>SPM</th> <th>PM10</th> <th>PM2.5</th> <th>So2</th> <th>NOx</th> </tr> </thead> <tbody> <tr> <td>Natedi Village</td> <td>Avg.</td> <td>158</td> <td>77</td> <td>29</td> <td>13.89</td> <td>19.85</td> </tr> <tr> <td>Nandira Colony</td> <td>Avg.</td> <td>164</td> <td>81</td> <td>32</td> <td>12.12</td> <td>16.86</td> </tr> </tbody> </table>	Location	Parameters	SPM	PM10	PM2.5	SO2	NOx	Project Office	Avg.	175	78	31	14.5	14.6	Substation	Avg.	168	75	29	14.02	13.35	Location	Parameters	SPM	PM10	PM2.5	So2	NOx	Natedi Village	Avg.	158	77	29	13.89	19.85	Nandira Colony	Avg.	164	81	32	12.12	16.86
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(iv)	Data on ambient air quality (SPM, RSPM, SO2 and Nox) should 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.	Data of ambient air quality is being submitted (half yearly) to MoEF&CC, SPCB/CPCB.																																										
(v)	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly, water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.	Fugitive dust emissions from coal bunker to loading points are controlled by regular water spraying through fixed water sprinklers. Water spraying is being done regularly along the haul road/coal transportation roads through a mobile water tanker.																																										

(vi)	Adequate measures should be taken for control of noise levels below 85 DBA in the work environment, workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs.	<p>Since it is an UG mine and the quantity of coal produced is also very less, no major HEMMs are operated at underground. Only activities like drilling, blasting (controlled), Side Discharge Loaders (SDLs) operation, conveyor belt movement are involved in the mining practices at underground. At surface, only a pay loader (for loading coal into trucks) and trucks are in operation. SDLs and Payloader are equipped with sound proof cabin. Moreover, all the workers engaged in blasting, drilling, SDLs, payloader operations etc. are provided with ear plugs/muffs.</p> <p>The average value of Noise level measured at two locations is given below:</p> <table border="1" data-bbox="829 584 1271 707"> <thead> <tr> <th colspan="3">Noise Measurement in dBA</th> </tr> <tr> <th>Location</th> <th>DAY</th> <th>NIGHT</th> </tr> </thead> <tbody> <tr> <td>Project Office</td> <td>65.3</td> <td>61.1</td> </tr> <tr> <td>Substation</td> <td>66.8</td> <td>59.3</td> </tr> </tbody> </table>	Noise Measurement in dBA			Location	DAY	NIGHT	Project Office	65.3	61.1	Substation	66.8	59.3																				
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(vii)	Industrial wastewater (workshop and wastewater from the mine) should be properly collected treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge, oil and grease trap should be install before discharge of workshop effluents.	<p>Mine discharge water is being collected in sedimentation ponds and treated suitably before being allowed to discharge on ground. No waste water discharged from workshop. Mine discharge water quality report is given below with average values:</p> <table border="1" data-bbox="829 902 1438 1025"> <thead> <tr> <th>Location</th> <th>Para meters</th> <th>pH</th> <th>O&G</th> <th>TSS</th> <th>COD</th> </tr> </thead> <tbody> <tr> <td>Mine Discharge water</td> <td>Avg.</td> <td>7.83</td> <td>< 4.0</td> <td>62</td> <td>28</td> </tr> </tbody> </table>	Location	Para meters	pH	O&G	TSS	COD	Mine Discharge water	Avg.	7.83	< 4.0	62	28																				
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(viii)	Vehicular emissions should be kept under control and regularly monitored; vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Vehicles used for transporting the mineral are being covered with tarpaulins and optimally loaded. And it is being verified regularly that all the vehicles used for transportation possess pollution under control certificate.																																
(ix)	Environment laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the state pollution control board.	Environmental monitoring works is being done through CMPDIL having adequate laboratory facilities as required by state pollution Control Board.																																
(x)	Personal working industry areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance of the workers should be undertaken periodically to any contractions due to exposure to dust and to take correct measure, if needed	<p>Persons working in dusty areas are provided with dust masks and educated on health aspects, periodically occupational health checkup of all workers is carried out once in every five years regularly. Details of Periodical Medical Examination during last 06 years are as follows:</p> <table border="1" data-bbox="829 1585 1433 1839"> <thead> <tr> <th>Year</th> <th>Man Power</th> <th>Target PME</th> <th>PME Done</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>1664</td> <td>785</td> <td>500</td> </tr> <tr> <td>2018-19</td> <td>1243</td> <td>410</td> <td>259</td> </tr> <tr> <td>2019-20</td> <td>1194</td> <td>358</td> <td>187</td> </tr> <tr> <td>2020-21</td> <td>1785</td> <td>500</td> <td>483</td> </tr> <tr> <td>2021-22</td> <td>1752</td> <td>529</td> <td>564</td> </tr> <tr> <td>2022-23</td> <td>1591</td> <td>460</td> <td>467</td> </tr> <tr> <td>2023-24</td> <td>1550</td> <td>455</td> <td>310 (as on 30.09.2023)</td> </tr> </tbody> </table>	Year	Man Power	Target PME	PME Done	2017-18	1664	785	500	2018-19	1243	410	259	2019-20	1194	358	187	2020-21	1785	500	483	2021-22	1752	529	564	2022-23	1591	460	467	2023-24	1550	455	310 (as on 30.09.2023)
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(xi)	A separate environment management cell with suitable qualified personal should be set under the control of a senior Executive, who will report directly to the head of the company.	A separate environment management cell with qualified personnel is under the control of Senior at Area HQ level and who will directly report to the Head of the Company.																																

(xii)	The funds earmarked for environment protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be report to this ministry and it's Regional Office at Bhubaneshwar.	<p>Funds measures are kept in a separate account head of "Environment". Year-wise expenditure is reported to MOEF, Sate Pollution Control Board by Company HQ.</p> <table border="1" data-bbox="808 295 1360 577"> <thead> <tr> <th>Year</th> <th>Expenditure for Environment Protection</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>23.22 Lakhs</td> </tr> <tr> <td>2017-18</td> <td>31.32 Lakhs</td> </tr> <tr> <td>2018-19</td> <td>26.28 Lakhs</td> </tr> <tr> <td>2019-20</td> <td>42.00 Lakhs</td> </tr> <tr> <td>2020-21</td> <td>93.44 Lakhs</td> </tr> <tr> <td>2021-22</td> <td>90.244 Lakhs</td> </tr> <tr> <td>2022-23</td> <td>217.92 Lakhs</td> </tr> </tbody> </table>	Year	Expenditure for Environment Protection	2016-17	23.22 Lakhs	2017-18	31.32 Lakhs	2018-19	26.28 Lakhs	2019-20	42.00 Lakhs	2020-21	93.44 Lakhs	2021-22	90.244 Lakhs	2022-23	217.92 Lakhs
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(xiii)	A copy of the environment clearance letter will be market to concerned panchayat/local NGO, if any, from whom any suggestion /representation has been received while processing the proposal.	A copy of environmental clearance had given to local Panchayat.																
(xiv)	State pollution control board should display a copy of the clearance letter at the Regional Office, District industry center and collector's Office/Tehsildar's Office for 30 days.	A copy of EC had displayed by SPCB and at the regional office, district industry center and collector's office.																
(xv)	The Project authorities should 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 seven days of the clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in .	<p>Grant of EC was published in two Odia Newspapers viz. 1) Sambad, 2) Dharitri, Angul on 24.07.2008.</p> <p><u>Grant of Revalidated EC</u> was published in following Newspapers viz. 1) PBD, 2) Sambad, Angul on 15.12.2020.</p> <p>It is also available in the MoEFCC website http://envfor.nic.in</p>																

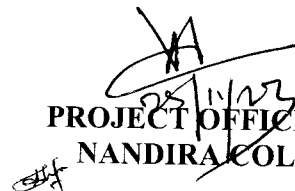

 28/11/23
PROJECT OFFICER (N&N)
NANDIRA COLLIERY

FORM-I

**MINISTRY OF ENVIRONMENT & FOREST
REGIONAL OFFICE
MONITORING PROFOMA PART-1(DATA SHEET)**

1. Project Type: River-Valley/Mining Industry/Thermal/Nuclear/Other (Specify) : Mining Industry (COAL)
2. Name of the Project : NANDIRA U/G Mine (0.33 MTY)
3. Clearance Letter(s) OM no. & Date : No.J-11015/866/2007-IA.II (M) dt.18.06.2007
No.J-11015/866/2007-IA.II (M) dt.18.06.2007
4. Location
- (a) District(s), State(s) : Angul, Orissa
5. a) Address of concerned project Chief Engineer (with pin code) : Sri.Virendra Prasad, Project Officer,
Nandira Colliery, Po: N.S.Nagar,
Bharatpur, Dist-Angul,
Orissa, Pin-759148, Tel.No.06760-260209
- b) Address of Executive project Engineer/Manager (with pin code and telephone/telex/Fax nos. : -do-
6. Salient Feature:
- a. S.F of the project : Start of mine - Feb'1962. Mine lease area 370 Ha, Mineable reserve 19.8 Mt, Extractable reserve-11.226Mt (As per Appr. Mining plan 2011). The Grade of coal is 'C' Mining Technology is Board & Pillar with SDLs. Targeted output- 0.33 Mty of augmented project Life of mine is 30 years (As per Mining plan May'2011)
- b. S.F of the environmental Management plans. : Panels where Top & Bottom seams are worked Should be extracted with stowing to prevent damage to reserve forest while other panels can be worked out as the subsidence limit is 20mm/m
7. Breakup of the project area
- a. Submergence area (Forest and Non-Forest) : Forest – 325.38 Ha.
Non-Forest – 44.62 Ha (Govt. and tenancy)
- b. Others : Residential Colony – 33.91 Ha.
8. Break up of project affected population With enumeration of those losing House/dwelling units only, agricultural Land only, both dwelling unit and Agricultural land and land less laborers/artisans. : NA
- a. SC, ST/Adivasis : NA
- b. Others : NA
9. Financial Details:
- a) Project cost as originally planned and Subsequently estimates and the year of price reference. : P.R- 1962. Project cost: 14.64 lakhs
F.R.Nov.1973; Project cost: 724.35 lakhs
May 1986; Project cost: 204.12 lakhs
PR Aug.1991; Project cost: 17.96 lakhs

- b) Allocation made for environmental Management plans, with item-wise year wise break-up. : ECO development cost
: 131.06 lakh
- Anti pollution measurement Cost: 38.55 lakhs
- Cost of strengthening of existing
- Forest land on surface: 20.77 lakhs
- c) Benefit cost ratio/internal rate of return & the year of assessment. : Cost Rs. /te. Profit/Loss Rs. /te.
- d) Whether 9 c) includes the cost of Environment management plans so far. : NA
- e) Actual expenditure incurred on the project : 5940.05 lakhs
- f) Actual expenditure incurred on the Env't. Mgmt plans, so far. : 217.92 Lakhs (2022-23)
10. Forest land requirements.
- a) The status of approval of a diversion of forest land non-forestry use. : The diversion of 325.38 Ha. of Forest Land has been granted for U/G mining.
- b) The status clear felling. :-NA-
- c) Comments on the viability and Sustainability programme in the light of actual fields experience so far. : No
- 11 .Status of construction:
- a) Date of commencement (Actual and /or planned) : Feb'1962
- b) Date of Completion (Actual and /or planned) : Aug'1991
12. Reason for the delay if the project is yet to start: NA
13. Date of site visit
- a) The date on which the project was monitored by the regional office , if any. : 22.09.2023
- b) Date of visit for this monitoring report. : 22.09.2023
14. Details of correspondence with project authority:
For obtaining action, information and status of compliance to safe guard.


PROJECT OFFICER (N&N)
NANDIRA COLLIERY

FORM-I

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6. Salient Feature:
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- b. S.F of the environmental Management plans. : Panels where Top & Bottom seams are worked Should be extracted with stowing to prevent damage to reserve forest while other panels can be worked out as the subsidence limit is 20mm/m
7. Breakup of the project area
- a. Submergence area (Forest and Non-Forest) : Forest – 325.38 Ha.
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- b. Others : Residential Colony – 33.91 Ha.
8. Break up of project affected population : NA
With enumeration of those losing House/dwelling units only, agricultural Land only, both dwelling unit and Agricultural land and land less laborers/artisans.
- a. SC, ST/Adivasis : NA
- b. Others : NA
9. Financial Details:
- a) Project cost as originally planned and Subsequently estimates and the year of price reference. : P.R- 1962. Project cost: 14.64 lakhs
F.R.Nov.1973; Project cost: 724.35 lakhs
May 1986; Project cost: 204.12 lakhs
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FORM-II

PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION

1. No. of village affected : Nil (Rehabilitation Plan not applicable)

2. Families affected : SC ST OTH. Total

3. Compensation package offered per family :

State/Centre norms	Project Package
As per state Govt. Package	

4. Budget estimate for rehabilitation. : NA

a) Total Outlay. : NA

b) Amount paid /used. : NA

5. Employment details

a) Total employment to be provided : NA

b) Employment given so far. :

6. Rehabilitation & Resettlement details. : NA

a) Nos. of families rehabilitated : NA

i. Name of the site : NA

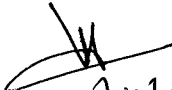
iv. Families rehabilitated. : NA SC ST OTH. TOTAL

b) Families yet to be rehabilitated : NA

i. Name of site. : NA

ii. No. of families : NA SC ST OTH. TOTAL

Any other information. : -


PROJECT OFFICER (N&N)
NANDIRA COLLIERY

FORM-III

FORMATE FOR PROVIDING PARTICULARS ON GREEN BELT/PLANTATION UNDER F©ACT 1980 AND E (P) ACT 1986

1. a. Name of Organization : MAHANADI COALFIELDS LTD.
b. Env't clearance order No. : No.J-11015/866/2007-IA.II(M) Dtd.18.06.2007
Revalidated on Dt:15.11.2020 & amended on Dt:16.09.2021
and 02.05.2022
c. Forest clearance order No. : F.No.8-74/2004 FC dt.16.6.2009
2. Location,Block/Sub Division/
District./State. : Village-Badajorada
: Block – Talcher, Sub. Dvn, Talcher, Dist:Angul
State-Orissa
3. Address for communication : Project Officer, Nandira Colliery, MCL
P.O: N.S.Nagar (Bharatpur), Dist:Angul (Orissa),
Pin-759148
4. Existing vegetation in the area/region :
a. Species (Trees/shrub/Grasses/climbers.) : Trees, Shrubs, Grasses& climbers
b. major prevalent species of each type :
5. Land coverage by the project
a. Total Area under the project : 403.91 Ha.
b. Area covered for basic infrastructure : 33.91 Ha.
(road, building/factory etc.)
6. Details about natural vegetation
a. Name and number of tree/species felled : Nil
b. Name and number of plants species still: 3850 Nos
available in the area.
c. By protecting the area will indigenous :
d. Extent of green belt developed. : 2.65 Ha.
7. Plantation required to be carried out as per.
a. Condition of Environment : As per specific condition No.ix.
(Clearance in Ha/No.s plants/Ha) : 2500 Nos. of plants/Ha
b. A condition of forest © Act : 1600 Nos.of plants/Ha
Forest clearance in Ha/No.
c. Voluntarily in Ha. /Nos. : 2500 Nos./Ha.

8. Details about plantation.

- a) Total area available for plantation in 2023-24 in each category.

Green belt	Ext dump	B/F Area.	Road sides	Block plantations.
350	Nil	Nil	Nil	0.4 Ha

b) Plantation details (Category wise & methodology used)

Year of plantation	Species planted	Spacing	Height attained	Total area covered till Sept'23	Proposed plantation programme in 2024-25
1993 to 2023	Given in Annex-A	2m x 2m	5 to 8 m	2.908	200

- c) Survival % of plantation (for last five years) : 80 % - 85 % after 3/5 years of plantation.

9. Agency carrying out plantation and maintenance: OFDC/ CGVVRNL/ Departmental/Contractual etc.

10. Financial Details. (Year wise and item wise):

A) Plantation:

Sl No	Year	Fund allocated (In Lakh Rs. For 3/5 years.	Expenditure made in lakh Rs. For 3/5 years	No. of plants Planted	Average cost each surviving plants in Rs. (plantation scheme valid for 3/5 years)
1.	1990-91	1.64 lakhs	1.64 lakhs	12000	17.08 for 9600 plants
2.	1991-92	1.77 lakhs	1.77 lakhs	12500	17.7 for 10000 plants
3.	1992-93	2.0 lakhs	2.0 lakhs	15000	16.67 for 12000 plants
4.	1993-94	1.6 lakhs	1.6 lakhs	13000	15.38 for 10400 plants
5.	1994-95	3.75 lakhs	3.75 lakhs	29000	16.16 for 23200 plants
6.	1995-96	6.55 lakhs	6.55 lakhs	20500	39.93 for 16400 plants
7.	1996-97	Nil	Nil	Nil	Nil
8.	1997-98	Nil	Nil	Nil	Nil
9.	1998-99	Nil	Nil	Nil	Nil
10.	1999-2000	Nil	Nil	Nil	Nil
11.	2000-01	Nil	Nil	Nil	Nil
12.	2002-03	Nil	Nil	Nil	Nil
13.	2003-04	Nil	Nil	Nil	Nil
14.	2003-04	Nil	Nil	Nil	Nil
15.	2003-04	Nil	Nil	Nil	Nil
16.	2004-05	1.85 lakhs	1.85 lakhs	2025	114.44 for 1620 plants
17.	2005-06	Nil	Nil	110	Nil
18.	2006-07	Nil	Nil	Nil	Nil
19.	2007-08	Nil	Nil	Nil	Nil
20.	2008-09	Nil	Nil	Nil	Nil
21.	2009-10	Nil	Nil	Nil	Nil
22.	2010-11	Nil	Nil	Nil	Nil
23.	2011-12	Nil	Nil	Nil	Nil
24.	2012-13	Nil	Nil	Nil	Nil
25.	2013-14	Nil	Nil	Nil	Nil
26.	2014-15	Nil	Nil	Nil	Nil
27.	2015-16	Nil	Nil	Nil	Nil
28.	2016-17	Nil	Nil	Nil	Nil
29.	2017-18	1.475 Lakhs for 5 years	1.475 Lakhs	500	295 for 500 plants
30.	2018-19	Nil	0.06 Lakhs	50	120 for 50 plants
31.	2019-20	Nil	0.02 Lakhs	20	100 for 20 plants
32.	2020-21	Nil	0.02 Lakhs	20	100 for 20 plants
33.	2021-22	Nil	2.40 Lakhs	650	369.23 for 650 plants
34.	2022-23	Nil	0.50 lakhs	300	166.67

B) Plant Distribution:

Sl No	Year	No. of Plants distributed	Expenditure made	Average cost for each plants
1	2014-15	1000	0.2 Lakhs	Rs.20/plant
2	2015-16	2000	0.46 Lakhs	Rs.23/plant
3	2016-17	10000	3.24 Lakhs	Rs.32.4/plant
4	2017-18	10000	3.15 Lakhs	Rs.31.5/plant
5	2019-20	5000	1.65 Lakhs	Rs.33/plant
6	2020-21	5000	1.55 Lakhs	Rs.31.5/plant
7	2021-22	2500	0.75 Lakhs	Rs.30.0/plant
8	2022-23	2750	0.98 Lakhs	Rs.35.64/plant

10. Inspection of plantation by fields: Nil

Experts and their comments and Follow up action.

11. Remarks /any other information.

ANNEXURE - I

AMBIENT AIR QUALITY REPORT

(APRIL' 2023 TO SEPTEMBER' 2023)

1) MONITORING STATION: Project Office (Compliance Station)

DATE	SPM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	Remarks
15.04.2023	172	86	36	10.06	12.58	Dust emission from Local Transportation, Domestic Cooking, RLS
29.04.2023	146	93	42	12.56	15.65	
15.05.2023	200	94	45	15.54	18.54	
29.05.2023	175	85	36	12.54	16.564	
15.06.2023	204	97	46	16.59	17.85	
28.06.2023	181	89	39	13.58	13.55	
15.07.2023	206	96	48	14.71	14.52	
22.07.2023	210	94	48	13.26	16.74	
12.08.2023	204	90	38	10.52	13.56	
30.08.2023	145	66	25	18.54	14.65	
15.09.2023	177	88	37	12.98	17.82	
23.09.2023	197	95	44	25.44	18.02	
Max (µg/.m ³)	210	97	48	25.44	18.54	
Min (µg/.m ³)	145	66	25	10.06	12.58	
Avg (µg/.m ³)	184.75	89.42	40.33	14.69	15.84	

2) MONITORING STATION: Sub-station (Compliance Station)

DATE	SPM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	Remarks
15.04.2023	186	93	41	11.85	15.86	Dust emission from Local Transportation, Domestic Cooking, RLS
29.04.2023	151	96	44	13.74	17.56	
13.05.2023	206	96	48	18.45	14.58	
29.05.2023	190	92	42	11.01	15.565	
15.06.2023	194	94	43	15.56	19.12	
28.06.2023	178	88	37	12.52	18.56	
15.07.2023	198	94	45	11.96	16	
22.07.2023	163	84	32	10.45	12.98	
12.08.2023	194	88	37	13.52	10.25	
30.08.2023	137	61	22	14.52	17.54	
15.09.2023	169	86	34	19.61	21.15	
30.09.2023	185	89	40	25.97	19.19	
Max (µg/.m ³)	206	96	48	25.97	21.15	
Min (µg/.m ³)	137	61	22	10.45	10.25	
Avg (µg/.m ³)	179.25	88.42	38.75	14.93	16.53	

3) MONITORING STATION: NANDIRA COLONY (Reference Station)

DATE	SPM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	Remarks
05.04.2023	146	70	26	13.95	17.58	
06.04.2023	138	61	22	12.76	18.86	
12.04.2023	155	75	28	13.52	16.77	
13.04.2023	164	84	32	12.56	10.52	
19.04.2023	150	69	26	12.86	15.43	
20.04.2023	157	76	29	16.74	12.65	
26.04.2023	164	82	31	10.56	15.85	
27.04.2023	162	81	30	13.41	15.74	
04.05.2023	154	71	27	15.42	13.52	
05.05.2023	161	79	30	18.57	19.58	
10.05.2023	145	66	25	15.42	20.52	
11.05.2023	138	61	22	18.57	14.58	
18.05.2023	146	65	25	15.4	18.54	
19.05.2023	158	78	29	16.52	19.57	
24.05.2023	163	83	32	13.56	14.58	
25.05.2023	160	80	30	16.54	13.52	
05.06.2023	150	68	26	13.41	15.46	
06.06.2023	138	61	22	13.56	17.56	
12.06.2023	143	63	24	17.89	16.52	
19.06.2023	137	61	22	14.52	13.56	
20.06.2023	162	81	30	13.56	18.54	
26.06.2023	156	73	28	14.55	16.55	
27.06.2023	145	66	25	13.56	17.58	
29.06.2023	153	74	27	14.58	16.58	
30.06.2023	154	68	26	12.95	14.65	
05.07.2023	146	67	25	12.56	17.58	
06.07.2023	144	63	24	11.21	13.65	
12.07.2023	159	76	29	133.65	16.58	
13.07.2023	152	71	27	13.25	17.58	
19.07.2023	157	79	29	13.56	11.75	
20.07.2023	162	83	31	13.52	17.68	
26.07.2023	153	73	27	11.69	13.98	
27.07.2023	145	69	25	13.59	16.52	
03.08.2023	150	68	26	10.25	13.58	
04.08.2023	138	61	22	13.52	14.52	
09.08.2023	143	63	24	10.25	14.56	
10.08.2023	136	59	21	12.26	10.25	
18.08.2023	155	73	28	13.52	13.56	
19.08.2023	164	81	32	12.12	16.86	
25.08.2023	152	67	25	14.58	13.52	
26.08.2023	153	71	27	16.41	17.85	
04.09.2023	157	78	29	15	20.03	
05.09.2023	155	75	28	12.65	17.95	
11.09.2023	152	69	26	15.37	10.18	
12.09.2023	161	82	30	11.13	12.34	
20.09.2023	146	66	25	23.23	18.6	
21.09.2023	154	74	28	20.23	16.45	
25.09.2023	151	72	27	25.44	19.58	
26.09.2023	161	82	30	17.71	20.94	
29.09.2023	145	68	25	14.84	24.28	
30.09.2023	165	85	33	16.4	12.99	
Max (µg/.m³)	165	85	33	133.65	24.28	
Min (µg/.m³)	136	59	21	10.25	10.18	
Avg (µg/.m³)	152.06	71.98	27.00	16.92	16.04	

Dust emission from
Local Transportation,
Domestic Cooking, RLS



4) MONITORING STATION: NATEDI VILLAGE
(Reference Station)

DATE	SPM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	Remarks
17.04.2023	158	82	31	15.65	17.58	
18.04.2023	137	74	28	12.54	16.58	
24.04.2023	139	60	22	11.52	15.65	
25.04.2023	143	68	26	10.56	13.52	
02.05.2023	158	77	29	13.56	13.52	
03.05.2023	137	58	21	15.24	17.59	
08.05.2023	139	60	22	10.52	14.52	
09.05.2023	135	57	20	15.24	18.54	
16.05.2023	137	59	22	12.51	19.56	
17.05.2023	154	72	27	13.52	18.59	
22.05.2023	157	79	29	18.56	13.52	
23.05.2023	166	82	33	13.56	18.41	
30.05.2023	155	74	28	18.54	13.52	
31.05.2023	146	65	25	10.54	18.74	
01.06.2023	156	73	28	10.52	13.56	
02.06.2023	141	61	23	13.56	17.85	
09.06.2023	154	71	27	14.58	19.85	
10.06.2023	143	62	24	12.56	16.44	
16.06.2023	164	80	32	13.52	14.58	
17.06.2023	153	71	27	16.58	13.56	
23.06.2023	144	63	24	13.52	18.54	
24.06.2023	155	74	28	14.55	16.55	
03.07.2023	143	64	24	10.52	23.52	
04.07.2023	138	62	22	18.97	16.59	
10.07.2023	150	72	26	10.52	11.25	
11.07.2023	139	62	22	13.95	14.76	
17.07.2023	143	65	24	13.12	12.25	
18.07.2023	136	62	21	16.85	18.54	
24.07.2023	140	64	23	14.71	14.52	
25.07.2023	138	61	22	11.96	16	
01.08.2023	156	73	28	10.25	17.56	
02.08.2023	141	61	23	13.56	14.18	
07.08.2023	154	71	27	13.58	16.58	
08.08.2023	143	62	23	12.28	14.25	
16.08.2023	152	71	27	15.47	16.58	
17.08.2023	143	63	24	11.58	14.56	
23.08.2023	158	77	29	13.89	19.85	
24.08.2023	146	66	25	11.52	16.58	
30.08.2023	154	71	27	14.58	17.45	
31.08.2023	141	62	23	16.58	16.45	
01.09.2023	150	68	26	11.59	16.45	
02.09.2023	161	82	30	12.58	18.6	
08.09.2023	163	83	32	15.77	16.45	
09.09.2023	143	63	24	20.67	21.93	
18.09.2023	147	65	25	23.37	18.09	
19.09.2023	138	60	22	18.08	13.71	
27.09.2023	165	84	32	22.26	16.45	
28.09.2023	162	79	30	21.75	17.2	
Max (µg/.m³)	166	84	33	23.37	23.52	
Min (µg/.m³)	135	57	20	10.25	11.25	
Avg (µg/.m³)	148.23	68.65	25.77	14.40	16.48	

Dust emission from Local
Transportation,
Domestic Cooking, RLS

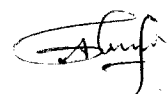
ANNEXURE - II

NOISE LEVEL REPORT

(APRIL' 2023 TO SEPTEMBER' 2023)

Monitoring Station : Project Office & Sub-station, Nandira Colliery

Date of Monitoring	Project Office		Sub-station		Remarks
	DAY (dBA)	NIGHT (dBA)	DAY (dBA)	NIGHT (dBA)	
03.04.2023	68.7	66.7	65.7	60.1	
17.04.2023	69.6	65.1	66.7	59.1	
08.05.2023	71.6	68.4	68.7	64	
22.05.2023	69.4	67.1	66.8	63.4	
08.06.2023	65.9	63.4	60.4	56.7	
22.06.2023	68.4	65.6	65.6	57.4	
10.07.2023	61.2	60.4	67.4	64.1	
27.07.2023	61.7	60.2	67.7	64.3	
10.08.2023	69.5	65.1	61.2	57.3	
24.08.2023	61.2	57.3	67.7	64.3	
09.09.2023	67.2	63.8	68.9	59.4	
28.09.2023	62.5	59.8	62.5	59.8	
Max (dBA)	71.6	68.4	68.9	64.3	
Min (dBA)	61.2	57.3	60.4	56.7	
Avg (dBA)	66.41	63.58	65.78	60.83	



ANNEXURE - III

MINE DISCHARGE – TREATED WATER QUALITY REPORT (APRIL' 2023 TO SEPTEMBER' 2023)

Location: Treated Mine Discharge water Tank/MDTP outlet Tank

DATE	PH	OG	TSS	COD	Remarks
10.04.2023	7.37	<4.0	34	36	-
24.04.2023	7.44	<4.0	28	32	-
10.05.2023	7.5	<4.0	38	24	-
24.05.2023	7.61	<4.0	44	28	-
08.06.2023	7.67	<4.0	48	36	-
22.06.2023	7.42	<4.0	32	32	-
10.07.2023	7.61	<4.0	42	32	-
27.07.2023	7.73	<4.0	46	44	-
10.08.2023	7.92	<4.0	58	36	-
24.08.2023	7.75	<4.0	66	20	-
06.09.2023	8.29	<4.0	46	32	-
25.09.2023	7.85	<4.0	36	32	-
Max (mg/L)	8.29	<4.0	66	44	-
Min (mg/L)	7.42	<4.0	28	20	
Avg (mg/L)	7.68	<4.0	43.17	32.00	

WELL WATER LEVEL MONITORING DATA (APRIL' 2023 TO SEPTEMBER' 2023)

Date of sampling	Name of the station	Depth from GL (in Meter)	Remarks
24.11.2022	Natedi village well	5.56	Post Monsoon
04.01.2023	Natedi village well	5.59	Winter

GROUND WATER LEVEL MONITORING DATA (APRIL' 2023 TO SEPTEMBER' 2023)

Date of sampling	Name of the station	Depth from GL (in Meter)	Remarks
22.05.2023	Piezometer no. MTP 11	8.12	Pre-Monsoon
24.08.2023	Piezometer no. MTP 11	7.25	Monsoon
22.05.2023	Piezometer no. MTP 10	15.24	Pre-Monsoon
25.08.2023	Piezometer no. MTP 10	13.25	Monsoon

