

HALF YEARLY COMPLIANCE REPORT

OCTOBER 2013- MARCH 2014

MANOHARPUR OPENCAST COAL MINE PROJECT

Odisha Power Generation Corporation Ltd.



Odisha power Generation Corporation Ltd, Zone-A, 7th Floor,

Fortune Towers, Bhubaneswar – 751023, Odisha,

Ph: 0674-2303765-66, Fax: 0674-2303755,

Web: www.opgc.co.in

A. Specific Conditions	Compliance
i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	Maximum production 8.00 MTPA 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	Site Specific Wildlife Conservation Plan has been obtained.
iii. The OB should be kept in ML area and there should be no OB dumps at the end of mining.	61.73 mm ³ OB will be kept in ML area. As per the approved mine Plan & Mine Closure Plan 4 no.s dumps will be in non coal bearing area. There will be no external dump after 9 th year
iv. The land for OB dumping should be made ready for original use after mine closure.	After Mine Closure, OB dump area will be restored.
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 the requirement when mine operation starts.
vi. Since the mining area is total forest land, the sandstones should not be dumped as OB.	Effort will be made not to dump sand stone in forest area.
vii. Fly ash dumping is not permitted in mine void.	Fly ash will not be dumped till studies done and permissions obtained.
viii. The leachability study may be carried out for chromium, arsenic and mercury that may be present in fly ash.	Leachability study of toxic elements is under progress.
ix. The CSR amount should be Rs 4 crores in initial 3 years, and thereafter it should be Rs5/T of coal /annum till the end of the life of project with the escalation factor every year coal production.	This is being complied.
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.	CSR activities which have already been carried will be audited by 3 rd party/reputed agency.
xi. The proponent shall come back to the Committee for its washery proposal for further consideration.	Washery proposal will be submitted 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.	Coal Transportation will be carried out by MGR from mine end to power plant.
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.	Agreed.
xiv. There shall be no over flow 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.	Agreed.
xv. OB shall be stacked at two earmarked external OB dump site(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	OB shall be dumped as per the approved Mine Plan & Mine Closure Plan locations marked on the final stage dump plan. Ultimate slope will be maintained to 28°. Monitoring & Management of reclaimed dump sites will continue till OB

self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.	dump areas are revegetated. Compliance status report will be submitted.
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.	Agreed.
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.	Retaining wall at the toe of the dumps and OB benches will be constructed on the basis of 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.	Pollution control measures will be carried out with high efficiency bag filters and water sprinkling system to arrest fugitive emission.
xix. Drills shall be wet operated.	Agreed.
xx. The project authorities shall under take 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,	Repairing & Tarring of road will be carried out during operation period of the mine. Green belt with native species of 3 tires will be provided.
xxi. Controlled blasting shall be practiced with use of delay detonators and only during day time. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Agreed.
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 (193.478ha), internal dump (257.11ha), and Greenbelt (61996ha) 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 plant as 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.	Afforestation Plan will be implemented with consultation of DFO/ Agricultural Department.

<p>xxiii. An estimated 61.73 MCum of OB will be generated during the entire life of the mine. Out of which 29.23Mm³ of OB will be dumped in four external OB Dumps 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 dumpsites 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>Maximum height of dump will be maintained as per the approved Mine Plan & Mine Closure Plan. Compliance & Status report will be submitted to MoEF and its Regional office on yearly basis.</p>
<p>xxiv. Of the total quarry area of 489 ha, the backfilled quarry area of 162 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>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/Agricultural department.</p>
<p>xxv. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.</p>	<p>Agreed.</p>
<p>xxvi. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.</p>	<p>Compensatory Afforestation and restoration of waste land will be done.</p>
<p>xxvii. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.</p>	<p>Agreed.</p>
<p>xxviii. No ground water shall be used for mining operations.</p>	<p>Agreed.</p>
<p>xxix. Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.</p>	<p>Agreed. After monitoring reports will be submitted to MoEF and Central Pollution Control Board on quarterly basis.</p>
<p>xxx. The Company shall put up artificial ground water recharge measures for augmentation or groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of</p>	<p>Rain water harvesting and artificial ground water recharge will be done. Nearby villages will be supplied water during summer seasons / as and when required.</p>

nearby village(s) in case the village wells go dry due to dewatering of mine.	
xxx. Sewage treatment plant shall be installed in the existing colony ETP shall also be provided for workshop and CHP wastewater.	STP & ETP will be installed.
xxxii. Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from work force engaged in active mining operations shall be subjected to health check up 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.	Agreed.
xxxiii. There are 370 PDFs and 385PAFs. 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.	PDFs & PAFs will be compensated as per norms laid out in relevant R&R Policy.
xxxiv. For monitoring land use pattern and for post mining land use, a time series of land use 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.	Land use maps based on satellite imagery will be prepared once in three years and submitted to MoEF and its concerned Regional Office.
xxxv. A detailed Final Mine Closure Plan along with details or Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of Environmental Clearance.	Mine Plan and Mine Closure Plan has been submitted.
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 or the mine.	CSR activities will be carried out in consultation with Panchayat/local administration.
xxxvii. The proponent should implement the assurances given during the Public Hearing.	Assurance given during Public Hearing will be implemented.
xxxviii. Corporate Environment Responsibility: a.The company shall have 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.	a. The policy has been duly approved by the board of Directors. b. Parameters will be monitored as per CPCB norms for STP & ETP. c. There will be environment management cell that will look after all compliances clearances and monitoring. The cell will be headed by General Manager (Mines). There will be environmental engineers who will report to G.M (Mines). d. Organizational Structure for Environmental Management & System of Reporting of Non-compliance:

<p>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.</p>	<p>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 various actions which are to be executed. The cell will report on a regular basis to the General Manager (Mines). The environmental monitoring like ambient air quality, water quality, noise level, vibration level etc. will be done through agencies approved by State Pollution Control Board, Odisha. The EMC will prepare a formal report on environmental management on half yearly basis and submit the same to the Office of Ministry of Environment & Forest, Eastern Regional Office, Bhubaneswar, Odisha and State Pollution Control Board, Bhubaneswar.</p> <p>System of Reporting of Non-compliance to the Board of Directors:</p> <p>The Site Engineer who is posted at the colony site gets daily report about the day to day activities related to safety and environment. Any abnormality is conveyed to Head of Environment who in turn reports the same to General Manager (Mine). Any violation of Environmental norms will be conveyed to the members of the Board of Directors. Corrective</p>
---	---

B. General Conditions	Compliance
i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests	Agreed.
ii. No change in the 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 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.	In consultation with State Pollution Control Board, ambient air quality monitoring station will be fixed. Heavy metals will be monitored in every 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 recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	Agreed.
v. Adequate measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM. Etc shall be provided with ear plugs/muffs.	Adequate measures will be adopted for controlling noise level. Ear plugs/muffs will be provided for the persons working in blasters etc.
vi. Industrial waste water (workshop and waste water 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.	Waste water from workshop & mine will be properly treated and re used as per standard prescribed under GSR 422(E)
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 will be covered with tarpaulines to check air pollution.
viii. Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules 1986.	Monitoring shall be carried out as per guidance of SPCB and data will be analysed in a laboratory recognized 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.	Training in safety and health aspects will be carried out. Refresher training programme will be also provided to the workers.
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 out sourced man power should be addressed by the company while outsourcing.	Occupational Health surveillance programme will be carried out by group of doctors. The health and safety issues of the out sourced man power would 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.	A separate environmental cell with qualified personnel will be set up under GM (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 will not be diverted for other purposes.
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 or 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.	Project authorities have already advertised in the local newspaper- Samaj and the New India Express.
xiv. A copy of 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 the 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.	Clearance letter have been displayed on website of State Pollution Control Board, Odisha.
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	Clearance letter has been uploaded in the company's website (www.opgc.co.in). Compliance report will also be updated and uploaded in every six months.

<p>six months so as to bring the same in public domain. The monitoring data of environmental quality parameters (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 the project premises and mine office and in corporate office and on company's website.</p>	
<p>xvii. The project proponent shall submit six monthly compliance reports on status of 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.</p>	<p>Half yearly compliance reports will be submitted to regional office of MoEF, Zonal office of CPCB and SPCB, Odisha.</p>
<p>xviii. The Regional Office or this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) or the Regional office by furnishing the requisite data/information/Monitoring reports.</p>	<p>Project authorities will extend full co-operation to regional officials.</p>
<p>xix. The Environmental statement for each financial year ending 31st 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.</p>	<p>Environment Statement Report in Form V will be submitted. It will be also uploaded in company's website.</p>