OPG POWER GENERATION PVT. LTD.
CIN : U40109TN2005PTC055442

OPGPG: EHS /2018-19/3181

May 25th, 2019

THE JOINT DIRECTOR
Govt. of India
Ministry of Environment and Forests
Regional Office (Southern Zone)
Kendriya Sadan, 4th Floor, E & F Wings
Koramangala,
Bangalore 560 034

Sir,

Sub: Compliance Status, Borewell Water Analysis and Ambient Air Quality Reports – Half Yearly Return – Reg.

Period: October 2018 to March 2019

Ref: No.J-13012/111/2009-IA.II (T)
Ref: MoEF. Lr. No. J-13011/81/2007-IA.II (T), Dated: 31.03.2008
Ref: J-13012/111/2009-IA.II (T)

We herewith submit the half yearly Bore well water analysis report, Ambient Air Quality Monitoring report, and Compliance status report, Noise level monitoring report for the period from October 2018 to March 2019.

Thanking you

Yours faithfully,
For **OPG POWER GENERATION PRIVATE LIMITED**

28/5/19.

G.Mohan
EHS – Sr.Manager

Encl.:

1. Environmental Clearance No.J-13012/111/2009-IA.II (T) General Conditions – Compliance status as on May 2019
2. Environmental Clearance No.J-13012/111/2009-IA.II (T) Special Conditions – Compliance status as on May 2019
3. Environmental Clearance No.J-13012/111/2009-IA.II (T) Amendment for the augmentation from 160MW to 180MW Conditions – Compliance status as on May 2019

New No. 6, Sardar Patel Road, Guindy, Chennai - 600 032.
Phone : +91 44 4291 1222, Fax : +91 44 4291 1209
E-mail : admin@opgpower.com Website : www.opgpower.com

6. Bore well water Analysis report
7. TNPCB analysis reports for Sewage effluent, Bore well water, Industrial effluent (Recycled)
8. Form V(Environmental Statement)
9. TNPCB analysis reports on AAQ and Stack
10. Third party analysis reports on AAQ and Stack
11. Report on control of Spontaneous combustion of coal
12. LDO license copy
13. Fly Ash customer list
14. Noise Level Report
15. CSR Activities

16. CC: **The District Environmental Engineer**, Gummidipoondi without Encl.

COMPLIANCE STATUS

As on April-2019

Environmental Clearance No: J-13012/111/2009-IA.II (T)

A- General Condition: **Compliance Status Update**

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
1.	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.	Documents posted in our official website. The points are well taken care and we are having closed storage area with adequate compaction and spraying facility to minimize spontaneous combustion of coal.
2.	Storage facilities for auxiliary liquid fuel such as LDO and / HFO /LSHS shall be made in the plant area in consultation with Departments 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.	We are using only LDO procuring from IOC. The Storage License copy is enclosed.
3.	Regular monitoring of ground water level 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.	Regular monitoring of ground water is being carried out through TNPCB and the reports are enclosed.
4.	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.	We are not neither using any surface water for the unit nor discharging any liquid effluent from the plant. Bore well water analyzing reports are enclosed. The result reveals that the ground water quality is sustaining.

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
5.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Both the First Aid and Sanitation arrangement have been made for drivers, contract workers.
6.	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.	The followings are the measures taken to reduce the noise level All the noise generating equipment's were installed with silencers/anti-vibrating pads Proper PPE's are issued to the concerned and enforcing to wear. Audiometric and health checkup records are maintained in standard forms.
7.	Regular monitoring of ambient air ground level concentration of SO2 , NOx , 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.	2 AAQ monitoring stations were installed and the data is uploaded to the Care Air Centre. Annual AAQ monitoring by TNPCB or Board's approved third party is being carried out and reports are submitted to TNPCB. Copy of the report is enclosed.
8.	Provision shall be made for the housing of construction labor (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking , mobile toilets , mobile STP , safe drinking water , medical health care , crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	100 rooms were constructed for construction labor inside the premises with basic amenities. After completion of the project, same was removed.

S. No.	Stipulated Conditions	Compliance Status As on 25th march 2019
9.	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.	Documents posted in our official website. Copy enclosed for ref.
10.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat , Zila Parisad / 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.	The same has been submitted to the concerned panchayat.
11.	An Environment Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the head of the organization.	An Environment Cell with the reporting To Central committee is being functional.
12.	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM , RSPM (PM2.5 & PM 10), SO2 , NOx (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.	The Stack emission and AAQ results are uploaded in the web site and being displayed at the gate as per guideline.

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
13.	The environment statement for each financial year ending 31st March in Form V as in 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 clearance conditions and shall also be sent to the respective Regional Officers of the Ministry by e- mail.	Form V is being submitted regularly to the Tamil Nadu Pollution Control Board.
14.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Regional Ministry of Environment and Forests, its Bangalore Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of the compliance of the environment of the environmental clearance conditions of their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	A half yearly report which comprises of the following is being sent to the Regional Ministry Office- 1. AAQ results 2. Ground water analysis results 3. Noise level results 4. Ash disposal details
15.	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 Environmental 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 basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	The Stack emitting levels are being displayed at the main gate and the reports are being submitted to TNPCB/MOEF as per directions.

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
16.	Separate funds shall be allocated for implementation of environmental protection measures along with item – wise break up. These cost shall be included as part of the project cost. The funds year marked for the environment protection measures shall not be diverted for another purposes and year –wise expenditure should be reported to the Ministry.	The guidelines and directions are strictly followed. The expenditure done in this review period of October 2018 to March 2019.
17.	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 details for the year 2017-2018 have been submitted to the ministry.
18.	Full cooperation shall be extended to the Scientists /Officers from the Ministry /regional Office of the Ministry of Bangalore / CPCB / SPCB who would be monitoring the compliance of environmental status	The guidelines and instructions are being followed.

PART- III

Subject: - Environmental Clearance – 2 x77MW reg.

Reference: - MoEF. Lr. No. J-13011/81/2007-IA.II(T), Dated: 31.03.2008

A. SPECIFIC CONDITION: **Compliance Status Update**

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
i.	The total land requirement for the project shall be restricted to 79.105 acres.	The land area utilized for power plant is 73.435 acres.
ii.	Sulphur and ash contents in the coal to be used in the project shall not exceed 1.2% and 15% respectively.	The Indonesian coal used in this plant is having a maximum of 0.3% Sulphur and 10% Ash respectively.
iii.	Two stacks with continuous online monitoring equipment's for SO2 , NOx and particulate matter shall be provided. The height of the stacks shall be as per the standards prescribed under the Environment (protection) Rules in this regards or 140 m whichever is more. Exit velocity of flue gases shall not be less than 20.14 m/sec.	1-Common stack with online continuous monitoring system for SO2, NOx and SPM was installed. The height of the chimney is 140m and the exit velocity of flue gases is more than 20.14 m/s, which is meeting the requirement of the said Rules. . The online stack monitor has been linked with TNPCB CARE AIR centre for real time data transfer, LED display for stack emission data has been fixed in the main gate of the plant.
iv.	High efficiency Electrostatic Precipitator (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3.	1. 99.9% Efficiency ESP has been installed to ensure the PM level is below 50 mg/Nm3. 2. Bag filters are installed in all the transfer towers of Coal. 3.Online data for Sox/NOx/SPM is being uploaded to TNPCB CARE AIR center
v.	Coal transportation will be done by rail up to Gummidipoondi Railway station and thereafter by road.	Coal will be transported from Chennai port to Gummidipoondi by Road since the rail transport was not feasible by railway. Clearance given by MoEF at the 54th meeting based on railways feedback.

vi.	Fly ash shall be collected in dry form and storage facility (silos) shall be provided.100 % fly ash utilization shall be ensured from day one. Unutilized bottom ash shall be disposed off in the ash pond in conventional slurry mode.	Separate Silos are provided for fly ash and bottom ash. The fly ash and bottom ash are collected in dry form and are entirely used in cement plants and brick making plants respectively. The reports are enclosed.
S. No.	**Stipulated Conditions**	**Compliance Status As on 25th March 2019**
vii.	Ash pond shall be lined with LDPE lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	100% ash is getting utilised in Cement Plants/Brick making plants. The reports are enclosed.
viii.	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.	Yes water sprinkler / and 11 Bag filters at all transfer points have been provided in the coal storage /handling area to control the fugitive emission.
ix.	Water requirement shall not exceed 4.3m3/hr.	Clearance obtained from TNPCB for using ground water and the monthly reports are being submitted. Complied with the condition.

EC Conditions:

J-13012/111/2009-IA.II (T)

Amendment for the augmentation from 160 to 180 MW

Compliance Status Update

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
1.	The matter for transportation of coal by rail shall be expedited. The progress made in this regard shall be submitted to the Ministry and its R.O from time to time	The detailed report from railways was submitted to the Ministry. The approval for the railway siding and the rail line up the plant includes the Rail over Road is in place. The land acquisition is in progress.
2.	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.	The detailed Coal and Ash analysis are being carried out by third party. Report copy is appended.
3.	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.	Conversion of street lights to LED lamps is in progress. Conversion to solar base study and implementation is in progress.
4.	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	Fogging and dust extraction systems are installed at all the probable locations.

5.	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.	Noted and complied with. 100% Fly Ash and Bottom Ash is being utilised in Cement plants/Brick making plants and road projects. The report is annexed.
S. No.	**Stipulated Conditions**	**Compliance Status As on 25th March 2019**
6.	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.	Noted and complied with. 30% green belt coverage as per direction was completed and nurturing is in progress.
7.	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.	Environment Management System with Corporate is in place. The plant is certified for ISO 14001 Environment Management System and OHSAS 18001 Occupational Health and Safety management System.

Environmental Clearance No: J-13012/111/2009-IA.II (T)

A- Special Condition: Compliance Status Update

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
1.	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six month	Documents posted in our official website
2.	The project proponent shall take up the matter for transportation of coal by rail with the Railways. Progress made in this regard shall be submitted to the Registration Office of the Ministry from time to time.	Documents posted in our official website
3.	High Efficiency Electrostatic Precipitators (ESPS) Shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas 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.	99.9% Efficiency ESP has Been installed to ensure the PM level below 50 mg/Nm3. Bag filters are installed In all the transfer towers to control dust emission. Online data for SOx/NOx/SPM is being uploaded to TNPCB website.
4.	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.8% and 25% respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to MoEF for suitable amendments to environmental clearance condition wherever necessary.	We are importing coal from Indonesia which has the maximum sulphur % of 0.15 and indigenous coal is having the maximum sulphur % of 0.4. We are ensuring that both the Sulphur and Ash content shall not exceed the prescribed norms. Documents posted in our official website

S. No.	Stipulated Conditions	Compliance Status As on 25th Oct 2019
5.	Stacks of 100 m and 120 m height respectively shall be installed and provided with continuous online monitoring equipment for SOx, NOx and PM2.5 and PM 10. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also be monitored on periodic basis.	Stacks of 100m, 120m height respectively has been installed. Continuous online monitoring equipment for 1x80 MW and 1x180MW was installed and the data is being uploaded to TNPCB website. Exit velocity is maintained always above 22 m/s.
6.	Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponents expenses in consultation with the state Govt.	We have conducted a Hydrogeological study of our own with a third party. Their recommendations are being implemented.
7.	Water requirement for running the plant to begin with shall be met from ground water after obtaining approval of the competent authority. However, the project proponent shall use harvested rain water in the long run. Air cooled condenser shall be installed for condensate cooling.	Ground water approval has been Obtained from SGWB for quantum of 1296 KLD. Harvested rainwater is mainly utilised for the process and Air cooled condensers are installed as per instruction.
8.	Hydro-geological status (quality and quantity) of ground water shall be reviewed annually from and institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports / data of water quality monitored regulation and maintained shall be submitted to the Regional Office of the ministry.	The reports are posted in our official website. There is no deterioration in the ground water quality and the results are annexed.
9.	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional office of the ministry within three months.	Document posted in our official website. Harvested rainwater is used during the lean period.

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
10.	No water bodies (including natural drainage system in the area shall be disturbed due to activates associated with the setting up / operation of the power plant.	The natural drain of the plant is from south to north which we have not disturbed. Storm water drains with infiltration wells have been made in the plant to enrich the ground water table in the plant without affecting the natural drain.
11.	A well designed rainwater harvesting shall be put in place before commissioning of the plant. Central Groundwater Authority / Boards shall be consulted for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance and details shall be furnished.	A detailed study was made and the report was posted in our official website. The recommendations are being implemented.
12.	The treated effluents conforming to the prescribed standards only shall be recirculated and reused within the plant. Arrangement shall be made that effluents and storm water do not get mixed. A sewage treatment plant shall be provided (as applicable) and the treated Sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	Noted and being ensured. TNPCB is also collecting surprise checks and collecting samples. The reports are annexed. A clear demarcation has been made to avoid the mixing of effluent water with storm water in design itself. Sewage treatment plant is in place and the treated water is being used in our green belt.
13.	Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Noted and complied with.
14.	Utilisation of 100% Fly ash generated shall be made from day one of commissioning of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	100% Ash utilisation is ensured as per condition from day 1. The ash utilization details are annexed.

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
15.	Fly ash shall be collected in dry from and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Separate silos are provided for Fly ash and bottom ash with adequate capacity. 100% Ash is being utilized. The ash utilization and the analysis reports are annexed. No ash is dumped at any point of time.
16.	Ash pond (if any) shall be lined with HDPE / LDPE 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.	Noted and complied with. Ash pond with proper 3 layer HDPE/LDPE lining has been made to ensure no leachate. The monitoring well water reports are annexed.
17.	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 30 m width shall be raised. Tree density shall not less than 2500 per ha with survival rate not less than 80%.	More than 33% area is covered by green belt as per the condition. District Forest Officers are helping in selection of the species, nurturing and enhancement.
18.	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 supplying the nearby village and schools shall be undertaken in a time abound manner.	Document is posted in our official website
19.	An amount of Rs. 4.8 Crores shall be earmarked as one time capital cost for CSR Programme. Subsequently a recurring expenditure of Rs. 0.96 Crores per annum till the operation of the plant shall be activities to be undertaken shall be submitted within one month along with road map for implementation.	Noted and complied with. Document is posted in our official website

S. No.	Stipulated Conditions	Compliance Status As on 25th March 2019
20.	While identifying CSR activities it shall be ensured that need based assessment for the nearby villages within study area shall be conducted 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 shall be undertaken. 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. Vocational training programme for possible self- employment and jobs shall be imparted to identify villagers free of cost.	Noted and complied with. Rotary club has been Invited to study the need base assessment for the nearby community. Document is posted in our official website
21.	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.	Noted and complied with. Document is posted in our official website.

Ash Utilization Report

(October-2018 to March-2019)

OPG POWER GENERATION PVT. LTD.	MONTHLY FLYASH AND BOTTOM ASH GENERATION,UTILIZATION DETAILS	Oct 18

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA OBULAPURAM
GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	1,35,337.02MT
2	Average ash content in the coal	4.06%
3	Generation of Fly ash	4406.520MT
4	Generation of Bottom Ash	1101.63MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	4406.520MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	4406.520MT

Bottom Ash

1	To Brick Industries	1101.63MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

OPG POWER GENERATION PVT. LTD.	MONTHLY FLYASH AND BOTTOM ASH GENERATION,UTILIZATION DETAILS	Nov 18

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA OBULAPURAM
GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	1,50,083.70MT
2	Average ash content in the coal	4.61%
3	Generation of Fly ash	6929.280MT
4	Generation of Bottom Ash	1732.32MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	6929.280MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	6929.280MT

Bottom Ash

1	To Brick Industries	1732.32MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

OPG POWER GENERATION PVT. LTD.	MONTHLY FLYASH AND BOTTOM ASH GENERATION,UTILIZATION DETAILS	Dec 18

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA OBULAPURAM
GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	1,05,515.440MT
2	Average ash content in the coal	6.24%
3	Generation of Fly ash	6593.390MT
4	Generation of Bottom Ash	1648.35MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	6593.390MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	6593.390MT

Bottom Ash

1	To Brick Industries	1648.35MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

OPG POWER GENERATION PVT. LTD.	MONTHLY FLYASH AND BOTTOM ASH GENERATION,UTILIZATION DETAILS	Jan 19

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA OBULAPURAM
GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	97,157.960MT
2	Average ash content in the coal	6.80%
3	Generation of Fly ash	5287.970MT
4	Generation of Bottom Ash	1321.99MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	5287.97MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	5287.970MT

Bottom Ash

1	To Brick Industries	1321.99MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

OPG POWER GENERATION PVT. LTD.	MONTHLY FLYASH AND BOTTOM ASH GENERATION,UTILIZATION DETAILS	Feb 19

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA OBULAPURAM
GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	91,211.610MT
2	Average ash content in the coal	3.86%
3	Generation of Fly ash	3522.400MT
4	Generation of Bottom Ash	880.6MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	3522.400MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	3522.400MT

Bottom Ash

1	To Brick Industries	880.6MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

OPG POWER GENERATION PVT. LTD.	MONTHLY FLY ASH AND BOTTOM ASH GENERATION, UTILIZATION DETAILS	March 19

NAME AND ADDRESS OF THE SUPPLIER : OPG POWER GENERATION PRIVATE LIMITED
MADHARPAKKAM ROAD, PERIYA

OBULAPURAM

GUMMIDIPOONDI 601 201

Accumulated quantity of ash at the start of the month

Fly Ash

1. Kept at Ash Dyke : NIL
2. Kept at Silo : NIL

Bottom Ash

1. Kept at Ash Silo : NIL

ASH GENERATION

1	Quantity of Blended coal used during this Month	1,72,264.240 MT
2	Average ash content in the coal	6.94 %
3	Generation of Fly ash	9,567 MT
4	Generation of Bottom Ash	2,391 MT

ASH DISPOSAL

Fly Ash

1	To Cement Industries	9,567 MT
2	To Brick Industries	NIL
3	Total disposal of Fly ash	9,567 MT

Bottom Ash

1	To Brick Industries	2,391 MT

ASH ACCUMULATION

1	Fly Ash Kept in Ash dyke	NIL
2	Fly Ash Kept in Silos	NIL
3	% of utilization	100%
4	Bottom Ash kept in Silos	NIL
5	% of utilization	100%

Fly ash sent to the following Industries

1. GGR Fly Ash Travels
2. Sri Praveen Enterprises
3. Ramco Cements Limited
4. Thirumalai Agencies
5. UltraTech Cements limited
6. Venkateswara concrete bricks

Borewell Analysis Report

(October-2018 to March-2019)

BORE WELL WATER ANALYSIS

October- 2018

BORE WELL WATER ANALYSIS - OCTOBER 2018

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	7.65	7.68	7.66	7.59	7.67	7.59	7.64	7.43	7.47	7.38	7.43	7.51	Not In Use	7.47	7.49	7.54
2	Electrical Conductivity	_	µs/Cm	1,246	1,427	934	704	724	793	2,175	639	1,271	951	764	663		655	712	757
4	Total Hardness	CaCo3	ppm	536	372	476	316	304	340	495	336	424	568	444	480		420	460	440
5	Calcium Hardness	CaCo3	ppm	304	208	256	240	180	184	160	176	220	340	264	288		208	164	148
6	Magnesium Hardness	CaCo3	ppm	232	164	220	76	124	156	335	160	204	228	180	192		212	296	292
7	Chlorides	Cl	ppm	119	143	99	43	71	77	409	51	167	102	57	82		71	68	57
8	Silica	SiO2	ppm	57	52	51	68	55	57	62	72	46	62	43	26		27	34	48
3	Sulphates	So5	ppm	52	57	36	39	38	43	72	43	54	52	46	29		30	44	30

November -2018

BORE WELL WATER ANALYSIS - NOVEMBER 2018

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	7.39	7.59	7.59	7.68	7.72	7.62	7.69	7.34	7.46	7.37	7.38	7.48	Not In Use	7.45	7.50	7.66
2	Electrical Conductivity	_	µs/Cm	1,228	1,661	1,022	716	726	802	2,185	621	1,051	964	780	698		818	712	751
4	Total Hardness	CaCo3	ppm	568	512	500	424	312	376	468	348	368	604	492	368		448	420	452
5	Calcium Hardness	CaCo3	ppm	192	152	220	176	184	228	179	148	152	244	200	212		260	184	204
6	Magnesium Hardness	CaCo3	ppm	376	360	280	248	128	148	289	200	216	380	292	156		188	236	248
7	Chlorides	Cl	ppm	153	184	99	60	88	85	389	88	130	79	65	60		82	88	71
8	Silica	SiO2	ppm	80	82	91	80	77	63	61	90	45	93	76	95		84	60	53
3	Sulphates	So5	ppm	50	66	47	34	37	34	71	37	31	49	49	30		34	42	29

December -2018

BORE WELL WATER ANALYSIS - DECEMBER 2018

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	7.38	7.40	7.45	7.53	7.88	7.40	7.55	7.37	7.30	7.26	7.25	7.19	Not In Use	7.35	7.31	8.15
2	Electrical Conductivity	_	µs/Cm	1,781	1,533	941	695	692	951	2,132	661	1,109	971	803	2,152		703	637	785
4	Total Hardness	CaCo3	ppm	516	528	524	520	384	480	490	392	408	588	540	800		464	356	464
5	Calcium Hardness	CaCo3	ppm	204	176	176	208	176	176	190	200	180	260	208	520		264	204	116
6	Magnesium Hardness	CaCo3	ppm	312	352	348	312	208	304	300	192	228	328	332	280		200	152	348
7	Chlorides	Cl	ppm	128	179	85	37	34	128	356	43	102	77	28	77		43	45	119
8	Silica	SiO2	ppm	66	95	106	91	69	773	62	89	41	85	83	89		82	78	61
3	Sulphates	So5	ppm	49	49	38	34	44	48	75	34	47	52	54	62		30	40	38

January -2019

BORE WELL WATER ANALYSIS - JANUARY 2019

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	8.41	7.76	7.63	7.69	7.71	7.71	7.56	7.81	7.51	7.47	7.60	7.63		7.78	7.87	7.63
2	cal Condu	_	µs/Cm	1,396	1,328	983	732	864	864	1,456	631	1,355	1,180	800	930		761	722	869
4	tal Hardne	CaCo3	ppm	530	520	420	360	410	410	520	290	410	440	360	420		370	340	400
5	cium Hard	CaCo3	ppm	220	210	200	180	240	240	289	150	240	240	200	250	Not In Use	210	180	210
6	esium Har	CaCo3	ppm	310	310	220	180	170	170	231	140	170	200	160	170		160	160	190
7	Chlorides	Cl	ppm	156	156	128	71	85	85	215	71	206	71	85	78		92	85	85
8	Silica	SiO2	ppm	46	47	28	33	33	33	45	30	55	72	42	51		25	35	24
3	Sulphates	So5	ppm	46	47	28	33	33	33	50	30	55	72	42	51		25	35	24

February -2019

BORE WELL WATER ANALYSIS - FEBRUARY 2019

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	7.30	7.48	7.33	7.28	7.22	7.23	7.43	7.03	7.29	7.16	7.12	7.18		7.28	7.18	7.32
2	Electrical Conductivity	_	µs/Cm	1,197	1,200	925	706	784	909	2,184	645	1,046	975	716	761		715	666	825
4	Total Hardness	CaCo3	ppm	424	324	362	250	333	354	499	250	250	366	324	333		300	208	354
5	Calcium Hardness	CaCo3	ppm	224	166	208	166	250	220	320	187	138	229	229	208		208	125	179
6	Magnesium Hardness	CaCo3	ppm	200	158	154	84	83	134	179	63	112	137	95	125	Not In Use	92	83	175
7	Chlorides	Cl	ppm	142	102	82	40	43	88	400	51	130	88	57	51		62	57	74
8	Silica	SiO2	ppm	77	73	92	85	87	87	76	87	48	88	82	93		87	74	81
3	Sulphates	So5	ppm	53	56	42	38	53	58	63	39	42	62	53	49		31	45	36

March-2019

BORE WELL WATER ANALYSIS - MARCH 2019

Sl. No.	ANALYSIS	As	Unit	PHASE-I						PHASE-II									
				BW 1	BW 2	BW 3	BW 4	BW 5	BW 6	BW1	BW2	BW3	BW4	BW5	BW6	BW7	BW8	BW9	BW10
1	pH	_	-	7.75	7.55	7.42	7.35	7.41	7.35	7.57	7.26	7.30	7.28	7.19	7.31		7.37	7.28	7.50
2	Electrical Conductivity	_	µs/Cm	1,331	1,273	966	752	779	973	2,357	671	1,138	1,014	758	743		765	713	831
4	Total Hardness	CaCo3	ppm	499	337	366	337	304	420	520	229	308	374	291	345		391	270	362
5	Calcium Hardness	CaCo3	ppm	187	125	196	154	171	262	191	187	150	208	183	208	Not In Use	229	133	171
6	Magnesium Hardness	CaCo3	ppm	312	212	171	183	133	158	329	42	158	166	108	137		162	137	191
7	Chlorides	Cl	ppm	153	130	94	45	45	108	425	57	128	94	57	57		71	60	74
8	Silica	SiO2	ppm	74	69	86	77	77	84	59	75	39	79	81	85		81	64	70
3	Sulphates	So5	ppm	60	59	41	38	47	57	59	47	57	61	50	51		39	47	35

FORM-V

(FY-2017-2018)

OPG POWER GENERATION PVT. LTD.

29 - Sep - 18

OPGPG: COO/PCB/2017-18/Form V

The Joint Chief Environmental Engineer
Tamilnadu Pollution Control Board,
First Floor, 950/1, Poonamallee High Road,
Arumbakkam,
Chennai-600 106.

Sir,

Sub: TNPCB Industries – M/S OPG Power Generation Private Limited – Submission of Environmental Statement FY 2017-18– Reg.

We hereby submitting the Annual Environmental Statement in Form V for the financial year 2017-2018 ending with March 2018

This is for your kind information and Documentation.

For further any clarification or data if required we are at your disposal.

Thanking you,

Yours Sincerely,
For **OPG Power Generation Private Limited**

29-Sep-18

D Sabarigireaswaran
Plant Head.

OPG POWER GENERATION PVT. LTD. Pin 601 201

Cc: 1. The Member Secretary, TNPCB Board, Chennai 32 with Encl.

2. The District Environmental Engineer, Gummidipoondi – Only Copy of letter

6, Sardar Patel Road, Guindy, Chennai - 600 032.
Phone +91 44 4291 1222 Fax +91 44 4291 1209
Email : admin@opgpower.com Website : www.opgpower.com

FORM V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH 2018

PART A

(i)	Name and address of the owner/ occupier of the industry, operation or process.	**D Sabarigireaswaran** Director - OPG Power Generation Pvt. LTD. New NO,6 Sardar Patel road, Guindy,Chennai-600 032
(ii)	Industry category Primary – (STC Code) Secondary– (STC Code)	1048. Thermal Power Plant Red Large
(iii)	Production capacity-Units-	2x77,1x80 & 1x180 MW
(iv)	Year of Establishment	Apr 2010/Sep 2012/May 2013/ Jul 2015
(v)	Date of last environmental statement submitted	28th April 2017

PART B

Water and Raw Material Consumption

(1) Water consumption m^3/d

Process	**326 KLD**
Domestic	**25 KLD**

Sl. No.	Name of the Products	Process water consumption per unit of product output l/kwh	
		During the previous financial year	During the current financial year
	(1)	(2)	(3)
1.	Electricity	0.038 litre/kwh – Unit 1 0.058 litre/kwh – Unit 2 0.061 litre/kwh – Unit 3 0.046 litre/kwh – Unit 4	0.052 litre/kwh – Unit 1 0.061 litre/kwh – Unit 2 0.045 litre/kwh – Unit 3 0.043 litre/kwh – Unit 4

(2) Raw Material Consumption

Sl. No.	Name of the Raw materials	Consumption of raw material per unit	
		During the previous financial year	During the current financial year
1.	Blended Coal	0.764 kg/kwh –Unit 1 0.780 kg/kwh –Unit 2 0.739 kg/kwh –Unit 3 0.598 kg/kwh –Unit 4	0.766 kg/kwh – Unit 1 0.767 kg/kwh – Unit 2 0.757 kg/kwh – Unit 3 0.669 kg/kwh – Unit 4

*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameters as specified in the consent issued)

Pollution	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	0.29 kg/day	pH: 7.55 TSS 16.25 mg/l BOD 4 mg/l	No Variation
(b) Air	SPM 0.4 MT/day SO_2 5.4 MT/day NO_X 3.3 MT/day	SPM 19 mg/Nm^3 SO_2 250 mg/Nm^3 NO_X 154 mg/Nm^3	No Variation

PART D

HAZARDOUS WASTES

(As specified under Hazardous Wastes Management and Handling Rules, 1989)

Hazardous Waste	Total quantity	
	During the previous financial year	During the current financial year
(a) From process (5.1)	1000 kg	1000 kg
(b) From process (5.2)	100 kg	100 kg
(c) From pollution control facilities	Nil	Nil

PART E

SOLID WASTES

	Total quantity	
	During the previous financial year	During the current financial year
(a) From process	Fly Ash 1,29,815 MT Bottom Ash 30,142 MT	Fly Ash 1,12,214 MT Bottom Ash 25,768 MT
(b) From pollution control facilities	Nil	Nil
(c) (1) Quantity recycled or re-utilised with in the unit	Nil	Nil
(2) Sold	Fly Ash 1,29,815 MT Bottom Ash 30,142 MT	Fly Ash: 1,12,214 MT Bottom Ash: 25,768 MT
(3) Disposed	Nil	Nil

PART F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adapted for both these categories of wastes.

- Hazardous waste production: Approximately 1000 kg of used/spent oil of all 4 units disposed to authorized recycler.
- Dry Fly ash and Bottom Ash Disposal Practice:

  Dry Fly ash: 100% disposal to end-user – Cement industries & brick making

  Dry Bottom ash: 100% disposal to end-user – Filling for Road laying & Brick making
- Typical Fly ash analysis:

Unburnt carbon: <1%	SiO2: 58 %	Al2O3: 24 %
Fe_2O_3: 6 %	CaO: 2 %	MgO: 1 %
TiO2: 1.1 %	Na2O: 0.5 %	K2O: 1 %
P2O5: 0.1 %	SO3: 5 %	

PART G

Impact on pollution abatement measures taken on conservation of natural resources and on the cost of production.

a) CEMS and CAAQMS connectivity was established in 2012 and 2014 respectively and the online data streaming is being done.

b) Zero stock of Hazardous Waste is being maintained.

c) RO based Effluent treatment plant is functioning and 90% of the effluent is recycled in the process.

d) Sewage treatment plants is working satisfactorily and the treated water is totally used in our green belt

e) Elevated solar pond is being used for solar evaporation.

f) Bag filters, ESP are working satisfactorily

g) Continuous stack Emissions for all the stacks and Ambient Air qualities from 2 Ambient Air quality monitoring stations are being streamed to Care Air Centre.

h) Continuous effluent monitoring station for the recommended effluent parameters (Flow Totalizer and Web Camera for the Solar Pond) are procured and connected to Water Quality monitoring center.

i) Rainwater harvesting by infiltration-recharge pits and open ponds were established based on independent hydrological study.

j) Additionally, we have 4 no's Rain water harvesting pits and 9 no's of recharge pits were established as recommended of hydrogeological study.

PART H

Additional measures / investment proposal for environmental protection, abatement of pollution, prevention of population.

l) Green belt developed in more than 33% of the total area and planned to put additional 2000 to 3000 plantations. This is a continuous progress.

PART I

Any other particulars for improving the quality of environment

a) ISO 14001: 2004 Environment Management System and OHSAS 18001:2007 Occupational Health & Safety Accreditation System certificates were obtained and the systems are maintained well.

m) Rainwater harvesting by infiltration-recharge pits and open ponds were established based on independent hydrological study

b) 100% disposal of fly ash and bottom ash are being ensured.

c) All the noise generating equipment were covered with acoustics to avoid the noise pollution

d) RO based effluent treatment plant is commissioned and the treated effluent water is recycled in the process, which reduced the raw water consumption to 14%.

TNPCB Water Analysis Report

Date of Sample Collection			16-Apr-18			10-May-18			28-Jun-18			1-Jul-18			1-Aug-18			25-Sep-18			1-Oct-18			1-Nov-18			1-Dec-18			10-Jan-19		
Sample Description			STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated	STP Out	RO permeate	Pond Untreated
DEE Code No.			33	34	119	93	94	95	165	166	167	-	-	-	-	-	-	315	316	317	-	-	-	-	-	-	-	-	-	499	500	-
Lab Code			117	118	119	294	295	296	652	653	654	-	-	-	-	-	-	1197	1198	1199	-	-	-	-	-	-	-	-	-	1818	1819	-
S.No.	Parameter	Unit	1	2	3	1	2	3	-	-	-	-	-	-	-	-	-	1	2	3	-	-	-	-	-	-	-	-	-	1	2	-
1	pH		7.53	7.87	8.33	8.35	8.66	7.75	7.76	8.35	8.43	-	-	-	-	-	-	7.82	8.53	8.41	-	-	-	-	-	-	-	-	-	7.53	7.55	-
2	Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Total Suspended Solids	mg/L	42	16	12	16	10	10	12	10	10	-	-	-	-	-	-	12	8	8	-	-	-	-	-	-	-	-	-	16	10	-
4	Total Dissolved Solids	mg/L	514	432	526	332	428	1816	342	412	518	-	-	-	-	-	-	-	656	670	-	-	-	-	-	-	-	-	-	524	268	-
5	Chlorides	mg/L	156	101	158	145	200	750	140	165	205	-	-	-	-	-	-	-	325	320	-	-	-	-	-	-	-	-	-	122	70	-
6	Sulphates	mg/L	68	32	74	54	63	59	43	50	81	-	-	-	-	-	-	-	70	73	-	-	-	-	-	-	-	-	-	82	25	-
7	Oil and Grease	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	-
8	BOD at 27 °C for 3 days	mg/L	16	10	5	13	3	6	2	2	2	-	-	-	-	-	-	8	2	2	-	-	-	-	-	-	-	-	-	5	2	-
9	COD	mg/L	152	96	48	96	24	48	24	16	32	-	-	-	-	-	-	64	16	16	-	-	-	-	-	-	-	-	-	32	16	-
10	Potassium	mg/L	-	-	-	-	-	-	-	-	-																					
11	Sulphides	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Zinc	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Total Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Total Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Total Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Total Kjeldhal Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Fluoride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Total Nitrogen (NO3+NO2)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-
24	Ammonical Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	<2	-	-	<2	-	-	<2	-	-	<2	-	-
25	Fecal Coliform	MPN/100 ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FNA	-	-	FNA	-	-	FNA	-	-	FNA	-	-	FNA	-	-
26	Hexavalent Chromium		-	-	-			-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TNPCB Survey Report

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Ambattur.

From

Dr.S.Sukumar.M.Sc.,M.Phil.,Ph.D.,
Chief Scientific Officer (Lab),
District Environmental Laboratory,
No.77-A South Avenue Road,
Ambattur Industrial Estate, Ambattur,
Chennai 600 058.

To

M/s. OPG Power Generation Ltd,
Periya Obulapuram Village
Gummidipoondi
Pin Code-601 201.

Lr.No.TNPCB/CSO/DEL/AMB/ **103** /AAQS/SM/2018-19 Dated: 07/04/2019.

Sir,

Sub: Furnishing of Report of Analysis of Ambient Air Quality/Stack Monitoring / Ambient Noise Level Survey-regarding.

Ref: 1.This Office.Lr.No. 20/2018-19 Dated:20/09/2018
2. Your ltr. No.NIL Dated: 26/11/2018
3.Cash Receipt No.26990 Dated: 12/11/2018
Rs. 32,200

****

I am sending herewith the Report of Analysis of Ambient Air Quality /Stack Monitoring/Ambient Noise Level Survey conducted in the vicinity of your Industry M/s. OPG Power Generation Ltd, Gummidipoondi on 28/3/2019 with an invoice for a sum of Rs. **56900** **(Rupees Fifty Six Thousand and Nine Hundred only)** towards the above survey/ analysis charges, and same has been adjusted with the advance fees received vide reference (3) cited.

Kindly acknowledge the receipt of the report without fail

S. Sukumar 15/4/2019
Chief Scientific Officer
12/4 **DEL, Ambattur**

Encl: As above

Copy Submitted to:

1. The joint Chief Environmental Engineer, Chennai region (Monitoring), for favour of kind information
2. The Deputy Director (Lab) - I, TNPCB, Chennai. for favour of kind information

Copy to:

3. The District Environmental Engineer, TNPCB,Gummidipoondi for favour of kind information
4. File

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Ambattur.

Ambient Air Quality Survey - Report of Analysis

Report No. **103** /AAQS/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi
   Pin Code-601 201.
3. Date of survey :23/3/2019
4. Duration of Survey : Eight hours
5. Category : Red Large
6. Land use classification. : others

Ambient Temperature (^{0}C)	Min	Max	Relative Humidity (%)	Min	Max
	32.0	37.0		41	55
Weather Condition	Clear Sky		Rain Fall (mm)	Nil	
Predominent Wind Condition	SSE-NNW		Mean Wind Speed (Km/hr)	12.8	

Ambient Air Quality Survey Results

Sl. No	Location	*Direction	Distance (m)*	Height from GL (m)	Pollutants Concentrations (µg/m^3)			
					$PM_{2.5}$	PM_{10}	SO_2	NO_2
1	On top of scaffolding near Main Security gate	N	200	5.0	42.3	77	12.9	15.0
2	On top of scaffolding near OPG staff Qtrs, Peddikuppam	NNE	1500	5.0	---	65	13.3	15.7
3	On top of scaffolding near backside of Church, Kayalarmedu	E	400	5.0	---	81	14.3	16.9
4	On top of scaffolding near Thiru Suresh House, S.R.Kandigai	SSW	80	5.0	51.2	85	14.8	17.3
5	On top of scaffolding near CFIL gate, NR Kandigai	NW	300	5.0	---	79	13.7	16.4

Note:- * With respect to major emission sources.

The analytical results are restricted to the sampling period of 8 Hrs/24Hrs.

Test performed	Test Method
PM_{10}	IS 5182: (Part 23) - 2006
SO_2	Modified West-Graeke /IS 5182: (Part2)-2001 RA:2012
NO_2	Jacobs-Hochheise /IS 5182: (Part6)-2006 RA:2012

S. Srikumar 15/4/2019

Chief Scientific Officer

12/4 DEL, Ambattur

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Ambattur.

Stack Monitoring Survey - Report of Analysis

Report No. **103** DEL-AMB/SM/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi
3. Date of survey 29/3/2019
4. Type of the Industry : Power

Stack Monitoring Survey Results

Sl.No	Stack attached to	Stack Temp °C	Velocity in (M/sec)	Discharge rate in (Nm^3/Hour)	Pollutants (mg/Nm^3)		
					PM	**SO_2**	**NO_x**
1	Boiler PF -1, 320 TPH- 77MW	138	20.9	337207.0	36.1	362.7	119.2
2	Boiler PF -3, 320 TPH- 80MW	143	21.4	341124.2	37.6	405.3	134.3
3	Boiler PF -4, 490 TPH- 180MW	192	13.6	346041.9	39.6	426.7	150.0

NABL Status:

Test performed	Test Method
PM_{10}	IS 5182: (Part 23) - 2006
SO_2	Modified West-Graeke /IS 5182: (Part2)-2001 RA:2012
NO_x	Jacobs-Hochheise /IS 5182: (Part6)-2006 RA:2012

15/4/2019
Chief Scientific Officer
12/4 DEL, Ambattur

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Ambattur.

STACK DETAILS

Report No. **103** DEL-AMB/SM/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi

3. Date of survey 29/3/2019

Sl.No	Particulars	1	2	3
1	Stack attached to	Boiler - 1	Boiler - 3	Boiler - 4
2	Details of process stack	77 MW	80 MW	180 MW
3	Height from G level in (m)	140	100	120
4	Diameter in (m)	3.0 X2.0	3.0 X2.0	3.0 X2.0
5	Port hole height from Ground Level or bends or ducts in (m)	10	10	8
6	Fuel used (with % Sulphur content)	Coal	Coal	Coal
7	Fuel consumption rate per day (mention units)	--	--	--
8	Boiler type and capacity	--	--	--
9	APC Measures provided	ESP	ESP	ESP
10	APC functional status	working	working	provided
11	Moisture Content in %	--	--	--
12	Ambient temp in K	307	307	307
13	Temp. of flue gas in K	411	416	435
14	Velocity of flue gas in m/sec	20.9	21.4	22.7
15	Volume of flue gas sampled in m^3	0.06	0.06	0.06
16	Gaseous Discharge rate per Nm^3/Hour	337207.0	341124.2	346041.9
17	Combustion efficiency %	100%	100%	100%

Chief Scientific Officer 15/4/2019

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Ambattur.

Stack Monitoring Survey - Additional Details

Report No. 103 DEL-AMB/SM/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi
3. Date of survey : 29/3/2019
4. Type of the Industry : Power

Stack Monitoring Additional Details

Sl.No	Details of stack mentioned in the Air consent order	Details of stack available and in working condition	Details of stack which stack Emission Sampling have been done	Justifiation for the left out of stack Emission Sampling
1	Boiler - PF	3 Nos	3 Nos	Nil

15/4/2019
Chief Scientific Officer
12/4 DEL, Ambattur

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Ambattur.

Ambient/Source Noise Level Survey-Report of Analysis

Report No. **103** /DEL-AMB/NSL/2018-19 Date: 07/04/2019.

1	Name of the Industry	**M/s. OPG Power Generation Ltd,**			
2	Address of the Industry	Periya Obulapuram Village Gummidipoondi Pin Code-601 201.			
3	Date of survey		29/3/2019		
4	Category	Red Large	Land Use Classification		others

Type of survey	Ambient/Source	Time Of Survey	Day
Meteorological Conditions		Calm	

Logging Parameters

Instrument Used	Larsen &Davis		Serial No.	824A2033
Logging Interval	10 Minutes in each point		Measuring Range	50-110 dB(A)
Weighting	"A"	Peak Weighting	"C"	Slow
Sound Incidence	RANDOM		Time in Hrs.	15.15 to 16.30

Location	Duration (min)	Distance (m)	Direction	Sound Level –dB(A)		
				L_{eq}	LMin	LMax
Near Main Security gate	10	200	N	58.4	55.2	70.1
Near OPG Qtrs, Peddikuppam	10	1500	NNE	53.6	49.4	63.5
near backside of Church, Kayalarmedu	10	400	E	58.7	55.3	70.7
near Thiru Suresh House, S.R.Kandigai	10	300	SW	55.1	50.2	65.6
near CFIL gate, NR Kandigai	10	300	NW	57.7	55.2	69.6

Note: L90 Value refers to background noise; L50 Value refers to mean noise L10 Value refers to nuisance or annoyance level; Leq Value is the average energy for the measured period

15/4/2019

Chief Scientific Officer

12/4 **DEL, Ambattur**

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Ambattur.

GENERAL PARTICULARS

Report No. **103** DEL-AMB/SM/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi

3. Date of survey :29/3/2019

Sl.No	Head of Particulars	Particulars
1	Process Description	Power
2	Emission sources	Boiler
3	Fugitive Emission Sources	COAL
4	Raw Material Consumption	1130 TPH
5	Production Capacity as per Air Consent order No. & Date	C.No.170818235199 Dated:27/07/2017.
6	Production on the day of survey	full
7	Percent production with respect to Air consent order	100%
8	Air consent Order No. Validity upto 31st March 2019	yes
9	Details of APC Measures	ESP
10	functional status of APC measures	working
11	Compliance with Consent conditions	complied
12	Field observations	Routine activity occured and vehicle movement observed while handling of materials

S. Sulaiman 15/4/2019
Chief Scientific Officer
DEL, Ambattur
12/4

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Ambattur.

INFERENCE REPORT No. **103** DEL-AMB/SM/2018-19 Dated: 07/04/2019.

1. Name of the Industry : **M/s. OPG Power Generation Ltd,**
2. Address of the Industry : Periya Obulapuram Village
   Gummidipoondi
3. Date of survey : 29/3/2019
4. Type of the Industry : Power
5. Weather condition : Clear Sky

STATUS OF POLLUTANTS LEVEL

I.AMBIENT AIR QUALITY:-

1 Total No. of AAQ Stations monitored : 5

2 No. of AAQ stations in which Pollutants level exceeded the Board standards : Nil

Maximum and Minimum values of Pollutants Level oberved

Sl.No.	Pollutant	Values in microgram/m^3		BOARD's STANDARD (As per consent order)
		Maximum	Minimum	
1	Respirable Suspended particulate Matter:			
	(i) PM_{10}	85	65	100 $\mu g/m^3$
	(ii) $PM_{2.5}$	51.2	42.3	60 $\mu g/m^3$
2	GASEOUS POLLUTANTS:-			
	(i) SO_2	14.8	12.9	80 $\mu g/m^3$
	(ii) NO_2	17.3	15.0	80 $\mu g/m^3$

II. STACK MONITORING:-

1 Total No. of Stacks monitored : 3

2 No. of Stacks in which Pollutants level exceeded the Board standards : Nil

5/4/2019
Chief Scientific Officer
DEL, Ambattur
12/4

Third Party Analysis Report on AAQ & Stack

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ISO 9001 : 2008 Certified Company
ISO 14001 : 2004 Certified Company
OHSAS : 18001 : 2007 Certified Company
Accredited by NABL (Chemical & Biological)
Recognized by BIS as per IS 17025 : 2005

TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-308/04/2018	Report Date :	30.04.2018
Customer Name & Address	M/s. OPG Power Generation Pvt Ltd OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-308/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark :	Near Kayalar Medu Charch		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial Residential)
1.	Ammonia (as NH_3)	$\mu g/m^3$	< 1.0	IS 11255:Part 06	400
2.	Arsenic (as As)	ng/m^3	< 0.1	IS 5182:Part 22	6.0
3.	Benzene (C_6H_6)	$\mu g/m^3$	< 1.0	IS 5182:Part 11	5.0
4.	Benzo-a-Pyrine (BaP)	ng/m^3	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m^3	< 1.2	ECI-SOP-SAM-08	2.0
6.	Lead (as Pb)	$\mu g/m^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	ng/m^3	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO_2)	$\mu g/m^3$	13.6	IS 5182:Part 06	80
9.	Ozone (as O_3)	$\mu g/m^3$	< 9.8	IS 5182:Part 09	180
10.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	25.3	EPA 40 CFR Part 50 Appendix L	60
11.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	50.8	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO_2)	$\mu g/m^3$	6.5	IS 5182:Part 02	80

<--- End of Report --->

Verified By :

Remarks :

ENVIRO CARE INDIA PRIVATE LIMITED ★ MADURAI ★ LAB DIVISION

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
Mobile : 8220015870
e-mail : lab@envirocareindia.com

COIMBATORE Tel : +91 (422) 4206686
Mobile : 8056766966
e-mail : ecicbe@envirocareindia.com

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-309/04/2018	Report Date :	30.04.2018
Customer Name & Address	M/s. OPG Power Generation Pvt Ltd OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-309/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark :	Near Sekar House Top		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Ammonia (as NH_3)	$\mu g/m^3$	< 1.0	IS 11255:Part 06	400
2.	Arsenic (as As)	ng/m^3	< 0.1	IS 5182:Part 22	6.0
3.	Benzene (C_6H_6)	$\mu g/m^3$	< 1.0	IS 5182:Part 11	5.0
4.	Benzo-a-Pyrine (BaP)	ng/m^3	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m^3	< 1.2	ECI-SOP-SAM-08	2.0
6.	Lead (as Pb)	$\mu g/m^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	ng/m^3	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO_2)	$\mu g/m^3$	12.5	IS 5182:Part 06	80
9.	Ozone (as O_3)	$\mu g/m^3$	< 9.8	IS 5182:Part 09	180
10.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	23.6	EPA 40 CFR Part 50 Appendix L	60
11.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	47.9	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO_2)	$\mu g/m^3$	6.2	IS 5182:Part 02	80

<--- End of Report --->

Verified By :

Remarks :

ENVIRO CARE INDIA PRIVATE LIMITED LAB DIVISION MADURAI

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
Mobile : 8220015870
e-mail : lab@envirocareindia.com

COIMBATORE Tel : +91 (422) 4206686
Mobile : 8056766966
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4. Unless informed by customer, the test items will not be retained for more than 15 days from date of issue of test report.
5. Total liability of our laboratory is limited to the invoice amount.
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TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-310/04/2018	Report Date :	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-310/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark :	OPG Quarters		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Ammonia (as NH_3)	$\mu g/m^3$	< 1.0	IS 11255:Part 06	400
2.	Arsenic (as As)	ng/m^3	< 0.1	IS 5182:Part 22	6.0
3.	Benzene (C_6H_6)	$\mu g/m^3$	< 1.0	IS 5182:Part 11	5.0
4.	Benzo-a-Pyrine (BaP)	ng/m^3	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m^3	< 1.2	ECI-SOP-SAM-08	2.0
6.	Lead (as Pb)	$\mu g/m^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	ng/m^3	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO_2)	$\mu g/m^3$	12.2	IS 5182:Part 06	80
9.	Ozone (as O_3)	$\mu g/m^3$	< 9.8	IS 5182:Part 09	180
10.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	24.6	EPA 40 CFR Part 50 Appendix L	60
11.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	49.8	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO_2)	$\mu g/m^3$	5.7	IS 5182:Part 02	80

<--- End of Report --->

Verified By :

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

ENVIRO CARE INDIA PRIVATE LIMITED ★ LAB DIVISION ★ MADURAI ★

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : eclchennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
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TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-311/04/2018	Report Date :	30.04.2018
Customer Name & Address	M/s. OPG Power Generation Pvt Ltd OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-311/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark :	Near 10 Megawatt Gate		

S No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQS (Industrial, Residential)
1.	Ammonia (as NH_3)	$\mu g/m^3$	< 1.0	IS 11255:Part 06	400
2.	Arsenic (as As)	ng/m^3	< 0.1	IS 5182:Part 22	6.0
3.	Benzene (C_6H_6)	$\mu g/m^3$	< 1.0	IS 5182:Part 11	5.0
4.	Benzo-a-Pyrine (BaP)	ng/m^3	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m^3	< 1.2	ECI-SOP-SAM-08	2.0
6.	Lead (as Pb)	$\mu g/m^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	ng/m^3	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO_2)	$\mu g/m^3$	11.8	IS 5182:Part 06	80
9.	Ozone (as O_3)	$\mu g/m^3$	< 9.8	IS 5182:Part 09	180
10.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	22.4	EPA 40 CFR Part 50 Appendix L	60
11.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	45.9	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO_2)	$\mu g/m^3$	5.6	IS 5182:Part 02	80

<--- End of Report --->

Verified By :

Remarks :

ENVIRO CARE INDIA PRIVATE LIMITED LAB DIVISION MADURAI

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
Mobile : 8220015870
e-mail : lab@envirocareindia.com

COIMBATORE Tel : +91 (422) 4206686
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Recognized by MoEF for Air, Water, Noise & Hazardous Waste

TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-312/04/2018	Report Date :	30.04.2018
Customer Name & Address	M/s. OPG Power Generation Pvt Ltd OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-312/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark :	CHP – in OPG (South Gate)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Ammonia (as NH_3)	$\mu g/m^3$	< 1.0	IS 11255:Part 06	400
2.	Arsenic (as As)	ng/m^3	< 0.1	IS 5182:Part 22	6.0
3.	Benzene (C_6H_6)	$\mu g/m^3$	< 1.0	IS 5182:Part 11	5.0
4.	Benzo-a-Pyrine (BaP)	ng/m^3	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m^3	< 1.2	ECI-SOP-SAM-08	2.0
6.	Lead (as Pb)	$\mu g/m^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	ng/m^3	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO_2)	$\mu g/m^3$	11.8	IS 5182:Part 06	80
9.	Ozone (as O_3)	$\mu g/m^3$	< 9.8	IS 5182:Part 09	180
10.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	22.4	EPA 40 CFR Part 50 Appendix L	60
11.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	45.9	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO_2)	$\mu g/m^3$	5.6	IS 5182:Part 02	80

<--- End of Report --->

Verified By :

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
Mobile : 8220015870
e-mail : lab@envirocareindia.com

COIMBATORE Tel : +91 (422) 4206686
Mobile : 8056766966
e-mail : ecicbe@envirocareindia.com

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5. Total liability of our laboratory is limited to the invoice amount.
6. Any dispute arising out of this report is restricted to Madurai Jurisdiction Only.

Please look for hologram to Confirm Genuine ECI Test Report

Enviro Care™
INDIA PRIVATE LIMITED
ISO 9001 : 2008 Certified Company
ISO 14001 : 2004 Certified Company
OHSAS : 18001 : 2007 Certified Company

TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-313/04/2018	**Report Date :**	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	**Sample Reference No :**	ECI-NN-AAQ-313/04/2018
Sample Drawn By :	ECI	**Sample Received On :**	24.04.2018
Sample Collected Date :	23.04.2018	**Test Commenced On :**	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	**Test Completed On :**	28.04.2018
Sample Description :	Ambient Air	**Sampling Method :**	IS 5182:P14
Sample Mark:	Near Kayalar Medu Charch		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	24.8	EPA 40 CFR Part 50 Appendix L	60
2.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	52.7	IS 5182:Part 23	100
3.	Suspended Particulate Matter (SPM)	$\mu g/m^3$	147.9	IS:5182 Part 4	--

<--- End of Report --->

Verified By : G.T. Venkatesh

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

ENVIRO CARE INDIA PRIVATE LIMITED LAB DIVISION MADURAI

Authorized Signatory

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TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-314/04/2018	**Report Date :**	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	**Sample Reference No :**	ECI-NN-AAQ-314/04/2018
Sample Drawn By :	ECI	**Sample Received On :**	24.04.2018
Sample Collected Date :	23.04.2018	**Test Commenced On :**	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	**Test Completed On :**	28.04.2018
Sample Description :	Ambient Air	**Sampling Method :**	IS 5182:P14
Sample Mark:	Near Sekar House Top		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	24.2	EPA 40 CFR Part 50 Appendix L	60
2.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	48.7	IS 5182:Part 23	100
3.	Suspended Particulate Matter (SPM)	$\mu g/m^3$	136.2	IS:5182 Part 4	--

<--- End of Report --->

Verified By : Q.T. Vasuki

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

ENVIRO CARE INDIA PRIVATE LIMITED * MADURAI * LAB DIVISION

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
Mobile : 8220015870
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Mobile : 8056766966
e-mail : ecicbe@envirocareindia.com

TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-315/04/2018	**Report Date :**	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	**Sample Reference No :**	ECI-NN-AAQ-315/04/2018
Sample Drawn By :	ECI	**Sample Received On :**	24.04.2018
Sample Collected Date :	23.04.2018	**Test Commenced On :**	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	**Test Completed On :**	28.04.2018
Sample Description :	Ambient Air	**Sampling Method :**	IS 5182:P14
Sample Mark :	OPG Quarters		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	24.8	EPA 40 CFR Part 50 Appendix L	60
2.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	50.9	IS 5182:Part 23	100
3.	Suspended Particulate Matter (SPM)	$\mu g/m^3$	146.8	IS:5182 Part 4	--

<--- End of Report --->

Verified By : G.T. Vaidyanathan.

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

ENVIRO CARE INDIA PRIVATE LIMITED * MADURAI * Lab DIVISION

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
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Laser Hologram to Confirm Genuine ECI Test Report

TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-316/04/2018	Report Date :	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	Sample Reference No :	ECI-NN-AAQ-316/04/2018
Sample Drawn By :	ECI	Sample Received On :	24.04.2018
Sample Collected Date :	23.04.2018	Test Commenced On :	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	28.04.2018
Sample Description :	Ambient Air	Sampling Method :	IS 5182:P14
Sample Mark:	Near 10 Megawatt Gate		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	22.8	EPA 40 CFR Part 50 Appendix L	60
2.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	46.5	IS 5182:Part 23	100
3.	Suspended Particulate Matter (SPM)	$\mu g/m^3$	136.9	IS:5182 Part 4	--

<--- End of Report --->

Verified By : [signature]

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

[signature]
Authorized Signatory

ENVIRO CARE INDIA PRIVATE LIMITED LAB DIVISION MADURAI

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TEST REPORT

AMBIENT AIR QUALITY SURVEY

Report No :	ECI-NN-AAQ-317/04/2018	**Report Date :**	30.04.2018
Customer Name & Address	**M/s. OPG Power Generation Pvt Ltd** OPG Nagar, Periyaobulapuram village Madharpakkam Road, Gummidipoondi-601201 Tamil Nadu , India		
Customer Reference :	IWO Dt: 23/04/2018	**Sample Reference No :**	ECI-NN-AAQ-317/04/2018
Sample Drawn By :	ECI	**Sample Received On :**	24.04.2018
Sample Collected Date :	23.04.2018	**Test Commenced On :**	24.04.2018
Qty of Sample Received :	Filter Paper & 25ml Solution	**Test Completed On :**	28.04.2018
Sample Description :	Ambient Air	**Sampling Method :**	IS 5182:P14
Sample Mark:	CHP – in OPG (South Gate)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of NAAQs (Industrial, Residential)
1.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	25.2	EPA 40 CFR Part 50 Appendix L	60
2.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	51.7	IS 5182:Part 23	100
3.	Suspended Particulate Matter (SPM)	$\mu g/m^3$	140.6	IS:5182 Part 4	--

<--- End of Report --->

Verified By : G.T. Venkatesan

Remarks :

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

ENVIRO CARE INDIA PRIVATE LIMITED ★ LAB DIVISION ★ MADURAI

Authorized Signatory

CHENNAI Tel : +91 (44) 42867084
Mobile : 9944938637
e-mail : ecichennai@envirocareindia.com

MADURAI Tel : +91 (452) 4355103
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SOP OF COAL SPONTANEOUS COMBUSTION

Safety Monitoring in Coal handling area

Monitoring involves scheduled (8 hr.) visual inspections and recordings of coal stockpiles with specific attention to the presence of haze, smoke emissions or spontaneous combustion odour.A thermocouple is inserted into the stockpile at specific positions to measure temperature in every 24 hours

Normally, wet coal will show signs of water sweating and slow rise in temperature in that area. Those areas to be watched regularly for any increase in steam

The following details to be recorded to monitor the stockpile:

1) Date of stacking
2) Type of coal
3) Stockpile temperature readings
4) Date of reclaiming

The record assist in the management of residency time and subsequent control measures for spontaneous combustion of stockpiled coal

A major preventive measure is regular scheduled stockpile observations. These observations assist in early identification of hot spots of spontaneous combustion.

Mitigation Measures:

1) The Bottom portion of the pile to be manually compacted with the help of shovels to prevent air from flowing into or out of the bottom of the pile when the coal pile is warmer than ambient conditions
2) In case of the coal being unable to reclaim due to some reasons and if smoke comes out, the smoldering portion to be taken out of the pile and water to be sprayed on the smoldering coal and allow it to cool and the area to be compacted to prevent further air contact
3) Fly ash slurry can be applied at the toe portion of the Pile to completely blanket the portion from Air contact
4) ile should be stacked such that there is sufficient gap between each piles

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भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)
Petroleum & Explosives Safety Organisation (PESO)
पांचवा तल, ए-ब्लाक, सी.जी.ओ.काम्प्लेक्स, सेमिनरी हिल्स
नागपुर- 440006
5th Floor, A-Block, CGO Complex, Seminary Hills,
Nagpur - 440006

E-mail: explosives@explosives.gov.in
Phone/Fax No. 0712-2510248, Fax-2510577

दिनांक /Dated: 08/01/2015

संख्या /No: P/HQ/TN/15/4786(P226617)

सेवा में /To:

M/s. M/s OPG Power Generation Pvt. Ltd.,
167 St. Marys Road Alwarpet,
NA,
Chennai,
District: CHENNAI,
State: Tamil Nadu
PIN: 600018

विषय /Sub: Plot No, S. No. 195/2A, NA, Pappankuppam, Taluka: Thiruvallur, District: THIRUVALLUR, State: Tamil Nadu, PIN: 999999 में स्थित पेट्रोलियम वर्ग B प्रतिष्ठापन पेट्रोलियम नियम 2002 के अन्तर्गत फार्म XV में जारी अनुज्ञप्ति सं P/HQ/TN/15/4786 (P226617) - स्थापन के संदर्भ में ।
Existing Petroleum Class B Installation at Plot No. S. No. 195/2A, NA, Pappankuppam, Taluka: Thiruvallur, District: THIRUVALLUR, State: Tamil Nadu, PIN: 999999 - Licence No. P/HQ/TN/15/4786 (P226617) - granted in form XV under Petroleum Rules 2002 - Amendment regarding

महोदय /Sir,

कृपया आपके उपर्युक्त विषय से संबंधित पत्र संख्या OPGPG/JMD/CCOe/1443/14-15 दिनांक 05/01/2014 का संदर्भ ग्रहण करें ।
Reference to your letter No. OPGPG/JMD/CCOe/1443/14-15 dated 05/01/2014 on the above subject.

दिनांक 31/12/2019 तक वैध अनुज्ञप्ति संख्या P/HQ/TN/15/4786 (P226617) दिनांक 08/01/2015 निम्नलिखित सभी एवं समाधर्ग में पेट्रोलियम भण्डारण के लिए यथा संशोधित कर इस पत्र के साथ लौटाई जा रही है ।
Licence No. P/HQ/TN/15/4786 (P226617) dated 08/01/2015 valid upto 31/12/2019 is returned herewith duly amended with respect to Capacity Amendment.

पेट्रोलियम का विवरण /Description of Petroleum	लिसेंसीदार में अनुज्ञप्ति क्षमता Quantity licensed in KL
वर्ग क खपुज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग क खपुज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख खपुज पेट्रोलियम /Petroleum Class B in bulk	271.00 KL
वर्ग ख खपुज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग खपुज पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग ग खपुज पेट्रोलियम से भिन्न /Petroleum Class C otherwise than in bulk	NIL
कुल क्षमता /Total	271.00 KL

कृपया पावती दें।
Please acknowledge the receipt.

Note: Your Balance Amount with the Organisation is Rs[redacted] which will be used for processing of the same Licence in future.

भवदीय /Yours faithfully,

(आर पी.सिंह)
(R.P.Singh)
उप मुख्य विस्फोटक नियंत्रक
Dy. Chief Controller of Explosives
कृते मुख्य विस्फोटक नियंत्रक
For Chief Controller of Explosives
नागपुर
Nagpur

Copy forwarded to :-
1. The The District Revenue Officer, Tiruvallur (T.N.) THIRUVALLUR(Tamil Nadu) with reference to the NOC No.RC 3/212/08 M3 Dated 17/03/2009
2. The Chief Controller of Explosives, South Circle Office, CHENNAI. A Copy of the licence along with approved plan is enclosed.
3. Dy. Chief Controller of Explosives, Sivakasi, VIRUDHUNAGAR. A Copy of the licence along with approved plan is enclosed.

For Chief Controller of Explosives,
Nagpur

अधिक जानकारी हेतु शुल्कों के स्थिति शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट http://peso.gov.in देखें.
(For more information regarding status fees and other details please visit our website http://peso.gov.in)

High Speed Diesel / Gas Oil

Indian Oil Diesel meets the requirements of
IS 1460: 2005 (5th Revision)

Sl. No.	Characteristics	Requirements		Method of Test
		BS II	BS III	
(I)	Acidity, inorganic	Nil	Nil	P:2
(ii)	Acidity, total mg of KOH/g, Max	To Report	To Report	P:2
(iii)	Ash, percent by mass, Max	0.01	0.01	P:4 / ISO 6245
(iv)	Carbon residue (Ramsbottom) on 10 percent residue[1] percent by mass,Max	0.30	0.30	P:8 / ISO 10370
(v)	Cetane number[2], Min	48[3]	51[3]	P:9 / ISO 5165
(vi)	Cetane index [2], Min	46[3]	46[3]	D 4737 / ISO 4264
(vii)	Pour points [4] Max a) Winter b) Summer	 3°C 15°C	 3°C 15°C	P:10 / D 5949 or D 5950 or D 5985
(viii)	Copper strip corrosion for 3hr at 100°c	Not worse than No. 1	Not worse than No. 1	P:15 / ISO 2160
(ix)	Distillation, percent (v/v) recovered			P:18 / ISO 3405
	a) at 350°c	85	-	
	b) at 360°c	-	95	
	c) at 370°c	95	-	
(x)	Flash point			
	a) Abel °C, Min	35	35	P:20
	b) Pensky Martens closed cup[5] °C, Min	66	66	P:21
(xi)	Kinematic viscosity, cSt, at 40°C	2.0 to 5.0	2.0 to 5.0	P:25 / ISO 3104
(xii)	Sediments, percent by mass, Max	0.05	-	P:30
(xiii)	Total Contamination, mg/kg	24	24	EN 12662
(xiv)	Density at 15°C[6], kg/ m^3	820-860	820-845	P:16 or P:32[7] / D 4052 / ISO 3675 or ISO 12185
(xv)	Total sulphur[8], mg/kg, Max	500	350	IP 336 or 4294.[9] ISO 14596 or ISO 8754/ P:83 / D 2785 / D 5433 / D 2622 / D 3120
(xvi)	Water content, percent(v/v) Water content, mg/kg, Max	0.05 -	- 200	P:40 / ISO 3733 / ISO 6296 /ISO 12937
(xvii)	Cold Filter Plugging point (CFPP) [4] Max a) Winter b) Summer	 6°C 18°C	 6°C 18°C	P:110 / D 6371
(xviii)	Total sediments [10] mg per 100 ml, Max	1.5	-	Annex A / ISO 11205 / D 2274 [10]
(xix)	Oxidation Stability, g/m^3, Max	-	25	ISO 12205 or D 2274
(xx)	Polycyclic Aromatic Hydrocarbon (PAH) percent by mass, Max	-	11	IP 391 or EN 1296
(xxi)	Lubricity corrected wear scar diameter (WSD 1.4) at 60°C, microns, Max	460	460	ISO 12156-1
(xxii)	Oxygen content[11] percent by mass, Max	0.6	0.6	Annex B

NOTES

1 This limit is applicable prior to addition of ignition improvers, if used. In case a value exceeding the limit is obtained on finished fuels in the market, ASTM D 4046 / ISO 13759 shall be used to establish the presence of nitrate containing compound. In such case the present limit for carbon residue cannot be applied. However, the use of ignition improver does not exempt the manufacturer from meeting this requirement prior to the addition of additives.

2 Fuel meant for vehicles meeting Bharat Stage II emission norms is required to meet either of these two parameters.

3 For fuel processed from Assam crude, cetane number and cetane index is relaxed by 3 units.

4 Winter shall be the period from November to February in central and northern plains of India (both months inclusive) and rest of the months of the year shall be called as summer.

5 Applicable for Naval applications and fishing vessels requiring high flash HSD.

6 For fuel processed from Assam crude, the density range is relaxed to 820-870 and 820-850 for Bharat Stage II and Bharat Stage III grades respectively.

7 In case of dispute P:32 shall be the referee test method.

8 For HSD supplied to Indian Navy, the limit of sulphur shall be in agreement between the buyer and the supplier.

9 In case of dispute, ASTM D 4294 shall be the referee test method.

10 This test shall be carried out only at the refinery or manufacturer's end. As an alternative, the test method given in Annex A can also be used with a limit of 1.6 mg/100 ml. In case of dispute, ASTM D 2274 shall be referee method.

11 Shall be applicable only for HSD blended with 5 percent (v/v) Bio-diesel and the limit shall proportionately vary as and when the different blending percent of bio-diesel is permitted.

Last Updated on September 26, 2007

FLY ASH Customer List

Fly Ash Customer Details			
S no	Name	Contact Person	Address
1	Amba Recycler	Ashok	Chennai
2	Amma Fly ash Bricks	Murali	21B, By pass road, Gummidipoondi-601201
3	Amman Roadways Agency Pvt Ltd		200A, Padmavathy complex, Salem Road, Namakkal-637001
4	B.Sekar	Sekar	Chennai
5	Hyderabad Industrial Ltd (HIL)	Sasthri	Kanigapuram, Periyapalayam, Thiruvallur
6	Kavery Industries	R.V Reddy	Nemalore, Matharapakkam
7	Lakshmi Agencies	Parasuraman	59/29, Arunachalam 2nd St, (Opp Sivan Kovil), Arakkonam-631001
8	Methra Industries India Pvt Ltd	Manokaran	New No: 62, Panjaliyamman kovil st, Arumbakkam, Chennai-106
9	Munusamy & Co		Chennai
10	Om Muruga	Prakash	No 27, Madhalaiyar st, Mannelore, Gummidipoondi Taluk, Thiruvallur-601201
11	Sastha Enterprises		Ambattur, Chennai
12	Sri Balaji Agencies	Srinivasan	Chennai
13	Sri Kameshwaran Fly Ash Bricks		Ponneri - 601204
14	Sri Preeven Enterprises	Mony	25, Indranagar, Nanganallur, Mathavaram, Chennai-600061
15	The India Cements Ltd	Mohammad	PSN Nagar, Dalavoi, Ariyalur-621704
16	Thirumalai Agencies	Gopal	Mathavaram
17	Ultra Tech Cements Ltd	Arulprakash	Reddypalayam Post , Reddypalayam, Ariyalur-621704
18	Vasantham Enterprises	Selvaraj	No 19, By-pass road, Gummidipoondi
19	Boomi Brick Industries		Boomi Brick Industries , Veeraraghavapuram village, Thiruvallur-602001
20	Vijay Agency		11E,21A Michael Thottam, Housing Unit, Metturdam-636401
21	Saravana Supply		GNT Road , Kavaraipettai-601206
22	Raydium Flyash Bricks		126/2A,2B Vannipakkam Village 601203 Ponneri Taluk,
23	Sri Nithya Supplier		3/33, Nagaraja kandigai village , Gummidipoondi - 601201
24	Sree Kandan Traders		Sree Kandan Traders, Veeraraghavapuram Village, Tiruvallur District -602021
25	Thirumurugan Concrete Blocks		12/3 Big street,Dhimmavaram, Chengalpattu - 603101

Noise Level Report

(October-2018 to march-2019)

AMBIENT NOISE LEVEL MONITORING - Oct 2018 to March 2019

October- 2018

Ambient NOISE LEVEL (Oct 2018)								
Date	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
01-10-2018	51.2	51.8	52.2	52.8	42.4	42.6	42.2	42.1
14-10-2018	50.1	51.2	51.6	50.4	41.8	42.2	41.8	41.6
19-10-2018	50.1	51.2	50.4	50.4	41.8	42.2	41	41.6
26-10-2018	51.2	51.8	52.2	52.8	42.4	42.6	42.2	42.1

November-2018

Ambient NOISE LEVEL (Nov 2018)								
Date	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
03-11-2018	51.2	52.1	50	52.3	42.3	42.4	43.8	40
16-11-2018	50.2	50.1	50.5	50	42.1	41	42	41.8
20-11-2018	50.4	51.2	50.8	51	41.8	41.4	41.8	40
29-11-2018	50.1	50.8	51.5	51.5	41.4	42	41.6	41

December-2018

Ambient NOISE LEVEL (December 2018)								
Date	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
01-12-2018	52.2	51.4	52.1	51.1	41.8	42.8	41.8	42.3
12-12-2018	50.2	50.1	50.5	50	42.5	41.2	41.4	41.2
22-12-2018	51.2	52.1	53.8	52.3	42.1	42.1	44.1	40.6
31-12-2018	50.1	50.8	51.5	51.5	41.4	42	41.6	41

January-2019

Ambient NOISE LEVEL (January 2019)								
Date	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
03-01-2019	51.2	51.8	52.2	52.8	42.4	42.6	42.2	42.1
19-01-2019	50.1	51.2	51.6	50.4	41.8	42.2	41.8	41.6
25-01-2019	51	52	51.2	51	42.1	42	41	42
30-01-2019	52	51.8	50.2	50	41.8	41	41.9	41

February- 2019

Ambient NOISE LEVEL (February 2019)								
Date	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
02-02-2019	50.2	50.1	50.5	50	42.1	41	41	41.8
14-02-2019	50.4	51.2	50.8	51	41.8	41.4	41.8	41.8
18-02-2019	51.2	51.6	51.7	50.8	42.5	42.1	42	42.2
27-02-2019	52	53	50	51.1	42.1	41.8	42.2	40.1

March-2019

Ambient NOISE LEVEL (March 2019)								
	Day Time (6.00 AM to 10.00 PM)				Night Time (10.00 PM to 06.00 AM)			
	North Gate	South Gate	Kanishk Gate	RR Thulasi	North Gate	South Gate	Kanishk Gate	RR Thulasi
Limits in dB	55				45			
01-03-2019	51.2	51.6	51.7	50.8	42.5	42.1	42	42.2
13-02-2019	51.2	52.1	53.8	52.3	42.1	41.8	42.2	40.1
20-03-2019	50.2	50.1	50.5	50	42.1	41	41	41.8
29-02-2019	50.2	51.2	50.6	51.4	41.8	41.6	42	41

OPG POWER GENERATION PVT LTD

CSR EXPENDITURES FOR 2018 - 2019

Month : March'2019

S.No.	Programme	Item Description	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	TOTAL	Expenses Type Monthly/ Annually	Total Expenses
1	Education	Uniform Materials for School children							300,165						300,165	Annually	2,495,832
2		Uniform Materials Stitching Cost							323,276						323,276	Annually	
3		School Notebooks for School Children							202,391						202,391	Annually	
4		School Bags for School children							174,168						174,168	Annually	
5		School Shoes for School Children													-	Annually	
6		Education Assistance to school children						50,845	150,000					20,865	221,710	Annually	
7		PTA Teachers Salary (7 Teachers)	59,000	-	59,000	59,000	59,000	59,000	59,000	59,000	59,000	59,000	59,000	59,000	649,000	Monthly	
		Adoption of Govt schools-Isha			625,122										625,122		
8		Adopted Girl Children Education Aid													-	Annually	
9	Medical	Doctor Salary (SDK)													-	Monthly	-
10		Plant Nurse Salary (SDK)													-	Monthly	
11		village Dispensary Nurse Salary													-	Monthly	
12		Village Dispensary Helper Salary													-	Monthly	
		Medicines													-	Monthly	
13		Bio Medical Waste Removal													-	Monthly	
14	Environment	Drinking water/Destilting pallavada													-	One time	-
15	Youth Sports	Cricket Match CKM-													30,000	One time	143,000
16		Kabadi Match Prize Sponsor - N.R.Kandigai			30,000									20,000	38,000	One time	
17		Cricket Match Prize Sponsor - Chinna Obulapuram		18,000								30,000			30,000	One time	
18		Kabadi Match Prize Sponsor - Periya Obulapuram									30,000				45,000	One time	
19		Acc cricket club-GPD/KM/Powerboys	15,000												-	One time	48,600
20	Others	Community hall contruction at SRK										48,600			48,600	One time	
		KLK School National level sports Sponsor													-	One time	
21		a/c to community hall													-	One time	
22		community hall at KM													-	One time	
23		Function Expenses - Eguvarpalayam Temple													-	Monthly	
24		Welfare of Contract workmen like soap,jagger & towel													-	One time	
25		Tiles Sponsor - Pothulraja Temple													2,687,432		2,687,432
	Total		74,000	18,000	714,122	59,000	59,000	109,845	1,209,000	59,000	89,000	137,600	59,000	99,865			

S.No	Consolidated Expenses Description	Amount
1	Education	2,495,832
2	Medical	-
3	Environment	-
4	Youth Sports	143,000
5	Others	48,600
Grand Total		2,687,432