

ODISHA POWER GENERATION CORPORATION LTD.

(A Government Company of the State of Odisha)

CIN: U40104OR1984SGC001429

Ib Thermal Power Station

Banharpali, Dist.: Jharsuguda, Odisha – 768 234, India

Plant Manager : (+916645) 289266, Fax: (+916645) 222-230

Factory Manager : (+916645) 222224, Fax: (+916645) 222-230



Letter No. ITPS/1868/WE

May 29, 2026

The Deputy Director General of Forest(C)

Ministry of Environment Forests & Climate Change

Eastern Regional Office

A/3, Chandrasekharpur

Bhubaneswar – 751023

Sub.: **Half yearly Environmental Status Report of Odisha Power Generation Corporation (2X660 MW ITPS),
Banharpali, Dist. Jharsuguda for the period from October 2025 – March 2026.**

Ref.: ITPS Environmental Clearance No. No-J-13011/59/2008 for 2X660 MW Unit#3 & Unit#4 & Subsequent
Amendments

Dear Sir,

This has reference to the above subject and cited references.

Kindly find enclosed the half-yearly Environment Compliance report of Odisha Power Generation Corporation (2X660 MW ITPS) for the period from **October 2025 – March 2026**.

We have also uploaded the half yearly compliance status for the mentioned period in OPGC **website-
www.opgc.co.in**. We have also mailed the same for your ready reference and kind perusal.

Thanking you

Sincerely yours,

Anjana Ranjan Dash
Director (Operations)

Enclosures as above

- CC: i. Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar – 751 012
ii. CPCB Regional Director Kolkata, Southend Conclave (5th Floor) 1582, Rajdanga Main Road Kolkata- 700107

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

Cl. 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. In case diversion of any drainage is required in future, permission shall be taken from competent authority.												
4. (ii)	The height of the existing ash pond shall not be increased to accommodate fresh disposal of ash slurry.	Since this condition pertains to EC of Unit#3 & Unit#4; hence it is implied that, "for fresh disposal of ash slurry from Unit#3 & Unit#4, height of the existing ash pond shall not be increased". The same is being fully complied. Ash from Units 3 & 4 has not been disposed in that time existing ash ponds i.e. (Ash Pond A & B). OPGC has constructed dedicated Ash Pond for its Unit#3 & Unit#4 at Tilia (Phase-1 & Phsase-2 Ash Ponds) which are operational. However, the heights of existing (Existing in the year 2010) ash dykes at Rengali are being raised for disposal of ash from Unit#1 & Unit#2. The levels of top of the height of ash ponds A, B and C are as follows <table border="1"> <thead> <tr> <th>Pond</th><th>Level of Top of Dyke envisage in 2010</th><th>Current Level of Top of Dyke in 2025</th></tr> </thead> <tbody> <tr> <td>A</td><td>208 m RL</td><td>210.5 m RL</td></tr> <tr> <td>B</td><td>208 m RL</td><td>208 m RL & Capped reclaimed</td></tr> <tr> <td>C</td><td>Not in Existence</td><td>211 m RL</td></tr> </tbody> </table> Further OPGC has taken CTE for all height raising & the point has been accepted as complied in a personal hearing dated 01.10.2025 which was chaired by Joint Secretary MoEF & CC.	Pond	Level of Top of Dyke envisage in 2010	Current Level of Top of Dyke in 2025	A	208 m RL	210.5 m RL	B	208 m RL	208 m RL & Capped reclaimed	C	Not in Existence	211 m RL
Pond	Level of Top of Dyke envisage in 2010	Current Level of Top of Dyke in 2025												
A	208 m RL	210.5 m RL												
B	208 m RL	208 m RL & Capped reclaimed												
C	Not in Existence	211 m RL												
4.(iii)	Wildlife conservation plan prepared in consultation with the office of the concerned Chief	The Site-Specific Wild Life Conservation Plan (SSWLCP) for the power plant has been prepared and got approved from Chief Wildlife Warden, Odisha on dt. 12th June 2014.												

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	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.	- 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. 2.01 Crore towards plantation activities against the plantation requirement mentioned in approved wild life management plan. In the FY 2025-26, OPGC has completed plantation activities through OFDC by adopting Miyawaki Plantation technology on 5 acres of land near Tilia village. Under biodiversity conservation plan, OPGC has installed bird nests inside its campus for protection and conservation of avifauna.
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.	Recent Hydrogeology study has been carried out in Post Monsoon 2025 & in Pre Monsoon 2026 by IIT Roorkee. No major adverse findings have been reported. The study states that the soil in the vicinity is highly impervious mostly made up basalt rock & therefore ground water recharge is not feasible & in majority of the borewells in the surrounding of the plant, the water table is very deep & recharge rate of the wells/bore wells is also very low. IIT has suggested to construct new ponds, deepen existing ponds as a measure to conserve water & create water shed. Attached as Annexure-1
4. (v)	A twin flue stack of 275 m height shall be provided with continuous online monitoring equipment's for SOx, NOx and RSPM (PM2.5 & PM10). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	- 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 SO2, NOX and PM parameters and real time data being transferred to SPCB & CPCB. - Exit velocity of flue gas has been maintained more than 22 m/sec (In the range of 22m/s to 25m/s) - Mercury emission and other emission parameters (PM, SO2 & NOx) of flue gas is being monitored periodically from January 2020 onwards through NABL accredited Lab and reports are being submitted. Mercury emission of the stack is also being monitored on monthly basis through NABL accredited lab and the results are enclosed as Annexure-2.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

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 . Third party NABL monitoring results are enclosed as Annexure-2
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.	• 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. • Ring header water sprinklers have been provided all around the ash dyke top to control fugitive dust emission. Work Zone monitoring report in support of the functioning of the Dust Suppression/Extraction System has been enclosed as Annexure-2
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.	OPGC has faced several genuine and unavoidable constraints that have adversely impacted the pace of ash utilization during the compliance cycle (2022–27). Some of the major challenges are summarized below: 1. Limited demand for fly ash in the immediate vicinity of the plant and dependence on external consumers. 2. High transportation costs and long lead distances to major utilization centres. 3. Inadequate rail transportation infrastructure during the initial years of the compliance cycle. 4. Seasonal fluctuations in demand from construction and infrastructure sectors. 5. Dependence on third-party (OSPCB) approvals and clearances for mine filling, extinct quarry reclamation, and other bulk utilization projects. 6. Presence of substantial stocked ash inventory accumulated over previous years.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW 1b Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	7. Requirement imposed by the Expert Appraisal Committee (EAC) vide MoM dated 26.05.2026 for evacuation of ash stored in Ash Pond-A and Ash Pond-C within five years. 8. Narrow village roads and low load-bearing capacity of existing transportation corridors restricting movement of heavy ash-laden vehicles. 9. Absence of a dedicated transportation corridor from Tilia Ash Pond. 10. Restrictions on movement of ash transportation vehicles through infrastructure owned by other industrial entities. 11. Transportation of ash from Tilia Ash Pond is presently constrained due to the non-availability of a dedicated Railway Over Bridge (ROB) connecting the PWD Road with the State Express Highway. The proposed ROB, being developed by Indian Railways, is currently under the tendering stage and has not yet been constructed. In the absence of the ROB, OPGC is compelled to utilize an alternate route passing through the land owned by M/s Shyam DRI for movement of ash transportation vehicles. Since the route does not form part of OPGC's dedicated transportation infrastructure and is dependent upon access through land owned by a third-party industrial entity, uninterrupted movement of ash transportation vehicles cannot be assured. Recently, Shyam DRI has expressed reservations regarding movement of OPGC's ash transportation vehicles through its land and has communicated its intention to restrict such movement. Consequently, the absence of the ROB has emerged as a significant logistical bottleneck affecting large-scale evacuation of legacy ash from Tilia Ash Pond. Completion of the proposed ROB by Indian Railways will provide direct connectivity between the PWD Road and the State Express Highway, eliminate dependence on third-party land, facilitate uninterrupted movement of ash transportation vehicles, and significantly enhance the pace of ash evacuation and utilization. 12. Restrictions imposed by TRL on movement of vehicles carrying loads exceeding 30 MT through its road network.
--	---

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

		13. Non-completion of the proposed Railway Over Bridge, resulting in continued dependence on third-party infrastructure for ash transportation. Notwithstanding the above constraints, OPGC has undertaken several significant initiatives to improve ash utilization, including: • Long-term ash supply arrangements with major cement manufacturers including Dalmia Cement and Ambuja Cement. • Deployment of dedicated railway rakes for transportation of fly ash. • Upgradation of Ash Handling Plants and silo infrastructure. • Registration and participation in NHAI road projects for large-scale ash utilization. • Development of mine filling and quarry reclamation projects. • Ongoing acquisition of land for a dedicated ash transportation corridor from Tilia Ash Pond. • Floating of an Expression of Interest (EOI) for transportation of ash through dedicated railway rakes to consumers located within a lead distance of 100–700 km. • Large-scale lifting and utilization of stocked ash from existing ash ponds. As a result of these sustained efforts, OPGC has achieved significant improvement in ash utilization performance. Ash utilization has increased substantially during FY 2025-26 and FY 2026-27, with utilization reaching approximately 98.74% on a year-to-date basis, demonstrating the effectiveness of the corrective measures undertaken.
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	• Pneumatic conveyer system with 3 nos. of dry ash storage silos have been constructed with capacity of 2300 MT each 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

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	existing ash pond. No ash shall be disposed of in low lying area.	is being monitored periodically, test reports are enclosed as Annexure-3 for kind reference. No ash shall be disposed in low lying area without taking consent from OSPCB. Although the EC condition stipulates that no ash shall be disposed in low lying area, subsequent guidelines of MoEF & CC/ CPCB dated 28.08.2019 & MoEF&CC Notification dated 31.12.2021 as amended, identifies reclamation of low lying areas using ash as a potential avenue for ash utilization. <u>Further, MoEF&CC Guidelines dated 28.08.2019 replaces the existing conditions (Specific & General) which prohibited the use of fly ash in abandoned mines/ low lying area/ soil conditioner in agriculture.</u> OPGC is following the Standard Operating Procedure (SoP) of OSPCB for Reclamation of Low Lying Area By Filling with Ash-October,2025 <u>In view of the above MoEF & CC has considered this point to be complied in the personal hearing dated 01.10.2025 which was chaired by Joint Secretary MoEF & CC.</u>
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.	The design & drawing of the Tilia ash pond has been provided by WAPCOS Ltd. OPGC has provided all safety measures for protection of Ash Ponds like Sand Chimney, Rock Toe, Garland Drain, Grass turffing, full-fledged decanted ash water recirculation system etc. OPGC has provided 1.5 mm HDPE membrane as liner for both Tilia Phase I and Tilia Phase II.
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.	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

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

		- 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-4 - The blow down of the IDCT is being utilised in ash handling and dust suppression purpose.
4. (xiii)	COC 5.0 will be adopted.	The average COC for FY 2025-26 was 5.01
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.	2 Nos of ETP of 200 m3/hour capacity each has been installed for treatment and utilisation of waste water generated from the plant. - Zero effluent discharge is being adhered. Effluent drains have been segregated from the Storm water drains. - Storm water is treated in surface water treatment system and is collected in Rain Water Harvesting Pond. The water is used back in process & in water sprinkling. Excess storm water is discharged ensuring the water quality
4. (xv)	A sewage treatment plant shall be provided, and the treated sewage shall be used for raising greenbelt/plantation.	1 MLD capacity Sewage Treatment Plant has been provided for treatment of sewage generated from colony and office buildings of OPGC. - 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.	Based on the detailed 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, and the 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 has been constructed. The rain water harvesting pond is operational since May'22.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

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.	• 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. • Coal stock yard is being managed through Coal first in first out method to reduce spontaneous combustion. • Compaction of coal stock pile is being done at regular intervals to reduce spontaneous combustion.
4. (xviii)	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.	• Storage facilities for auxiliary liquid fuel have been made in consultation with Dept. of Explosive, Nagpur. Further, the facilities have been brought into operation after getting valid license from Dept. of Explosive, Nagpur. • 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.	• Piezometers have been installed in existing ash pond and 16 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-5 for kind reference

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

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 reports are enclosed as Annexure-6.
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 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 %.	• ITPS has a total perimeter length of 12950 m out of which 12350 m has a green belt thickness of more than 100 m Further the overall green belt cover in the plant is more than 34.92% • However, in a stretch of 600m only along the MGR line, the provision of 100 m wide green belt is not possible due to layout constraint (Green belt thickness ranges from 20 m to 50 m) • District plantation monitoring committee, constituting of Ex Vice Chancellor & Honorary WL Warden, ACF, Jharsuguda Forest division, A.D Horticulture Jharsuguda, Asst. Env. Engineer Jharsuguda & Chief coordinator Eco-Club Jharsuguda. Survey report of District Plantation Committee conform to 34.86% (Plantation Committee visit for the FY 2025-26 completed on dt.11.11.2025, now the green belt percentage increased to 34.92%). Plantation activity is also being taken up every year. Detail plantation status is enclosed as Annexure 7(A). Plantation Committee report enclosed as Annexure 7(B) • The average survival rate of plants since 1991 is around 75.8%. However, it is pertinent here to mention that, the survival rate during the last 10 years is 100% which is ensured through AMC contracts and by replacement of dead plants. • OPGC is in process of gap plantation to increase the thickness of the abovementioned 600m length greenbelt. • OPGC is in process of developing greenbelt in an area of 26Ha of land within ITPS premises to achieve 40% green coverage.
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. Annual Health check-up of all labours is also being carried out in the same Hospital.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

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.	• 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 is provided for all personnel exposed to work in noisy area. • Periodic/ Annual health check is carried out for all employees & contractor partners. • Audiometric test is conducted annually for all employees working in noisy area & no abnormalities has been observed so far. A sample health check-up report has been enclosed as Annexure-8.
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 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.	• The project is located inside the existing plant premises. Six online CAAQ monitoring stations to monitor PM10, PM2.5, SO₂, NO_x & CO has been installed within impacted zone. Results are transmitted to SPCB & CPCB server on real time basis. Other than this, Ambient Air Quality is also being monitored through five permanent offline ambient air 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. • Third party Ambient Air monitoring report has been enclosed as Annexure-9. • Necessary control measures shall be implemented in case any exceedances are observed. • The half yearly compliance report is uploaded in OPGC website. Address: https://www.opgc.co.in/env/Half_Yearly_EC_Compliance_Report.asp
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. Note: The detailed R&R is applicable for Environment Clearance of OPGC-I (2x210 MW) and details are mentioned in the EC Compliance status report of OPGC-I

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

		Total 197 families were identified under R & R scheme. Out of 197 families 168 family received the benefit of direct employment in OPGC. Another 17 families received cash in lieu of employment. Balance 12 families which are not traceable, Govt. of Odisha has issued a newspaper advertisement on dated 14.08.2010. However, no families or person came forward to claim their R&R benefits. As the matter is a state subject, OPGCL is committed to follow the direction of State Govt. in this regard News Paper Advertisement is enclosed as Annexure-10																											
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.	As the construction period has already completed, the shortfall in CSR Expenditure during construction phase shall be adjusted in CSR Expenditure during operation phase. The details of Expenditure on CSR are as follows: <table border="1"> <thead> <tr> <th>Year</th><th>Stipulated CSR Exp. (Rs. Cr.)</th><th>Actual CSR Exp. (Rs. Cr)</th></tr> </thead> <tbody> <tr> <td>Construction Period</td><td>24.36 Cr</td><td>22.19</td></tr> <tr> <td>2020-21*</td><td>4.87</td><td>1.0238</td></tr> <tr> <td>2021-22*</td><td>4.87</td><td>0.9554</td></tr> <tr> <td>2022-23*</td><td>4.87</td><td>1.2074</td></tr> <tr> <td>2023-24</td><td>4.87</td><td>4.4081</td></tr> <tr> <td>2024-25</td><td>4.87</td><td>11.8657</td></tr> <tr> <td>2025-26</td><td>4.87</td><td>15.55</td></tr> <tr> <td>Total</td><td>29.22</td><td>35.01</td></tr> </tbody> </table> The CSR Expenditures during the years 2020-21 to 2022-23 were low due to COVID. However, OPGC contributed Rs.94.48 Lakh. to District Administration Jharsuguda during this period to for COVID-19 management. Further Rs.1 Crore has been donated to Chief Minister's Relief Fund. Further, the average annual expenditure during last two years is much more than stipulated and sets- off the shortfall in previous years. The detailed breakup of CSR projects for 2025-26 is enclosed as Annexure-11	Year	Stipulated CSR Exp. (Rs. Cr.)	Actual CSR Exp. (Rs. Cr)	Construction Period	24.36 Cr	22.19	2020-21*	4.87	1.0238	2021-22*	4.87	0.9554	2022-23*	4.87	1.2074	2023-24	4.87	4.4081	2024-25	4.87	11.8657	2025-26	4.87	15.55	Total	29.22	35.01
Year	Stipulated CSR Exp. (Rs. Cr.)	Actual CSR Exp. (Rs. Cr)																											
Construction Period	24.36 Cr	22.19																											
2020-21*	4.87	1.0238																											
2021-22*	4.87	0.9554																											
2022-23*	4.87	1.2074																											
2023-24	4.87	4.4081																											
2024-25	4.87	11.8657																											
2025-26	4.87	15.55																											
Total	29.22	35.01																											

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

4. (xxvi i)	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, 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.	• A Socio Economic Survey including need based assessment was undertaken through M/s Sutra in the year 2015-16. • Further as a part of the EIA study, a need based assessment survey has already been carried out through M/s Vimta Labs. • In addition, a comprehensive social impact assessment including need-based assessment study work has been awarded to Sambalpur University. Study of total 35 villages completed, including both Core and Buffer zone till March'26. The updated CSR programme list & expenditure has been enclosed as Annexure-12 (Expenditure from Project Cost)
4. (xxvi ii)	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. OPGC has also started mobilising people's opinion and support for sustainable water solutions in collaboration with experts and Jharsuguda district authority. • OPGC has undertaken many projects for construction of new village ponds & deepening of existing ponds. This not only helps in harvesting of rain water which is used for irrigation, washing & bathing but also helps in recharge of ground water. • At present OPGC is supplying piped drinking water to 17 villages. During summer drinking water supply is being done to 70 villages through tankers. In future the supply of drinking water shall be increase as per demand.
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,	• Construction phase has been completed.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	
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 may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in .	Complied. Published in Sambad (Odiya) & New India Express (English) in March 2010.
4. (xxxi)	A copy of the clearance letter shall be sent by the proponent to concern Panchayat, ZilaParisad / 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. (xxxi i)	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. - The detailed structure of the Environment Management Cell is enclosed as Annexure- 13.
4. (xxxi ii)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their	The status of compliance is being uploaded in Website and reports are also being sent to the said offices.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	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, SO₂, 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.	2 Nos of LED display boards are installed at the Plant main gate for display of environmental information. Website path http://www.opgc.co.in/env/half_comp_powerplant.asp
4. (xxxi v)	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 by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	Being complied. The last half yearly compliance report has been submitted to MoEF&CC vide letter no. ITPS/2686/WE dated 27.05.2025.
4. (xxx v)	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.	Annual Environment Statement (Form-V) of 2X660 MW for the FY 2024-25 had been submitted to OSPCB & MoEF & CC regional office vide ITPS Letter No. 4301/WE, dated 22.09.2025 and web-hosting of Environment Statement has also been done. The annual report for the FY 2024-25 has been enclosed as Annexure-14 (For FY 2025-26 it will be submitted before 30.09.2026)
4. (xxx vi)	The project proponent shall submit six monthly reports on the status of the implementation of the	Reporting already commenced since October 2010. The compliance report is being sent to Ministry of Environment and Forests, it's

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	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 bye-mail to the Regional Office, Ministry of Environment and Forests.	Regional Office, Central Pollution Control Board, State Pollution Control Board and the Regional Office, OSPCB. • Web hosting of EC Compliance status is being done. Website path http://www.opgc.co.in/env/half_comp_powerplant.asp
4. (xxx vii)	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents 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.	• Reporting already commenced since October 2010. • Web-hosting of compliance of stipulated in the EC conditions being done. • Criteria pollutants levels NOx (from ambient air and stack) is being displayed at the main gate of the power plant.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW 1b Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

4. (xxx viii)	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.	Pollution Control Expenditure from the period 1st October'2025 to 30th March'2026 are as bellow: ➤ ETP and cooling tower operation & maintenance cost -12.5 Lakhs ➤ ESP operation & maintenance cost-65Lakhs ➤ STP operation cost(Excluding manpower cost)-7.5 Lakhs ➤ Plantation cost-2.47Lakhs ➤ Coal Handling Plant-15 Lakhs ➤ General Plant House keeping cost-150Lakhs ➤ Ash Silo area housekeeping cost-100Lakhs ➤ Annual Hazardous waste Audit-0.6Lakhs ➤ Annual Ash Audit-1.5Lakhs ➤ Annual Env. Monitoring cost4Lakhs ➤ Maintenance of Online equipments-26.5Lakhs ➤ Ash Utilization cost-28.22 Cr. ➤ CTO & CTE fee for low lying area-2.87Lakhs ➤ Celebration of Environment Events-1.6Lakhs <i>Note: The above cost excludes Main Plant CTO & Authorization fees</i>
4. (xxxi x)	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 BGRE on 26th March 2014.
4.(xx xx)	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 the compliance of environmental status.	• It is being done.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

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.	- The Units # 3 and 4 were commissioned in 2019 & since then coal & ash samples have been analysed twice in 2020 & 2024. - A long-term study based on the annual analysis of coal & ash samples for radio activity & heavy metals is being awarded to BRIT & IMMT. - The radioactivity analysis report is attached as Annexure-15 and the heavy metal content of Coal & Ash test report is attached as Annexure-3 The Units # 3 and 4 were commissioned in 2019 & since then coal & ash samples have been analysed twice in 2020 & 2024. A long-term study based on the annual analysis of coal & ash samples for radio activity & heavy metals is being awarded to BRIT & IMMT. Recent samples has already been sent to BRIT and the results are awaited.
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., Asian Geotech consultancy Services,)/Institutions (IMMT, BBSR)
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-16
d	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	- 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.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

		• Mechanized road sweeping machines deployed for filtering loose dust from the roads. • Fugitive emissions are effectively controlled by OPGC through different mitigative measures & the effectiveness of these measures is reflected in the ambient air quality monitoring data. • Fugitive emissions monitoring is being conducted by Third party NABL Accredited Lab. Monitoring Report Attached as Annexure 2
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 disturbed due to activities associated with the setting up/operation of the power plant.	• No water bodies have been disturbed due to project and will not be disturbed in future due to operation.
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.	• No ash generated is used for agricultural purpose at present. • 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.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

i	Three tier green belts shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.	• 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, the entire ash dykes are turfed with grass to avoid any rain cuts. • Plantation of 16000 Saplings has been completed in FY 2025-26 around Tilia Ash Pond through Miyawaki Plantation method. The plantation activity carried out through Odisha Forest Development Corporation Ltd. • OPGC is in process of conducting plantation activity in another 5 acres of land (16000 Nos.) near Tilia Ash pond in Miyawaki Method through Odisha Forest Development Corporation Ltd in FY 2026-27.
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.	• OPGC has already achieved green belt % of 34.86 % against the stipulation of 33% and has been carrying out plantation activity by keeping budget provision in its Revenue Budget. The ultimate purpose is for green belt development. The last 9 years expenditure in Green belt development are as below: 2018-19 – 24 Lakhs 2019-20 – 34 Lakhs 2020-21 – Nil(Due to Covid-19) 2021-22 – 0.5 Lakhs 2022-23 – 18 Lakhs (17.5 Lakhs to District Administration for development of a Nursery) 2023-24 – 1.17 Lakhs 2024-25 – 10 Lakhs 2025-26 – 114 Lakhs Presently OPGC is in process of opening an green endowment fund.
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	• 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. • In addition, a comprehensive social impact assessment including need- based assessment study work has been awarded to Sambalpur University. Study of 35 villages has been completed including both core zone and buffer zone till March'26.

ODISHA POWER GENERATION CORPORATION LIMITED

2x660 MW Ib Thermal Power Station

Environment Clearance No-J-13011/59/2008 & Subsequent Amendments

Period October'2025 - March'2026

	the status of implementation of the scheme from time to time.	
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 (EHS Head) who directly reports to Unit Head (Occupier). The detailed structure of the management cell is enclosed as Annexure-13.
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 Environment Policy. The policy is enclosed as Annexure-17

Prepared By:



Sujata Sahu

Asst. Manager- Environment



Reviewed by:

Parthasarathi Panda

Sr. Manager-Environment

Draft Interim Report

IITR Project No. WRD/6029/25-26

**Conducting Hydro-Geological Study and submission of final study
report to OPGC for Stage-III Expansion Project Unit- 5&6
(2X660 MW) at ITPS, Jharsuguda, Odisha**

February 2026

Submitted to

Sponsor: Odisha Power Generation Corporation, Ltd.

Submitted by

**Prof. Ashish Pandey, Professor (Principal Investigator)
Dr. Umesh C. Chaube, Ex- Emeritus Fellow, IIT Roorkee (Consultant)**



**Department of Water Resources Development & Management
Indian Institute of Technology Roorkee
Roorkee 247 667, India
E-mail: ashish.pandey@wr.iitr.ac.in**



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited		
Customer Address	IB Thermal Power Station Banharipali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260224/ST272	Date of Sample Receiving	25.02.2026
Sample Description	Stack Emission	Date of Testing	25.02.2026-28.02.2026
Date of Sampling	24.02.2026	Date of Reporting	28.02.2026
Location	Unit-4	Test Report No./ULR	TC627026000000271F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Results
1	Total Mercury as Hg	mg/Nm ³	0.013

*****End of Report*****

Report prepared by *Bdhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharipali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260225/ST273	Date of Sample Receiving	26.02.2026
Sample Description	Stack Emission	Date of Testing	26.02.2026-28.02.2026
Date of Sampling	25.02.2026	Date of Reporting	28.02.2026
Location	Unit-3	Test Report No./ULR	TC627026000000272F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Results
1	Total Mercury as Hg	mg/Nm ³	0.010

*****End of Report*****

Report prepared by Bdhan
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by Harmohan Das
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260224/ST272	Date of Sample Receiving	25.02.2026
Sample Description	Stack Emission	Date of Testing	25.02.2026-28.02.2026
Date of Sampling	24.02.2026	Date of Reporting	28.02.2026
Location	Unit-4	Test Report No./ULR	TC627026000000271F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Protocol	Results
1	Temperature	°C	IS 11255: Part 3 :1985 (RA 2018)	128
2	Velocity of Gas	m/sec	IS 11255: Part 3 :1985 (RA 2018)	25.42
3	Quantity of Gas flow	Nm ³ /hr	IS 11255: Part 3 :1985 (RA 2018)	2833738.68
4	Concentration of Particulate Matter	mg/Nm ³	IS 11255(Part-1):1985 (RA 2019)	49.13
5	Concentration of SO ₂	mg/Nm ³	IS 11255(Part-2): 1985 (RA2019)	1314
6	Concentration of NO _x	mg/Nm ³	IS 11255 (Part-7): 2005(RA-2022)	441
7	Oxygen (O ₂)	%	As Per SOP Method	6.79
8	Carbon Dioxide (CO ₂)	%	As Per SOP Method	13.18

*****End of Report*****

Report prepared by *Bhagyashree*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accredited & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-8270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharipali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260225/ST273	Date of Sample Receiving	26.02.2026
Sample Description	Stack Emission	Date of Testing	26.02.2026-28.02.2026
Date of Sampling	25.02.2026	Date of Reporting	28.02.2026
Location	Unit-3	Test Report No./ULR	TC627026000000272F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Protocol	Results
1	Temperature	°C	IS 11255: Part 3 :1985 (RA 2018)	112
2	Velocity of Gas	m/sec	IS 11255: Part 3 :1985 (RA 2018)	25.52
3	Quantity of Gas flow	Nm ³ /hr	IS 11255: Part 3 :1985 (RA 2018)	2980099.02
4	Concentration of Particulate Matter	mg/Nm ³	IS 11255(Part-1):1985 (RA 2019)	48.21
5	Concentration of SO ₂	mg/Nm ³	IS 11255(Part-2): 1985(RA2019)	1203
6	Concentration of NO _x	mg/Nm ³	IS 11255 (Part-7): 2005(RA-2022)	425
7	Oxygen (O ₂)	%	As Per SOP Method	6.58
8	Carbon Dioxide (CO ₂)	%	As Per SOP Method	12.91

*****End of Report*****

Report prepared by *Bdhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

FUGITIVE MONITORING TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharipalli, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260226/WZ43	Date of Sample Receiving	NA
Sample Description	Fugitive Monitoring	Date of Testing	26.02.2026-27.02.2026
Date of Sampling	26.02.2026	Date of Reporting	28.02.2026
Location	Inside Plant	Test Report No./ULR	TC627026000000274F

ANALYSIS REPORT

Sl. No.	Sampling Location	Date of Sampling	UOM	Result
1	Tilia Ash Pond	26.02.2026	$\mu\text{g}/\text{m}^3$	408.25
2	Rengali Ash Pond	27.02.2026	$\mu\text{g}/\text{m}^3$	322.39

*****End of Report*****

*Note- As Per CPCB Guidelines, Permissible Exposure Limits for Industrial Area is $2000 \mu\text{g}/\text{m}^3$.

Report prepared by *Bhagyashree*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

GROUND WATER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251025/0395	Date of Sample Receiving	26.10.2025
Sample Description	Ground water	Date of Testing	26.10.2025-31.10.2025
Date of Sampling	25.10.2025	Date of Reporting	31.10.2025
Sample Quantity	2 litre	Environmental Condition	Temp.-26.9°C & RH- 62%
Location	Sansartikira Village	Test Report No./ULR	TC627025000000840F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Standard as Per IS-10500:2012	Result
1	pH at 25 °C	IS 3025 (P-11):2022	--	6.5-8.5	6.56
2	Total Suspended Solids at 104°C	IS 3025 (P-17):2022	mg/l	NA	7
3	Total Dissolved Solids at 180 °C	IS 3025 (P-16):2023	mg/l	500-2000	639
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	30-100	17.01
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	1.0- NA	0.46
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F (D)	mg/l	1.0-1.5	0.58
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	0.05-1.5	BDL
8	Lead as Pb	APHA 24 th Edition (2023) ,3500-Pb	mg/l	0.01- NA	BDL
9	Mercury as Hg	APHA 24 th Edition (2023) ,3500 Hg	mg/l	0.001- NA	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023) ,3500-Cd	mg/l	0.003- NA	BDL
11	Arsenic as As	APHA 24 th Edition (2023) ,3500-As	mg/l	0.01- NA	BDL
12	Strontium as Sr	APHA 24 th Edition (2023) ,3500-Sr	mg/l	0-0.004	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.1-NA	BDL
14	Total Chromium as Cr	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.05- NA	BDL

*****End of Report*****

Report prepared by
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
Note:

Bhagyashree Pradhan
21-10-25



Approved by
Name: Harmohan Das
Designation: Quality Manager

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



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.
- (l) 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.
- (li) 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.
- (lii) 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

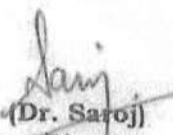
qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.

- (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



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accredited & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

GROUND WATER TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260220/0697	Date of Sample Receiving	21.02.2026
Sample Description	Ground water	Date of Testing	21.02.2026-24.02.2026
Date of Sampling	20.02.2026	Date of Reporting	25.02.2026
Sample Quantity	2 litre	Environmental Condition	Temp.-25.9°C & RH- 63%
Location	Sansartikira Village	Test Report No./ULR	TC627026000000254F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Standard as Per IS-10500:2012	Result
1	pH at 25 °C	IS 3025 (P-11):2022	--	6.5-8.5	6.54
2	Total Suspended Solids at 104°C	IS 3025 (P-17):2022	mg/l	NA	7
3	Total Dissolved Solids at 180 °C	IS 3025 (P-16):2023	mg/l	500-2000	604
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	30-100	31.59
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	1.0- NA	0.48
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F-(D)	mg/l	1.0-1.5	0.77
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	0.05-1.5	BDL
8	Lead as Pb	APHA 24 th Edition (2023) ,3500-Pb	mg/l	0.01- NA	BDL
9	Mercury as Hg	APHA 24 th Edition (2023) ,3500 Hg	mg/l	0.001- NA	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023) ,3500-Cd	mg/l	0.003- NA	BDL
11	Arsenic as As	APHA 24 th Edition (2023) ,3500-As	mg/l	0.01- NA	BDL
12	Strontium as Sr	APHA 24 th Edition (2023) ,3500-Sr	mg/l	0-0.004	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.1-NA	BDL
14	Total Chromium as Cr	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.05- NA	BDL

*****End of Report*****

Report prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
Note:



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-8270

SURFACE WATER TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited		
Customer Address	IB Thermal Power Station Banharipali, Jharsuguda, Odisha- 768234		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260220/0695	Date of Sample Receiving	21.02.2026
Sample Description	Surface water	Date of Testing	21.02.2026-24.02.2026
Date of Sampling	20.02.2026	Date of Reporting	25.02.2026
Sample Quantity	2 litre	Environmental Condition	Temp.-25.7°C & RH- 60%
Location	Tilia Village	Test Report No./ULR	TC627026000000252F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Result
1	pH	IS 3025 (P-11):2022	--	7.69
2	Total Suspended Solids	IS 3025 (P-17):2022	mg/l	2
3	Total Dissolved Solids	IS 3025 (P-16):2023	mg/l	167
4	Magnesium as Mg	APHA 24th Edition (2023) 3500-Mg (B)	mg/l	6.80
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	0.037
6	Fluoride as F	APHA 24th Edition(2023), 4500-F- (D)	mg/l	0.42
7	Copper as Cu	APHA 24th Edition (2023), 3500-Cu	mg/l	BDL
8	Lead as Pb	APHA 24th Edition (2023), 3500-Pb	mg/l	BDL
9	Mercury as Hg	APHA 24th Edition (2023), 3500 Hg	mg/l	BDL
10	Cadmium as Cd	APHA 24th Edition (2023), 3500-Cd	mg/l	BDL
11	Arsenic as As	APHA 24th Edition (2023), 3500-As	mg/l	BDL
12	Strontium as Sr	APHA 24th Edition (2023), 3500-Sr	mg/l	BDL
13	Hexavalent Chromium as Cr6+	APHA 24th Edition (2023), 3500- Cr	mg/l	0.008
14	Total Chromium as Cr	APHA 24th Edition (2023), 3500- Cr	mg/l	0.013
15	BOD at 27°C (3 days)	IS 3025 (Part-44) : 2023	mg/l	6.80
16	COD of O2 at 150°C	IS 3025 (Part-58) : 2023	mg/l	16

*****End of Report*****

Report prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



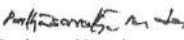
Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com

Annexure- 7(A)						
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
Colony, Guest House, Halipad, 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 581, Old Hanuman Temple back side of Store yard, colony road side.	Sidhartha agency, Jharsuguda.	1993-94/94-95	23,800	Chhatim		
i) Back side of Autobase, Fahamunda village area.	i) Sidhartha agency, Brukshyaropan Samiti, Jharsuguda.	1994-95/95-96	20,000	Kadamba	23,300	
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	Panash		
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	Neem		
Jhawn & Plantation coal handling plant area & other species on both sides of roads inside plant.	ii) Departmentally		34,500	Bottle brush	15,000	
Fuel Oil Pump house area, School, Hospital, Police station Outer periphery of children Parks, Playgrounds etc.	iii) Local agencies Total:-		5,500	Bottle Palm		
Ash Pond	i) Brukshyaropan Samiti		5,000	Chakunda		
Both side of Security road.	ii) Departmentally		5,000	Jhaun	15,000	
	iii) Departmentally		5,000	Sisoo		
	Total			Golmohar		
Ash Pond		1998-99/99-00	5,500	Eucalyptus	31,155	
Ash Pond	By agencies	2000-2001	5,058	Gambhari		
CHP & Plant	-do-		5,966	Jarul		
Colony	-do-		11,500	Litchi		
Ash Filling Area (low lying area), Colony, Warehouse, SVM School (ITPS), Rengali School	-do-	2006-07	1,800	Amba		
Inside Plant campus	-do-	2007-08	3,000	Baula		
Distribution of fruit bearing tree in Periphery villages	-do-	2008-09	4,000	Radhachuda		
Block Plantation in association with District Environmental Society	Majhi		3,000	Deodaru		
Fruit bearing tree plantation at Gujapar and in Schools	do		350	Karanja		
CHP & Learning Centre on Earth Day	Self	2009-10	120	Pijuli		
World Env Day	Self		150	Saguan		
Govt. Land near Rengali Nursery	Karunakar Sahu		5000	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		
Vacant space at Coal Handling Plant	Self	2012-13	350	Juniperous	65,000	
Distribution of fruit bearing & Forest plant species in Periphery villages, 2000 nos	Self	2012-13	2000	china Palm		
Avenue Plantation at Banharpali & Ash Pond Road & 100 nos inside Plant premises	Self	2013-14	1300	Musunda		
Sapling Distribution, 6000 nos	through nearby villagers		6000	Karabira		
Sapling Distribution, 5000 nos	through nearby villagers	2014-15	5000	Golap		
				Thuja		
					15,500	
					4,500	
					5,000	
					4,842	
					10,000	
					1200	
					2300	
					2100	
					2500	
					50	
					75	
					90	
					2000	
					900	
					70	
					100	
					200	
					1000	
					900	
					3000	
					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	265	Karanj, Neem Bakul	265	
Plantation inside Plant and Colony	Self	2020-21	300	Bakul	300	
Plantation inside Plant and Colony	Self	2021-22	200	Bakul, Neem, Karanj, Sisoo	200	
Plantation inside Plant and Colony	Self	2022-23	950	Terminalia, Baula, Neem, Karanja, Arjun	950	1.25
Plantation inside Plant and Colony	Self	2023-24	900	Terminalia, Baula, Neem, Kanchan	900	1
Plantation inside Plant and Colony	Self	2024-25	2500	Terminalia, mango, jack fruit & neem	2500	1.15
Plantation inside Plant and Colony	Self	2025-26 (Till 18.09.2025)	17280	Mango, jack fruit & neem	17280	0.25
Total			3,44,529		2,64,824	428.65
% Survival				76.9		
Green Belt%				34.92		

Total Area of Green Belt

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.


Parthasarathi Panda
Sr. Manager Environment

REPORT OF THE PLANTATION MONITORING COMMITTEE OF THE DISTRICT ENVIRONMENT SOCIETY, JHARSUGUDA, 2024-25.

INTRODUCTION

The Jharsuguda District Environment Society constituted a Plantation Monitoring Committee on dt.03.04.2013 under the Chairmanship of former Collector-Cum District Magistrate, Sri Niranjan Sahu, Divisional Forest Officer, Sri Aswini Kumar Kar, Former Vice Chancellor Sambalpur University, Sri Dhurbaraj Naik, Honorary Wildlife Warden for Jharsuguda District as its Chief, Sri Prahallad Naik Chief Coordinator District Eco-Club Coordination Committee, Jharsuguda, former ACF, Jharsuguda Forest Division, Sri Basil Barla, DSP of Police, Tahasildar, Jharsuguda, ADHO, Jharsuguda, RO, SPCB, Jharsuguda and all DES and DECC Members are attend. Since then, the committee is inspecting industrial premises at least twice every year for monitoring the plantation activity.

Environment can be defined as a sum total of all the Living or biotic Elements (Animal, Plant, Forest, Fisheries & Birds) and non-living elements or non-biotic element (Water, Land, Sunlight, rocks & Air) and there effect that influence human Life. Industrialization has led to habitat destruction through deforestation, mining and other human Activities. As per the Air Quality Index (AQI) of Jharsuguda District (raising from 112 to 123) is unhealthy for Sensitive groups which can be immediately felt. Healthy individuals may experience difficulty in breathing and throat irritation with prolonged exposure. In order to protect/conserv the Environment massive plantation programme inside & outside the plants/Mines is badly necessary. in this Connection the Collector & District Magistrate Jharsuguda had Convened the district Environment Society meeting on Dated 20.07.2024 at 11.30 AM in the DMF conference Hall, Jharsuguda where all the Official of Corporate Sectors were also present in the meeting and the Plantation target of the current Year 2024-25 has been fixed to the all Corporate Sectors for greenery. Further they are instructed to cover the 33.3% greenery of the total acquired land or as per the specific term & conditions of the Environmental clearance of the concerned Corporate Sector. In order to review to the census of tree planted over the Years, the Divisional Forest Officer, Jharsuguda in his Letter No 4719(19)4F(Miss) Dt 17.08.2024 had instructed all the Corporate Sector of his District to Co-operate District Plantation Committee members during their visit.

Inspection (2024-25)

The Plantation Monitoring Committee comprising of Sri Prahallad Naik, Honorary Wildlife Warden-Cum-Chief Coordinator, Jharsuguda, Deputy Collector, Jharsuguda, Tahasildar, Jharsuguda, Asst. Director, Horticulture, Jharsuguda, Asst. Environment Engineer, State Pollution Control Board, Jharsuguda, DIPRO, Jharsuguda, DES Members Sri Tapas Rai Choudhary, Prof. Tahalu Sahu, Sri Trinath Gual, Sri Bijay Behera, Sri Benudhar Choudhary, Sri Abhisekh Lath & Asst. Conservator of Forests, Jharsuguda Forest Division inspected various industrial premises as per the following schedule.

Date	Industries/mines inspected
04.09.2024	IB Valley, MCL Lakhanpur
05.09.2024	NLC Talabira, LN Metallicks Sripura
06.09.2024	OPGC Banharpali, Ind Barath, JSW
11.09.2024	Sesa Starlite (Vedanta Alumina) IOC
12.09.2024	TRL, Global Coal
13.09.2024	SMC Power, Comcast Stell & Power MSP Metallicks
20.09.2024	Ultra Tech Cement, Fortise Chemicals, Jay Hanuman, Seven Star
21.09.2024	MCL Orient Area, TPSI Lahundabud.

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 with the industrial areas was made which protects the health condition of the employees working inside. Also, the Govt. land allotted to them outside the plant where also inspected the main objective of district administration to make greenery around the urban areas as well as affected areas to protect the environment of this district.
2. They are advised to plant environment friendly species of plants which absorbed CO₂ gas in more quantity and fruits bearing trees as well.
3. It was observed some of the industries/mines have not achieved their target assigned to them. They are advised to makeup the deficiency by end of the year.
4. To plant the trees is not important. The survival of the plant is most important. They are advised to take care of the trees with utmost care and dedication.
5. The committee observed that, some of the industries have planted outside the plants in scattered areas (in less than half acer areas), which is not advisable. They should be applied for one or more patch area at least more than two acers.
6. Further, they are advised to adopt 4 to 5 adjacent villages so that, the negative mind set of villagers towards the plants will be removed.
7. All the corporate sector are advised to follow their environment clearance points and display it on their respective websites for public visibility and social audit.
8. In some point of dumping area of MCL IB-Valley area extra funds may be provided for easy transportation/communication of labours to the top point, where plantation have been carried out. Further, they are also instructed to provide facility of Water Tanker in the said area.

Sl No.	Name of Industries/ Mines	Total land Acquired (Ac)	33.3% of area (Ac)	Land planted (Ac) up to 2023-24	Plantation Achieved during 2024-25		Total area planted inside premises (Ac) up to 2024-25	Total nos. of saplings planted during 2024-25 (inside & outside)	Remarks/ percentage Achieved
					Inside premises (Ac/No)	Outside premises (Ac/Km)			
01	MCL IB Valley	3474.558	1158.07	1132.79	12.35	180 Ac. 116800 nos	1145.25	2000	32.96%
02	MCL Orient Area (Contain data of 5 nos of mines)	361.441 Ac.	119.274 Ac	161.274 Ac.	11.268Ac.	-	148.618 Ac.	10000	
03	Integrated Lakhanpur-Belpahar-Lilari OCP Lakhanpur Area, MCL	10870.77 Ac	3587.35 Ac.	1799.55 Ac.	29.65 Ac. (7500 nos are being carried out)	149.50 Ac. 76000 nos	1799.55 Ac. have already been planted 26.65 Ac. work in progress	76000 nos outside lease area 7500 nos inside lease area (work in progress)	
4	SMC Power Generation Limited, Unit-2, Badmal	196.188 AC	65.3 AC	39.1 AC	13.06 AC	NIL	52.16 AC	6500	
5	SMC Power Generation Limited Hirma, Jharsuguda	275.63 Ac	90.95 Ac	104.79 Ac	550 nos of saplings	50 nos of saplings	0.74 Ac.	600 nos of saplings	
6	JSW Energy (Utkal) Limited	Total Land Area-592 Acre	196 Ac.	25.0 Ac. (3000 nos)	23 Acre/ 15000 nos	2 Acre/ 1000 nos	90 Acre	60000 (55000+5000)	12.7 %
7	Vedanta Ltd., Jharsuguda Smelter & CPP	1876.10	619.12	619.12	Additio nal area Nil/ 3000 No sapling planted in gap Filling	50 acres	619.12	3000 (inside premises)	33% achieved as per EC. Further Planting 1 Lakhs Sapling under Matrivan Project in FY 2024-25
8	Vedanta Ltd., Jharsuguda 2400 MW TPP	534.14	176.26	176.26	Additio nal area Nil/		176.26	2000 (inside premises)	

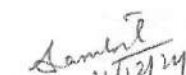
					2000 No sapling planted in gap Filling				
9	TRL Krosaki Refractories Ltd.	156.27	54.60	.513 Ha. 1300 Sapling		4 Ha. 1000 Sapling	.913 ha.	2300 nos	34.94 %
10	Integrated Lakhanpur- Belpahar-Lilari OCP, Lakhanpur Area, MCL	10870.77	3587.35	1799.5 5	29.65 / 7500 nos. are being carried out	149.50 / 76000 nos.	1799.55 Acre have already been planted. 29.65 Acre work is in process	76000 nos. outside lease area 7500 nos. inside lease area (work is in process)	
11	L N Metallics Limited	29.64	9.87	10.16	250	2000	10.16	2250	
12	Talabira II & III OCP, NLC India Limited	Total lease area- 4729.649 Total acquired land - 4162.236	1560.78	Plante d - 7.413 Natura l vegetat ion - 2103.9 6	18680 nos (18.532 Ac)	16000 nos (4.942 Ac)	25.945	34680 Nos	Green cover exist over 51.17 % of acquired area
13	2x210MW unit31 & Unit #2 & 2x660 MW unit#3 & Unit# IN Thermal Power Station of Odisha Power Generation Corporation Ltd.	1227.39	405	427.25	0.61	5	427.86	4700	34.86
14	IB Valley Coal Washery (10MTPA), MCI	90.36	30.08	21.35	3.78/24 50 nos of trees planted	Nil	25.13 Ac have already been planted 4.95 Ac plantation work under progress	2450 nos of trees planted inside premise Plantation work for 3200 nos of saplings is	

								under progress	
15	Seven Star Steel Ltd.,	53.50	17.82	17156	744	1350	18.80	2094	35.14
16	Odisha Metalics Pvt. Ltd., Marakuta	256.54 Ac.	84.66 Ac	9.88 Ac.	6000 nos of saplings	1500 nos of saplings	12.35 Ac	7500 nos of saplings	100%
17	TPSL Lahandabud	178	71.19 Ac 40% of the total land	71.19 Ac.	5842	2020	Replantatio n died plants 5.5 Ac. Scattered	7862	100%
18	Ultratech Cement Ltd.	165 Ac.	55	52.8 Ac	2288 nos 2.47 Ac.	400 nos (0.4 Ac.0	55.28 Ac	2688	33.5%
19	Jai Hanuman Udyog	37.00 Ac.	12.5 Ac.	500 nos	500 nos	Patrapali to Jaihanum an (500 nos)	12.5 Ac.	1000	100%
20	OPGC, Banharpali	1227.39 Ac.	405.00 Ac.	427.25	0.61 Ac.	5	427.86 Ac.	4700	34.86 %
21	Concast Steel & Power SMC Power Unit-I, Hirma	275.63 Ac.	90.95 Ac.	104.79 Ac.	1.10 Ac.	Nil	105.98 Ac.	450 nos	
22	Fortis Chemical Pvt. Ltd.	8.02 Ac.	2.64 Ac.	1045 nos	245 nos	Both side of the road between Boundary of Apar Industries to Kendutikr a village	2.64 Ac.	1045	100%
23	APPAR	13 Ac.	4.29 Ac.	2.29 Ac.	1.25 Ac.	0.75 Ac.	3.54 Ac.	2032	27.23 %


(B. Dung Dung) 11/12/24


(M. Nanda) 11/12/24


(S. Munda) 11/12/24


(S. Kumbhar) 11/12/24

Honorary,
WL Warden-cum-
Chief Coordinator DECC

ACF,
Jharsuguda Forest

ADHO,
Jharsuguda

Asst. Env. Engineer,
Jharsuguda

(S. Kumbhar)
Tahasildar,
Jharsuguda



ANNUAL HEALTH CHECK-UP DATA 2025-26							
		TOTAL EMPLOYEES	UNDER GONE CHECK-UP	X-RAY	SPIROMETER	AUDIOMETER	COLOUR VISION
OPGC-I	EMPLOYEES	231	231				
	CONTRACTOR	1044	945				
	TOTAL			65	280	168	77
OPGC-II	EMPLOYEES	234	234				
	CONTRACTOR	1851	1468				
	TOTAL			295	725	264	1006

All the above test conducted & all found O.K at the time of examination.

[Signature]
11.6.26.

Answer 2





ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-8270

AMBIENT AIR TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited		
Customer Address	IB Thermal Power Station Banharipalli, Jharsuguda, Odisha- 768234		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260207/AA213	Date of Sample Receiving	08.02.2026
Sample Description	Ambient Air Quality	Date of Testing	08.02.2026-10.02.2026
Date of Sampling	07.02.2026	Date of Reporting	10.02.2026
Location	Learning Center	Test Report No./ULR	TC627026000000164F

ANALYSIS RESULT

Sl. No.	Name of the Parameter	Unit	Limit	Analysis Method	Result
1.	Particulate Matter (PM ₁₀)	µg/m ³	100	IS 5182 (Part 23) :2006	49.5
2.	Particulate Matter (PM _{2.5})	µg/m ³	60	IS 5182 (Part 24) :2019	36.2
3.	Sulphur dioxide (SO ₂)	µg/m ³	80	IS 5182 (Part 2) :2001	6.94
4.	Nitrogen dioxide (NO _x)	µg/m ³	80	IS 5182 (Part 6) :2006	13.69
5.	Ozone (O ₃)	µg/m ³	180	IS 5182 (Part 9) :1974	BDL
6.	Lead (Pb)	µg/m ³	1	IS 5182 (Part 22) :2004	BDL
7.	Carbon Monoxide	mg/m ³	2	IS 5182 (Part 10) :1999	0.48

*****End of Report*****

Report Prepared by *Bhuvan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844
Email: bbsr@agrsindia.com, harmohan@agrsindia.com
website : www.agrsindia.com



ASIAN GEOTECH RESEARCH SERVICES

(Civil Engineering Consultants & Testing Laboratory)
NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

AMBIENT AIR TEST REPORT

Format No-AGRS/FM/047

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharipali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004969		
Lab Sample Id	AGRS260209/AA214	Date of Sample Receiving	10.02.2026
Sample Description	Ambient Air Quality	Date of Testing	10.02.2026-12.02.2026
Date of Sampling	09.02.2026	Date of Reporting	12.02.2026
Location	Plant Gate	Test Report No./ULR	TC627026000000165F

ANALYSIS RESULT

Sl. No.	Name of the Parameter	Unit	Limit	Analysis Method	Result
1	Particulate Matter (PM ₁₀)	µg/m ³	100	IS 5182 (Part 23) :2006	51.5
2	Particulate Matter (PM _{2.5})	µg/m ³	60	IS 5182 (Part 24) :2019	38.6
3	Sulphur dioxide (SO ₂)	µg/m ³	80	IS 5182 (Part 2) :2001	8.89
4	Nitrogen dioxide (NO _x)	µg/m ³	80	IS 5182 (Part 6) :2006	13.29
5	Ozone (O ₃)	µg/m ³	180	IS 5182 (Part 9) :1974	BDL
6	Lead (Pb)	µg/m ³	1	IS 5182 (Part 22) :2004	BDL
7	Carbon Monoxide	mg/m ³	2	IS 5182 (Part 10) :1999	0.50
8	Mercury (Hg)	µg/m ³	--	IS 12041 :1987	BDL

*****End of Report*****

Report Prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



Landline : +91674 2748517, 2965177, Mobile : +91 9937341499, 9437014844

Email: bbsr@agrsindia.com, harmohan@agrsindia.com

website : www.agrsindia.com

ANNEXURE-A

REVISED CSR PROJECTS LIST FOR FY2025-26
Other than Multi-year Projects of FY 2025-26

SL No	Thematic Area	Proposal for CSR activities in details	Village Covered	Gram Panchayat	Revised Project Amount (In Rs. lakhs)	PO Estimate Amount (In Rs. lakhs)	Expenditure (In Rs. lakh)	Status as on 05/01/26
1	Promotion of Education	Education Support Programme in Periphery Schools and Colleges	Periphery villages/ Hamlets	Six GPs	14.52	14.52	6.62	Work in Progress
2	Promotion of Education	Scholarship program for Meritorious students of Peripheral village	Periphery villages/ Hamlets	Six GPs	10.10	10.10		Work in Progress
3	Promotion of Education	Education expenses of periphery students at DAV school	Periphery villages/ Hamlets	Six GPs	228.50	228.50		New project To be approved by Board.
4	Promotion of Education	Girl Child empowerment programme	Periphery villages/ Hamlets	Six GPs	5.00	5.00		In Tendering Process
5	Promotion of Education	Smart Class for periphery schools	Periphery villages/ Hamlets	Six GPs	36.00			In Tendering Process
6	Promotion of Education	Hiring of School Van for students of Sansaratikira village	Sansaratikira	Kumarbandh	2.52	2.52	1.05	Work in Progress
7	Promotion of Education	Supply and Installation of playing equipment in periphery villages	Periphery villages/ Hamlets	Six GPs	1.28	1.28	1.28	Work Completed
8	Promotion of Education	Provision of school kits, test papers, desk & bench, water purifier/Cooler, furniture, bicycle, high mast light for periphery schools/students	Telenpali	Banharpali	8.00		6.23	Work in Progress
9	Preventive Health	Organising Community Health camps	Periphery villages/ Hamlets	Six GPs + MGR Line	6.00	6.00	2.65	Work in Progress
10	Preventive Health	Health expenses of periphery villagers availed at ITPS hospital	Periphery villages/ Hamlets	Six GPs + MGR Line	72.00	72.00		New project. To be approved by Board.
11	Preventive Health	Eye check-up camp for villages & schools	Periphery villages/ Hamlets	Six GPs	5.69			In Tendering process
12	Preventive Health	Combating Alcohol Programme in periphery villages	Telenpali & Kustraloi	All village	5.60	5.60	5.59	Work Completed
13	Preventive Health	Procurement of medical equipment for patients of periphery villages	Periphery villages/ Hamlets	Six GPs + MGR Line	7.54	7.54	7.53	Work Completed
14	Preventive Health	Larvacide Spray and Anti-Mosquito fogging program for periphery village	Periphery villages/ Hamlets	Six GPs	13.40	13.34	13.38	Work Completed

H. B. Sharma

15	Preventive Health	Sanitary Napkin, Vending Machine, and Incinerator facility for adolescent Schools and college Girls in Peripheral Educational Institutions.	Periphery villages/ Hamlets	Six GPs	4.00		4.07	Work Completed
16	Preventive Health	Malnutrition Awareness Programme in periphery villages of ITPS	Periphery villages/ Hamlets	Six GPs	5.54			Work in Progress
17	Preventive Health	Nikshya Mitra (TB Eradication Program)	Periphery villages/ Hamlets	Six GPs	2.76	2.76	0.62	Work in Progress
18	Development of Community Infrastructure	AMC of LED street light	Periphery villages/ Hamlets	Six GPs	23.75	10.00		Work in Progress
19	Provision of safe drinking water	Payment of electricity bill of street light & water supply connection	Periphery villages/ Hamlets	Six GPs	2.00	2.00	0.70	Work in Progress
20	Provision of safe drinking water	AMC of pipeline drinking water supply and Repair and installation of extra water point	Periphery villages/ Hamlets	Six GPs	8.00	8.00		Work in Progress
21	Provision of safe drinking water	Supply of water through Tankers for three and half summer months	Periphery villages/ Hamlets	Six GPs	42.50		41.62	Work Completed
22	Livelihood Enhancement and Skill development	Supply of drinking water beyond summer season	Periphery villages/ Hamlets	Six GPs	5.00			Work in Progress
23	Livelihood Enhancement and Skill development	Programme for Skills Development of youth	Periphery villages/ Hamlets	Six GPs	8.00	6.16	0.74	Work in Progress
24	Environment	Livelihood Training on Mushroom Cultivation for Women SHGs of ITPS Periphery	Periphery villages/ Hamlets	Six GPs	15.93		7.57	Work in Progress
25	Promotion of Rural Sports	Plantation and sapling distribution	Periphery villages/ Hamlets	Six GPs	5.50		5.44	Work Completed
26	Livelihood Enhancement and Skill development	Purchase of Sports material, organising sports training and Tournament	Periphery villages/ Hamlets	Six GPs	15.00	13.00		Work in Progress
27	Promotion of Education	Comprehensive Skill gap assessment	Periphery villages/ Hamlets	Six GPs	8.28			In Tendering Process
28	Promotion of Education	Providing laboratory items to Mahima college	Panchgaon	Panchgaon	5.50			In Tendering Process
29	Development of Community Infrastructure	Release of pending contribution towards group CSR project "Mpower- powering education for the FY2019-20"	Periphery villages/ Hamlets	Six GPs	27.00			New project. To be approved by Board.
A		Installation of public address system at Maa Samleswari temple, Sambalpur	Sambalpur	Sambalpur	46.00	45.54		Work Completed
Sub Total					640.91		105.09	

Handwritten signature

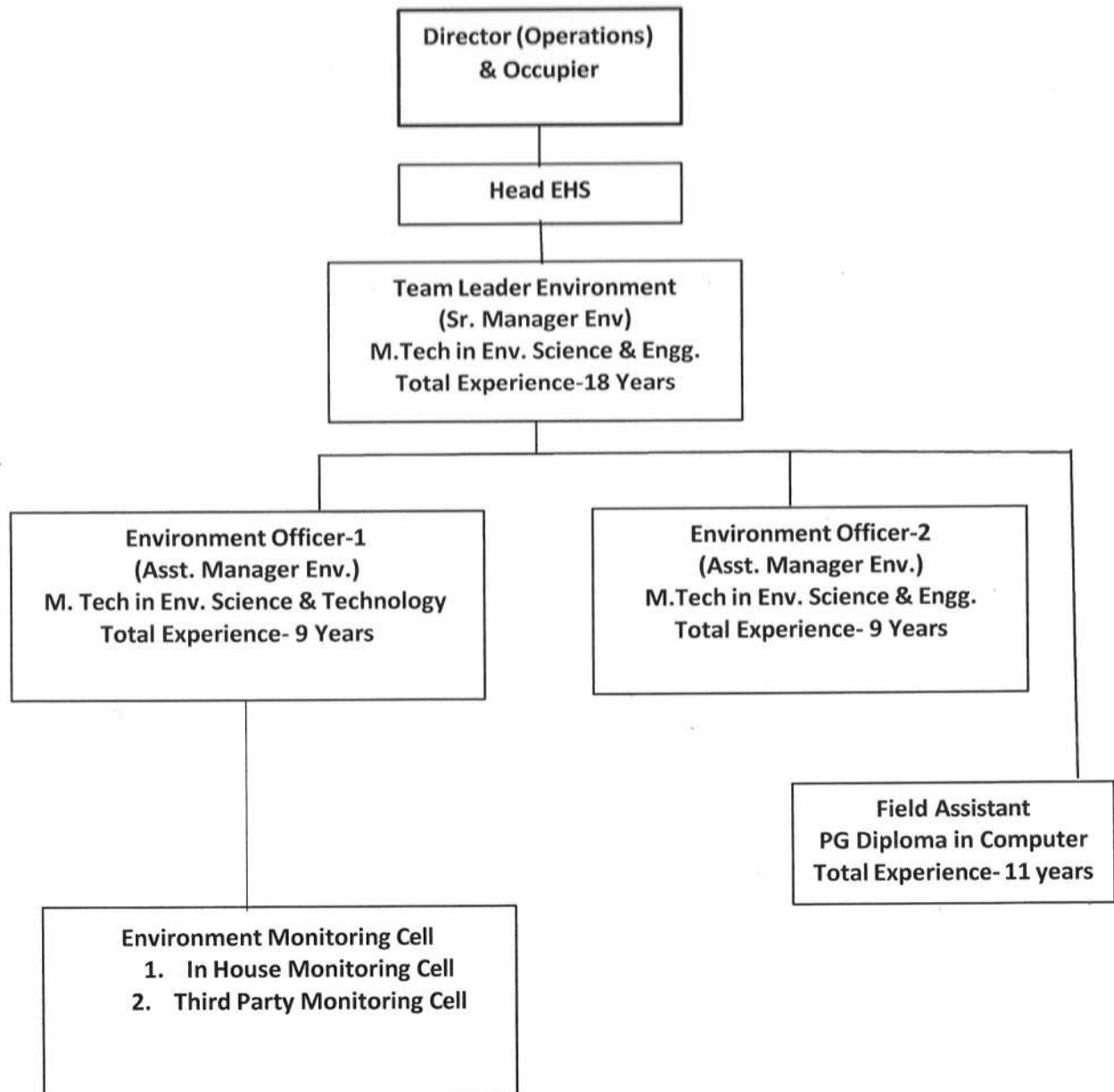
B. Multi-year Projects of FY 2025-26

SI No	Thematic Area	Proposal for CSR activities in details	Village Covered	Gram Panchayat	Revised Project Amount (In Rs. lakhs)	Expenditure (In Rs. lakhs)	Status as on 05/01/26
1	Promotion of Education	Learning Enhancement Remedial Program,	Periphery villages/ Hamlets	Six GPs	120.75		In Tendering process
2	Development of Community Infrastructure	Community Centre for Senior Citizens at Telenpali village with indoor sports items, furniture & allied facilities	Telenpali	Telenpali	22.00		In Tendering process
3	Development of Community Infrastructure	Construction of Road and Drain at Banharpali	Telenpali	Banharpali	54.20		In Tendering process
4	Development of Community Infrastructure	Cleaning of pond & beautification of ponds, construction of bathing step (Deepening of kottikra, Budi pond, bathing step kottikra-2, thoropali-1 no, Phatapali-2 no, Deband-2, Budi pond-2 nos) Deepening & construction of bathing step Benkmura pond, Pondri GP	Periphery villages/ Hamlets	Six GPs	70.00	10.41	Work in progress
5	Development of Community Infrastructure	Renovation of Khandasa kata.	Kushraloi	Kushraloi	7.58		Work in progress
6	Development of Community Infrastructure	Construction of road in periphery villages	Periphery villages/ Hamlets	Six GPs	344.00		In Tendering process
7	Development of Community Infrastructure	Repair of Sansaratikra water supply system	Sansaratikra	Rampela	2.50	2.50	Work Completed
8	Provision of Safe drinking Water	Rerouting of pipeline near pumphouse of ITPS	Pumphouse	Telenpali	39.51		In Tendering process
9	Development of Community Infrastructure	Construction of passenger retiring room & toilet for development of bus stop at Telenpali	Telenpali	Telenpali	21.05		Work in progress
10	Provision of Safe drinking Water	Laying of of drinking water pipeline to Bhaludol & Sargipali village under Kumarbandh GP	Bhaludol & Sargipali	Kumarbandh	16.80		Work in progress

Handwritten signature

11	Livelihood Enhancement and Skill development	Wadi & nutrition garden project	Periphery villages/ Hamlets	Six GPs	270.88		In Approval process
12	Promotion of Education	Additional classroom in DAV Public School			95.05	78.54	Work in progress
13	Development of Community Infrastructure	Construction of Boundary wall of Kalyan Mandap of Telenpali village.	Telenpali	Telenpali	17.11	16.77	Work Completed
14	Development of Community Infrastructure	Deepening of Pond and construction of bathing steps of different periphery villages in Phalsamunda & Rengali(04 bathing ghat)	Phalsamunda,Rengali	Kushraloi, Kuamrbandh	14.16	12.98	Work Completed
15	Development of Community Infrastructure	Construction of Community Centre in Nuapada Village under Tilia GP.	Nuapada	Tilia	19.35	14.30	Work Completed
16	Development of Community Infrastructure	Renovation of Telenpali Majhir Kanta	Telenpali	Telenpali	17.91	16.94	Work Completed
17	Development of Community Infrastructure	Construction of class room in periphery schools.(Kumarbandh Primary School)	Kumarbandh	Kumarbandh	36.81	32.04	Work Completed
18	Promotion of Education	Construction of Girls toilet at Kumarbandh College.	Kumarbandh	Kumarbandh	4.93	4.32	Work Completed
19	Promotion of Education	Construction of Kitchen room in Binika Primary school	Binika	Telenpali	14.37	10.93	Work Completed
20	Promotion of Education	Construction of girl's toilet at Remenda High school	Remenda	Remenda	3.59	3.59	Work in progress
21	Provision of Safe Drinking Water	Laying of drinking water pipeline system at Telenpali weekly market	Telenpali	Telenpali	4.95	2.86	Work Completed
C	Miscellaneous projects	Sub-total			1197.50	206.18	
1	Disaster Management	Support to DERC Jharsuguda	Jharsuguda	Jharsuguda	15.00	15.00	Work Completed
2	Promotion of education	Educational support to girl students through Aswasana Trust	Jharsuguda	Jharsuguda	28.08	28.08	Work Completed
3	Environment & Sustainability	Installation solar panel in Shree Jagannath Temple Administration, Puri	Puri	Puri	25.32	25.32	Work Completed
4	Promotion of sports	Sports materials for Ram Krishna Sevak Sampraday	Cuttack	Cuttack	1.50		In Tendering process

H. B. S. S. S.

STRUCTURE OF ENVIRONMENT DEPARTMENT

ODISHA POWER GENERATION CORPORATION LTD.

(A Government Company of the State of Odisha)

CIN: U40104OR1984SG001429

Ib Thermal Power Station

Banharpali, Dist.: Jharsuguda, Odisha - 768 234, India

Plant Manager : (+916645) 289266, Fax: (+916645) 222-230

Factory Manager : (+916645) 222224, Fax: (+916645) 222-230



Letter No. ITPS/4301/WE

September 22, 2025

To

The Member Secretary

State Pollution Control Board, Odisha

Paribesh Bhawan, A/118

Nilakantha Nagar, Unit-VIII

Bhubaneswar-751012

Sub: Environmental Statement for ITPS (2x210MW & 2X660 MW) for the period from April 2024 to March 2025.

Sir,

Enclosed please find herewith the annual Environmental Statement in (Form-V) for Ib Thermal Power Station (2x210MW & 2x660 MW), Banharpali, Jharsuguda for the period from 1st April 2024 to 31st March 2025 for kind perusal.

Thanking you

Sincerely yours,

Anjana Ranjan Dash

Director (Operations) & Occupier

Encl: Environmental Statement

Copy to-Regional Officer, State Pollution Control Board, Plot No. 370/5971, At - Babubagicha (Cox Colony), St. Marry Hospital Road, Post - Industrial Estate, Jharsuguda for kind information.

ENVIRONMENTAL STATEMENT

Odisha Power Generation Corporation Ltd
Ib Thermal Power Station

Banharpali, Jharsuguda

(2 x 210 MW & 2x660 MW)

PERIOD FROM 1st APRIL 2024 TO 31st MARCH 2025

Perfessionally A do

(FORM - V)
(See Rule 14)

Environmental Statement Report for the Financial Year ending the 31st March, 2025.

PART - A

- i. Name and address of the Owner/Occupier of the Industry : Mr. Anjana Ranjan Dash
Odisha Power Generation Corp. Ltd.
1b Thermal Power Station
Banharpali, Jharsuguda
Pin Code- 768234
Site Office-Ph.06645-222220, Fax. 222230
- ii. Production Capacity : 1740 MW (2X210 MW & 2x660MW))
- iii. Year of Establishment : Unit#1-21.12.1994
: Unit#2-20.06.1996
: Unit#3-03.07.2019
: Unit#4-21.08.2019
- iv. Date of last Environment Statement submitted : 20.09.2024
- v. Industry category : Thermal Power Plant

Environment Statement

PART – B

(Water and Raw Material Consumption)

(All values indicate Annual consumption) in m³/day

Sl.	Description	2023-2024	2024-2025
(i)	Gross Energy Generation (MU/Year):	11799.666	12769.092
(ii)	Total Water consumption (m3/day):	79570	84205
(iii)	Ash disposal make up, Process NEBD:	3133	4043
(iv)	Cooling, Spraying, Boiler Feed:	18730436	19774395
(v)	Domestic*: (Excluding Township)	361.353	393
(vi)	Process, EBD	7040	7431

Sl No	Name of the product	Process Water Consumption per Unit of Product Output	
		2023-24	2024-25
01	Electricity	2.37 KI/MWH	2.41 KI/MWH

NB: The Sp. Water consumption was higher than previous due to lesser generation.

Name of Raw Material	Name of the product	Consumption of Raw Material unit of output			
		2023-24		2024-25	
Coal	Electricity	Total Consumption	8755602	Total Consumption	9053066
		Specific Consumption	0.742Kg/KWH	Specific Consumption	0.708 Kg/KWH
Start-up Fuel Oil (LDO)	Electricity	Total Consumption	2772.872 KL	Total Consumption	2384.172 KL
		Specific Consumption	0.234 ml/KWH	Specific Consumption	0.186 ml/KWH

PART - C

Pollution discharged to Environment and Pollution Level

PERIOD- April 2024 TO March 2025

STACK EMISSION								
PARAMETER	NORM	STACK 1			NORM	STACK 2		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM (mg/Nm ³)	100	91	74	85	100	88	65	79
SO ₂ (mg/Nm ³)	600	1316	1045	1199	600	1335	1053	1198
NO _x (mg/Nm ³)	600	303	308	332	600	338	267	303
PARAMETER	NORM	STACK 3			NORM	STACK 4		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM (mg/Nm ³)	50	39	29	35	50	43	33	35
SO ₂ (mg/Nm ³)	200	1580	1380	1457	200	1616	1209	1160
NO _x (mg/Nm ³)	450	348	220	264	450	330	235	239
AMBIENT AIR QUALITY								
PARAMETER	NORM	INDUSTRIAL			NORM	RESIDENTIAL		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM ₁₀ (ug/m ³)	100	94	39	70	100	89	20	66
PM _{2.5} (ug/m ³)	60	56	17	37	60	52	10	35
SO ₂ (ug/m ³)	80	19	9	12	80	13	8	9
NO _x (ug/m ³)	80	31	15	23	80	26	10	18
STP WATER QUALITY					AMBIENT NOISE in dB(A)			
PARAMETER	NORM	MAX	MIN	AVE.	INDUSTRIAL		RESIDENTIAL	
					MAX.	MIN.	MAX.	MIN.
pH	6.5 - 9.0	7.11	6.51	6.92				
TSS, mg/ltr	100	51	6.9	20.65	DAY TIME			
BOD(3 days at 27°C), mg/ltr	30	21	7.9	15.4	NORM			
					75		55	
					73	67	48	39
Fecal coliform	<1000	106	87	85.52	NIGHT TIME			
					NORM			
					70		45	
					69	64	42	36

OPGC has installed continuous emission monitoring system for both the stacks, four continuous ambient air quality monitoring stations and one continuous effluent monitoring station for round the clock monitoring and control of emission/pollution parameters. These stations are connected to SPCB & CPCB servers through real time data acquisition and transmission facility. The plant has achieved zero effluent discharge from December'18 onwards and till December'18 only 1 % effluent had been discharged after meeting the norms.

Environment Statement

PART - D
HAZARDOUS WASTES

(As specified under Hazardous wastes/management & Handling Rules, 2016)

A. From Process:

Hazardous Waste Types	2023-24				2024-25			
	Opening stock	Generation	Sold/Disposed	Balance	Opening stock	Generation	Sold/Disposed/in house utilization	Balance
Used oil or Spent oil a. Used Lub. Oil - KL b. Used Grease - MT c. Used Transformer Oil - KL	196.29 KL a. 99.355 KL b. 96.56 KL c. 0.375 KL	41.37 KL a. 37.38 KL b. 3.99 KL c. Nil	23 KL a. 23 KL b. Nil c. Nil	214.66 KL	214.66 KL	62.910 KL	41.11 KL	336.460 KL
Waste or Residue containing oil*	7.6 MT	2.0 MT (oily cotton waste)	Nil	9.6 MT Note- Stored securely inside PVC containers after evaporation of oil	9.6 MT Note- Stored securely inside PVC containers after evaporation of oil	2.0 MT	11.6 MT (Combustion in Boiler)	Nil
Oily sludge during cleaning: KL	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Spent Resin, MT	Nil	Nil	Nil	7.6 MT Note- Stored in impervious Pit	7.6 MT Note- Stored in impervious Pit	Nil	0.700 MT (Mixed with coal and used for combustion)	6.900 MT Note- Stored in impervious Pit
Discarded Container a. oil drums (Nos) Empty Chemical Jar, Nos b. CW chemical	422	523	426 (20 nos. used in house)	519	519	1697 Nos.	764 Nos (5.944 MT) 115 Nos (1.840 MT) Note- Oil drums used for storage 260 Nos (0.520 MT)- Ammonia jenkins 169 Nos (2.704 MT) Note- Oil drums Disposed along with Used Oil 220 Nos (0.880 MT) Note- Chemical Jenkins disposed back to original supplier on buy back policy	1452 Nos (20.374 MT)

B. From Pollution Control Facilities: No generation

PART – E

SOLID WASTES

A. Ash:

Solid Wastes (Ash):	Total Quantity (MT)	
	2023-24	2024-25
From Process	715925MT (Bottom Ash)	763408 MT (Bottom Ash)
From Pollution Control Facilities	2863704 MT (Fly Ash)	3053580 MT (Fly Ash)
Quantity Utilized	874309 MT	650676 MT
Disposed in Ash Pond	2705320 MT	3113930 MT

Reasons for variation from the target

1. Since the plant is situated in a remote location (pit head power plant located in rural area) there is very limited scope of ash utilization in brick manufacturing. More over utilization in this particular area cannot exceed more than 2% to 3%.
2. Big Stone quarry or low lands are not available in the locality.
3. Export of ash is not feasible since the site is located at a distance of 500 Km from the nearest port. Transportation from site to nearest port through rail or any other means is not feasible.
4. Major road construction activities are taking place near Jharsuguda (Expansion of Sambalpur Rourkela Sate Highway No-10 & Expansion of Sambalpur National Highway No-42). The ash demands for these activities are met by other thermal power plants, close to the road construction areas. However, we have supplied around 8830 MT of ash in the last financial year for construction of road.
5. No scope available in major ash utilization area i.e. Cement Plant use for production of PPC cement. Only one cement plant is available in the vicinity i.e. M/s Ultratech Cement Ltd. M/s Ultratech off takes entire quantity of ash for cement manufacturing from its sister concern i.e. from M/s Aditya Aluminium (Lapanga).
6. Considering OPGC plant's location (Pit Head), mine void back filling of ash is the only means of utilization by which OPGC can achieve 100% ash utilization. The steps so far are as follows.
 - i. There was progress on mine void allotment in the year 2006. With the support from Regional Office, MoEF and SPCB, MCL has consented to allot Lilari mine void to OPGC. Subsequently, in July 2007, MCL accorded consent for taking up EIA & Feasibility Study for back filling in the void based on which OPGC engaged CIMFR to conduct the studies in October 2007. During the course of the EIA study, the consent given to OPGC was withdrawn by MCL unilaterally vide their letter No MCL-3185/13.02.2008 stating "the life of Lilari Mine is extended with ten more years". Thereafter, OPGC has been pursuing MCL time and again

Partly in scope of A & B

involving regulatory as well as Govt. to reconsider the withdrawal or consider allotting any other mine void near to OPGC site but there has been no progress.

- ii. State Pollution Control Board, Odisha made a proceeding on 05.06.10 for backfilling of OPGC ash in BOCM Mine void of MCL as an alternative solution against allotment of Lilari Mine void but no initiative has been taken so far from MCL side.
- iii. MCL has also been directed repeatedly by OPGC Chairman & Principal Secretary, Energy, Govt. of Odisha, managing Director and Director (Operation) but no positive response has so far been received from MCL.
- iv. In a meeting held on 24.01.2011 with Principal secretary Energy, Govt. of Odisha, CMD, MCL has given consent to give principal approval for back filling BOCM mine void but the same has not been done, so far.
- v. In response to the letter of Director (Operation), OPGC, dtd.24.08.2013 on the subject, Director (Tech. P&P), MCL negated the request on the ground of BOCM expansion towards dip slide and no scope to back fill ash in running mine even though OPGC proposed for a partition bund to separate the void space from active mine for ash back filling.
- vi. In a high-level meeting held on 13.12.2013 under the Chairmanship of Chief Secretary, GoO, directions for allotment of BOCM mine void to OPGCL were issued to MCL on 03.04.2014 by Dept. of Environment & Forest, GoO. The said directions were for taking expeditious steps on this front. However, there has not been any progress as yet.
- vii. In a letter dated 10.08.2020 OPGC had again requested Director Technical for allotment of BOCM mine void, however the request was turned down stating various technical causes.
- viii. In a letter dated 14.06.2021 OPGC had again requested Director Technical for allotment of BOCM mine void, however the request was turned down vide MCL letter No253H, dated 07.08.2021 stating the reason of excavation of bottom seam and integration of Lakhanpur, Belpahar & Lilari mines.

***However, OPGC is still working on high priority to pursue MCL, involving Government & other agency to get newly allotted nearest mine void to fulfill this important regulatory obligation.**

Efforts made by OPGCL to Maximise Utilisation of Fly-Ash:

1. OPGCL has entered into an agreement with Dalmia cement, Rajgangpur and Ambuja cement, PAN India for supply of 1MMT fly ash per year to each cement plants (the transportation is being done through dedicated BTAP rakes).
2. OPGC has served notice to MCL and OCPL referring fly ash notification 31 December 2021 for OB mix, concurrent filling and back filling of mines with coal ash.
3. OPGC is in process of procurement of BTAP type wagons and construction of dry ash silos at OCPL (2 silos of 1500MT capacity each).end. This will help OPGC to avoid road transportation of ash particularly narrow village roads. After pneumatic unloading of ash into the silos at mines end, the ash will be used for back filling/OB mix or it can also be used in nearby extinct quarries, low lying areas and road projects. It is pertinent here to mention that majority of the extinct stone quarries and low lying areas are in Sundargarh district, which are in close proximity to OCPL.
4. OPGC has discovered rate contract price for different slabs up to lead distance of 300KM (aerial distance). This will help OPGC in utilization of ash at distant avenues.

Environment Statement

Particulars of notes

5. OPGC at present has an avenue for supplying of 30LMT of ash to different NHAI, SH, PWD road projects.

PART – F

Indicate disposal practice adopted for Hazardous as well as solid waste

A. Hazardous Wastes:

OPGC has obtained Hazardous Waste Authorization from OSPCB for Collection & Storage of Hazardous waste valid up to 31st March 2026.

Used Oil and grease are periodically collected from different location within plant & stored at designated place with concrete flooring, shed and secondary containment. The same is then transferred to a central storage area. This is being disposed to recyclers/re-processors having authorization & valid consent from SPCB & registered under CPCB.

Spent resin is temporarily stored in identified impervious pits at ITPS. It has been planned to dispose of the same in CHWTSDF. Asbestos generated from conveyer roofs as a phase out plan is disposed in underground pits within the plant premises. Discarded chemical containers are mostly returned to the Chemical suppliers against supply of fresh chemical supply.

E- Wastes are stored in designated places under concrete floor & shed. Inventorization of the same has been made & intimated to OSPCB. OPGC has signed lifetime membership agreement with M/S Ramky Enviro Engineers (RE Sustainability Ltd) for disposal of non-soluble, non-incinerable and non-recyclable hazardous wastes at Common Hazardous Wastes Treatment Storage and Disposal Facility (CHWTSDF), Jajpur.

New Batteries are procured from Battery suppliers against buy back of used/waste batteries.

B. Fly Ash and Bottom Ash

OPGC has both wet ash disposal system as well as dry ash disposal system at ITPS for handling the main solid waste i.e. fly ash & bottom ash. OPGC has 03 Ash Ponds for Unit#1&2 (2x210MW) & 02 Ash Ponds for Unit#3&4(2x660MW) i.e.

- i. Ash Pond A- 150 Acres
- ii. Ash Pond B- 242 Acres
- iii. Ash Pond C- 115.92 Acres.
- iv. Ash Pond Phase I- 125 Acres
- v. Ash Pond Phase II- 175 Acres

Ash pond B was exhausted in August 2007 and thereafter a study was conducted through IIT, Madras where it was recommended to go for another 03-meter Dry Ash Mounds on the Pond B. Based on which OPGC has constructed Ash Mounds on the Pond successfully. Reclamation certificate has been obtained from OSPCB.

Ash pond A is in partial operation and ash is evacuated from ash Pond A for utilization in low lying areas

Environment Statement

Part F is done by A. K. S.

reclamation and road construction.

Ash Pond-C is operational, and ash is disposed in form of lean slurry.

Ash Pond Phase I and Phase II are operational.

Dry ash collection facility with 600 MT (Unit# 1&2) and 8100MT(Unit#3&4) capacities Storage Silo for utilization of dry fly ash by Cement Industries & ash brick/block manufacturing units is already in place. The ash collected in this Silo is from Field 2 of ESPs suitable for Cement & Brick production. Provision has been made for additional storage and collection facility (60 T/Hr with Storage facility of 120 MT) from 1st fields of ESPs. This dry ash collection facility is made for adequate dry ash availability in utilizing ash in low land reclamation and road construction.

C. Other Solid Waste of Plant and Colony (Bio-degradable)

Solid Waste of plant other than Fly Ash & Bottom Ash, like ferrous & non-ferrous scraps are collected regularly from different sites & deposited in the designated scrap yard for selling.

Kitchen waste is collected from Plant Canteen, Colony, Guest House, ITPS Market etc. and segregated as biodegradable and non-biodegradable is being disposed in an eco-friendly manner in a 1.0 Ton Capacity Bio-Gas Plant with zero effluent discharge.

Other biodegradable waste of plant & colony is regularly collected from different places & disposed on OPGC land. Domestic effluent from Plant is disposed through Septic Tanks and Soak Pits and Sewage from colony is treated in 1.0 MLD capacity Sewage Treatment Plant (STP) with zero effluent discharge. Treated Sewage is reused for watering green belt and also used in Park for horticulture purpose.

D. Bio-medical Waste

OPGC has 18-bedded Hospital at ITPS without any Operation Theatre. Bio-medical waste is mainly non-toxic in nature and the quantity is insignificant. OPGC has sign an agreement with Mediaid Marketing services, Sundargarh (facility owner for Biomedical Waste disposal). The Biomedical waste are transported through dedicated vehicle and disposed off in facility situated at Sundargarh district.

E. Plastic waste

Plastic waste is being segregated from Colony Garbage and packed in gunny bags. The gunny bags containing plastics are being stored in a designated place at township. The same is being given to plastic waste recycler. Process has been initiated to dispose the same through co-processing in cement plant of M/s ACC Limited. Formal agreement is already in place for disposal.

OPGC has declared no usage of plastic carry bags in colony and plant area. Regular campaigns are made to restrict the use of plastic carry bags in township and peripheral areas. OPGC has distributed Jute carry bags to all its employees to promote non usage of plastic carry bags.

PART - G

A. Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

- By adopting appropriate technology, operation & maintenance, monitoring practices and pollution control measures, OPGC has been successful in conserving coal, oil, water & energy through reduce /reuse/recycle.
- Through 100% Ash Water re-cycling system and maximum reuse of other liquid effluents is in process, not only control & prevention of water pollution takes place but also optimization of fresh water makeup has been taking place. Specific water consumption remains less than 3KL/MWH which indicates effective water conservation.
- Fuel oil consumption is monitored and controlled with minimum Unit light up periods and reducing number of Unit trips.
- Lubricant consumption is also monitored regularly to reduce its consumption.
- All bricks used for civil maintenance activities inside the plant are of ash bricks.
- Pond ash is being used for ash mound preparation & also for ash dyke height raising, thereby conserving soil for dyke height raising as well as increasing ash pond life.
- LED light and solar panel have led significant conservation of energy in township, as pond and street lighting

B. IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION:

Cost of production reduces due to

1. Process optimization to operate plant with reduced emission and higher efficiency.
2. Conservation of resources used as input (Coal, Oil, Water.)
3. Waste utilization & eco-friendly and cost-effective disposal means (Solid waste and hazardous waste).

The additional investment and the above benefits balance some way by treating the pollution control and mitigation is integrated with overall efficiency of the plant and cost of the production.

PART - H

Additional investment proposal for Environmental protection abatement of pollution,

Prevention of pollution

1. Utilization of ash in low lying areas, brick plants/asbestos- 28.22Cr.
2. Tree Plantation/Green belt development- 2.47 lakh
3. Effective Ash dispersion control in Ash Pond at the time of turbulent wind flow- 30 lakh
4. Ash Disposal line replacement to reduce the risk of pipe line failure- 25 lakh
5. Hazardous waste disposal-5 Lakhs
6. Maintenance of online analysers-10 Lakhs
7. ISO 14001:2015 recertification-2.5 Lakhs

Environment Statement

Pond ash is being used for ash mound preparation & also for ash dyke height raising, thereby conserving soil for dyke height raising as well as increasing ash pond life.

PART- I

Any other particulars for improving the quality of Environment.

- Complying with the directions and conditions of state and central pollution boards.
- Environment Management by establishing ISO 14001:2015 EMS and Global EMS standard.
- Fine tuning of ESPs of both the Units for achieving desired emission level.
- Adequate plantation and greenbelt developed to minimise air as well as noise pollution. Planted approx. 3.23 lakh trees. 34.92% greenbelt and plantation exists in and around plant and colony premises.
- Water conservation by 100% Ash water recirculation and other effluents recycle & reuse. All the plant effluent is also getting recycled back in process.
- Housekeeping has been given highest priority. Plant & Colony premises are maintained clean all the time. Roads are black turfed to control fugitive emission. Colour coded bins have been provided at all generation points for proper segregation and management of wastes.
- Water, Coal, Oil & Ash leakages & spillages are being controlled at the source itself to maintain clean work place and clean environment.
- Provided HDPE Lining on New Ash Pond (Ash Pond C) to minimize water pollution. Ash dykes are extra strengthened to prevent dyke failure.
- Implemented sound wastes management practices.
- Carrying out regular environmental audits by competent auditors and taking timely corrective measures.
- Carrying out Annual Hydrogeological study for studying characteristics of aquifers and quality of ground water.

Anjana

Anjana Ranjan Dash
Director (Operations) & Occupier

Purandara River

भारत सरकार
परमाणु ऊर्जा विभाग
विकिरण एवं आइसोटोप प्रौद्योगिकी बोर्ड



Government of India
Department of Atomic Energy
Board of Radiation & Isotope Technology

Certificate Tracking ID / CTID : 2400322
Date of Issue / DOI : 30-Jan-2024
Certificate Serial No. / CSN : ULR-TC1170324000001567F



Radioanalytical Laboratory

RADIOACTIVITY TEST CERTIFICATE

Ref : BRIT/RAL/DOM/841-856/MISC/614-629/23-24

To :
M/S. ODISHA POWER GENERATION CORPORATION LIMITED
IB-THERMAL POWER STATION,
BANHARPALI, JHARSUGUDA
ODISHA 768234

This is regarding the sample of "COAL, FLY ASH & BOTTOM ASH" sent for radioactivity analysis vide your letter ref. no. ITPS/6739/WE dt. 20.12.2023 which as per above letter is drawn from consignment with the following markings, as shown in italics:

NAME & ADDRESS OF THE CUSTOMER : *M/S. ODISHA POWER GENERATION CORPORATION LIMITED
IB-THERMAL POWER STATION,
BANHARPALI, JHARSUGUDA,
ODISHA 768234*

SAMPLE DESCRIPTION : *1) OPGC-1 FEEDER COAL
2) OPGC-2 FEEDER COAL
3) FLY ASH FROM ESP OF UNIT #4
4) BOTTOM ASH FROM CLINKER GRINDER OF UNIT #4*

DATE OF SAMPLING : *04.12.2023*

DATE OF RECEIPT OF SAMPLE: 26.12.2023

DATE OF COMPLETION OF TEST: 25.01.2024

The samples were analysed for U-238, Th-232, Ra-226 and K-40 radioactivity content by HPGe gamma spectrometry and the values obtained are as follows:

Sr. No	SAMPLE DESCRIPTION	U-238 (Bq/Kg)	Th-232 (Bq/Kg)	Ra-226 (Bq/Kg)	K-40 (Bq/Kg)
1	OPGC-1 FEEDER COAL	31.6 ± 1.4	44.8 ± 8	26.1 ± 3.4	87 ± 6.3
2	OPGC-2 FEEDER COAL	30.1 ± 1.4	47 ± 5.0	36.3 ± 3.8	71.9 ± 5.3
3	FLY ASH FROM ESP OF UNIT NO 4	79.5 ± 2.3	125 ± 4.9	91.1 ± 6.4	229 ± 12.4
4	BOTTOM ASH FROM CLINKER GRINDER OF UNIT NO 4	82.7 ± 2.7	118 ± 12.6	63.6 ± 6.3	168 ± 11.3

Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010.

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

Checked by:
GANPAT B NAKTI
Assistant

Authorized Signatory:
AJAY NANA THAMKE
OIC, RAL

***** End of Report *****

1/1

The authenticity of this certificate is verifiable. Please scan the QR code using a QR scanning application on any mobile devices. Upon redirection you must enter the necessary information in landing page <https://portal.britatom.gov.in>. We will then revert you back with a digital copy of the certificate in your verified e-mail ID. In accordance to IT Act 2000 (21 of 2000), this document is generated electronically through a validated s/w and need no physical/ digital signature(s).



विज्ञानप्रौद्योगिकी/ वीएनएस परिसर, सेक्टर २०, वाशी, नवी मुंबई - ४०० ७०३ (महाराष्ट्र)
BRIT/ BARC Vashi Complex, Sector 20, Navi Mumbai - 400 703 (Maharashtra)
वेबसाइट/ Website: www.britatom.gov.in; फ़ोन/ 022 2788 7002/ 7006

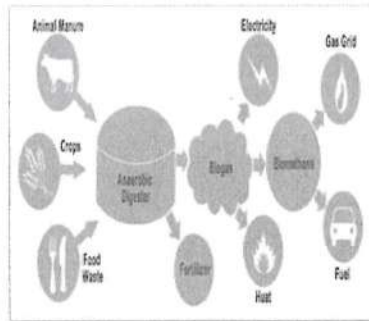
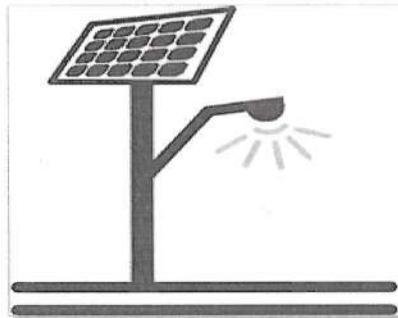
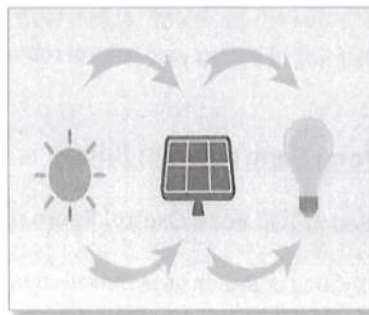
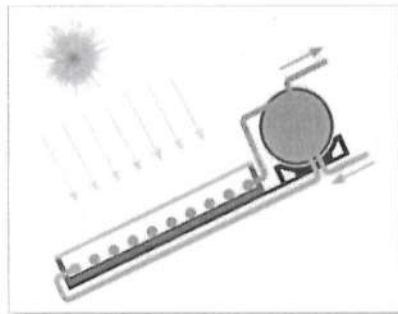


OPGC

Renewable Energy Projects

[Type the document subtitle]

Engg & Efficiency Dept.



Renewable Initiatives:

- Solar Photovoltaic Roof top plants
- Solar Powered LED Street Lights.
- Solar Water Heaters.

1. Roof top PV Plants :

Sl.no	Area	Installed Capacity	Connected Load
1	Switch yard	3 KW	2.2 KW
2	Ash Pond	6 KW	4.55 KW
3	DM Plant	9 KW	7.26 KW
4	CW Pump House	3 KW	2.1 KW
5	Plant Canteen	9 KW	6 KW + (2.0 KW flexible load of heater/food warmer)
6	Service Building	9 KW	9KW
	Total	39 KW	

a. PV Solar System at Switch Yard Roof:

3 KW PV Solar system installed at 220kV switchyard control room building commissioned in **April-2016**.

- **Connected load:** All indoor lighting of Switch yard control room, Front & rear halogen lights of Switch yard control room building.

b. PV Solar System at Ash Pond Control Room Roof:

2x3 KW PV Solar system installed at Ash Pond Control Room roof top commissioned in **June-2017**.

- **Connected load:** All indoor lighting of Switch gear control room, Battery room, Front & rear halogen lights of Ash pond switch gear room, all outdoor lighting of Ash Pond 33/6.6KV Switch yard.

c. PV Solar System at DM Plant Building Roof:

3x3 KW PV Solar system installed at DM Plant building Roof commissioned in **June-2018**.

- **Connected load:** All indoor lighting of control room, MCC room, Office rooms, Efficiency Lab, GCV Room & coal laboratory.

d. PV Solar System at CW Pump House Roof:

3 KW PV Solar system installed at CW Pump house roof commissioned in **June-2018**.

- **Connected load:** All indoor lighting of MCC room & outside lights.

e. PV Solar System at Plant Canteen building Roof:

9 KW PV Solar system installed at Plant Canteen roof commissioned in **April-2019**.

Connected load: All indoor lighting of Canteen dining, fans, Water cooler, TV, Insect killers & Portable strip warmers.

e. PV Solar System at Service Building Roof:

9 KW PV Solar system installed at service building roof commissioned in **March-2021**.

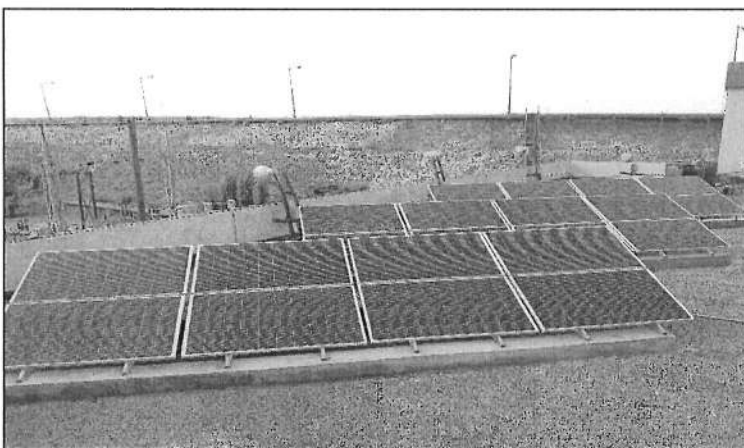
- **Connected load:** All indoor lighting, fans, water cooler of Service building 3rd floor.



Solar PV Plant in Canteen.



Solar PV Plant in DM Plant.



Solar PV Plant in Ash Pond.



Solar PV Plant at Service Building

2. Solar Powered LED Street Lights:



Solar Powered LED Street Light at Ash pond-C

- Total **60 no's** of solar 50 watt powered 30 watt LED's Street lights are installed in Ash Pond –C area.
- The total capacity of the system is **3KW**.
- Specific Features of the street lights: Pole Mounted type, Inbuilt Maintenance free Lithium Ion Battery With Motion Sensor.
- Lights are in service on an average 11 hours daily i.e. 6 pm to 5am .
- **Electrical Energy saved in a month** = 60 no's x 30 watt x 11 hours x 30 days = **594 kWh**.

3. Solar Water Heater:

a. Solar Water Heater:



Solar Water Heater at Plant

900 Litre /day Solar Water Heater installed at roof of plant canteen commissioned in March-2017

- 3 Hot water tap points are provided at different locations inside plant canteen: for full filling the hot requirements like cooking, utensil cleaning, tea making, and vegetable washing & cleaning.
- Physical verification on **6th April 2019**, all the three hot tap points are working & serving their purpose.
- The electric geyser is in OFF condition.
- Energy Savings for geyser not in service: $2 \text{ kw} \times 4 \text{ hrs} \times 30 \text{ Days} = \mathbf{240 \text{ KWH}}$
(Also LPG Cylinder consumption savings is additional.)

b. Solar Water Heater at Guest House & Quarters

2000 Litre/day Solar Water Heater has been installed at ITPS Guest House (OPGC township) commissioned in Sept-16.

Solar water heater in :

D1 Type - 14000 LPD(7 x2000 LPD)

D3 Type-6000 LPD(3X 2000 LPD)

Purpose: To serve the hot water requirement to the individual rooms/houses.

Biogas Plant

a. Biogas supplied to guest house:

- 1 MTD- Per day capacity (which is running at 30% capacity providing 5to6 hrs gas supply to guesthouse.)

+

Solar water heater in :

D1 Type - 14000 LPD(7 x2000 LPD)

D3 Type-6000 LPD(3X 2000 LPD)





Environment Policy



OPGC understands the importance of the Environment and *In* recognition of the interests of the society in securing sustainable industrial growth, compatible with a wholesome environment, OPGC affirms to adhere the highest possible levels of performance in environmental compliance, practices, stewardship and assigns high importance to promote and maintain a pollution-free environment in all its activities.

Objectives

- To adopt a pro-active approach and place environmental aspects as one of the prime consideration in decision-making process.
- To comply with all applicable laws governing environment protection through appropriate mechanisms.
- To constantly improve upon the standards of pollution control and provide a leadership in environment management.
- To ensure efficient and optimal use of resources such as land, water, fuel, construction materials, oils, and chemicals etc. especially the non-renewable ones.
- To use non-polluting and environment-friendly technology.
- To monitor regularly air, water, land, noise and other environmental parameters.
- To spearhead waste management by adopting the 3Rs principle (Reduce, Re-use and Recycle) and safe disposal.
- To develop employees' awareness on environmental responsibilities and encourage adherence to sound environmental practices.
- To work closely with Government and local authorities to prevent or minimise adverse consequences of the industrial activities on the environment.
- To actively participate in social welfare and environmental development activities of the locality around its Units.
- To create carbon sink by adding green cover in and around ITPS.

Effective from: 12.08.2025


Sri Anjana Ranjan Dash
Director (Operations) & Occupier