Odisha Coal and Power Limited
(A Government of Odisha Company)
CIN: U10100OR2015SGC018623
Website: www.ocpl.org.in

Letter No. OCPL/16
Date: 06/01/2020

To,

The Joint Director(s)
Regional Office, Eastern Region
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 (Refer Appendix I)
(ii) EC transfer order vide letter no. J-11015/139/2008-IA.II (M)Pt. file dt. 30.12.2015 (Refer Appendix II)
(iii) Amendment in EC vide letter no. J-11015/139/2008-IA.II (M)Pt. dt. 06.11.2019 (Refer Annexure 2)

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 (CD) as well as hard copy for the period of April 2019 to September 2019.

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

Yours Faithfully

Authorized Signatory

Copy to:

1. The Scientist ('E' & Regional Directorate), Central Pollution Control Board, South end Conclave, Block 502, 5th & 6th 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

April 2019 - September 2019

## MANOHARPUR OPENCAST COAL MINE

OCPL Odisha Coal and Power Limited

Odisha Coal & Power Limited,
Zone-A, Ground Floor,
Fortune Tower, Bhubaneswar-751023, Odisha
Web: www.ocpl.org.in

# ENVIRONMENTAL CLEARANCE (EC) COMPLIANCE REPORT

**MANOHARPUR OPENCAST COAL MINE PROJECT**

**EC-No. J-11015 / 139/2008-IA.II (M) Pt. file Dated 30TH December 2015**

| Sr. No. | EC Letter Condition | Compliance |
|---|---|---|
| **A. SPECIFIC CONDITIONS** | | |
| i. | The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC. | The rated maximum production capacity of the mine is 8.00 MTPA as per the approved mining plan. Hence, the limit shall not exceed as prescribed in EC. |
| 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 | Not Applicable. The proposed Manoharpur coal mine project does not fall within 10km of National park/sanctuary and as such clearance from National Board of Wildlife is not required for the said project.<br>However, the Site Specific Wildlife Conservation Plan of this project has been approved by CWLW, Odisha. |
| iii. | The OB should be kept in ML area and there should be no OB dumps at the end of mining. | As per the approved Mine Plan & Mine Closure Plan (Revision – II), total 3nos. 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 and there will be no external dump at the end of mining.<br>Currently, the generated OB from the mining operation is being stored at External OB dump 1 as per approved Mining Plan located near the coal stock yard in North direction of mine site. |
| iv. | The land for OB dumping should be made ready for original use after mine closure. | Noted. |
| v. | All the sandstone taken out during mining should be utilized for house construction and given free of cost to locals. | Efforts will be made to comply with the conditions. |
| vi. | Since the mining area is total forest land, the sandstones should not be dumped as OB. | Maximum care will be taken for compliance of the same. |
| vii. | Fly ash dumping is not permitted` in mine void. | Fly ash will not be dumped till studies done and permissions obtained from competent authorities. |

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| viii. | The leachability study may be carried out for chromium, arsenic and mercury that may be present in fly ash. | The required leachability study shall be carried out and submitted with MOEF & CC for obtaining necessary permission before commencement of fly ash disposal 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 activities already carried out in the vicinity of the project area. Total expenditure incurred on CSR activities till September 2019 is Rs. 4. 41 Cr. The year wise expenditure carried out on CSR activities is attached as **Annexure 1** for your kind reference. |
| x. | The CSR activity, which had already been carried out by proponent, be audited by a 3rd Party. The audit should be carried out by a reputed agency. | Noted. The audit by 3rd party is being carried out. |
| xi. | The proponent shall come back to the Committee for its washery proposal for further consideration. | Will be c comlied, 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 transportation from mine to railway siding will be done by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons.<br>However, the commissioning of MGR system is getting delayed due to land acquisition issue. Therefore, the project proponent is planned to transport the coal through road as an interim arrangement for an initial period of 2 years of coal production and an approval/amendment in the EC letter for the same has been obtained from MoEF&CC vide letter no. J-11015/139/2008-IA-II(M) Pt. dated 06th November 2019. The copy of same is attached herewith as **Annexure 2** for your kind consideration. |
| 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. | Will be complied. |

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| 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. | Will be complied. |
| xv. | OB shall be stacked at two earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring & management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis. | The mining operation i.e. excavation of top soil & removal of over burden is being continuously carried out at site to expose the coal surface. The excavated top soil and overburden from the mine is being stored at earmarked location as approved in Mining Plan (Revision II). |
| xvi. | 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. The drains shall be regularly de-silted and maintained properly. 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. | Noted and is being complied with.<br>Catch drain around the External OB dump 1 has been provided to arrest the flows from OB dump.<br>In addition to above, one sump of sufficient capacity has been provided in the mined area to cater the peak sudden rainfall and discharge of adjoining areas. |
| 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. | Will be complied. |
| 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. | Currently, the construction of CHP is under progress. Hence, the compliance will be done when CHP becomes operational. |
| xix. | Drills shall be wet operated. | Will be complied. |
| xx. | The project authorities shall undertake regular repairing and tarring of roads used for | Efforts will be made to comply with the conditions. |

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| | mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads. | |
| 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. | Will be taken care during blasting operation in the mine area. |
| xxii. | 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. | Areas will be afforested including reclaimed areas etc. and native species of plantation will be decided in consultation with DFO/Agriculture department. Technical and Biological reclamation plan as per approved Mine Plan has already been submitted to your good office. |
| xxiii. | An estimated 61.73 M Cum of OB will be generated during the entire life of the mine. Out of which 29.23 $Mm^3$ of OB will be dumped in four external OB dump in non-coal bearing area. 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°. 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 | Will comply with as per the approved Mine Plan & Mine Closure Plan (Revision-II). Compliance & Status report will be submitted to MoEF &CC and its Regional office on yearly basis. |
| xxiv. | 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 | Back filled area 489 ha will be reclaimed with plantation. Density of trees will be 2500/ha. Water body (reservoir) will be gently sloped. Plantation with native species will be done with consultation of DFO/Agriculture department. |

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| | plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha | |
| xxv. | The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner | Will be complied as specified in approved Mining Plan. |
| xxvi. | Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out | Will be complied as specified. Year wise plan for progressive reclamation and afforestation as per approved Mine Plan has already been submitted to your good office. |
| xxvii. | The mining should be phased out in sustainable manner. No extra over burden dumps are permitted. | Noted and will be complied as per approved mine plan notifications. |
| xxviii. | No groundwater shall be used for mining operations | Noted. |
| 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 and construction of new piezometers. The monitoring carried out for quantity and quality till Aug-2018 has already been submitted to your good office. Also, the monthly monitoring of ground water quality for two locations within the proposed mine site is being carried out regularly by MoEF&CC/NABL/OSCPB accredited laboratory M/s Visiontek Consultancy Services Pvt. Ltd. The latest monitoring report for the month of September 2019 is attached herewith as **Annexure ३** for your ready reference. |
| 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 | Will be complied as specified. |

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| xxxi. | Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater. | Will be complied as specified. |
| 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 agency/institution within the District/State and the results reported to this Ministry and to DGMS | Will be complied as per applicable guidelines of Coal Mine Rules. |
| 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 | Complied. Details of rehabilitation and resettlement of the project affected population has already been submitted to your good office. |
| 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. | Noted and will be complied with. |
| 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 | The approved Mine Plan and Mine Closure Plan (Rev II) has been submitted to MoEF&CC on dated 08.05.2018. Further, the Mining Plan & Mine Closure Plan (Rev-III), approved on 26-09-2019. |
| 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 is 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 is being implemented in the vicinity of project area. |
| xxxviii. | Corporate Environment Responsibility: | |

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| | a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.<br>b) b) 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<br>c) c) 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<br>d) 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 | a) OCPL being a new company, preparation and approval of Environment Policy from Board of Directors is under process.<br>b) Will be complied with.<br>c) There will be environment management cell that will look after all compliances clearances and monitoring. The cell will be headed by Head of Mines (OCPL). There will be environmental engineers who will report to Head of Mines (OCPL)<br>d) Organizational Structure for Environmental Management & System of Reporting of Non-compliance - The Environmental Management Cell (EMC) has important role for coordination of the actions required for environmental management, mitigation, and for monitoring the progress of the proposed management plans and actions to be taken. The cell will be under the overall supervision of the Environment Engineer and responsible for monitoring of the implementation of the environment issues |
| **B. 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 | Prior approval will be obtained as applicable. |
| ii. | No change in calendar plan of production for quantum of mineral coal shall be made. | Agreed. |
| 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 | The monthly environmental monitoring including ambient air quality is being carried out regularly in the core zone as well as in the buffer zone by MoEF&CC/NABL/OSCPB accredited laboratory M/s Visiontek Consultancy Services Pvt. Ltd. for $PM_{10}$, $PM_{2.5}$, $SO_x$, and $NO_x$ and the copy of same is |

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| | 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. | being submitted regularly to Odisha State Pollution Control Board (OSPCB). Also, the monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc. has been carried out on six monthly basis. The results show that parameters are within the permissible limits as prescribed by MoEF&CC. The monitoring report showing the results of pollutants ($PM_{10}$, $PM_{2.5}$, $SO_x$, and $NO_x$ & heavy metals) is attached as **Annexure 4** for ready reference. |
| 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 | Adequate measures i.e. controlled blasting; efficient machinery for mining operations etc. will be adopted for controlling noise level. Ear plugs/muffs will be provided for the persons engaged in mining activities. |
| 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 | Will be complied with. |
| 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 | Transport vehicles optimally loaded and will be covered with tarpaulins to prevent the fugitive emission. |

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| viii. | Monitoring of environmental quality parameters shall be carried out through a laboratory recognized under EPA Rules, 1986 | The environmental monitoring is being carried out as mentioned above in Point no. iii (General Condition). |
| 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. | Agreed. |
| 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. | Will be complied as advised. |
| 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. | Will comply with as advised. |
| 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 | Will be complied as advised. |
| 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 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 http://envfor.nic.in | Complied. |
| xiv. | A copy of the environmental clearance letter shall be marked to concern Panchayat/ZilaParishad, Municipal Corporation or Urban local body and local | Complied. |

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| | 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 | |
| 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 |
| 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. |
| 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. |
| 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. |
| xix. | The environmental statement for each financial year ending 31 March in Form V is | Being Complied. |

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| | 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. | |

# ENVIRONMENTAL CLEARANCE (EC) COMPLIANCE REPORT

**MANOHARPUR OPENCAST COAL MINE PROJECT**

**(Amendment vide letter No. EC-No. J-11015 / 139/2008-IA.II (M) Pt. file Dated 06TH November 2019 – Kindly Refer Annexure 2)**

| Sr. No. | EC Letter Condition | Compliance |
|---|---|---|
| **C. CONDITIONS** | | |
| i. | High rated tippers i.e. 25 to 30 tonne capacity coal carrying tippers for same quantity shall be used to reduce number of trips. | Being complied. |
| ii. | Accordingly, 9200 TPD of coal from Manoharpur Coal Mine to Kanika siding / ACB siding / any other Indian railway siding in the near vicinity of mine (23 km) by road and from there to Ib TPP of OPGC by Indian rail. | Around 5100 TPD of Coal is being transported to Kanika siding of MCL by road. |
| iii. | Further, 3000 TPD of coal from Manoharpur Coal Mine to Ib TPP directly by road (i.e. 117 km road) only if Route 1 is not available. The stretch of 1.2 km having width of ~ 5.5 mts (single lane) shall be widened to 7mts width and made double lane before commencement of transportation. | No coal is being transported through this Route. |
| iv. | All necessary environment mitigation such as tree plantation, mechanized road sweeping should be taken to prevent increase in air pollution level in villages/settlements lying within 100 m (23 km till Kanika Railway siding) along the Route 1 and villages/settlements (117 km road) lying along the Route 2. | Necessary mitigation measures i.e. water sprinkling, tree planation etc. are being carried out at site to prevent increase in air pollution level in nearby villages. |
| v. | The state pollution control board, while considering consent to operate for project, shall ensure that with the proposed coal transportation by road, air quality would remain within the national ambient air quality standards. | Noted & agreed. |
| vi. | Implementation of MGR shall be expedited. | Construction of MGR is progressing fast. |
| vii. | All the recommendations given in study on Traffic Impact Assessment Report shall be complied. | Will be complied as applicable. |

ANNEXURE- 1.

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

ANNEXURE 1

**Year wise Expenditure Detail on CSR**

| Sl.No | Sectors | OPGC | OCPL | | | | | Total Expenditure on CSR |
|---|---|---|---|---|---|---|---|---|
| | | 2008-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-19 | 2019-20 (Till September 2019) | |
| 1 | Health | 16922646 | 95000 | 225900 | 414000 | 412309 | 171279 | |
| 2 | Education | | 1290000 | 1244300 | 1326500 | 912000 | 25000 | |
| 3 | Skill Development | | | 2151263 | 1854000 | 1925170 | 1177054 | |
| 4 | Socio-Culture | | 168000 | 100560 | 305000 | 565000 | 75000 | |
| 5 | Sports | | 226000 | | 117800 | 140000 | 50000 | |
| 6 | Rural Infrastructure | | | 3114404 | 3791751 | 2340609 | 1969011 | |
| 7 | Livelihood | | 0 | 0 | 0 | | 0 | |
| 8 | Water Sanitation | | 0 | 0 | 330000 | 440000 | 169000 | |
| 9 | Public Relation | | 0 | 0 | 0 | 64000 | 0 | |
| | **Total** | **1,69,22,646** | **17,79,000** | **68,36,427** | **81,39,051** | **67,99,088** | **36,36,344** | **4,41,12,556** |

Note: Rs. 16922646 expenditure submitted by OPGC to OCPL

ANNEXURE-2

J-11015/139/2008-IA-II(M) Pt.
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division
***

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 6th November, 2019

To,

The General Manager, (Mines)
M/s Odisha Coal and Power Limited,
Plot No. N-3/135, IRC Village, Nayapalli,
Bhubaneshwar, Odisha -751 015

Email: mines@ocpl.org.in

**Sub: Manoharpur Opencast Coalmine Project (8 MTPA) of M/s Odisha Coal and Power Ltd in mine lease area of 977.875 ha located in Ib Valley, District Sundargarh (Odisha) - Amendment in Environmental Clearance-reg.**

Sir,

This has reference to your online proposal No. IA/OR/CMIN/19231/2008 dated 17th April, 2019 on the above mentioned subject.

**2.** The Ministry of Environment, Forest and Climate Change has granted environmental clearance vide letter dated 21st February, 2014 in favour of Manoharpur Opencast Coalmine Project (8 MTPA) of M/s Odisha Coal and Power Limited in mine lease area of 977.875 ha located in Ib Valley, District Sundargarh (Odisha).

**3.** Subsequent to cancellation of coal blocks, pursuant to order of Hon'ble Supreme Court in August/September, 2014 and their reallocation to successful bidders, Manoharpur Opencast Coalmine Project was vested with M/s Odisha Coal and Power Limited vide Allotment Order under clause (c) of sub-rule (2) of rule 7 and sub-rule (1) of rule 13 and Order No. 103/25/2015/NA dated 31st August, 2015 issued by the Nominated Authority in the Ministry of Coal. The said environmental clearance was accordingly transferred to M/s M/s Odisha Coal and Power Limited vide this Ministry's letter dated 30th December, 2015.

**4.** Now, M/s Odisha Coal and Power Limited sought amendment in the said environmental clearance for change in specific condition no. (xii) of the EC letter for Manoharpur Coal mine Project as stated *"Coal transportation from mine to railway siding by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons".*

**5.** In view of delay in commissioning of MGR system due to land acquisition issues in MCL command area and is expected to be completed by March, 2022.

Also, mining operations has started on 1st November 2018 and about 2.32 Mcum of OB have been removed and around 0.15 million tonne of coal have been exposed. Amendment in the environmental clearance has been sought for waiver off the above condition.

**6.** The proposal was earlier considered by the sector expert appraisal committee in its meeting held on 27th May, 2019 and 3-4 October, 2019 wherein the Committee recommended for transportation of coal by road **for two years** subject to the following: -

- High rated tippers i.e. 25 to 30 tonne capacity coal carrying tippers for same quantity shall be used to reduce number of tips.
- Accordingly, 9200 TPD of coal from Manoharpur coal mine to Kanika siding / ACB siding/ any other Indian railway sidings in the near vicinity of mine (23 km) by road and from there to Ib TPP of OPGC by Indian Rail.
- Further, 3000 TPD of coal from Manoharpur coal mine to Ib TPP directly by road (i.e. 117 km road) only if Route 1 is not available. The stretch of 1.2 km having width of ~5.5 mts (single land) shall be widened to 7 mts width and made double lane before commencement of transportation.
- All necessary environment mitigation such as tree plantation, mechanised road sweeping should be taken to prevent increase in air pollution level in villages/Settlements lying within 100 m (23 km till Kanika Railway siding) along the Route-1 and villages/Settlements (117 km road) lying along the Route-2.
- The State Pollution Control Board, while considering consent to operate for the project, shall ensure that with the proposed coal transportation by road, air quality would remain within the national ambient air quality standards.
- Implementation of MGR shall be expedited.
- All the recommendations given in Study on Traffic Impact Assessment report shall be complied.

**7.** Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for amendment in the environmental clearance 21st February, 2014, in favour of M/s Odisha Coal and Power Limited for the Manoharpur Opencast Coalmine Project (8 MTPA) in mine lease area of 977.875 ha located in Ib Valley, District Sundargarh (Odisha), ***as stated in para 5 above***.

**8.** All other terms and conditions stipulated in the environmental clearance dated 21st February, 2014 and 30th December, 2015, shall remain unchanged.

**(Dr. R.B. Lal)**
**Additional Director / Scientist 'E'**

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Additional Principal Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandershekharpur, Bhubaneswar - 751023 (Odisha)
3. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar (Odisha)
4. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, River Development & Ganga Rejuvenation, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
5. The Member Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
6. The Member Secretary, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneshwar - 751012 (Odisha)
7. The District Collector, Sundargarh, Government of Odisha
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board

**(Dr. R.B. Lal)**
**Additional Director / Scientist 'E'**

ANNEXURE-3


# Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001 : 2008
ISO 14001 : 2004
OHSAS 18001 : 2007


Ref: Envlab/19/R-4612 Date: 03.10.19

## GROUND WATER QUALITY REPORT SEPTEMBER-2019
## (CORE ZONE)

1. Name of the Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Name of the Location : **Ground Water -1( Near CHP OCPL Office)**
3. Date of Sampling : 06.09.2019
4. Date of Receiving : 07.09.2019
5. Date of Analysis : 07.09.2019 to 16.09.2019
6. Sample Collected By :VCSPL Representative in presence of OCPL representative

| SL. No. | Name of the Parameters | Unit | Testing Method | Standard as per IS 10500:2012, Amnd. 2015 & 2018 | Analysis Result |
|---|---|---|---|---|---|
| 1. | pH | --- | APHA 4500$H^+$B | 6.5-8.5 | 7.31 |
| 2. | Colour | Hazen | APHA 2120 B,C | 5.0 | <5 |
| 3. | Odour | --- | APHA 2150 B | Agreeable | Agreeable |
| 4. | Taste | --- | APHA 2160 C | Agreeable | Agreeable |
| 5. | Turbidity | NTU | APHA 2130 B | 1.0 | <1.0 |
| 6. | Residual Free Chlorine | mg/l | APHA 4500 $Cl^-$ B | 0.2 | ND |
| 7. | Total Dissolved Solids | mg/l | APHA 2540 C | 500.0 | 261 |
| 8. | Electrical Conductivity | µS/cm | APHA 2510 B | --- | 397.5 |
| 9. | Total Alkalinity as $CaCO_3$ | mg/l | APHA 2320 B | 200 | 106.0 |
| 10. | Total Hardness as $CaCO_3$ | mg/l | APHA 2340 C | 200 | 138.0 |
| 11. | Calcium as Ca | mg/l | APHA 3500 Ca B | 75 | 34.6 |
| 12. | Magnesium as Mg | mg/l | APHA 3500Mg B | 30 | 12.5 |
| 13. | Chloride as Cl | mg/l | APHA 4500$Cl^-$ B | 250 | 53.5 |
| 14. | Fluoride as F | mg/l | APHA 4500 $F^-$ C | 1.0 | 0.22 |
| 15. | Sulphide | mg/l | APHA 4500 $S^{2-}$ D | 0.05 | ND |
| 16. | Sulphate as $SO_4$ | mg/l | APHA 4500$SO_4^{2-}$ B | 200 | 29.85 |
| 17. | Nitrate as $NO_3$ | mg/l | APHA 4500$NO_3^-$ E | 45 | 3.32 |
| 18. | Ammonical Nitrogen as $NH_3$-N | mg/l | APHA 4500 $NH_3$F | 0.5 | BDL |
| 19. | Hexavalent Chromium as $Cr^{+6}$ | mg/l | APHA 3111 B | -- | BDL |
| 20. | Phenolic Compounds as $C_6H_6OH$ | mg/l | APHA 5530 B,D | 0.001 | BDL |
| 21. | Cyanide as CN | mg/l | APHA 4500 $CN^-$ C D | 0.05 | BDL |
| 22. | Sodium as Na | mg/l | APHA 3500Na B | --- | 10.8 |
| 23. | Potassium as K | mg/l | APHA 3500K B | --- | 2.3 |
| 24. | Copper as Cu | mg/l | APHA 3111 B,C | 0.05 | BDL |
| 25. | Iron as Fe | mg/l | APHA 3500Fe B | 1.0 | 0.22 |
| 26. | Manganese as Mn | mg/l | APHA 3500Mn B | 0.1 | BDL |
| 27. | Mercury as Hg | mg/l | APHA 3500 Hg | 0.001 | BDL |
| 28. | Cadmium as Cd | mg/l | APHA 3111 B,C | 0.003 | BDL |
| 30. | Selenium as Se | mg/l | APHA 3114 B | 0.01 | BDL |
| 31. | Arsenic as As | mg/l | APHA 3114 B | 0.01 | BDL |
| 32. | Lead as Pb | mg/l | APHA 3111 B,C | 0.01 | BDL |
| 33. | Zinc as Zn | mg/l | APHA 3111 B,C | 5.0 | 2.62 |

*Ref.:* Envlab/19/R-4612 *Date:* 03.10.19

| | | | | | |
|---|---|---|---|---|---|
| 34. | Nickel as Ni | mg/l | APHA 3500 Ni | 0.02 | BDL |
| 35. | Total Chromium as Cr | mg/l | APHA 3500 Cr B | 0.05 | BDL |
| 36. | Boron as B | mg/l | APHA 4500 B C | 0.5 | BDL |
| 37. | Silver as Ag | mg/l | APHA 3500 Ag | 0.1 | BDL |
| 38. | Barium as Ba | mg/l | APHA 3500 Ba | 0.7 | BDL |
| 39. | Aluminium as Al | mg/l | APHA 3500 Al B | 0.2 | BDL |
| 40. | Anionic detergent as MBAS | mg/l | APHA 5540 C | 1.0 | ND |
| 41. | Mineral Oil | mg/l | APHA 5220 B | 0.5 | ND |
| 42. | Total Coliform | MPN/100ml | APHA 9221 B | Shall not be detectable in any 100 ml | <1.8 |
| 43. | E Coli | MPN/100ml | APHA 9221 E | Shall not be detectable in any 100 ml | Absent |
| 44. | Feacal Coliform | MPN/100ml | APHA 9221 F | --- | <1.8 |
| 45. | Pesticides | mg/l | APHA 6630 C | --- | Absent |

*BDL Value: Cu <0.02mg/l, Al <1.0mg/l, B <0.1mg/l, Ba <0.5mg/l, Mn <0.05mg/l, Hg<0.002 mg/l, Cd <0.01 mg/l, Se <0.001 mg/l, As <0.004 mg/l, Pb <0.01mg/l, Ni<0.05 mg/l, Cr <0.05mg/l, $Cr^{+6}$ <0.01mg/l, Phenol <0.05mg/l, CN <0.01mg/l, Ba<0.1mg/l*

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OHSAS 18001 : 2007


Ref: Envlab/19/R-4613 Date: 03.10.19

## GROUND WATER QUALITY REPORT SEPTEMBER-2019
## (CORE ZONE)

1. Name of the Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Name of the Location : **Ground Water-2 (Near BGR Office Camp)**
3. Date of Sampling : 06.09.2019
4. Date of Receiving : 07.09.2019
5. Date of Analysis : 07.09.2019 to 16.09.2019
6. Sample Collected By :VCSPL Representative in presence of OCPL representative

| SL. No. | Name of the Parameters | Unit | Testing Method | Standard as per IS 10500:2012, Amnd. 2015 & 2018 | Analysis Result |
|---|---|---|---|---|---|
| 1. | pH | --- | APHA 4500H$^+$B | 6.5-8.5 | 7.44 |
| 2. | Colour | Hazen | APHA 2120 B,C | 5.0 | <5 |
| 3. | Odour | --- | APHA 2150 B | Agreeable | Agreeable |
| 4. | Taste | --- | APHA 2160 C | Agreeable | Agreeable |
| 5. | Turbidity | NTU | APHA 2130 B | 1.0 | <1.0 |
| 6. | Residual Free Chlorine | mg/l | APHA 4500 Cl$^-$ B | 0.2 | ND |
| 7. | Total Dissolved Solids | mg/l | APHA 2540 C | 500.0 | 238 |
| 8. | Electrical Conductivity | µS/cm | APHA 2510 B | --- | 369.7 |
| 9. | Total Alkalinity as $CaCO_3$ | mg/l | APHA 2320 B | 200 | 102.0 |
| 10. | Total Hardness as $CaCO_3$ | mg/l | APHA 2340 C | 200 | 124.0 |
| 11. | Calcium as Ca | mg/l | APHA 3500 Ca B | 75 | 31.8 |
| 12. | Magnesium as Mg | mg/l | APHA 3500Mg B | 30 | 10.8 |
| 13. | Chloride as Cl | mg/l | APHA 4500Cl$^-$ B | 250 | 49.0 |
| 14. | Fluoride as F | mg/l | APHA 4500 F$^-$ C | 1.0 | 0.17 |
| 15. | Sulphide | mg/l | APHA 4500 $S^{2-}$ D | 0.05 | ND |
| 16. | Sulphate as $SO_4$ | mg/l | APHA 4500$SO_4^{2-}$ B | 200 | 24.7 |
| 17. | Nitrate as $NO_3$ | mg/l | APHA 4500$NO_3^-$E | 45 | 2.51 |
| 18. | Ammonical Nitrogen as $NH_3$-N | mg/l | APHA 4500 $NH_3$F | 0.5 | BDL |
| 19. | Hexavalent Chromium as Cr+$^6$ | mg/l | APHA 3111 B | -- | BDL |
| 20. | Phenolic Compounds as $C_6H_6OH$ | mg/l | APHA 5530 B,D | 0.001 | BDL |
| 21. | Cyanide as CN | mg/l | APHA 4500 CN$^-$ C D | 0.05 | BDL |
| 22. | Sodium as Na | mg/l | APHA 3500Na B | --- | 9.5 |
| 23. | Potassium as K | mg/l | APHA 3500K B | --- | 3.7 |
| 24. | Copper as Cu | mg/l | APHA 3111 B,C | 0.05 | BDL |
| 25. | Iron as Fe | mg/l | APHA 3500Fe B | 1.0 | 0.19 |
| 26. | Manganese as Mn | mg/l | APHA 3500Mn B | 0.1 | BDL |
| 27. | Mercury as Hg | mg/l | APHA 3500 Hg | 0.001 | BDL |
| 28. | Cadmium as Cd | mg/l | APHA 3111 B,C | 0.003 | BDL |
| 29. | Selenium as Se | mg/l | APHA 3114 B | 0.01 | BDL |
| 30. | Arsenic as As | mg/l | APHA 3114 B | 0.01 | BDL |
| 31. | Lead as Pb | mg/l | APHA 3111 B,C | 0.01 | BDL |
| 32. | Zinc as Zn | mg/l | APHA 3111 B,C | 5.0 | 2.37 |
| 33. | Nickel as Ni | mg/l | APHA 3500 Ni | 0.02 | BDL |

Ref.: Envlab/19/R-4613 Date: 03.10.19

| | | | | | |
|---|---|---|---|---|---|
| 34. | Total Chromium as Cr | mg/l | APHA 3500 Cr B | 0.05 | BDL |
| 35. | Boron as B | mg/l | APHA 4500 B C | 0.5 | BDL |
| 36. | Silver as Ag | mg/l | APHA 3500 Ag | 0.1 | BDL |
| 37. | Barium as Ba | mg/l | APHA 3500 Ba | 0.7 | BDL |
| 38. | Aluminium as Al | mg/l | APHA 3500 Al B | 0.2 | BDL |
| 39. | Anionic detergent as MBAS | mg/l | APHA 5540 C | 1.0 | ND |
| 40. | Mineral Oil | mg/l | APHA 5220 B | 0.5 | ND |
| 41. | Total Coliform | MPN/100ml | APHA 9221 B | Shall not be detectable in any 100 ml | <1.8 |
| 42. | E Coli | MPN/100ml | APHA 9221 E | Shall not be detectable in any 100 ml | Absent |
| 43. | Feacal Coliform | MPN/100ml | APHA 9221 F | --- | <1.8 |
| 44. | Pesticides | mg/l | APHA 6630 C | --- | Absent |

*BDL Value: Cu <0.02mg/l, Al <1.0mg/l, B <0.1mg/l, Ba <0.5mg/l, Mn <0.05mg/l, Hg<0.002 mg/l, Cd <0.01 mg/l, Se <0.001 mg/l, As <0.004 mg/l, Pb <0.01mg/l, Ni<0.05 mg/l, Cr <0.05mg/l, $Cr^{6}$ <0.01mg/l, Phenol <0.05mg/l, CN <0.01mg/l, Ba<0.1mg/l*

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ANNEXURE-4



***Ref:*** **Envlab/19/R-5384** ***Date:*** **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (CORE ZONE)

2. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
3. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
4. Sampling Location : **AAQMS-1:BGR Office Camp**
5. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 05.10.2019 | 63.0 | 32.0 | 18.8 | 30.1 | BDL | BDL | BDL | BDL | BDL |
| 17.10.2019 | 55.0 | 29.0 | 17.2 | 28.4 | BDL | BDL | BDL | BDL | BDL |
| **CPCB, New Delhi AAQ Standard** | **100** | **60** | **80** | **80** | -- | **6** | **20** | -- | -- |
| **Testing Method** | **Gravimetric IS 5182: Part 23** | **Gravimetric EPA 1998** | **Improved West & Geake Method IS 5182 (Part-2) RA2017** | **Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017** | **AAS Method IS 5182(Part -22):2004** | | | | |

***BDL Values:*** $SO_2$< 4 $\mu g/m^3$, $NO_X$< 9 $\mu g/m^3$, , Ni<0.01 $ng/m^3$, As < 0.001 $ng/m^3$,

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***Ref:*** **Envlab/19/R-5385** ***Date:*** **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (CORE ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-2: Vocational Training Center**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 03.10.2019 | 56.0 | 29.6 | 15.7 | 23.7 | BDL | BDL | BDL | BDL | BDL |
| 16.10.2019 | 61.0 | 31.4 | 16.3 | 26.2 | BDL | BDL | BDL | BDL | BDL |
| **CPCB, New Delhi AAQ Standard** | **100** | **60** | **80** | **80** | -- | **6** | **20** | -- | -- |
| **Testing Method** | **Gravimetric IS 5182: Part 23** | **Gravimetric EPA 1998** | **Improved West & Geake Method IS 5182 (Part-2) RA2017** | **Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017** | **AAS Method IS 5182(Part -22):2004** | | | | |

***BDL Values:*** $SO_2 < 4\ \mu g/m^3$, $NO_x < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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*Ref:* **Envlab/19/R-5386** *Date:* **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (CORE ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-3: CHP OCPL Office**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 05.10.2019 | 69.0 | 36.0 | 21.7 | 25.7 | BDL | BDL | BDL | BDL | BDL |
| 17.10.2019 | 62.0 | 33.4 | 19.3 | 22.3 | BDL | BDL | BDL | BDL | BDL |
| CPCB, New Delhi AAQ Standard | 100 | 60 | 80 | 80 | -- | 6 | 20 | -- | -- |
| Testing Method | Gravimetric IS 5182: Part 23 | Gravimetric EPA 1998 | Improved West & Geake Method IS 5182 (Part-2) RA2017 | Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017 | AAS Method . IS 5182(Part -22):2004 | | | | |

*BDL Values:* $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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***Ref:*** **Envlab/19/R-5387** ***Date:*** **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (CORE ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-4: BGR Mines Area**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 03.10.2019 | 77.0 | 41.0 | 26.2 | 27.8 | BDL | BDL | BDL | BDL | BDL |
| 16.10.2019 | 88.0 | 46.0 | 24.7 | 30.6 | BDL | BDL | BDL | BDL | BDL |
| CPCB, New Delhi AAQ Standard | 100 | 60 | 80 | 80 | -- | 6 | 20 | -- | -- |
| Testing Method | Gravimetric IS 5182: Part 23 | Gravimetric EPA 1998 | Improved West & Geake Method IS 5182 (Part-2) RA2017 | Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017 | AAS Method IS 5182(Part -22):2004 | | | | |

***BDL Values:*** $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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***Ref:*** **Envlab/19/R-5388** ***Date:*** **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (BUFFER ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-1: Dulinga Village**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 14.10.2019 | 58.0 | 29.6 | 11.3 | 14.7 | BDL | BDL | BDL | BDL | BDL |
| 29.10.2019 | 64.0 | 33.2 | 11.9 | 16.2 | BDL | BDL | BDL | BDL | BDL |
| **CPCB, New Delhi AAQ Standard** | **100** | **60** | **80** | **80** | **--** | **6** | **20** | **--** | **--** |
| **Testing Method** | **Gravimetric IS 5182: Part 23** | **Gravimetric EPA 1998** | **Improved West & Geake Method IS 5182 (Part-2) RA2017** | **Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017** | **AAS Method IS 5182(Part -22):2004** | | | | |

***BDL Values:*** $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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*Ref:* Envlab/19/R-5389 *Date:* 05.11.2019

## AAQ MONITORING REPORT FOR OCTOBER-2019 (BUFFER ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-2: Kalamegha Village**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 12.10.2019 | 55.0 | 28.7 | 10.5 | 14.1 | BDL | BDL | BDL | BDL | BDL |
| 24.10.2019 | 49.0 | 26.4 | 9.7 | 13.7 | BDL | BDL | BDL | BDL | BDL |
| CPCB, New Delhi AAQ Standard | 100 | 60 | 80 | 80 | -- | 6 | 20 | -- | -- |
| Testing Method | Gravimetric IS 5182: Part 23 | Gravimetric EPA 1998 | Improved West & Geake Method IS 5182 (Part-2) RA2017 | Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017 | AAS Method IS 5182(Part -22):2004 | | | | |

*BDL Values:* $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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***Ref:*** **Envlab/19/R-5390** ***Date:*** **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (BUFFER ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-3: Paramanandpur Village**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 12.10.2019 | 53.0 | 27.0 | 10.8 | 13.8 | BDL | BDL | BDL | BDL | BDL |
| 24.10.2019 | 57.0 | 29.4 | 8.7 | 11.6 | BDL | BDL | BDL | BDL | BDL |
| CPCB, New Delhi AAQ Standard | 100 | 60 | 80 | 80 | -- | 6 | 20 | -- | -- |
| Testing Method | Gravimetric IS 5182: Part 23 | Gravimetric EPA 1998 | Improved West & Geake Method IS 5182 (Part-2) RA2017 | Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017 | AAS Method IS 5182(Part -22):2004 | | | | |

***BDL Values:*** $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

VISIONTEK CONSULTANCY SERVICES PVT LTD — *Prepared by*

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*Ref:* **Envlab/19/R-5391** *Date:* **05.11.2019**

## AAQ MONITORING REPORT FOR OCTOBER-2019 (BUFFER ZONE)

1. Name of Industry : **M/s Odisha Coal and Power Limited, Sundargarh**
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : **AAQMS-4: Kiripsira Village**
4. Sample collected by : VCSPL representative in presence of OCPL representative

| Date | $PM_{10}$ ($\mu g/m^3$) | $PM_{2.5}$ ($\mu g/m^3$) | $SO_2$ ($\mu g/m^3$) | NOx ($\mu g/m^3$) | Hg ($mg/m^3$) | As ($ng/m^3$) | Ni ($ng/m^3$) | Cd ($mg/m^3$) | Cr ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|---|
| 14.10.2019 | 56.0 | 29.5 | 10.6 | 15.8 | BDL | BDL | BDL | BDL | BDL |
| 29.10.2019 | 50.0 | 26.2 | 11.4 | 17.5 | BDL | BDL | BDL | BDL | BDL |
| CPCB, New Delhi AAQ Standard | 100 | 60 | 80 | 80 | -- | 6 | 20 | -- | -- |
| Testing Method | Gravimetric IS 5182: Part 23 | Gravimetric EPA 1998 | Improved West & Geake Method IS 5182 (Part-2) RA2017 | Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017 | AAS Method - IS 5182(Part -22):2004 | | | | |

*BDL Values:* $SO_2 < 4\ \mu g/m^3$, $NO_X < 9\ \mu g/m^3$, , $Ni < 0.01\ ng/m^3$, $As < 0.001\ ng/m^3$,

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File
LS 25/2/14
APPENDIX-I

No. J-11015/139/2008-IA.II (M)
Government of India
Ministry of Environment & Forests
IA-II (Coal Mining) Division

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110003
Dated: 21st February, 2014

To

The Manager (Mechanical)
M/S Orissa Power Generation Corporation Ltd.
Zone-A, 7th floor, Fortune Tower
**Bhubaneswar- 751 023**
Odisha

**Subject: Manoharpur Opencast Coalmine Project (8 MTPA in an ML area of 977.875 ha) of M/s Orissa Power Generation Corp. Ltd. located in Ib Valley, Dist. Sundergarh, Orissa - Environment Clearance –reg.**

**Sir:**

This is with reference to letter no.982/WE dated 18.03.2008 along with the application for Terms of Reference (TOR) and this Ministry's letter of even number dated 11th July, 2008 granting TOR. Reference is also invited to the letter No. 1424 dated 26.05.2012; no. 2837(12)-12 dated 25.10.2012; dt 9.11.2012; no. OPGC/Proj/2975 W/E dated 12.11.2012, nos, 510 dt 26.2.2013; 534 dt 28.02.2013 and 21.12.2013 for Environmental Clearance on the above-mentioned subject.

2. The Ministry of Environment & Forests has considered the application. The proposal was reconsidered in the 59th Expert Appraisal Committee held on 6th -7th November, 2012, It is noted that the proposal is for grant of Environmental Clearance for **Manoharpur Opencast Coalmine Project (8 MTPA in an ML area of 977.875 ha) of M/s Orissa Power Generation Corp. Ltd. located in Ib Valley, Dist. Sundergarh, Orissa.** The proponent has informed that:

i. Manoharpur Coal Block has been allocated by the Ministry of Coal in July 2007 to M/s Orissa Power Generation Corporation. Manoharpur Opencast coalmine project is an opencast project of 8 MTPA rated capacity in a total project area of 977.875 ha of which 653.509 ha is within the coal block and 324.367 ha is outside the coal block. The coal is captive to two power plants Power plant -2 x 660 MW (Phase II) and 2 x 660 MW (Phase III) of OPGC. EC for the linked Power Plant has been obtained in 2010.

ii. Of the total project area, 193.739 ha is forestland, 238 ha is agricultural land, 176.839 ha is barren land, 13.189ha is homestead land, 20.040 ha is grassland and 11.611 ha is water body.

iii. Land Use Pattern as approved in revised mine plan shall be as follows:

| S. No. | Classification of Land | Area insider the block ha | Area outside the block ha | Total ha |
|---|---|---|---|---|
| 1 | Forest Land | 193.739 | 6.726 | 200.465 |
| 2 | Agriculture Land | 238.090 | 165.358 | 403.448 |
| 3 | Barren Land | 176.839 | 97.916 | 274.755 |
| 4 | Township Land | 13.189 | 2.614 | 15.803 |

| | | | | |
|---|---|---|---|---|
| 5 | Grazing Land | 20.040 | 45.937 | 65.977 |
| 6 | Water Body | 11.611 | 5.815 | 17.426 |
| | | 653.509 | 324.367 | 977.875 |

iv. Of the total 324.677 ha outside the coal block, 6.726 ha is forestland, 165.358 ha is agricultural land, 97.917 ha is barren land, 2.614 ha is homestead land, 45.937 ha is grassland and 5.815 ha is water body. Of the total project area of 653.509 ha, 550.954 ha is for quarry/excavation, 36.952ha is for external OB dump, 3.89ha is for coal stockyard, 20.117ha is for infrastructure, 7.13 ha is for roads, 3.7 ha for road diversion, 5.99 ha is for 100m barrier, 2.34 ha is for nala diversion, 4.659 ha is for safety zone along existing nala, 8.906 ha is for safety zone along project boundary, 8.871 ha is for rationalisation of project boundary.

v. It was informed that of the 324.677 ha is outside the block, 0.498 ha is for crushing, 156.526ha is for external OB dump, 1.465 ha is for coal stockyard, 3.015 ha is for topsoil, 6.406 ha is for sedimentation pond, 108.367 ha is for allied infrastructure, 48.090 ha is for residential colony. It was clarified that the entire 324.677ha outside the ML area is non-coal bearing.

vi. Grade of coal is mostly F & G.

vii. Mining would be by shovel-dumper and surface miner. Mining would be at a depth of 8m- 205m. It was informed that a minimum 15m safe distance would be maintained between quarry edge and nala and a 3-tier thick plantation consisting of native species would be developed.

viii. The total estimated OB generation is 432.11 $Mm^3$, of which 61.73 $Mm^3$ would be stored in external OB dump of 193.478 ha of a max height of 70m, which after re-handling of OB, would be reduced to 50m height. The balance 370.38 $Mm^3$ would be backfilled in an area of 257.11 ha. Backfilling would begin in the 2nd year. At the post mining stage a water body of an area of 13.96 ha would be left, whose depth would be reduced from 140m to 80m. The total water requirement is 3780 $m^3/d$ of which 2580 $m^3/d$ is for mine operations and 1200 $m^3/d$ is for the coal washery.

ix. Garia Nalla (tributary of Basundhara River) flows along the northern boundary and eastern side of the Block. A stretch of Garia nalla flowing over the south eastern part of the block would be diverted and road passing through the road would be diverted. The nala thereafter, which would flow into NTPC's Dulanga Coal Block, would be further diverted by NTPC. The water from the catchment area in lieu of the nala would be collected in a garland drain and connected downstream of Garia Nala to maintain its flow. An Embankment would be constructed along the Garia Nala which would be 3m above HFL of Garia Nala.

x. Approval of CGWB has been obtained for drawl of 950 $m^3/d$ of groundwater.

xi. The captive pit-head coal washery in an area of 20 ha would operate in an improved HM Cyclone and would yield 6.4 MTPA of clean coal of 33 + 0.5% ash and the balance 1.6 MTPA of coal of 55% ash content. It is a zero-discharge washery. Crushed coal from mine to pit head washery to be transported through covered conveyor belt then power plant to MGR. Coal rejects would be sent to M/s SV Power Plant for their FBC based TPP.

xii. The Mining Plan has been approved by MOC in August 2008 and the revised mining plan approved on 11.12.2013. R&R involves 370 PDFs and 385 PAFs. A site of 74 ha has been planned for the resettlement colony and awaiting approval of the State Govt. Budget for CSR is Rs 240 lakhs. Life of the mine is 23 years.

xiii. There were small and seasonal water ponds exist in the Manoharpur village of the project area. As Manoharpur village will be totally displaced, these ponds will no more be used by the villagers.

xiv. The proponent informed that the conditions of the approved TOR have become the reasons for revision of Mine Plan. All the points of the TOR have been duly complied in the Revised Mine Plan. The conditions in the approved TOR for revision of Mine Plan are: (a) Relocation of External Dumps, (b) CHP & Washery to be away from the villages (c) Dumps to be maintained at a minimum 100 mtrs away from the villages and Nalla; (d) Relocation of the village.

xv. It was informed that dumping of fly ash in the mine void was mentioned in EIA/EMP report in the TPP of capacity 2x660 MW (Units no. 3&4). The EC of TPP also permits the back filling of ash in the mine. The same has also been covered in the Revised Mine Plan.

xvi. The leachability study has been carried out by Water Environment Division, Central Institute of Mining and Fuel Research (CIMFR), Dhanbad with ash and OB material. The CIMFR recommended that use of 30% fly ash as back fill material with OB could be used for the purpose of 100% utilization of generated fly ash. All the leachate parameters are found within the range and have negligible impact on leaching of chemical constituents. It was informed that the leaching will be negligible. However, proper barrier/dyke against aquifers will be provided as per recommendation of CIMFR, Dhanbad. IIT, Bombay has been engaged for Geo Technical Studies including special studies for Ash backfilling. Therefore, the proponent proposed for concurrent filling of fly ash (30%).It was informed that Govt of Odisah, took a decision on 05.07.2012 in the Steering Committee that accorded approval for 324.367 ha. of land outside the Coal Block for OB dumping, infrastructure and other industrial use.

xvii. The comparison of Opencast vs. Underground mine shows that mining by opencast is the most feasible and viable technology to cater the requirement of the planned OPGC power project. The Proponent provided detailed justification of Opencast mining vrs Underground mining. The cost of OCP would be Rs 700/Te with 80% production/recovery of coal whereas the cost for the UG mining would be Rs. 2900/Te with 40 -50%low production.

xviii. The total Mine closure cost would be Rs. 99 Crores.

xix. An amount of Rs 385 lakhs has been proposed for a Wildlife Conservation Plan. Site specific WL Conservation Plan has been approved by Govt. of Odisha.

xx. The CSR cost has been calculated @ Rs 5/Te for 152.12 MT mineable reserves amounting to Rs. 7606 Lakh. The CSR expenditure of Rs. 84.35 Lakh till date has been made on education, health, infrastructure, water, sports & culture, Social welfare etc.

xxi. **Forestry issues:** Stage-I Forest Clearance have been obtained vide MoEF letter no. 8-63/2011-FC, dated 17.10.2012.

xxii. There are no ecologically sensitive areas such as National Parks, WL Sanctuaries, biosphere reserves, etc.

xxiii. **Public Hearing:** The Public Hearing was conducted on 28.02.2012. The proponent assured to take necessary action on the issues raised during public hearing.

3. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) in its 59th meeting held on 6th-7th November, 2012, reconsidered in 9th EAC meeting held on 20-21 January, 2014 and recommended for granting Environmental Clearance. The Ministry of Environment & Forests hereby accords environmental clearance to **Manoharpur Opencast Coalmine Project (8 MTPA in an ML area of 977.875 ha) of M/s Orissa Power Generation Corp. Ltd. located in Ib Valley, Dist. Sundergarh, Orissa** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below:

A. **Specific Conditions:**

i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.

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.

iii. The OB should be kept in ML area and there should be no OB dumps at the end of mining.

iv. The land for OB dumping should be made ready for original use after mine closure.

v. All the sandstone taken out during mining should be utilized for house construction and given free of cost to locals.

vi. Since the mining area is total forest land, the sandstones should not be dumped as OB.

vii. Fly ash dumping is not permitted in mine void.

viii. The leachability study may be carried out for chromium, arsenic and mercury that may be present in fly ash.

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.

x. The CSR activity, which had already been carried out by proponent, be audited by a 3rd Party. The audit should be carried out by a reputed agency.

xi. The proponent shall come back to the Committee for its washery proposal for further consideration.

xii. Coal transportation from mine to railway siding by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons.

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 stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.

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.

xv. OB shall be stacked at two earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.

xvi. 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 utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. 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.

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.

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.

xix. Drills shall be 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,

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.

xxii. 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 (61.996ha) 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.

xxiii. An estimated 61.73 MCum of OB will be generated during the entire life of the mine. Out of which 29.23 $Mm^3$ of OB will be dumped in four external OB Dump in non-coal bearing area . 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 degrees. 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.

xxiv. 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 stabilised 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.

xxv. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.

xxvi. Compensatory Ecological &Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.

xxvii. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.

xxviii. No groundwater shall be used for mining operations.

xxix. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and tot eh Central Pollution Control Board quarterly within one month of monitoring.

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.

xxxi. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.

xxxii. Besides carrying 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 specialised 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.

xxxiv. For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a 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.

xxxv. A detailed 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.

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.

xxxvii. The proponent should implement the assurances given during the Public Hearing.

xxxviii. Corporate Environment Responsibility:

a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
b) 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.
c) 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.

d) 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.

**B. 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.

ii. No change in the calendar plan of production for quantum of mineral coal shall be made.

iii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for $PM_{10}$, $PM_{2.5}$, $SO_2$ 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.

iv. Data on ambient air quality ($PM_{10}$, $PM_{2.5}$, $SO_2$ and $NO_x$) 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 recognised under the EPA rules, 1986 shall be furnished as part of compliance report.

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.

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.

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.

viii. Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.

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.

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 the company while outsourcing.

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.

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.

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 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 http://envfor.nic.in.

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.

xv. A copy of the environmental clearance letter shall be 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.

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 $PM_{10}$, $PM_{2.5}$, $SO_2$ and $NO_x$ (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's 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 Office s of CPCB and the SPCB.

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.

xix. The Environmental statement for each financial year ending 31 March in For –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.

4. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

5. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project.The Ministry or any other competent authority may stipulate any further condition for environmental protection.

6. The Ministry or any other Competent Authority may stipulate any further condition for environmental protection.

7. The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

8. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

9. The above conditions will be enforced *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

21 Feb 2014

(Dr. Manoranjan Hota)
Director

**Copy to:**

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment, Government of Orissa, Sachivalaya, Bhubaneswar, Odisha

3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, Bhubaneswar
4. Member Secretary, Orissa State Pollution Control Board, Unit -8, Neelkanth Nagar, Bhubaneswar-
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
8. District Collector, Sundargarh, Orissa.
9. IG (Wild life), Ministry of Environment and Forests, New Delhi
10. Monitoring File 11. Guard File 12. Record File. 13. Notice Board

(Dr. Manoranjan Hota) 5 Feb 2014
Director

APPENDIX-II

No. J-11015/139/2008-IA-II(M) Pt. file
Government of India
Ministry of Environment, Forest & Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi-3

Dated: 30th December, 2015

To,

The General Manager, (Mines)
M/s Odisha Coal and Power Limited,
Plot No. N-3/135, IRC Village, Nayapalli,
Bhubaneshwar, Odisha -751 015

Email: mines@ocpl.org.in

**Sub: Transfer of Environmental Clearance of Manoharpur Opencast Coalmine Project of 8 MTPA in ML area of 977.875 ha in Ib Valley, District Sundergarh (Odisha) from M/s Orissa Power Generation Corporation Limited to M/s Odisha Coal and Power Limited- reg.**

The Ministry of Environment, Forest and Climate Change (MoEFCC), in accordance with the Environmental Impact Assessment (EIA) Notification, 2006 and subsequent amendment thereto had accorded Environmental Clearance (EC) for **Manoharpur Opencast Coalmine Project of 8 MTPA in ML area of 977.875 ha in Ib Valley, District Sundergarh (Odisha) to M/s Orissa Power Generation Corporation Limited** subject to compliance of terms and conditions stipulated therein vide letter No. **J-11015/139/2008-IA.II (M) dated 21st February, 2014.**

WHEREAS the Hon'ble Supreme Court of India vide judgment dated 25th August, 2014 read with the order dated 24th September, 2014 has cancelled the allocation of 204 coal blocks and issued directions with regard to such coal blocks wherein the Central Government in pursuance of the said directions has to take immediate action to implement the said order.

WHEREAS in pursuance of the judgment and order of the Hon'ble Supreme Court, the nominated authority has, in accordance with provisions of the Coal Mines (Special Provisions) Second Ordinance, 2014 and the Coal Mines (Special Provisions) Rules, 2014 conducted the auction of the mines.

WHEREAS Ministry of Coal (MOC) vide letter No. **13016/38/2015-CA-III dated 18th September, 2015** has informed that, their Ministry has allotted 8 Coal Mines through allotment routes to 3 different allottees. MOC has requested this Ministry to facilitate transfer of the Environment Clearance and Forest Clearance of these blocks to the successful allottees.

WHEREAS Ministry of Coal vide **Allotment** Order under clause (c) of sub-rule (2) of rule 7 and sub-rule (1) of rule 13 and Order No. **103/25/2015/NA dated 31st August, 2015** has allotted the **Manoharpur Opencast Coalmine Project of 8 MTPA in ML area of 977.875 ha in Ib Valley, District Sundergarh (Orissa) to M/s Odisha Coal and Power Limited** as the successful allottee.

WHEREAS vide Gazette Notification S.O. 811 (E) Notification dated 23.03.2015, MOEFCC has made amendments to paragraph 11 in the Gazette Notification S.O.1533 (E) dated 14th September, 2006. Vide the said amendment; where an allocation of coal block is cancelled in any legal proceeding, or by the Government in accordance with law, the environmental clearance granted in respect of such coal block may be transferred, subject to the same validity period as was initially granted, to any legal person to whom such block is subsequently allocated, and in such case, obtaining of "no objection" from either the holder of environment clearance or from the regulatory authority concerned shall not be necessary and no reference shall be made to the Expert Appraisal Committee or the State Level Expert Appraisal Committee concerned.

WHEREAS in light of the MOC Allotment Order No. **103/25/2015/NA dated 31st August, 2015,** and MoEFCC Gazette Notification S.O. 811 (E) Notification dated 23.03.2015, the EC granted vide letter No. **J-11015/139/2008-IA.II (M) dated 21st February, 2014 to M/s Orissa Power Generation Corporation Limited for Manoharpur Opencast Coalmine Project of 8 MTPA in ML area of 977.875 ha in Ib Valley, District Sundergarh (Odisha)** is hereby transferred to **M/s Odisha Coal and Power Limited** subject to the following conditions:

(i) Any change in scope of work will attract the provisions of the Environment (Protection) Act, 1986 and Environmental Impact Assessment Notification, 2006 in conjunction with the subsequent amendments / circulars.

(ii) All conditions stipulated in the EC letter No. **J-11015/139/2008-IA.II (M) dated 21st February, 2014** shall remain unchanged.

(iii) The allottee shall be liable, if any, for any act of violation of the EP Act, 1986 / EIA Notification 2006/subsequent amendments and circulars which it has inherited during the revalidation/ transfer.

(iv) Allottee shall be liable for compliance of all court directions, if any.

30/12/2015

**(S. K. Srivastava)**
**Scientist E**

Copy to :

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar, Odisha
3. The Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarpur, Bhubaneshwar – 751 023, Odisha
4. The Member Secretary, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneshwar – 751012, Odisha
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi -110 032
6. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, Vikas Marg, Laxmi nagar, New Delhi
8. The District Collector, **Sundergarh**, Government of Odisha
9. Monitoring File 10. Guard File 11. Record File 12. Notice Board

30/12/2015

**(S. K. Srivastava)**
**Scientist E**