

Letter No. OCPL/313  
Date: 19-05-2023



**Odisha Coal and Power Limited**

(A Government of Odisha Company)

CIN : U10100OR20155GC018623

Website : www.ocpl.org.in

To,

The Joint Director(s)  
Regional Office, Eastern Region (ERO)  
Ministry of Environment, Forest & Climate Change  
A-3, Chandrasekharpur, Bhubaneswar-751023

**Sub:** Submission of Half Yearly Compliance Report of the Environmental Clearance conditions of Manoharpur Open Cast Coal Mine Project (8.00 MTPA) of Odisha Coal & Power Limited located in IB valley, Dist. Sundargarh, Odisha.

**Ref:** (i) EC letter No. J-11015/139/2008-IA.II (M) dated 21.02.2014  
(ii) EC transfer order vide letter no. J-11015/139/2008-IA.II (M)Pt. file dt. 30.12.2015

Dear Sir,

In reference to the notification issued by MoEF&CC vide letter S.O. 5845 (E) dated 26.11.2018 and Environmental Clearance as referred above in respect of Manoharpur Open Cast Coal Mine (8.00 MTPA) of Odisha Coal & Power Limited located in IB valley, Dist. Sundargarh, Odisha, please find enclosed herewith Half Yearly Compliance Report in soft copy (by email) as well as hard copy for the period of October 2022 to March 2023.

As per MoEF&CC (ERO) letter dated 11.05.2020, only scanned copy of report is being submitted to their good office at the given email address (roez.bsr-mef@nic.in).

This is for your kind information and needful action at your end.

Yours Faithfully



**Head of Mines**  
(Manoharpur Coal Mine Project)

Copy to:

1. The Scientist ('E' & Regional Directorate), Central Pollution Control Board, South end Conclave, Block 502, 5<sup>th</sup> & 6<sup>th</sup> Floors, 1582 Razidanga Main Road, Kolkata-700107.
2. The Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilkanthnagar, Unit VIII, Bhubaneswar 751012

# **HALF YEARLY COMPLIANCE REPORT**

**For**

**Environmental Conditions**

**October 2022 – March 2023**

**MANOHARPUR OPENCAST COAL MINE**



Odisha Coal & Power Limited,  
Zone-A, Ground Floor,  
Fortune Tower, Bhubaneswar-751023, Odisha  
Web: [www.ocpl.org.in](http://www.ocpl.org.in)

# ENVIRONMENTAL CLEARANCE(EC) COMPLIANCE REPORT

PROJECT NAME - MANOHARPUR OPENCAST COAL MINE PROJECT

EC letter No. J-11015/139/2008-IA.II (M) dated 21.02.2014 and

EC Transfer Order - EC-No. J-11015 / 139/2008-IA.II (M) Pt. file Dated 30<sup>TH</sup> December 2015

Period of Compliance Report – October 2022 to March 2023

Sr. No.	EC Letter Condition	Compliance										
<b>SPECIFIC CONDITIONS</b>												
i.	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	<p>The rated maximum production capacity of the mine is 8.00MTPA as per the approved Mining Plan (Rev II). Hence, the limit shall not exceed as prescribed in EC.</p> <p>Mine development work were started w.e.f. 01.11.2018 and coal production started from 10.10.2019. The year wise coal production details are as per following:</p> <table border="1"><thead><tr><th>Financial Year (FY)</th><th>Coal Production</th></tr></thead><tbody><tr><td>2019-20</td><td>1 MT</td></tr><tr><td>2020-21</td><td>2.00 MT</td></tr><tr><td>2021-22</td><td>5.25 MT</td></tr><tr><td>2022-23</td><td>8.0 MT</td></tr></tbody></table>	Financial Year (FY)	Coal Production	2019-20	1 MT	2020-21	2.00 MT	2021-22	5.25 MT	2022-23	8.0 MT
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2019-20	1 MT											
2020-21	2.00 MT											
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ii.	Environmental clearance to the proposal is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the Standing Committee of National Board for Wildlife, as applicable	<p>Not Applicable. The proposed Manoharpur coal mine project does not fall within 10km of any National park/sanctuary and as such clearance from National Board of Wildlife is not required.</p> <p>However, the Site Specific Wildlife Conservation Plan for the said project has been approved by Principal Chief Conservator of Forests (PCCF-WL) &amp; Chief Wildlife Warden (CWW), Odisha which is being and will be implemented in consultation with the forest dept.</p>										
iii.	The OB should be kept in ML area and there should be no OB dumps at the end of mining.	<p>As per the approved Mine Plan &amp; Mine Closure Plan (Revision – II), total 3 nos. of OB dumps will be acquired in non-coal bearing area by OCPL. Major portion of the overburden (86%) will be utilized in back filling.</p> <p>Currently, the generated OB from the mining operation is being stored at External OB dump 1 (NW) and OB dump 3 (SE) as per approved Mining Plan. Further, in pit dumping has also been started to accommodate the</p>										

		generated OB as per the approved mining plan.
iv.	The land for OB dumping should be made ready for original use after mine closure.	Not Applicable because the OB dump spread over the land will be stabilized by vegetation and plantation of native & fruit bearing species over it and the same will be forever.
v.	All the sandstone taken out during mining should be utilized for house construction and given free of cost to locals.	The technical study for availability and suitability of utilization of sandstone taken out during mining has been conducted by a reputed institute i.e. National Institute of Technology (NIT), Rourkela. As per the study report; the sandstone in mine does not confirm to the specifications of the construction grade sand stone required for house construction. Hence, the sandstone to be generated during mining can't be reused for construction purpose. The copy of report issued by NIT, Rourkela has already been submitted to your good office vide our letter no. OCPL/451 dt. 14.05.2022 (kindly refer Annexure 1).
vi.	Since the mining area is total forest land, the sandstones should not be dumped as OB.	Efforts are being made to comply with the conditions. Further as stated above in condition no. v, the quality of generated sand stones is not good and hence it is being utilized for the following purpose: <ol style="list-style-type: none"> <li>1. Preparation of haul road to avoid dust pollution</li> <li>2. Toe of the dump to prevent runoff and fall of OB material.</li> <li>3. Base layers in inpit dumping to improve the stability of back filling</li> </ol>
vii.	Fly ash dumping is not permitted in mine void.	Presently, Fly ash is not being dumped. If any situation arises which requires fly ash dumping; then proper scientific studies will be carried out and necessary permissions, if required will be obtained from competent authority prior to dumping.



viii.	The leachability study may be carried out for chromium, arsenic and mercury that may be present in fly ash.	Currently Not Applicable.  Further, the required leachability study shall be carried out and the test result of same will be submitted to MOEF & CC for obtaining necessary permission before commencement of fly ash disposal, if required, in Manoharpur Coal Mine Project.
ix.	The CSR amount should be Rs.4 crores in initial 3 years, and thereafter it should be Rs 5/T of coal/annum till the end of the life of project with the escalation factor every year coal production.	This is being complied. CSR / peripheral development activities are being regularly carried out in the vicinity of project area. The year wise expenditure is attached as <b>Annexure 1</b> for your kind reference.
x.	The CSR activity, which had already been carried out by proponent, be audited by a 3 <sup>rd</sup> Party. The audit should be carried out by a reputed agency.	Complied. The CSR audit has already been conducted by reputed agency M/s GEOENVITECH (Research and Consultancy Services Pvt. Ltd.) which is empaneled with Govt. of Odisha.
xi.	The proponent shall come back to the Committee for its washery proposal for further consideration.	Noted & will be complied at an appropriate stage, if applicable.
xii.	Coal transportation from mine to railway siding by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons	Coal Handling Plant (CHP) is fully operational and 100% of coal required for the EUP is being transported from mine to TPP by MGR through SILO loading of the wagons. only incase of breakdown/unavailability of CHP, coal may be loaded through the siding (wharf wall) located inside the project area. Further, the excess coal is being sold at the pit head to different consumers after meeting the requirement of EUP's.
xiii.	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	There is no river in and around the project area. One seasonal nalla i.e. Garia Nalla passes through the coal block will be diverted outside the coal block after 7 <sup>th</sup> year of mine operation. Strong embankment and stone pitching will be provided along the diverted nalla to withstand the peak water flow and prevent mine inundation. Approval for the diversion of Nallah has already been obtained from Dept. of Water Resources.
xiv.	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.	As mentioned above, there is no river in the vicinity of project site except seasonal Garia Nalla. There is no overflow of OB into agricultural fields &

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		<p>Nalla as the grassing &amp; plantation was carried out on slope of the dump during pre-monsoon / monsoon season to stabilize the dump slope which reduces the chance of overflow of OB.</p> <p>Moreover, till date Plantation of approx. 21704 nos. of trees comprises local native species have been carried out in and around the mine area such near workshop, coal stock yard, around OB dump, safety zone etc. The plantation list is attached as <b>Annexure 2</b>.</p> <p>Moreover, 18,800 species have also been planted in colony area.</p>
xv.	<p>OB shall be stacked at two earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring &amp; management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment &amp; Forests and its Regional office located at Bhopal on yearly basis.</p>	<p>The overburden generated from the mine is being stored at their earmarked location and also the dump design is as per approved Mining Plan (Revision II) and slope stability report.</p> <p>Currently, the dumps are in active stage. The dump portion in North, East and to some extent in south of OB dump 1 has been stabilized and planned for reclamation through plantation over it. Backfilling of excavated area has been started from 3<sup>rd</sup> year of operation i.e. 2021-22 which is under initial phase and later on the same will be reclaimed as per the approved Mine Closure Plan.</p>
xvi.	<p>Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc.</p> <p>The drains shall be regularly de-silted and maintained properly.</p> <p>Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.</p>	<p>Siltation pond followed by garland / catch drain around the mine area, external OB dump and coal stock yard etc. has been provided to arrest the flows from OB dump /coal stock yard. The drains are being regularly de-silted during the pre and post monsoon season and have been maintained properly.</p> <p>Two sump of sufficient capacity have been provided within the mine to cater the peak sudden rainfall and discharge/seepage from adjoining areas. The water collected in sump is being utilized for sprinkling the mine area, roads, green belt development, etc.</p> <p>Moreover, 4 nos. of settling ponds (8925 m<sup>3</sup>) and 1 no. recharge pond (4500m<sup>3</sup>) which are permanent in nature have also been provided to collect the storm</p>

		water or coal water generated inside the CHP area / along the conveyor. Further, 15,250m of permanent concrete/brick drains were constructed so that the entire water is collected at the settling ponds. The water collected in settling ponds is being reused for sprinkling purpose after primary treatment.
xvii.	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	As mentioned above in Point no. xv; presently, OB dumps are in the active stage except few portion of OB dump 1 which is being stabilized through grassing / plantation. Hence, Retaining wall around the toe of OB dump 1 (approx. 600 m) has been constructed.
xviii.	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	CHP is fully operational and crushers have been equipped with high efficiency bag filters. Further, water sprinkling system such as dust suppression system at dump hopper, dry fog dust suppression (DFDS) system at every receiving and discharge points of the conveyor etc. have been provided to control the fugitive dust emissions.
xix.	Drills shall be wet operated.	is being complied. Drills deployed at site are wet operated.
xx.	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	Tarring / concreting of coal transportation roads have been completed inside the project area. Further, permanent water sprinkling system through clog free type nozzles (i.e. 160 nos.) at an appropriate distance of 10m interval between each other along the road have been provided to reduce the dust emission during transportation. Avenue plantation has also been carried out along the roads to develop the green belt. Green area is under development through plantation in monsoon season of each year within the project premises.
xxi.	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Services of CSIR-CIMFR has been taken for scientific design of Blast parameter to reduce ground vibration. The recommendations of study are being implemented through the engagement of technical man power during blasting which is being carried out only during day time. Further, a scientific study has been carried out by NIT-Rourkela for monitoring of ground vibration.



xxii.	<p>A progressive afforestation plan shall be implemented covering an area of 512.584 ha at the end of mining, which includes reclaimed external OB dump (193.478 ha), internal dump (257.11 ha), and green belt (61.996 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.</p>	<p>Areas will be afforested including reclaimed areas etc. as per approved Mining Plan and native species of plantation will be decided in consultation with DFO/Agriculture department.</p> <p>Further, as stated above 21704 nos. of species have been planted to develop the green belt in and around the mine area such near workshop, coal stock yard, around OB dump, safety zone etc. Also, the tree plantation has been carried out inside the township complex to increase the green cover of the area. Moreover, 18,800 species have also been planted in colony area.</p> <p>The list comprises details of plantation is attached as <b>Annexure 2</b> as referred above in Point no. (xiv).</p>
xxiii.	<p>An estimated 61.73 M Cum of OB will be generated during the entire life of the mine. Out of which 29.23 Mm<sup>3</sup> of OB will be dumped in four external OB dump in non-coal bearing area.</p> <p>The maximum height of external OB dump for hard OB will not exceed 30 m each. The maximum slope of the dump shall not exceed 28°.</p> <p>Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.</p>	<p>OB dumps are located in non-coal bearing area. Further, in-pit dumping has also been started near the OB dump 1 from 3rd year of operation i.e. 2021-22 which is under initial phase</p> <p>Compliance &amp; Status report is being submitted regularly to MoEF &amp;CC and its Regional office along with the half yearly post EC compliance report.</p> <p>Also, kindly refer the point no. xv as mentioned above.</p>
xxiv.	<p>Of the total quarry area of ha, the backfilled quarry area of 489 ha shall be reclaimed with plantation and a void of 162 ha which is proposed to be converted into a water body, shall be gently sloped and the upper benches shall be terraced and stabilized with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha</p>	<p>Currently, the mining operation are in active stage. Hence, the back filled area will be reclaimed later on by grassing and plantation as per the Approved Mine Closure Plan.</p> <p>Density of trees will be 2500/ha.</p> <p>Water body (reservoir) will be gently sloped. Plantation of native species will be done with consultation of DFO/Agriculture department.</p>
xxv.	<p>The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.</p>	<p>Will be complied as specified in approved Mining Plan.</p>
xxvi.	<p>Compensatory Ecological &amp; Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out</p>	<p>Will be complied as specified in approved Mining Plan.</p>





xxvii.	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	Noted and being complied as per approved Mining Plan.
xxviii.	No groundwater shall be used for mining operations.	Being complied. Mine seepage collected in sump is being reused for sprinkling purpose.
xxix.	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. 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 the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	Monitoring of groundwater level and quality has been carried out by establishing a network of existing dug wells in surrounding villages and construction of new piezometers in the adjacent Dip-side Manoharpur coal block of OCPL itself and data collected is being submitted regularly to MoEF&CC and CPCB. The monitoring is being carried out by the MoEF&CC/NABL/OSPCB accredited laboratory i.e. M/s Visiontek Consultancy Services Pvt. Ltd.
xxx.	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine	Permanent recharge pond of 4500 m3 capacity along with temporary recharge ponds have been provided within the project area to recharge the ground water table of the adjoining areas. Moreover, siltation ponds of adequate size and capacity followed by Garland drains have been provided which also helps in retaining the rain water and recharge of ground water table. Further, the drinking water supply through tankers has been provided to nearby villages during the summer season.
xxxi.	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Commissioning of sewage treatment plant (2 nos. STP of 70 KLD and 50 KLD) installed in mine colony to treat the generated domestic waste water will be carried out during the occupancy of said colony. The STP treated water will be reused in horticulture development within the colony. ETP of 50 KLD capacity has also been installed & commissioned to treat the waste water generated from vehicle washing in workshop area.
xxxii.	Besides carried out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an specialized	Being complied with as per applicable guidelines of The Mines Rules, 1955.

	agency/institution within the District/State and the results reported to this Ministry and to DGMS	
xxxiii.	There are 370 PDFs and 385 PAFs. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher	R&R process for the eligible PDFs and PAFs have been completed as per the provisions of Odisha R&R Policy, 2006 Majority of PDFs have been resettled in two nos. of well-established R&R colonies constructed by OCPL.
xxxiv.	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its concerned Regional Office.	The land use / land cover study for core zone & buffer zone of Manoharpur Coal Mine Project has been carried out during the year 2021 by M/s Geosys Enterprise Solutions Private Limited, Hyderabad, Telangana. The copy of same has already been submitted to your good office along with half yearly post EC compliance report vide our letter no. OCPL/451 dt. 14.05.2022 (kindly refer Annexure 5).
xxxv.	A detail final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of Environmental Clearance	<p>Approved Mine Plan and Mine Closure Plan (Rev II) having details of Corpus Fund has already been submitted to MoEF&amp;CC on dated 08.05.2018.</p> <p>Further, the Mining Plan &amp; Mine Closure Plan (Rev-III), approved on 26-09-2019 by MoC for 16 MTPA includes the expansion of Manoharpur Coal Mine towards its Dipside coal block. The environmental clearance (EC) application for the proposed expansion from 8 to 16 MTPA has already been filed to MoEF&amp;CC and ToR has been approved.</p> <p>Subsequently, EIA/EMP report prepared on the basis of Terms of Reference (ToR) approved on 29.04.2020 by MoEF&amp;CC was appraised for EC on 04.03.2022 in 27th EAC meeting; wherein EAC has raised few observations including the obtaining of Forest Clearance (Stage 1) for development of Dip-side Manoharpur Coal Block. The compliance to EAC observations is under progress.</p> <p>Further, the Mine closure cost as per the approved Mine Plan and Mine Closure Plan is being regularly deposited in Escrow account.</p>

xxxvi.	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine	As mentioned above in Point no. (ix), CSR activities are being carried out in consultation with concerned Panchayat / local administration.
xxxvii.	The proponent should implement the assurances given during the Public Hearing	Assurance given during the Public Hearing of Manoharpur Coal Block is being implemented in the vicinity of project area.
xxxviii.	<p><b>Corporate Environment Responsibility:</b></p> <p>The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished</p> <p>To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large</p>	<p>Environment policy has been approved by Board and it is in place.</p> <p>Will be complied with.</p> <p>There is an environment management cell comprises of technical qualified persons which is taking care of all environmental compliances of clearances and monitoring. The cell is headed by Head of Company through Head of Mines.</p>

#### GENERAL CONDITIONS

i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	Shovel-dumper combination for OB extraction and surface miner for coal production is being used at site. Hence, no change in mining technology and scope of work at site. Further, if any change in technology and scope of work in future, requisite permission will be obtained from MoEF&CC.
ii.	No change in calendar plan of production for quantum of mineral coal shall be made.	Production of coal from the mine has not exceeded the limit as prescribed in EC. As per EC, maximum production capacity of mine is 8 MTPA.
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, so2 and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.	Monthly environmental monitoring including ambient air quality is being carried out regularly in the core zone (4 locations) as well as in the buffer zone (4 locations) by MoEF&CC/NABL/OSCPB accredited laboratory M/s Visiontek Consultancy Services Pvt. Ltd. for PM10, PM2.5, SOx, and NOx and the same has been finalized in consultation with the Odisha State Pollution Control Board

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		<p>(OSPCB). Further, the copy of analysis reports are being regularly submitted to statutory authorities i.e. OSPCB/CPCB/MoEF&amp;CC. Apart from the above, one continuous ambient air quality monitoring has also been installed within the core zone and the real time data is being transferred to OSPCB server.</p> <p>Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc. has also been carried out in September month 2022 for core zone and buffer zone. The test results show that monitored parameters are well within the permissible limits as prescribed by MoEF&amp;CC and test report in this regard is attached as <b>Annexure 3</b>.</p>
iv.	Data on ambient air quality (PM10, PM2.5, SO2 and NOx) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office 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 EPA rules, 1986 shall be furnished as part of compliance report.	Kindly refer the Point no. iii (General Condition) as mentioned above.
v.	Adequate measures shall 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 shall be provided with ear plugs/muffs	<p>Complied.</p> <p>The noise quality monitoring is being carried out regularly on monthly basis at various places of core zone and buffer zone and adequate measures are followed to control the noise level below 85 dBA in the working environment. The latest noise quality monitoring report for the month of March 2023 is attached herewith as <b>Annexure 4</b>.</p> <p>Also, workers engaged in blasting and drilling operations, operation of HEMM, etc. have been provided with proper PPE's i.e. ear plugs/muffs, helmet, safety shoe etc.</p>
vi.	Industrial Wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents	Effluent Treatment Plant (ETP) consisting of oil & grease trap has been provided at workshop. The treated water obtained from ETP is being reused / recycle for the vehicle washing purpose.

vii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Vehicle used for transportation of coal are covered with tarpaulins and optimally loaded. PUC certified vehicles have been deployed at site for the said purpose
viii.	Monitoring of environmental quality parameters shall be carried out through a laboratory recognized under EPA Rules, 1986	The monitoring of environmental quality parameters is being carried out by MoEF&CC/NABL/OSCPB accredited laboratory M/s Visiontek Consultancy Services Pvt. Ltd. and data is also being submitted on regular basis
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.	Personnel protective equipment's (PPE's) have been provided to workers engaged in dusty areas. Adequate training and information on safety and health aspects is also being provided at the Vocational Training Centre (VTC) located at site..
x.	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 and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by company while outsourcing.	Initial Medical Examination (IME) and Periodic Medical Examination (PME) of the workers is being complied carried out as per applicable norms of Coal Mine Rules. Further, periodically occupational health checkup of workers will be taken up in near future. The health & safety issues of the out sourced man power are also duly addressed in Notice Inviting Tender (NIT) and in Work orders.
xi.	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.	An environment management cell comprising of technical qualified personnel has been working in the organization who is directly reporting to the Head of Company through Head of Mines.
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Funds earmarked for environmental protection measures has been kept in separate account and will not be diverted for other purpose. The year wise expenditure is also being submitted regularly to Regional Office (MoEF&CC) along with Environment Statement. The year wise expenditure details till FY 2022-23 are attached as <b>Annexure 5</b> .
xiii.	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 seven days of the clearance letter	Complied.

	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 the website of the Ministry of Environment & Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a>	
xiv.	A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila 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 company's website	Complied.
xv.	A copy of environmental clearance letter shall also 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 Sector and Collector's Office/Tehsildar's Office for 30 days	Complied. The copy of Environmental Clearance (EC) has also been displayed on company website (i.e. www.ocpl.org.in).
xvi.	The clearance letter, shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM10, PM2.5, SO2 and Nox (ambient) and critical sectoral parameters shall also be displayed at the entrance of project premises and mine office and in corporate office and on company's website	The environmental clearance letter along with compliance status of stipulated conditions has been uploaded on company website which can be seen at the following link: <a href="http://ocpl.org.in/Environment.asp">http://ocpl.org.in/Environment.asp</a> Monitored environmental quality parameters (air, water, noise and soil) & critical sectoral parameters have also been displayed at the entrance of project premises & on company website
xvii.	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.	Being Complied in confirmation to notification issued by MOEF&CC vide letter no. S.O. 5845 (E) dated 26.11.2018 and MoEF&CC (ERO) vide letter no. File No : 106-12/EPE dated 11.05.2020.
xviii.	The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Project authorities will extend full cooperation to the Ministry Regional Office.

5

xix.	The environmental statement for each financial year ending 31 March in Form V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 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.	Being Complied regularly and timely.
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3

**Manoharpur Coal Mine Project, Tehsil Hemgir, Dist. Sundergarh, Odisha**

ANNEXURE 1

**Year wise Expenditure Detail on CSR / Peripheral Development**

Sl.No	Sectors	OPGC 2008-2015	OCPL										Total Expenditure on CSR / Peripheral Development
			2015-2016	2016-2017	2017-2018	2018-19	2019-20	2020-21	2021-22	2022-23			
1	Health	16922646	95000	225900	414000	412309	243562	279352	16000	1185806			
2	Education		1290000	1244300	1326500	912000	300000	0		3328830			
3	Skill Development			2151263	1854000	1925170	2143354	1338985		520000			
4	Socio-Culture		168000	100560	305000	565000	150000	25000	60,000	25,31,100			
5	Sports		226000		117800	140000	95000	40000		2,15,000			
6	Rural Infrastructure			3114404	3791751	2340609	1969011	3188081	30,00,000	27,86,289			
7	Livelihood		0	388292	4659504	4729018	5493672	7243672	96,93,672	96,93,672			
8	Water Sanitation		0	0	330000	440000	169000	0	8,22,260	10,24,666			
9	Public Relation		0	0	0	64000	0	0					
10	Environment								97,000	10,000			
	<b>Total</b>	<b>1,69,22,646</b>	<b>17,79,000</b>	<b>72,24,719</b>	<b>1,27,98,555</b>	<b>1,15,28,106</b>	<b>1,05,63,599</b>	<b>1,21,15,090</b>	<b>1,36,88,932</b>	<b>2,12,95,363</b>	<b>10,79,16,010</b>		

Note: Rs. 16922646 expenditure submitted by OPGC to OCPL

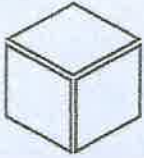
Annexure-1



ANNEXURE 2 - PLANTATION LIST					
MANOHARPUR COAL MINE PROJECT					
Tree Species	Plantation				Total
	(FY 2019-20)	(FY 2020-21)	(FY 2021-22)	(FY 2022-23)	
Mango	518	85	78	55	736
Amla	502	154	205	13	874
Neem	504	421	653	414	1992
Jackfruit	2	2	7	3	14
Guava	1	6	194	76	277
Ashok	22	10	-	-	32
Bakula	-	5	10	-	15
Jamun	503	-	80	18	601
Astelia	2	-	-	-	2
Monterey cypress	2	-	-	-	2
Norfolk island pine	2	-	-	-	2
Acalypha	4	-	-	-	4
Sago palm	2	-	-	-	2
Bahude	500	-	-	-	500
Harida	500	-	-	-	500
Seena Tora	-	5	-	-	5
Pongame Oil Tree	-	10	-	-	10
Drumstick Tree	-	8	50	188	246
Custard Apple Tree	-	303	108	-	411
Cassia	-	5	-	-	5
Debadaru	-	85	289	3040	3414
Karanj	-	441	10	2014	2465
Papaya	-	18	-	25	43
Sajana	-	15	-	-	15
Teak	-	100	42	-	142
Krushna Chuda	-	-	122	2040	2162
Radha Chuda	-	-	562	35	597
Simli	-	-	30	-	30
Chakunda	-	-	254	-	254
Semarua	-	-	42	-	42
Bottle Plant	-	-	46	52	98
Baula	-	-	33	45	78
Paper Flower	-	-	830	129	959
Sandal	-	-	22	-	22
Kusum	-	-	60	-	60
Resam / Tutth	-	-	50	-	50
Kadam	-	-	10	-	10
Sapeta	-	-	-	15	15
Jham	-	-	-	3131	3131
Saras	-	-	10	-	10
Sitafal	-	-	-	43	43
Terminalia Metallica Plant	-	-	-	10	10
Subabul	-	-	-	1016	1016
Water Apple	-	-	-	30	30
Lemon	-	-	-	7	7
Putranjeet	-	-	-	36	36
Nerum	-	-	-	40	40
Royal Palm	-	-	-	600	600
Bottle Brush	-	-	-	60	60
Nuru Varahalu	-	-	-	35	35
<b>Total</b>	<b>3064</b>	<b>1673</b>	<b>3797</b>	<b>13170</b>	<b>21704</b>

<b>ANNEXURE 2 - PLANTATION LIST</b>				
<b>MANOHARPUR COAL MINE PROJECT (COLONY AREA)</b>				
<b>Sr No.</b>	<b>Tree Species</b>	<b>R&amp;R colony at Village Sukhabandh</b>	<b>R&amp;R Colony at Village Hemgir</b>	<b>Total</b>
1	Neem	1500	2500	<b>4000</b>
2	Karanj	1500	1200	<b>2700</b>
3	Krishna Chuda	2000	1500	<b>3500</b>
4	Radha Chuda	2000	1500	<b>3500</b>
5	Kadam	1500	2000	<b>3500</b>
6	Mango	500	50	<b>550</b>
7	Jamun	400	100	<b>500</b>
8	Jackfruit	100	75	<b>175</b>
9	Lemon	200	75	<b>275</b>
10	Lichi	100	0	<b>100</b>
	<b>Total</b>	<b>9800</b>	<b>9000</b>	<b>18800</b>

4



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- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study

- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy

- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

**Laboratory Services**  
 Environment Lab  
 Food Lab  
 Material Lab  
 Soil Lab  
 Mineral Lab  
 &  
 Microbiology Lab

Ref: Envlab/22/R-8214

Date: 07.10.2022

## AAQ MONITORING REPORT (Heavy Metals) FOR SEPTEMBER-2022 (Core Zone)

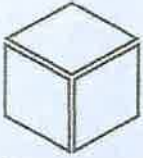
1. Name of Project : **Manoharpur Open Cast Coal Mine Project**
2. Name of Industry : **Odisha Coal and Power Limited (OCPL), Sundargarh**
3. Monitoring Instruments : **RDS (APM 460 BL), FPS (APM 550)**
4. Sample collected by : **VCSPL representative in presence of OCPL representative**

Monitoring Location	Date	Hg (mg/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	Cd (mg/m <sup>3</sup> )	Cr (mg/m <sup>3</sup> )
AAQMS-1:Near OB Dump-I	05.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-2: Near OB Dump-II	02.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-3: CHP OCPL Office	17.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-4: Near Mines Pit Area	19.09.2022	BDL	BDL	BDL	BDL	BDL
CPCB, New Delhi AAQ Standard		—	6	20	—	—
Testing Method		AAS Method IS 5182(Part -22):2004				

BDL Values: Ni<2.5 ng/m<sup>3</sup>, As < 1.0 ng/m<sup>3</sup>, Hg < 0.001 mg/m<sup>3</sup>, Cd < 0.002 mg/m<sup>3</sup>, Cr < 0.006 mg/m<sup>3</sup>



4



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- Quality Control & Project Management
- Renewable Energy

- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services  
 Environment Lab  
 Food Lab  
 Material Lab  
 Soil Lab  
 Mineral Lab  
 &  
 Microbiology Lab

Ref: Envlab/21/R-8219

Date: 07.10.2022

## AAQ MONITORING REPORT (Heavy Metals) FOR SEPTEMBER-2022 (Buffer Zone)

1. Name of Project : Manoharpur Open Cast Coal Mine Project
2. Name of Industry : Odisha Coal and Power Limited (OCPL), Sundargarh
3. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
4. Sample collected by : VCSPL representative in presence of OCPL representative

Monitoring Location	Date	Hg (mg/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	Cd (mg/m <sup>3</sup> )	Cr (mg/m <sup>3</sup> )
AAQMS-1: Kalamegha Village	08.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-2: Paramanandpur Village	06.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-3: Sarbahal Village	20.09.2022	BDL	BDL	BDL	BDL	BDL
AAQMS-4: Kiripsira Village	29.09.2022	BDL	BDL	BDL	BDL	BDL
CPCB, New Delhi AAQ Standard		—	6	20	—	—
Testing Method		AAS Method IS 5182(Part -22):2004				

BDL Values: Ni < 2.5 ng/m<sup>3</sup>, As < 1.0 ng/m<sup>3</sup>, Hg < 0.001 mg/m<sup>3</sup>, Cd < 0.002 mg/m<sup>3</sup>, Cr < 0.006 mg/m<sup>3</sup>



5



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- Quality Control & Project Management
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- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

**Laboratory Services**  
 Environment Lab  
 Food Lab  
 Material Lab  
 Soil Lab  
 Mineral Lab  
 &  
 Microbiology Lab

Annexure-4

Ref: Envlab/23-24/TR-318

Date: 04.04.2023

## NOISE MONITORING REPORT MARCHY-2023

1. Name of Project : Manoharpur Open Cast Coal Mine Project
2. Name of Industry : Odisha Coal and Power Limited (OCPL), Sundargarh

Location ID	Date of Recording	Location	Location Co-ordinates	Day time Equivalent	Night time Equivalent
				Noise Level in dB(A) leq	
<b>CORE ZONE</b>					
N-1	06.03.2023	Near OB Dump-I	21° 56' 57.6996" N 83° 47' 46.1436" E	71.9	62.5
N-2	21.03.2023	Near OB Dump-II	21° 57' 46.71" N 83° 47' 5.352" E	69.9	60.1
N-3	21.03.2023	CHPL OCPL Office	21° 58' 4.782" N 83° 47' 56.0616" E	70.5	62.3
N-4	06.03.2023	Near Pit Area	21° 57' 18.97121" N 83° 46' 47.65163" E	70.4	63.4
<b>BUFFER ZONE</b>					
N-5	27.03.2023	Kalamegha Village	21° 56' 55.5288" N 83° 50' 33.9036" E	52.8	43.2
N-6	09.03.2023	Paramanandpur Village	21° 57' 15.7464" N 83° 45' 54.8172" E	51.6	42.1
N-7	09.03.2023	Sarbahal Village OCPL Mines Colony	21° 58' 4.7388" N, 83° 48' 35.91187" E	50.4	40.9
N-8	27.03.2023	Kiripsira Village	21° 59' 22.6788" N 83° 46' 47.2368" E	50.7	40.2
Standard as per CPCB	Industrial Area			75	70
	Residential Area			55	45



3

**MANOHARPUR COAL MINE PROJECT**

*Annexure-5*

**ANNEXURE - 5**

**EXPENDITURE INCURED ON ENVIRONMENT MANAGEMENT PLAN (EMP)**

Sr. No.	Details of Expenditure incurred	Activities	2018-19 (Rs.)	2019-20 (Rs.)	2020-21 (Rs.)	2021-22 (Rs.)	2022-23 (Rs.)	
1	Air Pollution Control Measures	Water sprinkling	7,80,920	22,26,350	24,50,766	1,35,84,176	1,76,59,428	
		Plantation	Nil	7,41,225	75,000	11,42,230	13,92,725	
2	Water Pollution Control Measures	Settling Pond, Septic Tank, ETP etc.	-	1,19,732	4,59,866	57,26,440	19,30,000	
3	Hazardous Waste Pollution Control Measures	Waste storage facility etc.	-	-	14,15,000	40,00,000	10,00,000	
4	Top Soil Conservation	Dumping, Mulching, Seeding, garland drain etc.	-	63,55,400	56,000	10,00,000	10,00,000	
5	Miscellaneous	Awareness, compliance etc.	7,50,000	13,75,000	27,40,000	30,000	20,000	
6	<b>Sub Total</b>		15,30,920	1,08,17,707	71,96,632	2,54,82,846	2,30,02,135	
7	<b>Total Expenditure incurred on EMP so far</b>		<b>Rs. 6,80,30,258 or</b>					
			<b>Say Rs. 6.8 Crores</b>					

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