



ODISHA POWER GENERATION CORPORATION LTD.

(A Government Company of the State of Odisha)

CIN: U40104OR1984SGC001429

2X210 MW & 2X660MW Thermal Power Project Office: Resource Centre,
Ib Thermal Power Station, PS: Banharpali, Dist.: Jharsuguda - 768234, Odisha, Ph.:06645-222280

Web: www.opgc.co.in

LTR No: ITPS/3089/WE,

Dt. 27-05-2020.

The Additional Director (S)
Ministry of Environment Forests & Climate Change,
Eastern Regional Office,
A/3, Chandrasekharpur,
Bhubaneswar - 751023.

Sub: **Submission of half yearly compliance report to the conditions mentioned in the Environment Clearance granted to Expansion of existing coal based thermal power plant of OPGC by addition of 2 X 660 MW (unit 3 & 4) at Banharpali in Jharsuguda district of Odisha for the period from October 2019 to March 2020.**

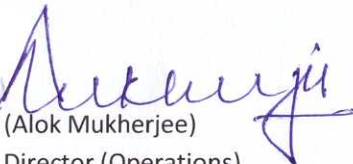
Ref: MoEF Letter No J-13011/59/2008-IA.II (T) dated 04.02.2010.
MoEF Letter No J-13011/59/2008-IA.II (T) dated 22.01.2014.
MoEF Letter No J-13011/59/2008-IA.II (T) dated 16.01.2015.
MoEF & CC Regional Office File No.106-12, dated 11.05.2020.

Dear Sir,

Kindly find the attached Compliance report to the conditions mentioned in Environment Clearance granted to Expansion of existing coal based thermal power plant of OPGC by addition of 2 X 660 MW (unit 3 & 4) for the period from October 2019 to March 2020.

We have also uploaded the half yearly compliance status for the mentioned period in OPGC [website-www.opgc.co.in](http://www.opgc.co.in) for your ready reference and kind perusal.

Thanking you,
Yours Faithfully,


(Alok Mukherjee)
Director (Operations)
OPGC Ltd.

Enclosure: Environment Clearance Compliance Report with annexures

- cc:
1. The Director Thermal, MoEF&CC, Indira Paryavaran Bhawan, Jor Road, New Delhi-110003.
 2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, Nilakantha Nagar, A/118, Unit -8, Bhubaneswar-751012.
 3. Regional Office, State Pollution Control Board, Odisha, Plot No- 370/5971, At- Babubagicha, (Cox Colony) St. Merry Hospital Road, Po- Industrial Estate, Dist- Jharsuguda-768203.
 4. The In charge, Eastern Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.)

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COMPLIANCE STATUS OF THE ENVIRONMENTAL CONDITIONS

Environment Clearance No. J-13011/59/2008-IAII(T), dated 04.02.2010 and its subsequent amendment
vide clearance No J-13011/59/2008-IAII(T), dated 22.01.2014

Period-October 2019 – March 2020

Clause No.	EC Conditions	Compliance Status
4. (i)	It shall be ensured that natural drainage in the area is not disturbed due to any activity associated with operation or development of the power plant.	The original natural drainage status has been maintained in the project area. The same will not be disturbed in future.
4. (ii)	The height of the existing ash pond shall not be increased to accommodate fresh disposal of ash slurry.	<ul style="list-style-type: none"> • The height of the existing ash pond (Ash Pond- A & Ash Pond-B) will not be increased to accommodate fresh disposal of ash slurry from the expansion (Unit 3 & 4). • Ash from Units 3 & 4 shall not be disposed in that time existing ash ponds i.e. (Ash Pond A & B).
4. (iii)	Wildlife conservation plan prepared in consultation with the office of the concerned Chief Wildlife Warden shall be implemented before any expansion activity is undertaken. The status of implementation shall be submitted to the Regional Office of the Ministry within six months and from time to time.	<ul style="list-style-type: none"> • The Site-Specific Wild Life Conservation Plan (SSWLCP) for the power plant has been prepared and got approved from Chief Wildlife Warden, Odisha on dtd. 12th June 2014. • The payment of amount Rs 6, 62, 92,000 for execution of SSWLCP was made on 18.07.2014 to Odisha CAMPA account. This payment was communicated to Forest Dept; Odisha vide our letter no 2161/WE on Dtd 19.07.2014. • Besides the above, OPGC has already spend Rs 66 lakh towards plantation activities against the plantation requirement mentioned in approved wild life management plan & is in process of planting additional 8000 saplings of forest and indigenous species in the FY 2020-21.
4. (iv)	Hydro-geological study of the area shall be reviewed annually, and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.	<ul style="list-style-type: none"> • First hydrogeological study was carried out in the year 2014-15. In the study, no such adverse impact was observed. The report was submitted to the Ministry & OSPCB. Thereafter yearly review study has been conducted with no observance of adverse impact so far. • Now, a comprehensive detailed Hydrogeological study covering the plant and ash pond area was carried out during 2018-19 & 2019-20. No adverse impact was observed from the study. The report is enclosed as Annexure-1. • Piezometers have been installed in existing ash pond and periodic monitoring is being carried out. Six nos. of Bore wells have been constructed in the identified locations covering all directions of the plant and ash pond for collection of water samples.

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Period-October 2019 – March 2020

Clause No.	EC Conditions	Compliance Status
4. (v)	A twin flue stack of 275 m height shall be provided with continuous online monitoring equipment's for SO _x , NO _x and RSPM (PM _{2.5} & PM ₁₀). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	<ul style="list-style-type: none"> • A twin flue stacks of 275 meters height have been constructed with sampling port hole and safe access arrangement for carrying out manual monitoring • 2 nos of CEMS have been installed at the twin flue stack for monitoring of SO_x, NO_x and PM parameters and real time data being transferred to SPCB and data transmission to CPCB is in process (analyser serial nos., make, model etc has been sent to CPCB IT section for registering the analysers in their server). • Exit velocity of flue gas has been maintained more than 22 m/sec. • Mercury emission and other emission parameters (PM, SO₂ & NO_x) of flue gas is being monitored periodically from January 2020 onwards through NABL accredited Lab and reports are being submitted.
4. (vi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High efficiency ESPs are designed and installed to ensure PM emission less than 50 mg/Nm ³ .
4. (vii)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	<ul style="list-style-type: none"> • Dust extraction systems (Bag Filters) have been provided at Crusher House, Boiler Bunkers, Transfer Towers and vents of Ash Silos to control the fugitive dust emission. • Dust Suppression Systems (DSS- Dry Fog and Water sprinkling) have been installed at Track hopper, Transfer towers. • Rain Gun type water sprinkling systems have been installed at Coal stock yard to control fugitive emission during stacking and reclamation of coal.
4. (viii)	Utilisation of 100% Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	<ul style="list-style-type: none"> • Shall be complied. • Ash utilization status for the FY 2019-20 has been reported to MoEF & CC vide OPGC Letter No. 2480/WE, dated 20.04.2020(Enclosed as Annexure – 2).

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Clause No.	EC Conditions	Compliance Status
4. (ix)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed of in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, and Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed of in low lying area.	<ul style="list-style-type: none"> • Pneumatic conveyer system with 3 nos of dry ash storage silos have been constructed for storage of ash and for its further utilisation and disposal. • Unutilised fly ash is being disposed in the ash pond through HCSD system and Bottom ash is being disposed through LCSD system. • Effluent emanating from the existing ash pond is being recycled and reused for fresh slurry making. No ash pond effluent is being discharged outside. The heavy metal in ash and nearby ground water is being monitored periodically, test reports are enclosed as Annexure--- for -kind reference. • No ash shall be disposed in low lying area without taking consent from OSPCB.
4. (x)	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	HDPE lining has been provided in the ash pond. Dyke safety measures has been addressed during design and construction of ash pond to protect the ash dykes from getting breached. During operation of ash pond, adequate safety measure will also be implemented to avoid breaching of ash dykes.
4. (xi)	For disposal of Bottom Ash in abandoned Manoharpur mines it shall be ensured that the bottom and sides of the mined-out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	The requirement will be implemented, and approval/ clearances will be taken from State Pollution Control Board before undertaking filling of mine void using ash.
4. (xii)	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	<ul style="list-style-type: none"> • Considering the ambient conditions, the plant has been designed with induced draft cooling tower. This deviation request was submitted to Director (Thermal), MoEF vide letter No.565 dated 8 -March-2010 • Considering our request, MoEF has granted its permission for use of Induced Draft Cooling System via EC Amendment dated 22/01/2014. The permission is enclosed as Annexure 3

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Clause No.	EC Conditions	Compliance Status
		<ul style="list-style-type: none"> The blow down of the IDCT will be utilised in ash handling and dust suppression purpose.
4. (xiii)	COC 5.0 will be adopted.	Being Complied
4. (xiv)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	<ul style="list-style-type: none"> 200 m³/hour ETP is being installed for treatment and utilisation of waste water generated from the plant. Zero effluent discharge is being adhered except the boiler area floor washing water has been discharged after meeting discharge norm to low lying area inside plant premises at the rate of around 10m³/hr. Action is under progress to recycle back and reuse the water in process by 15th July 2020. Effluent drains have been segregated from the Storm water drains.
4. (xv)	A sewage treatment plant shall be provided, and the treated sewage shall be used for raising greenbelt/plantation.	<ul style="list-style-type: none"> 1 MLD capacity Sewage Treatment Plant has been provided for treatment of sewage generated from colony and office buildings of OPGC Unit#3 & Unit#4. Treated sewage is being used for raising greenbelt/plantation.
4. (xvi)	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	<ul style="list-style-type: none"> The detail study on rain water harvesting technology has already been completed in May-2012 and the report is already finalised. The same was submitted to Central Ground Water Board for review and advice vide letter No. 1612/WE dated 28-June 13. After compliance submission against the observation raised by CGWB and further verification, finally approval accorded by CGWB vide letter no – 5-22/SER/CGWA/2017-18-1455 on dated 07.12.2017. After getting the approval of the technology, the rain harvesting pond design and construction activity is in process. It is planned to complete the harvesting pond by 31st December 2020.
4. (xvii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	<ul style="list-style-type: none"> Details of fire protection arrangement at coal yard with lay out map has been submitted to Regional Office, MoEF & CC Adequate fire hydrant system has been installed in the Coal stock yard and Track hopper site to control spontaneous fire.
4. (xviii)	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the	<ul style="list-style-type: none"> Storage facilities for auxiliary liquid fuel has been made in consultation with Dept. of Explosive, Nagpur. Further,

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	plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	<p>the facilities have been brought into operation after getting valid license from Dept. of Explosive, Nagpur.</p> <ul style="list-style-type: none"> As regards to Sulphur content, EAC (Thermal) in its monthly meeting held on 18th/19th November 2013 has accorded its consent for the use of commercially available fuel oil. Emergency response plan has been prepared to handle any emergency
4. (xix)	Regular monitoring of ground water (especially around ash pond and plant areas) shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	<ul style="list-style-type: none"> Piezometers have been installed in existing ash pond and 6 nos of Bore wells have been constructed in the identified locations covering all directions of the plant and ash pond for collection of water sample. Periodic monitoring for heavy metals is being carried out in the ground water samples from ash pond and surrounding area and reports are being submitted to the Regional Office. The analysis of the ground water samples near the existing ash pond & nearby surrounding villages' shows that the concentration of heavy metals is within the permissible limits. Reports enclosed as Annexure- ? for kind reference
4. (xx)	Monitoring surface water quantity and quality shall also be regularly conducted, and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Surface water and ground water quality monitoring is being done regularly. The points for monitoring in the direction of flow of ground water has been determined from the Hydro geological report and monitoring is being carried out accordingly.
4. (xxi)	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever	<ul style="list-style-type: none"> The requirements are addressed in the drawing number D-56 (already submitted on 30th November 2011).

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	100 m width is not feasible a 50 m width shall be raised, and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.	<ul style="list-style-type: none"> • District Plantation monitoring committee lead by Ex. Vice Chancellor Sambalpur University & Wild Life Warden along with Additional Chief Conservator of Forest, Asst. Director Horticulture, Asst. Environment Engineer OSPCB & Chief Co-ordinator Eco Club of Jharsuguda has verified the plantation/green belt status through site visits which comes to be 34.6% till Feb'18. • The District Plantation committee report mentioning 34.6% green cover is enclosed as Annexure-4 for reference. • Further to augment the existing greenbelt, 8000 Nos of saplings had been planted in 2016-17, 1880 in 2017-18, 10725 nos of saplings have been planted in 2018-19 financial year & 265 Nos of saplings have been planted in 2019-20. Year wise plantation details till 2019-20 is enclosed as Annexure-5.
4. (xxii)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Construction phase has been completed, however fully equipped 18 bedded Hospital has been established inside the campus for health care of workers.
4. (xxiii)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	<ul style="list-style-type: none"> • Arrangements for control of noise in the working areas have been taken in the plant by provision of acoustic enclosures, silencers etc. Sufficient ear protection PPE will be provided for all personnel exposed to work in noisy area. • Periodic health check will also be carried out for all employees & contractors
4. (xxiv)	Regular monitoring of ground level concentration of SO ₂ , NO _x , RSPM (PM _{2.5} & PM ₁₀) and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed	The project is located inside the existing plant premises. Four online AAQ monitoring stations to monitor PM ₁₀ , PM _{2.5} , SO ₂ , NO _x & CO has been installed within impacted zone. Results are transmitted to SPCB & CPCB servers on real time basis. Other than this, Ambient Air Quality is also being monitored through five permanent offline ambient air

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	limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	<p>quality stations and the location of the stations are decided earlier in consultation with the Regional Office. Periodic monitoring is being performed for ambient Hg.</p> <p>Necessary control measures shall be implemented in case any exceedances are observed.</p> <p>Monitoring reports are being submitted on periodic basis (The monitoring details have been summarized in Annexure-6 for the period from October'2019 to March'2020)</p>
4. (xxv)	A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.	R & R plan is not applicable as there is no displacement of people due to establishment of the project.
4. (xxvi)	An amount of Rs 24.36 Crores shall be earmarked as one-time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 4.87 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	A revised /updated list of projects amounting to Rs. 26.91 Crores has been approved by the CSR committee in its 22 nd meeting dated 06 th April 2019. A copy of the updated list of projects is attached herewith which includes projects that are completed, in progress and yet to start. (Annexure -6).
4. (xxvii)	As part of CSR programme the company shall conduct need-based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards,	Need based assessment have been conducted by CSR team of OPGC which was followed by a baseline survey taken up by a professional agency. The project list of Rs. 26.91 Crores provides the details of projects to be undertaken for development of local people as per their expressed needs and priorities.

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	vocational training etc. can form a part of such programme. Company shall provide separate budget for community' development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.	
4. (xxviii)	The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing fluoride free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	This remains high on OPGC'S agenda. The approved project list sheds adequate light on how OPGC has planned elaborately to provide lasting and sustainable water solutions to people of nearby villages. A scientific Hydrology study was conducted to guide the process of project implementation. OPGC has also started mobilising people's opinion and support for sustainable water solutions in collaboration with experts and Jharsuguda district authority.
4. (xxix)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Construction phase has been completed.
4. (xxx)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and	Complied. Published in Sambad (Odiya) & New India Express (English) in March 2010.

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	may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in .	
4. (xxxii)	A copy of the clearance letter shall be sent by the proponent to concern Panchayat, ZilaParasad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied in March 2010.
4. (xxxiii)	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Cell with qualified staff has already been functioning for the purpose.
4. (xxxiv)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	<ul style="list-style-type: none"> • The status of compliance is being uploaded in Website and reports are also being sent to the said offices. • 2 Nos of LED display boards are installed at the Plant main gate for display of environmental information. <p style="text-align: center;">Website path http://www.opgc.co.in/env/half_comp_powerplant.asp</p>
4. (xxxv)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well	This is being complied since October 2010.

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	by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	
4. (xxxv)	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	<p>Annual Environment Statement (Form-V) of 2X660 MW for the FY 2018-19 had been submitted to OSPCB & MoEF & CC regional office vide ITPS Letter No.5829/WE, dated 19.09.2019 and web-hosting of Environment Statement has also been done.</p> <p>Website path</p> <p>http://www.opgc.co.in/env/half_comp_powerplant.asp</p>
4. (xxxvi)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	<ul style="list-style-type: none"> • Reporting already commenced since October 2010. The compliance report is being sent to Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board, State Pollution Control Board and the Regional Office, OSPCB. • Web hosting of EC Compliance status is being done. <p>Website path</p> <p>http://www.opgc.co.in/env/half_comp_powerplant.asp</p>
4. (xxxvii)	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents	<ul style="list-style-type: none"> • Reporting already commenced since October 2010. • Web-hosting of compliance of stipulated in the EC conditions being done.

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	including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six-monthly bases. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	<ul style="list-style-type: none"> Criteria pollutants levels NOx (from ambient air and stack) is being displayed at the main gate of the power plant.
4. (xxxviii)	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	The project cost includes the provision for implementation of environmental protection measures as required. It is made strictly for environment protection measure.
4. (xxxix)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	The financial closure of the project was done on 23rd November 2012. NTP was issued to BHEL and BGR on 26th March 2014.
4.(xxxx)	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring	It is being done.

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COMPLIANCE STATUS OF THE ENVIRONMENTAL CONDITIONS

Environment Clearance No. J-13011/59/2008-IAII(T), dated 04.02.2010 and its subsequent amendment
vide clearance No J-13011/59/2008-IAII(T), dated 22.01.2014

Period-October 2019 – March 2020

Clause No.	EC Conditions	Compliance Status
	the compliance of environmental status.	
Additional Recommendations to OPGCL by MoEF in EC amendment dated 22.01.2014		
S. No	Recommendations	Compliance status
a	A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an inbuilt continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Coal & Ash samples have been sent to BRIT for radio activity analysis of Coal/fly ash and results are awaited, we have analysed the heavy metal content of Coal & Ash through Institute of Minerals & Materials Technology Bhubaneswar and results are enclosed as Annexure-7 for reference.
b	Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT Kanpur.	The monitoring has been periodically carried out through reputed and accredited agency (M/S SGS India Ltd., Visiontek Consultancy Services,)/Institutions (IIT, Chennai)
c	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	Complied. Details of renewable energy initiatives of OPGC has been enclosed as Annexure-8
d	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	<ul style="list-style-type: none"> • Adequate fugitive dust control measures had been implemented to prevent impact during construction phase • Adequate dust suppression systems (water sprinklers & Dry Fog) have been installed to suppress fugitive dust in coal and ash handling area for the operational stage • Mechanized road sweeping machines deployed for filtering loose dust from the roads.
e	No ground water shall be extracted for use in operation of the power plant even in lean season.	Ground water is not being used. All requirement of water is met from Hirakud reservoir.
f	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	Minimum required environmental flow is being maintained as per the water agreement with Water Resource Department.
g	No water bodies including natural drainage system in the area shall be	No water bodies have been disturbed due to project and will not be disturbed in future due to operation.

ODISHA POWER GENERATION CORPORATION LTD

IB THERMAL POWER STATION (2x660MW)

COMPLIANCE STATUS OF THE ENVIRONMENTAL CONDITIONS

Environment Clearance No. J-13011/59/2008-IAII(T), dated 04.02.2010 and its subsequent amendment
vide clearance No J-13011/59/2008-IAII(T), dated 22.01.2014

Period-October 2019 – March 2020

Clause No.	EC Conditions	Compliance Status
	disturbed due to activities associated with the setting up/operation of the power plant.	
h	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.	For mine void filling of ash, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained in close co-ordination with the State Pollution Control Board.
i	Three tier green belts shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.	<ul style="list-style-type: none"> • Green belt already exists all along the plant boundary. Details stated in condition no 4.xxi: • For Ash Pond, SPCB Odisha advised not to go for any plantation on the ash pond dykes looking towards the risk of dyke failure due to tree root channelling. • However, adequate water sprinkling arrangement has been made in the Ash Ponds for control of fugitive dust emission.
j	A common Green Endowment Fund shall be created, and the interest earned out of it shall be used for the development and management of green cover of the area.	Shall be complied.
k	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	<ul style="list-style-type: none"> • Baseline Survey has been completed by Sutra Consultancy Services, Bhubaneswar and the Final report is already available with OPGC. Monitoring is regularly done by OPGC CSR team. • Projects are currently under execution and appropriate time to get them evaluated by an external agency is not yet ripe. Impact measurement will be done in due course. An internal monitoring mechanism is already in place. As recommended, a proposal will be put up before OPGC Board of Directors to consider getting social audit conducted once all the approved projects have been successfully executed.

ODISHA POWER GENERATION CORPORATION LTD

IB THERMAL POWER STATION (2x660MW)

COMPLIANCE STATUS OF THE ENVIRONMENTAL CONDITIONS

Environment Clearance No. J-13011/59/2008-IAII(T), dated 04.02.2010 and its subsequent amendment
vide clearance No J-13011/59/2008-IAII(T), dated 22.01.2014

Period-October 2019 – March 2020

Clause No.	EC Conditions	Compliance Status
l	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.	A separate Environment Management Cell with qualified staff has already been functioning for the purpose. A senior qualified officer heads the Cell who directly reports to Unit Head.
m	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	OPGC has got well formulated EHS Policy. Also identified and designated responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations. (EHS Policy Enclosed as Annexure-9)


Alok Mukherjee
Director (Operations)
OPGC Ltd.

NAME OF THE INDUSTRY:- IB THERMAL POWER STATION (2 x 660 MW) OF ODISHA POWER GENERATION CORPORATION, BANHARPALI
STATUS OF UTILIZATION OF COAL ASH(FLY ASH AND BOTTOM ASH)

Sl. No.	Month	Power Generation (MWH)	Quantity of fly ash generated (MT)	Quantity of bottom ash generated (MT)	Total ash generated	Brick Manufacturing (MT)	Supplied to Industries		Mine void Quarry filling		Utilization in embankment/dyke raising(MT)		Other purpose (MT)					Total ash utilized (MT)	% of utilization		
							Cements	Asbestos	Quarry filling	Coal mine void filling	Dyke raising	Road making	Ceno sphere	Small land fill	Tiles	Aggregates	Agriculture/horticulture sector				
7	Oct'19	593933	129654	32414	162068	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6500	4.01
8	Nov'19	628537	148889	37222	186111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15130	8.13
9	Dec'19	412247	122954	30738	153692	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17486	11.38
10	Jan'20	552402	174382	43596	217978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11124	5.10
11	Feb'20	470586	131390	32847	164237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62000	37.75
12	Mar'20	544396	135621	33905	169526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15000	8.85
Oct'19-Mar'20		3202101	842890	210722	1053612	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127240	12.08


UK Pahi
Head-EHS



J-13011/59/2008 -IA.II (T)
Government of India
Ministry of Environment & Forests

BY SPEED POST

Paryavaran Bhawan
CGO Complex, Lodi Road
New Delhi-110 003
Dated: 22.01.2014.

To
M/s Odisha Power Generation Corporation Ltd.
Zone-A, 7th Floor, Fortune Towers,
Bhubaneswar- 751 023,
Odisha.

Ph: 0674-2303765; Fax: 0674-2303755/56

Sub: Expansion of existing Coal Based Thermal Power Plant by addition of 2x660 MW (Unit 3 & 4) at Village Banaharpalli, in Jharsuguda Distt., in Orissa by M/s Odisha Power Generation Corporation Ltd. - reg. Amendment and Extension of validity of Environmental Clearance.

Sir,

This has reference to your letters dated 05.06.2013 and 18.09.2013 requesting for amendment and extension of validity of environmental clearance accorded for the above mentioned project.

2. The matter was placed before the Expert Appraisal Committee (Thermal Power) in its 4th Meeting held during November 18-19, 2013. In acceptance of the recommendation of the Expert Appraisal Committee (Thermal Power) and in view of the information/clarification furnished by you, with respect to the above mentioned power project, the following amendments are made in two conditions i.e. (xii) & (xviii) specified in the earlier EC accorded to you vide our letter of even no. dated 04.02.2010.

a) The condition no. (xii) of Para No.4 shall be read as *"Closed cycle cooling system with induced draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms"* **instead of**

"Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms."

b) The condition no. (xviii) of Para No.4 shall be read as *"Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil"* **instead of**

"Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil."

3. Further, under Para no.4 of this Ministry's letter of even no. dated 04.02.2010, after the condition no. (xl), the following conditions shall be inserted:

- (xli) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (xlii) Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT Kanpur.
- (xliii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.
- (xliv) Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.
- (xlv) No ground water shall be extracted for use in operation of the power plant even in lean season.
- (xlvi) Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.
- (xlvii) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.
- (xlviii) Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.
- (xlix) Three tier green belt shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.
 - (i) A common **Green Endowment Fund** shall be created and the interest earned out of it shall be used for the development and management of green cover of the area.
 - (ii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.
 - (iii) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and

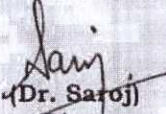
qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.

(liii) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.

4. All other conditions mentioned in this Ministry's letter of even no. dated 04.02.2010 shall remain the same.

5. Regarding the extension of validity of environmental clearance, since the validity will only expire in Feb, 2015, you may request this Ministry along with updated Form-I only before 6 months from expiry of the validity of EC, if required.

This issues with the approval of the Competent Authority.


(Dr. Saroj)
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Orissa, Bhubaneswar.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Orissa State Pollution Control Board, A-118, Nilkanta Nagar, Unit - VIII, Bhubaneswar- 751 012.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A/3, Chandeseckhapur, Bhubaneswar - 751023.
7. The District Collector, Jharsuguda District, Orissa.
8. Guard file.

(Dr. Saroj)
Director

Report of Plantation Monitoring Committee

of the

District Environment Society, Jharsuguda

for the year 2017-18

Report of the Plantation Monitoring Committee of the District Environment Society, Jharsuguda-2017-18.

INTRODUCTION

The Jharsuguda District Environment Society constituted a Plantation Monitoring committee on 30.04.2013 with Prof. DR. Naik, Former Vice-Chancellor, Sambalpur University and Honorary Wildlife warden for Jharsuguda District as its Chief. The ACF, Jharsuguda Forest Division, the Chief Co-ordinator of the Eco-Club Co-ordination Committee and representatives from the State Pollution Control Board and Horticulture Department were other members. Since then the committee is inspecting industrial premises at least twice every year for monitoring the plantation activity. The report submitted by the committee was discussed in the Review meeting held on 20.12.2016 with the Collector as the Chairman. It was decided that the Plantation Monitoring Committee should inspect the industrial premises and submit its report for further action.

Inspection (2017-18):

The Plantation Monitoring Committee comprising of Prof. D.R. Naik, Former Vice-Chancellor, Sambalpur University and Honorary Wildlife Warden, Sri. P.K. Dhal, ACF, Jharsuguda Forest Division, Sri Prahallad Naik, Chief Co-ordination, Eco-Club Co-Ordination Committee, Sri Devadutta Mohanty, Assistant Environment Engineer, State Pollution Control Board and a representative of the Horticulture Department inspected in the various industrial premises as per the following schedule.

Date	Industries/Mines inspected
04.10.2017	MCL Lakhanpur Area, OPGC, Banharpali Ltd., TRL, Krosaki Ltd.
07.10.2017	Vedanta (Sesa Sterlite) Limited, Ultratech Cement Ltd., Sven Star Steel Ltd., MCL Ib Valley Area, Gopal Coalwashery.
23.08.2017	SMC Power Generation Limited, L.N. Metallic's, MCL Orient Area

General Remarks

- (1) It was not intended to conduct the census of trees planted over the years. An overall estimation of the greenery in the accessible areas within the industrial premises was made. In addition, patches of vacant Govt. land outside their premises assigned to some of them for creating 'green belt' were also inspected. Care was taken to note the species of tree planted.
- (2) It was found that some of the Industries/Mines have not been able to meet the 33.3% mandatory requirement. The concerned Industries have been advised to make up the deficiency by the end of 2017-18.
- (3) It was noted that some Industries have planted trees like Eucalyptus and Acacia over extensive areas. These species are not environment friendly. Hence the concerned Industries were advised to undertake intercropping with other species of trees such as Neem, Jamun, Karanja, Simaruba, Jackfruit and such other species with thick foliage and big crown. In due course, Eucalyptus and Acacia may be eliminated.

(4) As Principal Chief Conservator of Forest, Odisha has allotted target of 1,25,000 nos. of seedlings to be planted during 2017-18 under Corporate Sector in Jharsuguda District, a scheme has been prepared by the Divisional Forest Officer, Jharsuguda for raising Urban/ Peri-Urban plantation which will be funded by MCL & Vedanta (Sesa Sterlite) Ltd.. Copy of the scheme has been forwarded to the appropriate authority of MCL & Vedanta (Sesa Sterlite) Ltd. vide Letter No.4411 and Date.14.12.2016 and Letter No.1016 dt. 29.03.2017 respectively. However, MCL Authorities have provided required funds the DFO, Jharsuguda for raising one lakh saplings for plantation in Urban/ Peri-Urban area of Jharsuguda District.

Table showing the Area covered and Number of Saplings planted by various Industries/Mines:

Sl No.	Name of Industries/ Mines	Total land Acquired (Ac)	33.3% of area (Ac)	Land planted (Ac) up to 2016-17	Plantation Achieved during 2017-18		Total area planted inside premises (Ac) up to 2017-18	Total nos. Of saplings planted during 2017-18 (inside & outside)	Remarks/ percentage Achieved
					Inside premises (Ac/No)	Outside premises (Ac/Km)			
1	SMC Power Ltd.	284	94.57	93.8	5.1	0	96.92	2000	34.12%
2	TRL Krosaki	386	128.53	135.0	1.54	0	136.4	1000	35.33%
3	Global Washery	21.17	7.04	7.9	0	0	7.9	0	37.31%
4	Ultratech Cement Ltd.	165.25	55.02	55.02	0	0	55.02	0	33.33%
5	Vedanta (Sesa Sterlite)	2371.0	789.54	615.6	19.0	0	624.6	18000	26.34%
6	OPGC Ltd.	1227.5	408.75	207.0 (210.0 Ac natural forest)	7.0	0	424.0	1000	34.60% (4000 nos seedling distributed)
7	MCL Ib Valley, Area	3474.558	1158.07	458.62	0	0	458.62	0	13.19%
8	MCL Orient, Area	3472.422 (surface braking area-247.5)	82.41	143.97	0	0	143.97	0	58.16%
9	MCL Lakhanpur, Area	3610.13	1202.17	1084.32	3.51	0	1087.83	5625	30.13%
10	Seven Star Steel	59.0	19.65	21.5	1.62	0	23.12	1200	39.18%
11	LN-Metallic's	25.41	8.46	12.0	1.4	0	13.4	900	52.73%
Total: -								29,725	

Comments on the Plantation Activities of Different Industries & Mines:

1. Ultratech Cement Ltd.:

- A) Saplings Planted on the embankments of the reservoir and along the railway track are well maintained. The 11 acres patch lately planted during the previous season was inspected. The area was inaccessible and filled with grass. This area would be inspected again. They are advised to clean up the tall grass and take adequate care of the saplings.
- B) They have done plantation in the Arda Gramya Jungle (about 4 acres). Many of the saplings are dead. They need to be replaced with neem, Karanj, and such other saplings.
- C) The Avenue plantation from Dhutra village to Badpulia is not visible. Proper maintenance of the saplings is necessary.
- D) No plantation has been taken up during 2017-18.

2. Seven Star Steels Ltd.:

- A) Maintenance of plantation sites satisfactory.
- B) Damaged tree-guard/gabion for the Avenue plantation may be repaired/replaced.

3. LN Metallic's:

- A) Maintenance satisfactory. Care may be taken during the dry season to ensure survival of the saplings planted during the Current year. Fire-line should be maintained to check possible fire accident having summer.

4. SMC Power Generation Ltd.:

- A) Maintenance satisfactory. It is nice to see their greenery getting greener. Sustained efforts are necessary to keep it up.
- B) They have a nursery of their own. They are also providing sapling in the neighbouring areas. Preparatory work for the nursery may be started in January. However, the current year plantation work not up to the Mark.

5. Vedanta (Sesa- Sterilite) Ltd.:

- A) They have done plantation over an extensive area of their ash Pond dyke and in very small patches inside the premises of plant area. The area was inaccessible, but the greenery was visible.
- B) They have developed a nursery. Preparation for the necessary may be started in January.
- C) They may prepare a sketch map showing the green belt and number the different sectors for proper assessment of their greenery.
- D) Plantation done lately during the previous season may be properly maintained before the next inspection.
- E) Spacing between saplings should be 2 m. to 2.5m.
- F) As they have planted very small size seedlings, they have been advised to procure seedlings from Forest Department nursery from next year.

6.OPGC:

- A) Maintenance of plantation sites satisfactory.
- B) Saplings planted in the extension area are small. Special care need to be taken for their maintenance.
- C) They have nursery for their own use and for distribution among the local community.

7.Global Coal Washery:

- A) Maintenance of plantation sites satisfactory.
- B) Plantation in the railway siding remains to be inspected.

8.MCL Ib Valley Area:

- A) No plantation has been done by during 2017-18

9. MCL Lakhanpur Area:


- A) Plantation sites of 2016-17 satisfactory. Replacement of the dead sapling advised.
- B) Plantation of the current season is satisfactory an about 20,000 saplings has been planted.

10.MCL Orient Area:


They reported that they have distributed saplings to different educational institutions. These institutions have to be inspected for on the spot verification. They have planted around 200 saplings in the colony area. They may be assigned Govt. land for plantation.

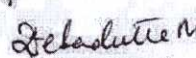
11.TRL-Krosaki:

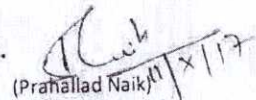
- A) Plantation satisfactory.
- B) They have a well maintained nursery.


(D.R. Naik)
Ex VC & Honorary
WL Warden


(P.K. Dhal)
ACF, Jharsuguda
Forest Division


(A. Lugun)
A.D Horticulture
Jharsuguda


(D. Mohanty)
Asst. Env. Engineer
Jharsuguda


(Prahalad Naik)
Chief Co-ordinator,
Eco-Club, Jharsuguda

Annexure- V (A)
IB THERMAL POWER STATION
SUMMARY OF GREEN BELT & PLANTATION, TILL MARCH 2020

- Total Plantation & colony Area-**1227.5 acres**
- Greenbelt & High-Density Trees- **425 acres**
- % Greenbelt & High-Density Trees- **34.6**
- Total trees planted- **322399 Nos.**
- Total trees survived-**237694 Nos.**
- % of survival-**73.7**

Plantation & sapling distribution

Year	Planted	Sapling distributed
2012-13	350	2000
2013-14	1300	6000
2014-15	3000	5000
2015-16	700	4480
2016-17	8200	15000
2017-18	1885	4000
2018-19	10725	4600
2019-20	265	4500 *Grafted mango saplings-4000 Nos Forest species trees saplings-500 Nos

*Compensatory plantation of 260 acres has been done in Deogarh area.

Besides, a nursery of 25000 capacity has been developed


UK Pahi
Head-EHS



Annexure- V (B)

ODISHA POWER GENERATION CORPORATION LTD

IB THERMAL POWER STATION

YEAR WISE TREE PLANTATION DETAILS OF OPGC AT ITPS

Location	Name of Agency	Year	No. of trees planted	Name of the Species	No. of trees alive	Plant Area	Green Belt & High density natural green belt
Colony, Guest House, Hallipad, Periphery, Pump House, Filter House, Stores etc.	Local agencies	1991-92/92-93	12,000	Akashia	9,550		
Periphery of Boundary Wall (Green Belt)	O.P.G.C.	1992-93/93-94	38,500	Sirish			
Vacant place in front of SBI, Old Hanuman Temple back side of Store yard, colony road side.	Sidhartha agency, Jharsuguda.	1993-94/94-95	23,800	Kadamba	23,300		
i) Back side of Autobase, Falsamunda village area.	i) Sidhartha agency, Brukshyaropan Samiti, Jharsuguda.	1994-95/95-96	20,000	Panash			
ii) Coal yard side, either sides of main roads, Plant boundary, Railway lines, inside area between D.M. Plant, R.W. pump house and compound wall.	ii) Departmentally. Total:-		37,000	Neem			
Both sides of Rly. inline out side the plant boundary and Ash Pond area.	i) Green channel, Brukshyaropan Samiti & 3 Nos. of Club and Yubak Sangha	1995-96/96-97	40,000	Bottle brush	15,000		
Jhawn & Plantation coal handling plant area & other species on both sides of roads inside plant.	ii) Departmentally		34,500	Bottle Palm			
Fuel Oil Pump house area, School, Hospital, Police station Outer periphery of children Parks, Playgrounds etc. Ash Pond	iii) Local agencies Total:-		5,500	Chakunda			
Both side of Security road.	i) Brukshyaropan Samiti		5,000	Jhaun	15,000		
	ii) Departmentally		5,000	Sisoo			
	i) Brukshyaropan Samiti		5,000	Golmohar			
	ii) Departmentally		5,000	Eucalyptus	31,155		
Ash Pond	Total	1998-99/99-00	5,500	Gambhari			
Ash Pond	By agencies	2000-2001	5,058	Jarul			
CHP & Plant	-do-		5,966	Litchi			
Colony	-do-		11,500	Amba			
Ash Filling Area (low lying area), Colony, Warehouse, SVM School (ITPS), Rengali School	-do-	2006-07	1,800	Baula			
Inside Plant campus	-do-	2007-08	3,000	Radhachuda			
Distribution of fruit bearing tree in Periphery villages	-do-	2008-09	4,000	Deodaru			
Block Plantation in association with District Environmental Society	Majhi		3,000	Karanja			
Fruit bearing tree plantation at Gujapar and in Schools	do		350	Pijull			
CHP & Learning Centre on Earth Day World Env Day	Self	2009-10	120	Saguan			
Govt. Land near Rengali Nursery	Karunakar Sahu		5,000	baxa			
Vatarika & Adhapada Mandir- 150 nos fruit & flower tree, Inside Colony vacant place- 100 neem trees, World Env day- 150 neem & Devdaru tree inside Plant Premises, Gujapahar- 200 Fruit bearing trees, 800 Fruit bearing, Radha Chuda etc planted in Binika & Banaharpali through villagers	Self & through villagers	2010-11	1500	Mandar			
Vacant space in between Boiler area scrap yard & clarifiers	Self	2010-11	100	Rangani			
Inside Colony Vacant Places	Self	2011-12	150	Areca Palm			
				Juniperous	65,000		
				china Palm			
				Musunda			
				Karabira			
				Golap			
				Thuja			
					15,500		
					4,500		
					0		
					4,842		
					10,000		
					1200		
					2300		
					2100		
					2500		
					50		
					75		
					90		
					2000		
					900	1227.5	425
					70		
					100		

Vacant space at Coal Handling Plant	Self	2012-13	350	Neem, Devdaru	200
Distribution of fruit bearing & Forest plant species in Periphery villages, 2000 nos	Self	2012-13	2000	Teak, Mango, Lemon	1000
Avenue Plantation at Banharpali & Ash Pond Road & 100 nos inside Plant premises	Self	2013-14	1300	Kadamba, Limba, Karanga, Radhachuda. Teak, Devdaru etc	900
Sapling Distribution, 6000 nos	through nearby villagers		6000	Teak, Guava, Jackfruit, Dalimb etc	3000
Sapling Distribution, 5000 nos	through nearby villagers	2014-15	5000	Teak, Guava, Teak, etc	2500
Block & Avenue Plantation (OPGC old Pump House vacant space, old Adhapada Shiv Temple premises near Banaharpali & Tarrini Temple premises at Pump House Para)	Self		3000		1050
Sapling Distribution	through nearby villagers, 4480 nos	2015-16	4480	Teak, Baula, Guava, Lemon, Karanj etc	2100
Plantation inside Plant and Colony	Self		700		650
Plantation inside Plant and Colony	Self	2016-17	200	Baula, Mango	192
Plantation inside Plant	Self		8000	Karanja, Neem, Baula	8000
Saplings Distributed, 15000 nos	Others			Grafted Mango, Guava, Teak, etc	
Plantation inside plant & township * 4000 Nos of mango sapling distributed	Self	2017-18	1885	Kadamba, Neem, Bakul, Siris & Karanja	1880
Gap Plantation	Self	2018-19	10725	Baula, Neem, Karanj, Mango, Arjun, Sisoo, Teak.	10725
Plantation inside Plant and Colony	Self	2019-20 (Till Sep'19)	260	Karanja, Neem Bakul	260
Total			322,394		237,689
% Survival					73.7
Green Belt%					34.6

In addition to above plantation at ITPS, Compensatory Afforestation has been done by OPGC over 260 Ha. non-forest land in Deogarh, through Forest Department, Govt. Of Odisha.


UK Pahi
Head-EHS

S.N	Project Theme	Project Description	Name of the Village	Name of Gram Panchayat	Oper. Area	Approved Budget by CSR Committee & BOD in Rs. Lakhs	Project Status As on 20-09-2018
1	Water & Sanitation	Drinking water project	Sarbahal	Sanghumda	MGR	16.00	Awarded & Ongoing
2		Water Sanitation & Hygiene (WASH) Project	08 villages of Telenpali G.P	Telenpali	Power Plant	359.00	Completed
3		Water Sanitation & Hygiene (WASH) Project	08 Villages of Kusuraloi G.P	Kusuraloi	MGR	416.00	Awarded & Ongoing
4		Water Sanitation & Hygiene (WASH) Project	22 Villages of Tilia G.P	Tilia	N. Ash Pond	600.00	Awarded & Ongoing
5		Water Sanitation & Hygiene (WASH) Project at Rengali Village in all 05 Hamlet & habitations	Rengali	Kumarbandh	Power Plant	125.00	Awarded & Ongoing
6		Installation of drinking water project	Beleituda	Rajpur	MGR	22.00	Awarded & Ongoing
7		Toilet for Girls in High School	Phatapali	Tilia	N. Ash Pond	5.00	Completed
8		Kumarbandh Education Complex (School & College) Drinking Water Project	Kumarbandh	Kumarbandh	Power Plant	5.00	Completed
9		Kumarbandh College Sanitation Project	Kumarbandh	Kumarbandh	Power Plant	10.00	Completed
10		Kumarbandh Police Station Sanitation Project	Kumarbandh	Kumarbandh	Power Plant	5.00	Completed
11		Construction of Toilet Facility at District Police Line	Jharsuguda	Jharsuguda	Power Plant	30.00	Completed
12		Drinking water Project at Bhaludole & Sargipali village	02 Villages	Kumarbandh	Power Plant	20.00	Estimate Stage
13	Education	Cycle stand for 100 Children in High School	Phatapali	Tilia	N. Ash Pond	5.00	Completed
14		Construction of High School Building	Remenda	Remenda	Power Plant	40.00	Completed
15		Construction of School Building & Anganwadi Centre	Telenpali	Telenpali	Power Plant	25.00	Completed
16		Construction of 02 Additional Class Rooms in High School	Banharpali	Telenpali	Power Plant	15.00	Completed

S.N	Project Theme	Project Description	Name of the Village	Name of Gram Panchayat	Oper. Area	Approved Budget by CSR Committee & BOD in Rs. Lakhs	Project Status As on 20-09-2018
17	E	Construction of Cycle Stand at U.P. School	Banharpali	Telenpali	Power Plant	5.00	Completed
18		Construction of two Classrooms at School	Bargad	Kusuraloi	MGR	15.00	Awarded & Ongoing
19		Basic materials to Primary School Hostel (PSH) at Kanaktura (Sundargarh District)	Kanaktura	Kanaktura	MGR	4.00	Completed
20		Leveling of Pathway at Kantatikira Project U.P School	Kantatikira	Kumarbandh	Power Plant	1.25	Awarded & Ongoing
21	Rural Development	Deepening of village pond at Saradhapali village	Saradhapali	Kumarbandh	Power Plant	2.75	Awarded & Ongoing
22		Construction of Kalyan Mandap	Kechubahal	Chandnimal	MGR	35.00	Awarded & Ongoing
23							
		Excavation of new Pond	Sarbahal	Sanghumda	MGR	10.00	Awarded & Ongoing
24		Deepening of village Pond	Kanaktura	Kanaktura	MGR	5.00	Completed
25		Construction of Bathing Ghat	Kechubahal	Chandnimal	MGR	3.00	Completed
26		Renovation of Pond (Gheemunda) Rohidas Para	Chandnimal	Chandnimal	MGR	5.00	Completed
27		Digging of village Pond	Gaudmal	Gaudmal	MGR	12.00	Completed
28		Renovation of Pond & Construction of Bathing Step (Bada Kanta)	Rajpur	Rajpur	MGR	10.00	Completed
29		Deepening of Village Pond	Ambdhar	Rajpur	MGR	10.00	Completed
30		Construction of New School Building	Sarbahal	Sanghumda	MGR	14.00	Awarded & Ongoing
31		Repair and Annual Maintainance Contract (AMC) of Street Light		Rajpur	MGR	15.00	Estimate Stage
32		Repairing of Road from Telenpali gate to Pump House Chawk	Telenpali	Telenpali	Power Plant	45.00	Cancelled
33		Construction of Road to village	Gaudmal	Gaudmal	MGR	12.00	Awarded & Ongoing
34		Construction of Community Centre	Chandnimal	Chandnimal	MGR	10.00	Awarded & Ongoing
35		Construction of Community Centre	Sarbahal	Sanghumda	MGR	10.00	Completed
36							
		Construction of community centre	Junanimunda	Rajpur	MGR	8.00	Awarded & Ongoing
37		Construction of community centre	Beleituda	Rajpur	MGR	8.00	Awarded & Ongoing
38							
	Ramela Pada Community Centre	Badsarua	Tilia	N. Ash Pond	8.00	Completed	
39							
	Phatapali (Saharapada) Community Centre	Phatapali	Tilia	N. Ash Pond	8.00	Completed	

S.N	Project Theme	Project Description	Name of the Village	Name of Gram Panchayat	Oper. Area	Approved Budget by CSR Committee & BOD in Rs. Lakhs	Project Status As on 20-09-2018
40		Community Centre (Near Bus Stand)	Tilia	Tilia	N. Ash Pond	8.00	Completed
41		Community Centre (near Tilia market)	Nuapada	Tilia	N. Ash Pond	8.00	Completed
42		Community Centre at Pudhipali	Tilia	Tilia	N. Ash Pond	8.00	Completed
43		Community Centre	Binika	Telenpali	Power Plant	8.00	Completed
44		Bhagabanpali Kanta (Birtia) Renovation	Bhagbanpali	Tilia	N. Ash Pond	4.00	Completed
45		Singhda bandh Pond Renovation	Singheipali	Tilia	N. Ash Pond	4.00	Completed
46		Shabandh (Kantatikra) Pond Renovation	Kantatikira	Tilia	N. Ash Pond	4.00	Completed
47		Thorapali Pond Renovation	Thorapali	Tilia	N. Ash Pond	4.00	Completed
48		Sivakanta Bathing Steps (two)	Badsarua	Tilia	N. Ash Pond	3.50	Completed
49		Nua Kanta Bathing Steps (two)	Pudhipali	Tilia	N. Ash Pond	3.50	Completed
50		Pipal Kanta Bathing Steps (two)	Kantatikira	Tilia	N. Ash Pond	3.50	Awarded & Ongoing
51		Tali Kanta Bathing Steps (two)	Phatapali	Tilia	N. Ash Pond	3.50	Completed
52		Renovation of pond at Charmal	Nuapada	Tilia	N. Ash Pond	7.00	Completed
53		Rengali Bandha 02 Bathing Steps	Rengali	Kumarbandh	Power Plant	3.50	Completed
54		Pond Renovation	Bhaludole	Kumarbandh	Power Plant	4.00	Awarded & Ongoing
55		Pond Renovation	Banikdera	Kumarbandh	Power Plant	4.00	Completed
56		Pond Renovation	Kantapali	Kumarbandh	Power Plant	4.00	Completed

S.N	Project Theme	Project Description	Name of the Village	Name of Gram Panchayat	Oper. Area	Approved Budget by CSR Committee & BOD in Rs. Lakhs	Project Status As on 20-09-2018
57		Dunguri Kisan Pada Pond Renovation & 02 Bathing Steps	Rengali	Kumarbandh	Power Plant	7.00	Completed
58		Sajni Kanta Pond Renovation	Budhapali	Kumarbandh	Power Plant	4.00	Completed
59		Birtia Kanta Renovation and 02 Bathing Steps	Barihapali	Sunari	Power Plant	7.00	Completed
60		Renovation of Rani Sagar Pond	Old Adhapada	Telenpali	Power Plant	4.00	Completed
61		Telenpali Upper Bandh 02 Bathing Ghats	Telenpali	Telenpali	Power Plant	3.50	Completed
62		Construction of Community Centre	Sargipali	Kumarbandh	Power Plant	15.00	Completed
63		Construction of Community Centre	Kantatikira	Kumarbandh	Power Plant	10.00	Completed
64		Electrification of Village(Part of WASH Project)	Sahareipada	Telenpali	Power Plant	7.00	Completed
65		Construction of Bus Stop	Kusuraloi	Kusuraloi	MGR	5.00	Completed
66		Construction of Kalyan Mandap at Suitable Place	Telenpali G.P	Telenpali	Power Plant	30.00	Awarded & Ongoing
67		Kalyan Mandap at Ambdhar	Ambdhar	Rajpur	MGR	35.00	Estimate Stage
68		LED Street Light on Main Road	Banharpali	Telenpali	Power Plant	5.00	Completed
69		LED Street Light on Main Road	05 G.P	05 G.P	Power Plant	150.00	Completed
70		Installation of High Mast light	Adhapada	Kusuraloi	MGR	9.00	Completed
71		2.1 K.M LED Street Light on Main Road	Belpahar Municipality	Belpahar Municipality	MGR	30.00	Completed
72		LED Street Light Project in Tilia Revenue Village (including all its hamlets/ constituent padas)	Tilia	Tilia	N. Ash Pond	50.00	Awarded & Ongoing
73		Erection/ Construction of New Electrical Infrastructure in Bargad Village near ITPS	Bargad	Kusuraloi	Power Plant	50.00	Estimate Stage
74		Bus Stop at Telenpali Market Bus Stand	Telenpali	Telenpali	Power Plant	5.00	Completed
75		Renovation of Asthai Kanta	Adhapada	Kusuraloi	MGR	10.00	Completed
76		Deepening of Village Pond & 02 Bathing Steps	Phalsamunda	Kusuraloi	MGR	7.00	Completed
77		Deepening of Naik Kanta	Khandsa	Kusuraloi	MGR	4.00	Completed
78		Renovation of Village Pond	Bargad	Kusuraloi	MGR	4.00	Completed