

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

OFFICE OF THE PROJECT OFFICER
LINGARAJ OCP, LINGARAJ AREA
P.O.: DEULBERA COLLIERY, TALCHER
DIST: ANGUL (ODISHA), PIN: 759102
PHONE: 06760 - 241270, FAX: 06760 - 241269



MCL

Ref. No.: MCL/PO(LOCP)/ENVT/2016-17/ 408

Date: 28.11.2016

To,

The Chief Conservator of Forests,
Eastern Regional Office.
Ministry of Environment, Forest & Climate Change
A/3, Chandrasekharpur,
Behind Rail Vihar & Adjacent to Wildlife Range Office
Bhubaneswar- 751023.

Sub: Six monthly (01.04.2016 to 30.09.2016) EC Compliance Report on implementation of Environmental Clearance conditions imposed by MOEF&CC, Government of India in respect of Lingaraj OCP, M/s Mahanadi Coalfields Limited.

Dear Sir,

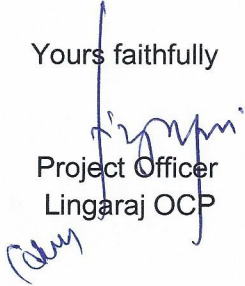
Please find enclosed herewith the Six Monthly EC Compliance Report for the half-year ending 30.09.2016 with respect to the Lingaraj OCP, M/s Mahanadi Coalfields Limited.

This is for your kind information please.

Encl.:

1. EC Compliance report for the period from Apr.2016 to Sept.2016
2. Filled in Datasheets (Part I, II and III)
3. Compiled Environment monitoring report for the period from Apr.2016 to Sept.2016
4. One CD containing the abovesaid report.

Yours faithfully


Project Officer
Lingaraj OCP

Copy to:

1. The Director, EIA, Monitoring Cell, MOEF&CC, Paryavaran Bhawan, CGO Complex, New Delhi-110 003.
2. The Member Secretary, OSPCCB, Paribesh Bhavan, Unit-VIII, Nilkantha Nagar, Bhubaneswar.
3. The Divisional Forest Officer, Angul.
4. The Regional Officer, Orissa State Pollution Control Board, Angul.
5. The General Manager, Lingaraj Area
6. The General Manager (Environment), MCL, Burla.
7. The Staff Officer (Environment), Lingaraj Area.
8. The Project Environment Officer, Lingaraj OCP.

**SIX MONTHLY (01.04.2016 TO 30.09.2016) EC COMPLIANCE REPORT
OF LINGARAJ OCP, M/S MAHANADI COALFIELDS LIMITED**

Name of the project	Lingaraj OCP
Status of period ending	30.09.2016
No. & Date of MOEF clearance letter	i) No. J-11015/174/2010-IA.II(M) dated 27.11.2015 ii) No. J-11015/223/2005-IA.II(M) dated 02.02.2006 iii) No.J-11015/18/86-IA dated - 17.05.1989
Project approval	Approved by Department of coal, Ministry of Energy Govt. of India Vide No. 43011/20/86-CPA dated - 21.02.1991.
Present status of the project:	
Mining operation	Continuing
Total OB removed till 30.09.2016	138.224 Mm ³
Total coal raised till 30.09.2016	193.88 MT
Cost of project as on 30.09.2016	575.15 Crores
Actual date of commencement	17.04.1991

**STATUS OF COMPLIANCE OF CONDITIONS OF ENVIRONMENTAL CLEARANCE
GRANTED BY MOEF&CC, GOVT. OF INDIA, VIDE LETTER NO. J-11015/174/2010-IA.II(M)
DATED 27.11.2015 IN RESPECT OF LINGARAJ OCP, MAHANADI COALFIELDS LIMITED**

(A) Specific Condition

i	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	The maximum production from the mine will not exceed the limit as prescribed in the EC. The last five years production is mentioned below. <table border="1"> <thead> <tr> <th><u>Year</u></th> <th><u>Production</u></th> </tr> </thead> <tbody> <tr> <td>2010-11</td> <td>- 11.85 MT</td> </tr> <tr> <td>2011-12</td> <td>- 11.59 MT</td> </tr> <tr> <td>2012-13</td> <td>- 11.57 MT</td> </tr> <tr> <td>2013-14</td> <td>- 07.17 MT</td> </tr> <tr> <td>2014-15</td> <td>- 11.38 MT</td> </tr> <tr> <td>2015-16</td> <td>- 14.18 MT</td> </tr> </tbody> </table>	<u>Year</u>	<u>Production</u>	2010-11	- 11.85 MT	2011-12	- 11.59 MT	2012-13	- 11.57 MT	2013-14	- 07.17 MT	2014-15	- 11.38 MT	2015-16	- 14.18 MT
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ii	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever earlier.	Agreed.														
iii	Periodically monitoring of WHS constructed /maintained and study their effectiveness, and all the works should, be completed by monsoon of year 2016.	The water harvesting structures are periodically monitored and maintained every year.														
iv	Silo should be commissioned by the year 2016.	Silo will be commissioned by the year 2016.														
v	Dispatch of 18.87 MT of Coal will be started from January, 2017	Agreed.														
vi	Initial OB will be filled in. Out of 538.851 ha excavated area of 292.18 ha will be filled in and brought	Overburden is concurrently being backfilled. 92.21 Ha. area has been backfilled till 30.09.2016.														

	to the ground level, and balance 246.71 ha shall remain as partially filled void 185 m deep.	
vii	There will be no external OBD in post mine closure. OB from Alkhopal and Sakshi Gopal OCP under formulation having a stripping ratio more than 2:-3 m ³ /T initial OBD will be filled. in this .mine void and brought to-the Ground Level. This refilling is expected by 8th year when the mine is in operation.	It will be carried out as per the approved Mine Closure Plan.
viii	The wild life conservation plan should be reworked out with time bound and site specific action plan and got approved from the PCCF wild life and be submitted to MoEF&CC within 3 Months.	The wild life conservation plan has been prepared by Shri R. N. Reddy (Retd. IFS) and has been submitted to PCCF (Wildlife)/Chief Wildlife Warden, Govt. of Odisha through DFO, Angul and RCCF (Wildlife).
ix	Efforts be made to explore the availability of mechanically Covered trucks.	Currently the trucks are covered by tarpaulin cover. Usage of mechanically covered trucks is in planning stage.
x	Total excavated area of 538.851 ha, shall be backfilled. with the available OB up to ground level to the tune. of 292.141 ha and balance 246/10 ha shall remain as partially filled void which will be developed as water body with maximum depth 185 m.	Overburden is concurrently being backfilled. 92.21 Ha. area has been backfilled till 30.09.2016.
xi	There shall not be any external OB dump post mine closure. Out of a total 292.141. ha backfilled area 186.311 ha shall be afforested and balance 105.83 ha shall be developed for agriculture purpose.	It will be carried out as per the approved Mine Closure Plan.
xii	Coal transportation in pit by dumper, Surface to Siding by dumper and siding at loading by pay loader.	Coal transportation is being made in pit by dumper, Surface to Siding by dumper and siding at loading by pay loader.
xiii	The production shall be within the same Mining Lease area.	Production is being carried out within the mine lease area.
xiv	The OB shall be complete re-handled at the end of the mining.	Agreed. It will be carried out as per the approved Mine Closure Plan.
xv	Final mine void depth will not be more than 40 m. The void area will be converted into water body. The rest of the area will be back filled up to the ground level and .covered with about a meter thick top soil-and put to use.	Agreed.
xvi	Garland drains be provided.	7.8 km. Garland drain has been constructed around the OB dumps.
xvii	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent	The nearest river, Brahmani river, is 3 km far from the mine. A survey was carried out from Hariharpur village to Talcher Township (approx.

	to the mine.	5 km) of western Bank of Brahmani River and from Khalpal village to Kulei village (approx. 3 km) on eastern bank of Brahmani River on 06.05.2015. It was found that the western bank of the river has a rocky terrain and the eastern bank of river has a natural berm of approximate 8 mts. with natural vegetation. Moreover, there has not been any occurrence of flood since the year 1980. So, it is stated that there is no need of strengthening river embankment.
xviii	The land after mining shall be brought back for agriculture purpose.	Agreed. It will be carried out as per the approved Mine Closure Plan.
xix	Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.	Mine water is not being discharged outside of the mine premises.
xx	The CSR cost should be Rs.5 per Tones of Coal produced which should be adjusted as per the annual inflation.	CSR Fund is allocated based on 2% of the average net profit of the company for the three immediate preceding financial years or @ Rs.5/- per ton of the coal production of the previous year whichever is higher.
xxi	Everybody in the core area should be provided with mask for protection against fugitive dust emissions	Everybody in the core is provided with mask for protection against fugitive dust pollution. 14 Nos. of dust masks have been issued during Apr'2016 - Sept'2016.
xxii	Dust Mask to be provided to everyone working in the mining area	Everyone working in the core area is provided with mask for protection against fugitive dust pollution. 14 Nos. of dust masks have been issued during Apr'2016-Sept'2016.
xxiii	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area	Agreed.
xxiv	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	People working in the core area are periodically tested for the lung diseases for which the expenditure is borne by MCL. 453 Nos. of employees have been checked during Apr'2016-Sept'2016 and no person was found affected with any diseases.
xxv	The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.	Green belt with local species is being developed along the periphery of the mine, inactive dumps, backfilled area, vacant area and colony. Till 30.09.2016, 421709 saplings have been planted over an area of 147.33 Ha. In addition to it 7000 Nos. of saplings have been planted over 4.375 Ha. of Govt. land near Handidhua, Talcher during April-September 2016.
xxvi	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by	There is no river adjacent to mine and hence, there is no chance of mine inundation.

	stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	
xxvii	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.	There is no overflow of OB into river. Till 30.09.2016, 421709 saplings have been planted over an area of 147.33 Ha. In addition to it 7000 Nos. of saplings have been planted over 4.375 Ha. of Govt. land near Handidhua, Talcher during April-September 2016.
xxviii	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 & Climate Change and its concerned Regional office on yearly basis.	OB is stacked at the earmarked site and Terracing/ benching/ stepping/ re-sloping is being made so that overall slope angle of the dump does not exceed 28°. Monitoring and management of the vegetation is being done for five years by which the vegetation becomes self-sustaining. Compliance status is submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.
xxix	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 desalted 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 thane site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	6.5 km length of catch drain is provided around the mine and is being maintained. The water so collected is utilized for watering the mine area, roads, green belt development, etc. 7.8 km length of garland drain has been constructed around the OB dumps and coal stock. Sumps of total 32.10 lakh m ³ capacity are available for proper settling of silt material. Two settling tanks of size 40 m. x 80 m. x 4 m. each and a clear water reservoir of size 40 m. x 40 m. x 6 m. have been constructed near stock no: 17 for the settling of mine water. Four settling tanks (size ST ₁ : 35 m. x 33 m. x 2 m. ; ST ₂ : 33 m. x 34 m. x 2 m. ; ST ₃ 36 m. x 35 m. x 2 m. & ST ₄ : 34 m. x 36 m. x 2 m.) & one clear water reservoir (size 48 m. x 48 m. x 1.5 m.) also are available near Lingaraj siding for proper management of surface run off and settling.
xxx	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.	4.19 km long and 1.2 m. high retaining wall has been constructed around the OB dump. The width of the retaining wall is 1.2 m. at the base and 1 m. at the top.
xxxi	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,	CHPs are provided with efficient dust control systems. (i) At CHP - water spraying through perforated pipe and mist sprayer. (ii) Dry fog system for dust suppression at all CHPs. (iii) Covering of CHP feeder breaker, belt

	transfer points, etc	conveyor, coal bunker by G.I. sheet to prevent propagation of dust. (iv) Dust suppression on road by water spraying through high capacity mobile water sprinkler (15 departmental and 01 contractual). (v) Dust suppression on road, railway siding, CHP areas, workshop and site office areas by water spraying through automatic fixed water sprinklers (68 nozzles).
xxxii	Drills shall be wet operated.	Drills are wet operated.
xxxiii	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	1.95 km of haul road, 7.65 km of service road including CT road and 1.70 km of colony road are black topped. Avenue plantation is being carried out and will also be carried out in future. 3-tier green belt development comprising of native species will be carried out in the next phase of plantation.
xxxiv	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.	Controlled blasting is being practiced with the use of delay detonators. Blasting is carried out only during the day time.
xxxv	A Progressive afforestation plan shall be implemented covering an area of 256.03 ha at the .end of mining, Green belt 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.	Green belt with local species is being developed along the periphery of the mine, inactive dumps, backfilled area, vacant area and colony. Till 30.09.2016, 421709 saplings have been planted over an area of 147.33 Ha. In addition to it 7000 Nos. of saplings have been planted over 4.375 Ha. of Govt. land near Handidhua, Talcher during April-September 2016.
xxxvi	An estimated total 222.23 Mm ³ (for the proposed expansion project) of OB will be generated during the entire life of the mine. Out of which 8.18 Mm ³ of OB will be dumped in nine external OB Dumps an earmarked area covering 256.03 ha of land. There will be one internal OB dump covering an area of 292.141 ha. The maximum height of external OB dumps will not exceed 80 m. 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	Agreed. OB dumps are stacked at the earmarked site and Terracing/ benching/ stepping/ re-sloping is being made so that overall slope angle of the dump does not exceed 28 ⁰ . Compliance status is submitted to MOEF&CC and its Regional Office on yearly basis.

	compliance status shall be submitted to MOEFCC and its Regional Office on yearly basis.	
xxxvii	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	Reclamation of the degraded area is being done continuously. Till date 25.80 Ha. backfilled area and 96.15 Ha. External OB Dump area has been biologically reclaimed. The land is being and will be used in a productive and sustainable manner.
xxxviii	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried but	Reclamation of land is being carried out as mentioned in above point (Point No. xxxvii). Eco-restoration of OB dumps is in planning phase.
xxxix	The mining should be phased out in sustainable manner.	The mine will be phased out in a sustainable manner as per approved Mining Plan and Mine Closure Plan.
xl	No groundwater shall be used for mining operations.	Ground water is not being used for mining purpose. The water from mine sump is being used for dust suppression.
xli	The total quarry area of 538.85 ha. A void of 246.709 ha at a depth of 40 m which is proposed to be converted into a water body having 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.	It is a matter of post mine closure. However, plantation is being carried out regularly. Details of plantation are mentioned in point No. (xxxv) above.
xlii	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 & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.	<p>A network of 23 piezometers was recently established in Talcher Coalfields to monitor and assess the long term water table variation in the aquifers. A report on piezometric water level data monitored in the premonsoon season of Talcher Coalfields is provided in Annexure-I.</p> <p>However, monitoring of ground water level is also being carried out by establishing a network of existing wells regularly by CMPDIL. The detailed monitoring report is enclosed as Annexure - II and Annexure- VI for reference.</p>
xliii	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	<p>Roof top rain water harvesting has been done at 6 points during 2000. The total expenditure for rainwater harvesting was Rs. 8.40 lakhs. Details are as follows:</p> <p>a) 2 Nos. each at GM Office complex & Regional Store complex, Lingaraj area.</p> <p>b) 1 No. each at Project Office complex & Deulbera Dispensary.</p>

	dewatering of mine.	Besides, 9 Nos. of open kutcha ponds have been made in the nearby villages (Kankili, Biharipur, Talabeda, Kandhal, Balugaon-khamar & Kusumpal) by using departmental resources. Digging of pond Khajuria kata at Deulbera village has also been completed during Apr. 2016-Sept. 2016 at an expenditure of Rs. 5.178 lakhs only. Cleaning of mud and debris from Dolki tank of village Handidhua has also been completed during Apr. 2016 - Sept. 2016 at an expenditure of Rs. 98870.75 only. Adequate water is provided to all the nearby villages. The cost incurred for water supply to the nearby villages was Rs.104.19 lakhs only during April-September 2016.
xliv	Sewage treatment plant shall be installed the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Currently Sewage Treatment Plant doesn't exist in the township of Lingaraj OCP. However, estimate is being prepared for the construction of STP.
xlv	Besides carrying out regular Periodic health check-up of their workers, 10% of the workers identified from workforce 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.	Persons working near to the dust generation source are provided with Dust respirator / Dust Mask. 14 Nos. of dust masks have been issued to the employees who are working near the dust sources. Occupational health surveillance programme of the workers are being made regularly. Result for April 2016 - September 2016 period is given below - Total persons examined = 453 persons. No. of persons found to be affected with occupational diseases = NIL.
xlvi	Land Oustees shall be compensated. as per the norms laid. out R&R Policy of CIL or.-the National Polity or R&R Policy of the State Government whichever is higher.	Land oustees & land losers are compensated as per R & R plan of CIL & State Govt. No. of persons provided employment so far = 1065. No. of persons to be provided with employment = 193 Amount paid so far on R&R activities = Rs.467.4 lakhs.
xlvii	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 MOEFCC and its concerned Regional office	Digital processing of the entire lease area using remote sensing technique is being done regularly and the report is submitted to the MOEF&CC and its regional office on regular basis. The important parameters of land use patterns are given below - <u>Parameters 2015 (km²)</u> Open forest 0.20 Scrubs 0.97 Plantation 0.90 Agriculture 0.72 land Waste land 0.62 Mining Area 3.53

		Settlements 0.26 Water body 0.05
xlvi	A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & climate Change within 6 months of grant of Environmental Clearance.	The Final Mine Closure Plan has been submitted to Ministry of Environment, Forests & Climate Change during EAC meeting.
xlix	<p>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.</p> <p>I. Corporate Environment Responsibility:</p> <p>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b) The Environment Policy shall prescribe for standard operating process/procedures to bring in to focus any infringements/deviation/violation of the environmental or forest norms/conditions.</p> <p>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.</p> <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>a) The company has a well laid down Environment Policy approved by Board of Directors.</p> <p>b) The Environment Policy prescribes for standard operating process/procedures to bring in to focus any infringements/deviation/ violation of the environmental or forest norms/ conditions.</p> <p>c) Environmental Management Cell has been set up at project level which is guided by General Manager (Environment), MCL. The General Manager (Environment) reports to Director (P&P) who in turn reports to Chairman-cum-Chief Managing Director of MCL.</p> <p>d) As per the policy Environment Audit is carried out on regular basis to bring in to focus any non-compliance/ infringements/deviation/ violation of the environmental or forest norms/conditions. Any such non-compliance/infringements/deviation/violation is reported to the Board of Directors of the company.</p>

(B) General Condition

i	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forest & Climate Change.	No change in mining technology and scope of working will be made without prior approval of the Ministry of Environment, Forest & Climate Change.
ii	No change in the calendar plan of production for quantum of mineral coal shall be made.	No change in the calendar plan of production for quantum of mineral coal will be made.

iii	<p>Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x 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.</p>	<p>Four ambient air quality monitoring stations have been established whose locations were decided in consultation with State Pollution Control Board, Odisha. Detailed monitoring report of ambient air quality is enclosed as Annexure-III for reference. Monitoring of heavy metals was carried out in the previous six months. However, the same was discontinued temporarily. The monitoring of heavy metal will be started soon and will be continued. However, the detailed report of previous six months is enclosed as Annexure-VII for kind reference.</p>
iv	<p>Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ 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.</p>	<p>Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data is 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.</p>
v	<p>Adequate measures shall be taken for control- of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.</p>	<p>Noise levels are controlled to the minimum with improved blasting technique & improved machineries. However, persons those who are working near high noise level zone like the HEMM, CHP& blasting etc. are provided with ear plugs/muffs. Detailed report in this regard is provided in Annexure - IV.</p>
vi	<p>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</p>	<p>Oil and Grease Trap has been installed to treat the discharge of the workshop. Moreover, treated effluent is being recycled and no discharge is being made to outside. The detailed monitoring report is enclosed as Annexure - V for reference.</p>

	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.	The condition is being implemented. Contractors have been directed to obtain Pollution under control certificate from authorized agent of State Pollution Control Board. Vehicles used for transporting the mineral are covered with tarpaulins and overloading is avoided.
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.	CMPDIL has been assigned with the task of monitoring and analysis of environmental quality parameters. Environmental laboratory with adequate number and type of pollution monitoring and analysis equipments has been established by CMPDIL and is 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.	Persons working near to the dust generation source are provided with Dust respirator / Dust Mask. During the April 2016 to September 2016, 14 Nos. of dust masks have been issued to the employees who are working near the dust sources. All the employees are undergone through regular training and are provided with 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.	Occupational health surveillance programme of the workers are being made regularly. Result for April 2016 – September 2016 period is given below - Total persons examined = 453 persons. No. of persons found to be affected with occupational diseases = NIL.
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.	Environmental Management Cell has been set up by Lingaraj OCP which is guided by General Manager (Environment), MCL. The General Manager (Environment) reports to Director (P&P) who in turn reports to Chairman-cum-Chief Managing Director of MCL.
xii	The funds earmarked for environmental protection measures shall be kept in separate account and shall not	Fund earmarked for environmental protection measures is not diverted for any other purpose. Capital expenditure since the inception of the mine for Environment management is given below -

	<p>be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.</p>	<p>i) R&R activities = Rs. 467.40 lakhs ii) Other Env't. Expenses = Rs. 39.91 lakhs</p> <p>In addition to the above, the following revenue expenditures are made during the period from April 2016 to September 2016.</p> <p>1) Tree Plantation =Rs. 52.33 lakhs 2) Water cess/Tax = Rs. 8.01 lakhs 3) Dust Suppression at CHP = Rs. 4.75 lakhs 4) Dust Suppression by mobile water tankers & road sweeper = Rs. 354.16 lakhs 5) CSR-water supply including Drinking water up to 15KMs Radius. =Rs. 104.19 lakhs 6) Other env't. expenses =Rs. 59.12 lakhs</p> <p>Year-wise expenditure is reported to MOEF&CC and Eastern Regional Office.</p>
xiii	<p>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 & Climate Change at http://envfor.nic.in.</p>	<p>Advertisement was put up in New Indian Express and Dharitri (in odia language) 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 & Climate Change at http://envfor.nic.in.</p>
xiv	<p>A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipa. 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.</p>	<p>Copy of Environmental Clearance letter was marked to concerned Panchayats, Zila Parishad, and Talcher Municipality.</p>
xv	<p>A copy of the environmental clearance letter shall also be displayed on the website of the</p>	<p>A letter requesting to display a copy of Environmental Clearance letter was written to State Pollution Control Board, Odisha. A letter was also written to the</p>

	concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office / Tahsildar's Office for 30 days.	Collector cum District Magistrate requesting to display a copy of Environmental Clearance letter in Collector's office, Tehsildar's Office and Regional Office, District Industry Sector.
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 (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.	The clearance letter has been uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions which were mentioned in the EC letter dated 27.11.2015 will be uploaded and updated once every six months. 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 are also displayed at Lingaraj Area Office.
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.	Six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) is regularly submitted to the Regional Office of the Ministry and the SPCB, Odisha. In future also the compliance report will be submitted to the Regional Office of the Ministry, Zonal Office of CPCB and the SPCB, Odisha. The previous six monthly EC conditions compliance report was submitted vide letter No. MCL/PO(LOCP)/ENVT/2016-17/333 dated 27.06.2016.
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.	Full cooperation will be extended to the Regional Office for monitoring the compliance of the stipulated conditions.
xix	The Environmental statement for each financial year ending 31 March in Form -V is mandated to be submitted by the project proponent for the concerned State Pollution	Environmental statement for each financial year ending 31 st March in Form-V is regularly submitted to the State Pollution Control Board, Odisha and is sent to regional office of MOEF&CC. The Environment Statement will also be uploaded on the company's website.

<p>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 Office of the MoEF&CC by e-mail.</p>	
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**STATUS OF COMPLIANCE OF CONDITIONS OF ENVIRONMENTAL CLEARANCE
GRANTED BY MOEF&CC, GOVT. OF INDIA, VIDE LETTER NO. J-11015/223/2005-IA.II(M)
DATED 02.02.2006 IN RESPECT OF LINGARAJ OCP, MAHANADI COALFIELDS LIMITED**

(A) Specific Conditions

i	The environmental clearance is subject to approval of the State Land use Department, Government of Orissa for diversion of agricultural land for non-agricultural use.	Necessary approval of concerned Department is taken for conversion of land whenever acquired. Land has been acquired under L.A. Act, 1894 and CBA (A & D) Act, 1957 and notifications for the same were issued.
ii	Environmental clearance is subject to grant of forestry clearance for diversion of forestland.	Forestry Clearance has been obtained vide letter No. 8-99/87-FC, dated 2/7.03.1989 for diversion of forest land of 186.311 ha.
iii	Top soil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	Top soil excavated is concurrently spread over the technically reclaimed area / OB dump. Total top soil removed & spread concurrently during the last 6-months period is 3480 m ³ .
iv	OB dumps should be stacked at earmarked dump site(s) only and should not be kept active for long period. Proper terracing of OB dump should be carried out so that the overall slope shall not exceed 28 degree. Concurrent backfilling should be practiced. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.	OB dumps are stacked at the earmarked site and Terracing/ benching/ stepping/ re-sloping is being made so that overall slope angle of the dump does not exceed 28 ⁰ . Till date 25.80 Ha. backfilled area and 96.15 Ha. External OB Dump area has been biologically reclaimed. Concurrent backfilling of OB is being done. Compliance status report is submitted to MOEF&CC regularly.
v	Check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected should be utilized for watering mine areas, roads, green belt development etc. The drains should be regularly de-silted and maintained properly. Garland drain (size, gradient and length) and sump capacity should be designed keeping	Check dams (3 Nos.) have been made at the OB dump (Soil dump) near Shanti nagar and New Langijoda Basti and OB dump near coal stock. Two settling tanks of size 40 m. x 80 m. x 4 m. each and a clear water reservoir of size 40 m. x 40 m. x 6 m. have been constructed near stock no. 17 for the settling of mine water. An MDTP is situated near Lingaraj siding and comprising of four settling tanks (size ST ₁ : 35 m. x 33 m. x 2 m. ; ST ₂ : 33 m. x 34 m. x 2m. ; ST ₃ 36 m. x 35 m. x 2 m. & ST ₄ : 34 m. x 36 m. x 2 m.) & one clear water reservoir (size 48 m. x 48 m. x 1.5 m.). 7.8 km. Garland drain has been constructed around the OB dumps.

	50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	The cost for cleaning of garland drain during 2015 was Rs. 90201/- vide Sanction order No. PO/LOCP/civil/2015-16/1146 dtd 02.04.2015. The garland drain cleaning has been completed in June, 2015.
vi	Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	4.19 km long and 1.2 m. high retaining wall / toe wall with dry stone boulder has been constructed on the top OB bench as well as around the OB dump. The width of the retaining wall is 1.2 m. at the base and 1 m. at the top.
vii	Plantation should be raised in an area of 584.17 ha by planting the native species around the ML area, OB dump sites, backfilled area, safety zone, infrastructure etc. in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha.	Plantation is being raised by Lingaraj Opencast Mine in and around OB dump sites, backfilled area, safety zone, infrastructure etc. Till 30.09.2016, 421709 saplings have been planted over an area of 147.33 Ha. In addition to it 7000 Nos. of saplings have been planted over 4.375 Ha. of Govt. land near Handidhua, Talcher during April-September 2016 under urban plantation scheme. Some of the plant species include Mango, Neem, Karanja etc.
viii	The Project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central ground water Board, South Eastern region, Bhubaneswar.	Roof top rain water harvesting has been done at 6 points during 2000. The total expenditure for rainwater harvesting was Rs. 8.40 lakhs. Details are as follows: a) 2 Nos. each at GM Office complex & Regional Store complex, Lingaraj area. b) 1 No. each at Project Office complex & Deulbera Dispensary. Besides, 9 Nos. of open kutcha ponds have been made in the nearby villages (Kankili, Biharipur, Talabeda, Kandhal, Balugaon-khamar & Kusumpal) by using departmental resources.
ix	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year. i.e. January, April-May, August and November and the data thus collected may be sent regularly to Ministry of Environment and Forests, Central Ground Water Authority and South Eastern region, Central Ground Water Board, Bhubaneswar	A network of 23 piezometers was recently established in Talcher Coalfields to monitor and assess the long term water table variation in the aquifers. A report on piezometric water level data monitored in the premonsoon season of Talcher Coalfields is provided in Annexure-I. However, monitoring of ground water level is also being carried out by establishing a network of existing wells regularly by CMPDIL. The detailed monitoring report is enclosed as Annexure - II and Annexure- VI for reference.
x	The project authorities should obtain approval of the	Water is being taken from the IWSS. IWSS, Lingaraj Area, obtained approval from Govt. of Odisha vide

	competent authority for drawl of 2700 m ³ /day potable water from the Integrated Water Supply Scheme of Talcher Coalfields with intake point at Brahmani River.	Agreement No. 01(IW) 2000-2001 dated 08.06.2000.
xi	Suitable embankment of proper dimensions should be constructed to protect the area from flood water during rainy season.	A survey was carried out from Hariharpur village to Talcher Township (approx. 5 km) of western Bank of Brahmani River and from Khalpal village to Kulei village (approx. 3 km) on eastern bank of Brahmani River on 06.05.2015. It was found that the western bank of the river has a rocky terrain and the eastern bank of river has a natural berm of approximate 8 mts. with natural vegetation and the bunds are stable.
xii	Appropriate mitigative measures should be taken to prevent pollution of Brahmani River in consultation with the State Pollution Control Board.	<p>A scheme to prevent pollution of Brahmani river has been prepared with consultation of the officials of the Regional Office, OSPCB, Angul vide our letter number MCL/GM(LA)/ENVT/2011/705 dated 02.12.2011. After several discussions with Member Secretary, OSPCB, it has been concluded in the meeting held on 29.11.2014 a suitable study/ survey was to be made by a scientific institute/ agency for proper water management of all the mines. Accordingly NIT Rourkela was approached for the study vide our letter number MCL/SBP/CGM(ENVT)/NITR/WO/2015/5028 dated - 02/12/2014. The recommendations of NIT Rourkela have been communicated to OSPCB vide letter No. MCL/SBP/GM(ENVT)/SPCB/2015/5788 dated 19.10.2015 and the following actions have been taken:</p> <ol style="list-style-type: none"> i) De-silting of existing mine sump has been done to accommodate more surface runoff. ii) Two pumps of 180 LPS capacity each are available at the mine sump for pumping the sump water to settling tanks near stock No. 17. Two settling tanks of size 40 m. x 80 m. x 4 m. each and a clear water reservoir of size 40 m. x 40 m. x 6 m. have been constructed near stock no. 17 for the settling of mine water. The settled water from the clear water reservoir is being diverted to IWSS through a 120 LPS pump and pipeline arrangement. iii) An MDTP situated near Lingaraj siding and comprising of four settling tanks (size ST₁: 35 m. x 33 m. x 2 m. ; ST₂: 33 m. x 34 m. x 2m. ; ST₃ 36 m. x 35 m. x 2 m. & ST₄: 34 m. x 36 m. x 2 m.) & one clear water reservoir (size 48 m. x 48 m. x 1.5 m.) has been revived. Channels were made to divert the surface run off generated from siding and adjoining area to the settling tanks. A pipeline arrangement has been made to lift water from clear water reservoir to be used for dust suppression. Moreover, another settling tank situated near

		E&M workshop was cleaned and part of surface runoff generated near dispatch office was being diverted to this sump during monsoon season. A pump of 120 LPS capacity has been set up to lift water from this settling tank and put in a reservoir made in the E&M workshop. The water from this reservoir is used for various industrial purposes such as washing of vehicles and spraying for dust suppression.
xiii	The project authorities should meet the water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.	Adequate water is provided to all the nearby villages. The cost incurred for water supply to the nearby villages was Rs.104.19 lakhs during April 2016-September 2016.
xiv	Coal handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. They should be properly maintained and operated.	<p>CHPs are provided with efficient dust control systems.</p> <p>A. <u>To improve housekeeping:</u></p> <p>(i) At CHP - water spraying through perforated pipe and mist sprayer.</p> <p>(ii) Dry fog system for dust suppression at all CHPs.</p> <p>(iii) Covering of CHP feeder breaker, belt conveyor, coal bunker by G.I. sheet to prevent propagation of dust.</p> <p>(iv) Dust suppression on road by water spraying through high capacity mobile water sprinkler (15 Nos. of departmental and 1 contractual).</p> <p>(v) Dust suppression on road, railway siding, CHP areas, workshop and site office areas by water spraying through automatic fixed water sprinklers (68 nozzles).</p> <p>(vi) Installation of Non-Visible Emission (NVE) assembly in all drills.</p> <p>B. <u>To improve AAQ:</u></p> <p>(i) Plantation in and around infrastructure and workings and also road side. Total plantation made till now 421709 Nos.</p> <p>(ii) Installed instant shower system at exit points.</p> <p>(iii) Trucks going outside the mine are covered by tarpaulin to prevent any spillage.</p> <p>(iv) Overloading of trucks is avoided to prevent spillage of coal.</p> <p>(vii) More than 95% coal production is made by Surface miner to minimize the drilling, blasting thereby reducing the dust.</p> <p>(viii) Introduction of a heavy duty truck mounted vacuum cleaner (Mechanical Road Sweeper) for cleaning of road.</p>
xv	Consent to operate should be obtained from SPCB before starting enhanced production from the mine.	Consent to operate was given to Lingaraj OCP vide letter No. 4085/IND-I-CON-765 (vol.-II) dated 03.03.2016 and is valid up to 31.03.2017.
xvi	Blasting operation should be carried out only during the daytime controlled blasting should be practiced. The	Blasting operation has been carried out in the day time only. Controlled blasting has been practiced to mitigate & control of ground vibration & to arrest fly rocks.

	mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	
xvii	Vehicular emissions should be kept under control and regularly monitored.	The condition is being implemented. Contractors have been directed to obtain Pollution under control certificate from authorized agent of State Pollution Control Board.
xviii	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MOEF and its regional office.	Digital processing of the entire lease area using remote sensing technique is being done regularly and the last report is submitted to the MOEF and its regional office on regular basis. The comparative statement of important parameters of land use patterns are given below - <u>Parameters 2015 (km²)</u> Open forest 0.20 Scrubs 0.97 Plantation 0.90 Agriculture 0.72 land Waste land 0.62 Mining Area 3.53 Settlements 0.26 Water body 0.05
xix	A Final Mine closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	The Mine Closure Plan has been submitted to MOEF&CC during EAC meeting.
xx	Land oustees and land looser shall be compensated as per the R&R plan approved by the CIL & State Government.	Land oustees & land losers are compensated as per R & R plan of CIL & State Govt. Total No. of people eligible for employment : 1258 No. of persons provided employment so far: 1065 Balance to be provided with employment : 193 Amount spent so far on R&R activities: Rs.467.4 lakhs. Details are enclosed herewith in 'Part II'.

(B) General Conditions

S. No.	Conditions imposed	Compliance status
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests	Coal production is being done with the help of existing Shovel-Dumper as well as by Surface Miner technology.
ii	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Actual Coal production for the last three years is given below:- 2013-14 - 7.17 MT 2014-15 - 11.39 MT 2015-16 - 14.18 MT
iii	At least four ambient air quality	4 Nos. of ambient air quality monitoring stations have

	<p>monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO₂, and NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (RPM, SPM, SO₂, NO_x & PM₅) should be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State pollution Control Board/ Central Pollution Control Board once in six months.</p>	<p>been established. The data for the period Apr.2016-Sept. 2016 are enclosed as Annexure-III.</p>
iv	<p>Drills should either be operated with dust extractors or should be equipped with water injection system.</p>	<p>All the Drills are attached with Non Visible Emissions (NVE) assembly. Six drills are provided with wet drilling system in addition to the NVE assembly.</p>
v	<p>Fugitive dust emissions from all the sources should be controlled and monitored regularly. Water spraying arrangements on haul roads, loading & unloading and at transfer points should be provided and properly maintained.</p>	<p>Dust emissions are controlled & monitored regularly. Adequate arrangement for dust suppression has been made. Monitoring of PM_{2.5} has been started since Feb'2014 and PM₁₀ has been started since Nov'2014 and details are reflected in the above condition No. (iii). Detailed report is enclosed as Annexure - III.</p>
vi	<p>Adequate measures should be taken for control of noise levels with prescribed standards. Workers engaged in blasting and drilling operations, operations of HEMM, etc, should be provided with ear plugs/muffs.</p>	<p>Noise levels are controlled to the minimum with improved blasting technique & improved machineries. However, persons those who are working near high noise level zone like the HEMM, CHP& blasting etc. are provided with ear plugs/muffs. Detailed report in this regard is enclosed as Annexure - IV.</p>
vii	<p>Industrial waste water (workshop and waste water from the mine) should 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. Oil and grease trap should be installed before discharge of effluents from workshop</p>	<p>Industrial waste water is properly treated and conform the prescribed norms. Results of monitoring are given below. Detailed compiled monitoring report is enclosed as Annexure - V.</p>

viii	Acid mine water, if any has to be treated and disposed of after conforming to the standard prescribed by the competent authority.	There is no acid mine water.
ix	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to coal dust and take corrective measures.	Persons working near to the dust generation source are provided with Dust Mask. During the period, 14 Nos. dust mask have been issued to the employees who are working near the dust sources. Occupational health surveillance programme of the workers are being made regularly. Result for the period is given below - Total persons examined = 453 persons. No. of persons found to be affected with occupational diseases = NIL.
x	A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior Executive who will report directly to the Head of the organization.	Environment cell has been established in the Project & Area under the control of the General Manager (Envt.), MCL who reports to the Director Technical (P&P), MCL.
xi	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Regional Office, Bhubaneswar of the MOEF and to the Ministry.	Fund earmarked for environmental protection measures is not diverted for any other purpose. Capital expenditure since the inception of the mine for Environment management is given below – i) R&R activities = Rs. 467.40 lakhs ii) Other Evt. Expenses = Rs. 39.91 lakhs In addition to the above, the following revenue expenditures are made during the period from April 2016 to September 2016. 1) Tree Plantation =Rs. 52.33 lakhs 2) Water cess/Tax = Rs. 8.01 lakhs 3) Dust Suppression at CHP = Rs. 4.75 lakhs 4) Dust Suppression by mobile water tankers & road sweeper = Rs. 354.16 lakhs 5) CSR-water supply including Drinking water up to 15KMs Radius. =Rs. 104.19 lakhs 6) Other envt. expenses =Rs. 59.12 lakhs
xii	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of	Full co-operation is / will be provided to all the statutory personnel.

	the Regional Office by furnishing requisite data/information/monitoring reports.	
xiii	A copy of the clearance letter will be marked to the concerned Panchayat / local NGO, if any, from whom any suggestions/ representation has been received while processing the proposal.	Complied.
xiv	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of land development work.	Date of Financial Closure is 31 st March every Year. Final approval of the 16 MTY (Normative) & 20 MTY (Peak) Lingaraj OC Expansion Project was based on cost base of December 2009. This is a running Project and working of the mine started on 17.04.91.
xv	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/ Tahasildar's Office for 30 days.	Not applicable.
xvi	The project authorities should advertise at least in two newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 web site of the Ministry of Environment and Forest at http:// envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.	The local people were informed by the State Pollution Control Board, Odisha through advertisement in English News Paper "The Indian Express" and Odiya News Paper "Sambad" on 6 th August'2014.

STATUS OF COMPLIANCE OF CONDITIONS OF ENVIRONMENTAL CLEARANCE GRANTED BY MOEF&CC, GOVT. OF INDIA, VIDE LETTER NO. J-11015/18/86-IA DATED 17.05.1989 IN RESPECT OF LINGARAJ OCP, MAHANADI COALFIELDS LIMITED

Condition Imposed	Compliance Status								
<p>i) Detailed exploration of the bottom seam (seam I) will be carried out at the earliest and proper exploitation scheme for this seam will be prepared.</p>	<p>As per Exploration made by the CMPDIL for Lingaraj Opencast Expansion (16 Mty.) Project, Seam I occurs in 5-6 splits of which the bottom split is generally persistent with workable thickness from 0.59 m. to 5.10 m. The other splits are generally thin, not persistent and uneconomical for Mining. The parting between Seam II bottom & Seam I is approximately 166.53 m. The Seam does not come under the purview of this present project.</p>								
<p>ii) The reclamation of the mined out area would be carried out as per the plan incorporated in the EMP and in the subsequent Supplementary Notes submitted by the Department of coal/ SECL.</p>	<p>The reclamation is made as per EMP. Till now 25.80 Ha. Back-filled area and 96.15 Ha. External OB dump areas have been biologically reclaimed.</p>								
<p>iii) Instead of waiting till the exhaustion of the mine, the reclaimed areas would be released for economic use at periodic intervals as per the following programme:</p> <table border="1" data-bbox="156 1137 644 1440"> <thead> <tr> <th>Years after commencement of mining operation</th> <th>Reclaimed area to be released for economic use (Ha.)</th> </tr> </thead> <tbody> <tr> <td align="center">5</td> <td align="center">20.00</td> </tr> <tr> <td align="center">10</td> <td align="center">154.90</td> </tr> <tr> <td align="center">15</td> <td align="center">200.24</td> </tr> </tbody> </table>	Years after commencement of mining operation	Reclaimed area to be released for economic use (Ha.)	5	20.00	10	154.90	15	200.24	<p>The reclaimed area is surrounded by active mines (Lingaraj OCP and Bhubaneswari OCP). Hence, periodical release of reclaimed area for economic use may not be possible till the end of mining activities. Moreover, OB dumps where grassing has been done will be re-handled to fill up the mine void which also limits the possibility of releasing those area at periodic intervals. Till now 25.80 Ha. Back-filled area and 96.15 Ha. External OB dump areas have been biologically reclaimed. Reclamation activity is taken up every year, which is certainly of great economic use to the society. The plants / trees with wood value, medicinal value, food value etc. will be utilized by the society at the end mining activity for which necessary arrangement by afforestation is being done regularly - almost every year.</p>
Years after commencement of mining operation	Reclaimed area to be released for economic use (Ha.)								
5	20.00								
10	154.90								
15	200.24								
<p>iv) The external overburden dumps shall be limited to the minimum possible. During the course of the mining operations, a continuous review shall be conducted to reduce the area required for external over burden dumps.</p>	<p>Till now External OB dump area is only 108.88 Ha. against the EMP provision of 130 Ha.</p>								
<p>v) The top-soil from the areas earmarked for external overburden dumps and coal dumps shall be removed in advance and used for reclamation concurrently, Necessary studies to increase shelf life of top soil shall also be conducted.</p>	<p>Top-soil from the areas earmarked for external overburden dumps and coal dumps was removed in advance and used for spreading on the reclaimed OB dumps and plantation has been raised.</p>								

vi) The final slopes of the external overburden dumps shall not exceed 28°. Garland drains shall be provided along the periphery of the external overburden dumps and the quality of the water flowing from these dumps shall be continuously monitored.	After reclamation, the final slope of the External OB dumps is kept at 28°. Garland drain is provided along the periphery of the External OB dump. Cleaning is done once in a year. Water from these drains accumulated in the sedimentation pond and normally does not go outside except during peak monsoon.
vii) Other pollution control measures listed in the EMP and the subsequent supplementary Notes shall be strictly implemented as per schedule.	All pollution control measures like dust suppression, control of water pollution, plantation, Land management & control of noise level are implemented.
viii) A periodic progress report regarding implementation of the control measures shall be submitted to this department every six months.	Progress report is submitted to the MOEF in every six months.
ix) The air emission and effluent quality will conform to the standards prescribed by the central/state pollution control Board/ under water (prevention and control of pollution) act 1974, the Air (prevention and control of pollution) act, 1981, Environment (protection) Act, 1986.	The air emission and effluent quality are mostly conforming to the standards. Data for the last 6 months are enclosed as Annexure - III and Annexure - V, respectively.
x) Regular monitoring of various environmental quality parameters would be carried out by the project authorities and the results of the monitoring would also be included in the six monthly progress reports to be submitted to this Ministry.	Regular monitoring of environmental quality is made. Reports are sent to the Ministry with this six monthly report.
xi) The project will have an Environmental Cell for monitoring quality of water, air, solid waste, greening and other action plans for protection of environment under the supervision of a senior technical person who will report to Chief Executive of the project.	The Environmental Cell has been established in the Project level which is guided by the General Manager (Envt.), MCL who reports to the Director (Tech./P&P), MCL, who in turn reports to the Chairman cum Chief Managing Director of MCL.
xii) Adequate financial provision will be made in the project cost to meet the expenditure for implementation of the environmental safeguards.	<p>Capital expenditure since the inception of the mine for Environment management is given below –</p> <p>i) R&R activities = Rs. 467.40 lakhs</p> <p>ii) Other Evt. Expenses = Rs. 39.91 lakhs</p> <p>In addition to the above, the following revenue expenditures are made during the period from April 2016 to September 2016.</p>

	1) Tree Plantation =Rs. 52.33 lakhs 2) Water cess/Tax = Rs. 8.01 lakhs 3) Dust Suppression at CHP = Rs. 4.75 lakhs 4) Dust Suppression by mobile water tankers & road sweeper = Rs. 354.16 lakhs 5) CSR-water supply including Drinking water up to 15KMs Radius. =Rs. 104.19 lakhs 6) Other envt. expenses =Rs. 59.12 lakhs
xiii) This Ministry may stipulate any other condition may be required in the interest of environmental protection.	Agreed.
xiv) These conditions and safeguards will be implemented, among others, under the Environment (Protection) Act, 1986.	Agreed.
xv) Provision of funds made for implementing the above conditions (capital & Recurring) should be communicated to the Ministry.	<p>The details of fund are communicated to MOED&CC. Capital expenditure since the inception of the mine for Environment management is given below –</p> i) R&R activities = Rs. 467.40 lakhs ii) Other Evt. Expenses = Rs. 39.91 lakhs
	<p>In addition to the above, the following revenue expenditures are made during the period from April 2016 to September 2016.</p> 1) Tree Plantation =Rs. 52.33 lakhs 2) Water cess/Tax = Rs. 8.01 lakhs 3) Dust Suppression at CHP = Rs. 4.75 lakhs 4) Dust Suppression by mobile water tankers & road sweeper = Rs. 354.16 lakhs 5) CSR-water supply including Drinking water up to 15KMs Radius. =Rs. 104.19 lakhs 6) Other envt. expenses =Rs. 59.12 lakhs