

SPEED POST

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J 13011/10/2009-IA.II(T)  
Government of India  
Ministry of Environment & Forests

BY SPEED POST

Paryavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110 003  
Dated: December 04, 2009

To  
M/s Dhariwal Infrastructure (P) Ltd.  
1008, A-Wing Lokmat Bhawan,  
10<sup>th</sup> Floor, Nagpur ? 400 012

Sub: 2x300 MW Coal Based Thermal Power Plant in MIDC Industrial Area, at village Tadali, in Distt. Chandrapur, in Maharashtra ? reg. Environmental Clearance (reconsideration).

Sir,

The undersigned is directed to refer to letters dated 18.08.2009 and 05.10.2009 on the subject mentioned above. The Ministry of Environment & Forests has examined the application.

2. It has been noted that the proposal is for setting up a 2x300 MW Coal Based Thermal Power Plant in MIDC Industrial Area, at village Tadali, in Distt. Chandrapur, in Maharashtra. Land requirement will be 480 acres. Coal requirement will be 11040 TPD and will be sourced from SECL mines. Coal linkage has been obtained from Ministry of Coal. The coordinates of the site are latitude 20°00'30" to 20°01'20" N and longitude 79°11'50" to 79°12'35" E. Water requirement of 19.272 m cum per annum will be sourced from Wardha River which flows at a distance of 9.3 km from the plant site. Govt. of Maharashtra has accorded permission for water allocation from Wardha River. A Barrage is proposed to be constructed in Wardha River for uninterrupted water supply. There are no national parks, wildlife sanctuary, tiger & elephant reserves, heritage sites etc. within 10 km of the study area. MoU with M/s ACC for consumption of Fly Ash for its Chanda Cement Works is in place. As a contingency measure 65.2 acres of land is proposed for ash storage, which will be properly lined with HDPE. Abandoned mines are being identified within the District for disposal of bottom ash. Bhandak Reserve Forest is located at a distance of 7.8 kms away. Motaghat nallah flows at a distance of 6.2 km away in the east and Sarai Nallah at 5.0 km in South. Cost of the project will be Rs. 3054.00 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.

4. Based on the information submitted by you, as at Para 2 above and others, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA notification dated September 14, 2006, subject to the compliance of the following conditions:

- i. No further expansion in capacity shall be permitted for this Power Plant in view of the uncertainty of water in lean season.
- ii. The two radial wells shall be constructed maintaining a distance of at least 450 m between them and at least 500 m from the nearest habitations/village boundary.

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- iii. Water from the radial well(s) shall be utilized only for extreme necessity during lean season and



shall be kept only as standby arrangement during lean season.

- iv. Hydro-geological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.
- v. A Two Bi-Flue stacks of 275 m height shall be provided with continuous online monitoring equipments for SO<sub>x</sub>, NO<sub>x</sub> and PM. Exit velocity of flue gases shall not be less than 25 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.  
*not online..*
- vi. High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
- vii. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- viii. Utilisation of 100% Fly Ash generated shall be made from 4<sup>th</sup> year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.
- ix. Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from 4th year onwards. 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.
- x. Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- xi. For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.
- xii. Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.
- xiii. The treated effluents conforming to the prescribed standards only shall be discharged. Arrangements shall be made that effluents and storm water do not do not get mixed.
- xiv. A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.

- xv. Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three



months from the date of clearance and details shall be furnished.

- xvi. 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.
- xvii. Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- xviii. 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.
- xix. Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.
- xx. First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- xxi. 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.
- xxii. Regular monitoring of ground level concentration of  $SO_2$ ,  $NO_x$ ,  $RSPM(PM_{10}/PM_{2.5})$  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.
- xxiii. A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.
- xxiv. An amount of Rs 12.0 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 3.0 Crore per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.
- xxv. As part of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the



people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.

- xxvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xxvii. 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>.
- xxviii. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / 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.
- xxix. A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- xxx. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely:  $\text{SPM}$ ,  $\text{RSPM}(\text{PM}_{10}/\text{PM}_{2.5})$ ,  $\text{SO}_2$ ,  $\text{NO}_x$  (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.
- xxxi. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- xxxii. The environment statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
- xxxiii. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of

Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of



## Environment and Forests

xxxiv. Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.

xxxv. 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 earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

xxxvi. 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.

xxxvii. Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.

5. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.

6. The environmental clearance accorded shall be valid for a period of 5 years to start operations by the power plant.

7. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

8. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.

9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

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10. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

(LALIT KAPUR)



BY SPEED POST

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DIRECTOR

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Forests and Environment Department Government of Maharashtra.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Maharashtra Pradesh State Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> & 4<sup>th</sup> Floors, Sion Matunga Scheme Road No. 6, Opp. cine Planet, Sion Circle, Sion (E), Mumbai ? 400 022
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Chandrapur District, Govt. of Maharashtra.
8. The Director (EI), MOEF.
9. Guard file.
10. Monitoring file.

(LALIT KAPUR)  
DIRECTOR





RP - Sanjiv Goenka  
Group  
Growing Legacies



**Dhariwal Infrastructure Limited**

CIN : U70109WB2006PLC111457  
E mail : dhariwalinfrastructure@rp-sg.in

Ref. No.: DIL/MoEF/HSE/F-09/16-17/22

Date: 27-10-2016

To,  
The APCCF (C),  
Ministry of Environment and Forest, Climate Change,  
Regional Office (WCZ) Ground Floor,  
East Wing, New Secretariat Building,  
Civil Line,  
NAGPUR – 440001 (MH)

Sub. : Half Yearly Compliance Report of the Environmental Clearance (1<sup>st</sup> April  
2016 to 30<sup>th</sup> September 2016)

Ref.: MoEF, Govt. of India Environmental Clearance No. J-13011/10/2009-IA. II (T)  
dated 04-12-2009

Dear Sir,

We are operating 2 x 300 MW Thermal Power Plant at MIDC, Tadali Industrial Area,  
Chandrapur (M.S.) as per Environment Clearance above reference.

We are submitting herewith Half Yearly Compliance Report for the period from 1<sup>st</sup> April  
2016 to 30<sup>th</sup> September 2016 in hard as well as soft copy (compact disc) in respect of  
the terms and conditions stipulated in Environmental Clearance .

We assure you of taking every feasible step towards preservation of environment.

Thanking you,

Yours faithfully,  
For DHARIWAL INFRASTRUCTURE LTD.

*Basab Ghose*  
(Basab Ghose)  
Vice President

Encl. : as above  
CC:

1. The Incharge ,  
Central Pollution Control Board  
Western Zonal Office, Parivesh Bhawan  
Opp. VMC Ward Office No.10, Subhanpura  
Vadodara-390023- Gujarat

2. The Regional Officer  
Maharashtra Pollution Control Board,  
1<sup>st</sup> Floor, Udhayog Bhavan  
Near Bus Stand, Chandrapur (MS)

प्रधानमंत्री, वन एवं जलवायु परिवर्तन विभाग  
Ministry of Environment, Forest & Climate Change  
राज्यीय प्रदूषण नियंत्रण बोर्ड (राज्य)  
Regional Office (Maharashtra, Central Zone)  
पहल, पूर्व मंजूर / Ground Floor, East Wing  
नया सचिवालय भवन / New Secretariat Building  
सिविल लाईन्स / Civil Lines



Acknowledgement Copy



**RP-Sanjiv Goenka  
Group**

Growing Legacies



**Dhariwal Infrastructure Limited**

CIN : U70109WB2006PLC111457

E-mail : dhariwalinfrastructure@rp-sg.in

Ref. No.: DIL/MoEF/HSE/F-09/16-17/22

Date: 27-10-2016

To,  
The APCCF (C),  
Ministry of Environment and Forest, Climate Change,  
Regional Office (WCZ) Ground Floor,  
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We assure you of taking every feasible step towards preservation of environment.

Thanking you,

Yours faithfully,  
For DHARIWAL INFRASTRUCTURE LTD.

(Basab Ghose)

Vice President

Encl. : as above

CC:

1. The Incharge ,  
Central Pollution Control Board  
Western Zonal Office, Parivesh Bhawan  
Opp. VMC Ward Office No.10, Subhanpura  
Vadodara-390023- Gujarat
2. The Regional Officer  
Maharashtra Pollution Control Board,  
1<sup>st</sup> Floor, Udhyog Bhavan  
Near Bus Stand, Chandrapur (MS)

Basab Ghose  
27/10/16



♣  
♣

**Environmental Compliance Report  
for  
the Period From  
1<sup>st</sup> April 2016 to 30<sup>th</sup> September 2016**

*of*

**M/s. DHARIWAL INFRASTRUCTURE LTD.  
Plot No. C-6, C-7 & C-8,  
Tadali Industrial Area,  
MIDC, Village – Tadali,  
Dist. - Chandrapur**

**Ministry of Environment and Forest,  
Climate Change  
Regional Office (WCZ), Ground Floor, East Wing  
New Secretariat Building  
Civil Line, Nagpur – 440001 (MH)**

♣  
♣

1.0 Dhariwal Infrastructure Ltd has been granted MoEF Environmental Clearance for 2 x 300 MW Thermal Power Plant vide No. J-13011/10/2009-IA. II (T) dated 04-12-2009

Both Unit -1 & 2 (2 x 300 MW) of Thermal Power Plant are installed and commissioned in October 2013 and June 2014 respectively. The MPCB Consent to Operate is granted to both units for the period valid up to 31-08-2016. The application for renewal of Consent to Operate is already submitted to MPCB.

All the environmental works including air pollution control systems, effluent treatment plant, sewage treatment plant, rain water harvesting pond, greenbelt development activities etc are completed. The present compliance status is given below.

## 2.0 COMPLIANCE STATUS

The conditions stipulated in MoEF Environmental Clearance are followed scrupulously. Compliance is reported hereunder for the period from 1<sup>st</sup> April 2016 to 30<sup>th</sup> September 2016 in serial order of Environmental Clearance Letter as delineated below.

Sr. No.	Conditions	Compliance
(i)	No further expansion shall be permitted for this power plant in view of the uncertainty of water in lean season.	Further expansion will not be carried out in view of the uncertainty of water in lean season.
(ii)	The two radial wells shall be constructed maintaining a distance of at least 450 m between them and at least 500 m from the nearest habitations/village boundary.	Yes, radial well is constructed away from the nearest habitation (more than 500 m )
(iii)	Water from the radial well(s) shall be utilized only for extreme necessity during lean season and shall be kept only as standby arrangement during lean season.	Water from the radial well(s) is utilized only for extreme necessity during lean season and kept only as standby arrangement during lean season.
(iv)	Hydro-geological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.	Hydro-geological status of the area is reviewed regularly. Ground water level measurement reports (April 2016 to September 2016) are enclosed herewith as <b>Enclosure-1</b> . There is no adverse impact on ground water quantity and quality is observed. Ground water quality in the study area is regularly analyzed and reports (April 2016 to September 2016) are enclosed herewith as <b>Enclosure -2</b>
(v)	Two Bi-Flue stacks of 275 m height shall be provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and PM. Exit velocity of flue gases shall not be less than 25 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	Yes, two Bi-Flue stacks of 275 m height are provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and PM. Exit velocity of flue gases is being maintained more than 25 m/sec. Mercury in outgoing emissions from stack is also being monitored on periodic basis.



(vi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .	Yes. High Efficiency Electrostatic Precipitator (ESP) for unit 1 & 2 are commissioned and in operation. Both ESP's are designed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> . The analysis reports of stack emission monitoring for Units -IIInd is enclosed as <b>Enclosure-3</b> (Unit - 1 is stopped)
(vii)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Yes, 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 are provided and all stipulated norms are complied.
(viii)	Utilization of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Yes, 100% Fly Ash generated is being taken by nearby cement plants for cement manufacturing.
(ix)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided 100% fly ash utilization shall be ensured from 4 <sup>th</sup> year onwards, 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.	Yes, fly ash silo & handling plant for direct loading to bulkers is in operation. The condition is fully complied.
(x)	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Yes, Ash pond is lined with HDP/LDP lining such that no leachate takes place at any point of time. Adequate safety measures are also implemented to protect the ash dyke from getting breached.
(xi)	For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well In advance before undertaking the activity.	In the initial years bottom ash will not be disposed to abandoned mines.
(xii)	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the	Closed cycle cooling system with Induced draft cooling towers is provided. The effluents are treated as



	prescribed norms.	per the prescribed norms and used for bottom ash handling.
(xiii)	The treated effluents conforming to the prescribed standards only shall be discharged. Arrangements shall be made that effluents and storm water do not get mixed.	The treated effluents conforming to the prescribed standards are used for green belt development. Arrangements are made such that effluents and storm water do not get mixed.
(xiv)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	Sewage treatment plant is provided and the treated sewage is used for raising greenbelt/plantation.
(xv)	Rainwater harvesting should be adopted Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Rain water harvesting pond is developed and through natural drains, rain water is regularly collected.
(xvi)	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.	Provision of adequate safety measures in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season has been made. Water Sprinkler have been provided around coal stock yard and are kept in regular operation.
(xvii)	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Facilities for storage of auxiliary liquid fuel such as LDO and HSD are provided in the plant are under approval of DOE.  Disaster Management Plan is prepared to meet any eventuality in case of an accident may be taken place due to storage of oil.
(xviii)	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.	Network of existing wells and piezometers has been established for seasonal monitoring.  The ground level monitoring and ground water quality analysis on seasonal basis in study area & specifically around ash pond site since beginning is regularly carried out by MoEF approved IIIrd party and reports are submitted. It is observed that there is no adverse impact in the area.  The ground water quality in the study area is also regularly analyzed for heavy metals and reports are submitted.



(xix)	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %	As on date about 80,500 trees are existing.  The major existing trees (80500) are Akeshiya, Imli, Karanj, Mahaneem, Neem, Nilgiri, Peltocofram, Sisam and Casia, Aapta, Amla, Anjeer, Areka Palm, Aerial Palm, Arjun, Ashoka, Bargad, Badam, Banana, Boganvel, Chikku, Coconut, Flower tree, Fucus benjamina, Goldan Bambu, Green Bambu, Gulmohar, Jambhul Jaswant, Kadam, Kanher, Kawat, Mahagani, Mango, Mogra Mosambi, Nimbu, Pipal, Rain Tree, Red Rose, Royal Palm, Ornamental Plants, Saru, Simal, Spindal Palm, Silver oke, Swastik, Vel (Kourav & Pandava), Vidya, X-mas tree, Yellow Bell, Bakul, Papaya, Sitaphal, Bel, Shahtut, Anar, Sevga, Amrud, Ber, Kher etc. Nearly 3000 nos. plants are planted in April to Sept.16 namely Teak wood, Peltocofram, cassia, accesia, arjun, mahaneem, saru, sisam etc & further plantation work under progress.
(xx)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Construction phase is over. First aid and sanitation arrangements for the drivers and other contract workers are available. Regularly first aid training is given to drivers & contract workers.
(xxi)	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dB(A). 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 any hearing loss including shifting to non noisy/less noisy areas.	Noise level emanating from turbines is controlled such that the noise in the work zone is limited to 75 dB (A). For people working in the high noise area, requisite personal protective equipment like ear plugs/ear muffs etc. are provided. Workers engaged in noisy areas such as turbine area, air compressors etc. are periodically examined & maintained the audiometric record and any hearing loss including shifting to non noisy/less noisy areas is adopted if required. The ambient noise quality results for are enclosed herewith as <b>Enclosure-4</b> .
(xxii)	Regular monitoring of ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , RSPM (PM <sub>10</sub> /PM <sub>2.5</sub> ) 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	Yes, regular ambient air quality monitoring at six locations is carried out by MoEF Approved IIIrd Party and reports (April 2016 to September 2016) are enclosed herewith as <b>Enclosure -5</b> .



	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 the Ministry. The data shall also be put on the website of the company.	
(xxiii)	A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.	Not Applicable.
(xxiv)	An amount of Rs. 12.0 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 3.0 Crore per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within month along with road map for implementation.	Road map is worked out for implementation of CSR activities. A partnership along with Zila Parishad, Chandrapur & UNICEF for improving water & sanitation facilities in ten Grampanchayat, Schools and Anganwadis is done and work is under progress.
(xxv)	As par of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programs. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	<p>A need based survey is carried out by Social Action for Rural Development (SARDA) in nearby areas to assess the social and economic status of the people based on which a comprehensive document is prepared to deal with need based CSR activities. The implementation of following CSR activities is in progress. Providing sanitary toilets to 9 Adjacent villages.</p> <p>Education programme for Dropout students in nearby villages under progress. Agriculture programme, Vegetable promotion activities &amp; water shed project to adjacent villages.</p> <p>Two no. check dam over nallahs so that three times vegetable / crop can take in a year.</p> <p>Tree plantation in Surrounding villages. health check up plan &amp; Skill development programme for nearby villages on regular basis.</p>
(xxvi)	Provision shall be made for the housing of construction labors 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	Yes, Construction phase is already completed and demolition of temporary structures, which were provided during construction phase is under progress.



	be in this form of temporary structures to be removed after the completion of the project.	
(xxvii)	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a>	Yes, it is already complied.
(xxviii)	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.	Yes, it is complied.
(xxix)	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Yes, separate Environment Management Dept with qualified staff is set up for implementation & maintaining the stipulated environmental safeguards.
(xxx)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB The criteria pollutant levels namely; SPM, RSPM (PM <sub>10</sub> /PM <sub>2.5</sub> ) SO <sub>2</sub> NO <sub>x</sub> (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.	Yes, it is complied.  Reports are regularly sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB The criteria pollutant levels namely; SPM, RSPM (PM <sub>10</sub> /PM <sub>2.5</sub> ) SO <sub>2</sub> NO <sub>x</sub> (ambient levels are displayed at a the main gate of the company in the public domain.
(xxxi)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of	Yes, six monthly reports are regularly submitting since beginning about the status of compliance of the stipulated EC conditions including results of monitored data to the respective Regional Office of MoEF, the respective

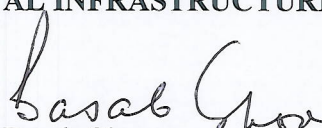



	MoEF, the respective Zonal Office of CPCB and the SPCB.	Zonal Office of CPCB and the SPCB.
(xxxii)	The environment statement for each financial /year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules. 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Yes, Environment Statement for financial /year ending 31 <sup>st</sup> March 2016 is complied and submitted online on MPCB server. Copy is enclosed herewith as <b>Enclosure -6</b> .
(xxxiii)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	Yes, six monthly reports are regularly submitting since beginning about status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests Regional Office, Central Pollution Control Board and State Pollution Control Board.
(xxxiv)	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload 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.	Yes, will be complied time to time.
(xxxv)	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	Yes, separate funds are allocated for implementation of environmental protection measures. Total expenses from April 16 to Sept 16 were Rs.176.71 lakh for Env. Control measures.



	earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	
(xxxvi)	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.	Plant is in running condition. COD for Unit 1 was 11 Feb 2014 and COD for Unit 2 <sup>nd</sup> was 02 August 2014. Information has been given to the authorities.
(xxxvii)	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhopal/CPCB/SPCB who would be monitoring the compliance of environmental status.	Agreed.

Yours faithfully,  
For DHARIWAL INFRASTRUCTURE LTD.

  
 Basab Ghose  
(Vice President)

Encl. : As above



# ENCLOSURE - 1

## GROUND WATER LEVEL STATUS

May - 2016

Sr. No. of Villages	Village Name	Details of Locations	Field Code No.	Date of Measurement	Internal Diameter in mtr. (m)	Total Depth from measuring point in mtr. (depth in mbmp)	Static Water Level from Measuring Point in mtr. (level in mbmp)	Measuring Point i.e. MP distance above ground level in mtr. (magl)	Water Level below ground level (level in mbmp - magl = mbgl)
1.	Village- Pandharkwada	Dugwell of Shri Pandari Zitrajji Wadai Farm	DIL 1	16-05-2016	2.55	9.5	8.25	0.8	7.45
2.	Village- Sonegaon	Grampanchayat Dugwell, Near Hanuman Mandir	DIL 2	16-05-2016	4.10	9.8	9.25	0.8	8.45
3.	Village- Sonegaon	Borewell of Shri Kundlik Vishwanath Urkude.	DIL 3	16-05-2016	0.16	80.0	31.55	0.1	31.44
4.	Village- Yerur	Dugwell of Shri Ravindra Pandurangji Balki	DIL 4	16-05-2016	6.0	9.5	8.70	0.1	8.6
5.	Village- Wandhari	Dugwell of Shri Anandrao Vithoba Kavarashe Farm	DIL 5	16-05-2016	5.0	10.3	12.45	0.2	12.25

Continue to....



6.	Village- Yerur	Grampanchayat Dugwell near Primary School	DIL 6	16-05-2016	4.95	11.0	10.65	0.7	9.95
7.	Village- Chodpeth	Dugwell of Shiv Mandir	DIL 7	16-05-2016	4.50	9.0	8.80	0.6	8.20
8.	Village- Tadali	Grampanchayat Dugwell Near Z. P. Primary School	DIL 8	16-05-2016	3.65	12.35	9.10	0.8	8.30
9.	Village- Morwa	Dugwell near Jagnath Baba Mandir	DIL 9	16-05-2016	2.40	14.80	5.30	0.8	4.50
10.	Village- Mursa	Grampanchayat, Dugwell near Z.P. Primary School	DIL 10	16-05-2016	7.0	10.8	9.55	4.4	5.15
11.	MIDC, Tadali	Piezometer Well No.5 near Chimney Area	DIL 11	16-05-2016	0.1	15.0	8.30	0.2	8.1
12.	MIDC, Tadali	Piezometer Well No.4 behind Site Office near Cooling Tower, DIL	DIL 12	16-05-2016	0.1	15.0	9.85	0.1	9.75
13	Village- Wadha	Intake Well	DIL 12	16-05-2016	11.0	21.8	17.70	2.20	15.5

Note: - Monitoring done by MOEF approved Third party.



# AUGUST – 2016

Sr. No. of Villages	Village Name	Details of Locations	Field Code No.	Date of Measurement	Internal Diameter in mtr. (m)	Total Depth from measuring point in mtr. (depth in mbmp)	Static Water Level from Measuring Point in mtr. (level in mbmp)	Measuring Point i.e. MP distance above ground level in mtr. (magl)	Water Level below ground level (level in mbmp - magl = mbgl)
1.	Village- Pandharkwada	Dugwell of Shri Pandari Zitiraji Wadai Farm	DIL 1	22-08-2016	2.55	9.5	3.20	0.8	2.40
2.	Village- Sonegaon	Grampanchayat Dugwell, Near Hanuman Mandir	DIL 2	22-08-2016	4.10	9.8	2.40	0.8	1.60
3.	Village- Sonegaon	Borewell of Shri Kundlik Vishwanath Urkude,	DIL 3	22-08-2016	0.16	80.0	28.34	0.1	28.24
4.	Village- Yerur	Dugwell of Shri Ravindra Pandurangji Balki	DIL 4	22-08-2016	6.0	9.5	3.70	0.1	3.60
5.	Village- Wandhari	Dugwell of Shri Anandrao Vithoba Kavarashe Farm	DIL 5	22-08-2016	5.0	10.3	3.20	0.2	3.0
6.	Village- Yerur	Grampanchayat Dugwell near Primary School	DIL 6	22-08-2016	4.95	11.0	4.30	0.7	3.60
7.	Village- Ghodpeth	Dugwell of Shiv Mandir	DIL 7	22-08-2016	4.50	9.0	2.50	0.6	1.90
8.	Village- Tadali	Grampanchayat Dugwell Near Z. P. Primary School	DIL 8	22-08-2016	3.65	12.35	2.20	0.8	1.40
9.	Village- Morwa	Dugwell near Jagnath Baba Mandir	DIL 9	22-08-2016	2.40	14.80	1.40	0.8	0.60



Sr. No. of Villages	Village Name	Details of Locations	Field Code No.	Date of Measurement	Internal Diameter in mtr. (m)	Total Depth from measuring point in mtr. (depth in mbmp)	Static Water Level from Measuring Point in mtr. (level in mbmp)	Measuring Point i.e. MP distance above ground level in mtr. (magl)	Water Level below ground level (level in mbmp - magl = mbgl)
10.	Village- Mursa	Grampanchayat. Dugwell near Z.P. Primary School	DIL 10	22-08-2016	7.0	10.8	4.4	2.40	2.0
11.	MIDC, Tadali	Piezometer Well No.5 near Chimney Area	DIL 11	22-08-2016	0.1	15.0	7.34	0.2	7.14
12.	MIDC, Tadali	Piezometer Well No.4 behind Site Office near Cooling Tower, DIL	DIL 12	22-08-2016	0.1	15.0	8.10	0.1	8.0
13	Village- Wadha	Intake Well	DIL 12	22-08-2016	11.0	21.8	16.3	2.20	14.1

Note :- Monitoring done by MOEF approved Third party.

## ENCLOSURE -2

## WATER QUALITY STATUS

Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Concentration							
			Location							
			Dugwell Pandari Farm, Pandharkawda )	Water (Mr. Wadai Village- )	Borewell Panchayat Hanuman Mandir, Village- Sonegaon)	Water (Gram near Borewell)	Borewell Kundlik Urkude Farm, Village- Sonegaon)	Water (Mr. Vishwanath Farm, Village- )	Dugwell Ravindra Pandurang Bulki Farm, Village- Yerur)	Water (Mr. )
1.	Colour, Hazen units	5/15	15-05-2016	<5.0	15-05-2016	<5.0	15-05-2016	<5.0	15-05-2016	<5.0
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.00	7.36	7.36	7.71	7.83	7.83	7.83	7.83
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	0.4	0.1	0.1	0.1	0.20	0.20	0.20	0.20
6.	Total dissolved solids, mg/l	500/2000	2483.8	1333.8	1333.8	410.9	757.5	757.5	757.5	757.5
7.	Boron (as B) mg/l	0.5/1.0	0.36	0.19	0.19	0.009	0.09	0.09	0.09	0.09
8.	Calcium (as Ca) ,mg/l	75/200	305.6	140.8	140.8	67.2	59.2	59.2	59.2	59.2
9.	Chloride (as Cl), mg/l	250/1000	473.0	202.0	202.0	14.8	64.1	64.1	64.1	64.1
10.	Copper (as Cu), mg/l	0.05/1.5	0.02	0.06	0.06	0.007	0.01	0.01	0.01	0.01
11.	Fluoride ( as F), mg/l	1.0/1.5	0.14	0.47	0.47	1.04	0.73	0.73	0.73	0.73
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Continue to....



13	Iron (as Fe), mg/l	0.3	<0.05	0.28	<0.05	<0.05
14	Magnesium (as Mg), mg/l	30/100	109.3	44.9	24.4	35.1
15	Manganese (as Mn), mg/l	0.1/0.3	0.01	0.01	0.007	0.008
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	25.8	26.6	5.25	17.8
17	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	141.5	99.2	23.8	57.2
18	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	361.2	327.6	294.0	407.4
19	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	1212.0	536.0	268.0	292.0
20	Zinc (as Zn) mg/l	5/15	0.1	0.08	0.05	0.04
21	Lead (as Pb) mg/l	0.01	0.01	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	<0.001	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	0.02	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	0.04	0.04	0.01	0.01
25	Total Coliform Bacteria, (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
26	Thermo tolerant Coliform Bacteria/E. Coli (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Note :- Monitoring done by MOEF approved Third party.

Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Concentration			
			Location			
			Dugwell Water of Shiv Mandir, Village- Wadhri	Dugwell Water ( Near Jagnath Baba Mandir, Marwa )	Dugwell Water (Shiv Mandir, Village – Ghodpeth)	Dugwell Water (Grampanchayat Dugwell Near ZP Primary School, Village – Tadali)
1.	Colour, Hazen units	5/15	15-05-2016 <5.0	15-05-2016 <5.0	15-05-2016 <5.0	15-05-2016 <5.0
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.52	7.52	7.73	7.97
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	0.30	0.2	0.1	0.2
6.	Total dissolved solids, mg/l	500/2000	562.1	528.0	602.9	914.9
7.	Boron (as B) mg/l	0.5/1.0	0.03	0.019	0.03	0.119
8.	Calcium (as Ca) mg/l	75/200	97.6	64.0	97.6	115.2
9.	Chloride (as Cl), mg/l	250/1000	37.5	48.3	22.7	163.9
10.	Copper (as Cu), mg/l	0.05/1.5	0.03	0.008	0.008	0.01
11.	Fluoride (as F), mg/l	1.0/1.5	0.85	0.46	1.14	0.60
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1	<0.1	<0.1	<0.1

Continue to....



13	Iron (as Fe), mg/l	0.3	0.07	<0.05	0.05	<0.05
14	Magnesium (as Mg), mg/l	30/100	28.3	31.2	29.3	76.1
15	Manganese (as Mn), mg/l	0.1/0.3	0.01	0.008	0.006	0.005
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	0.91	1.54	5.26	25.9
17	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	66.0	34.6	82.5	62.6
18	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	260.4	344.4	277.2	394.8
19	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	340.0	228.0	364.0	600.0
20	Zinc (as Zn) mg/l	5/15	0.09	0.03	<0.03	<0.03
21	Lead (as Pb) mg/l	0.01	<0.01	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	<0.001	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	<0.01	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	0.02	0.01	0.007	0.008
25.	Total Coliform Bacteria, (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
26.	Thermotolerant Coliform Bacteria/E. Coli (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Note :- Monitoring done by MOEF approved Third party.

Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Ground Water from Intake Well near Wadha Village
			15-05-2016
1.	Colour, Hazen units	5/15	<5.0
2.	Odour	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	8.09
4.	Taste	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	0.1
6.	Total dissolved solids, mg/l	500/2000	401.1
7.	Boron (as B) mg/l	0.5/1.0	0.009
8.	Calcium (as Ca) .mg/l	75/200	60.8
9.	Chloride (as Cl), mg/l	250/1000	16.8
10.	Copper (as Cu), mg/l	0.05/1.5	0.01
11.	Fluoride (as F), mg/l	1.0/1.5	0.19
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1
13.	Iron (as Fe), mg/l	0.3	<0.05
14.	Magnesium (as Mg), mg/l	30/100	34.2
15.	Manganese (as Mn), mg/l	0.1/0.3	0.008
16.	Nitrate (as NO <sub>3</sub> ), mg/l	45	3.75
17.	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	39.6
18.	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	260.4
19.	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	292.0
20.	Zinc (as Zn) mg/l	5/15	0.03
21.	Lead (as Pb) mg/l	0.01	<0.01
22.	Mercury (as Hg) mg/l	0.05	<0.001
23.	Total Arsenic (as As) mg/l	0.01	<0.01
24.	Total Chromium (as Cr) mg/l	0.001	0.01
25.	Total Coliform Bacteria, (CFU /100 ml)	Shall not be Detectable	Not Detected
26.	Thermotolerant Coliform Bacteria/E. Coli (CFU /100 ml)	Shall not be Detectable	Not Detected

Note :- Monitoring done by MOEF approved Third party.



Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Concentration Location			
			Dugwell Water (Mr. Pandari Zitiraji Wadai Farm, Village- Pandharkawda )	Borewell Water (Gram Panchayat Borewell near Hanuman Mandir, Village- Sonegaon)	Borewell Water (Mr. Kundlik Vishwanath Urkude Farm, Village- Sonegaon)	Dugwell Water (Mr. Ravindra Pandurang Bulki Farm, Village- Yerur)
1.	Colour, Hazen units	5/15	22-08-2016 <5.0	22-08-2016 <5.0	22-08-2016 <5.0	22-08-2016 <5.0
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.11	7.20	7.57	8.40
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	<0.1	2.2	<0.1	0.4
6.	Total dissolved solids, mg/l	500/2000	3217.5	2034.7	639.6	684.3
7.	Boron (as B) mg/l	0.5/1.0	0.14	0.08	0.03	0.03
8.	Calcium (as Ca) .mg/l	75/200	274.4	150.5	68.9	47.0
9.	Chloride (as Cl), mg/l	250/1000	443.5	259.3	12.7	14.7
10.	Copper (as Cu), mg/l	0.05/1.5	0.012	0.01	<0.006	<0.006
11.	Fluoride ( as F), mg/l	1.0/1.5	0.15	0.67	0.842	1.10
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1	<0.1	<0.1	<0.1

Continue to....

13	Iron (as Fe), mg/l	0.3	<0.05	0.28	<0.05	<0.05
14	Magnesium (as Mg), mg/l	30/100	103.3	38.2	21.0	12.4
15	Manganese (as Mn), mg/l	0.1/0.3	0.018	0.03	<0.003	<0.003
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	1.8	1.1	0.80	0.73
17	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	88.7	81.0	26.9	44.1
18	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	243.6	210.0	180.6	163.8
19	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	1109.3	533.1	258.7	168.6
20	Zinc (as Zn) mg/l	5/15	2.84	1.09	0.128	0.253
21	Lead (as Pb) mg/l	0.01	0.050	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	0.002	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	0.031	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	0.019	0.01	<0.005	0.007
25.	Total Coliform Bacteria, (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
26.	Thermotolerant Coliform Bacteria/E. Coli (CFU /100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Note :- Monitoring done by MOEF approved Third party.



Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Concentration			
			Location			
			Dugwell Water of Shiv Mandir , Village- Wandhri	Dugwell Water ( Near Jagnath Baba Mandir, Marwa )	Dugwell Water (Shiv Mandir , Village – Ghodpeth)	Dugwell Water (Grampanchyat Dugwell Near ZP Primary School, Village – Tadali)
1.	Colour, Hazen units	5/15	22-08-2016 <5.0	22-08-2016 <5.0	22-08-2016 <5.0	22-08-2016 <5.0
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.00	7.59	7.78	8.12
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	0.50	0.3	<0.1	1.0
6.	Total dissolved solids, mg/l	500/2000	2074.8	827.9	704.2	1328.7
7.	Boron (as B) mg/l	0.5/1.0	0.08	0.03	0.02	0.06
8.	Calcium (as Ca) ,mg/l	75/200	137.9	67.4	87.8	94.1
9.	Chloride (as Cl), mg/l	250/1000	188.8	57.2	24.6	125.2
10.	Copper (as Cu), mg/l	0.05/1.5	0.010	0.009	0.008	0.012
11.	Fluoride (as F), mg/l	1.0/1.5	1.05	0.416	1.06	0.585
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1	<0.1	<0.1	<0.1

Continue to....

13	Iron (as Fe), mg/l	0.3	0.17	0.08	<0.05	0.07
14	Magnesium (as Mg), mg/l	30/100	54.5	40.2	13.4	55.5
15	Manganese (as Mn), mg/l	0.1/0.3	0.031	0.029	0.012	0.063
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	1.80	0.52	0.6	1.2
17	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	106.3	18.5	61.1	77.0
18	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	298.2	235.2	168.0	184.8
19	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	568.4	333.2	274.4	462.6
20	Zinc (as Zn) mg/l	5/15	1.24	0.650	0.428	0.954
21	Lead (as Pb) mg/l	0.01	0.01	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	<0.001	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	<0.01	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	<0.005	0.007	0.014	0.015
25.	Total Coliform Bacteria, (CFU/100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
26.	Thermotolerant Coliform Bacteria/E. Coli (CFU/100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Note :- Monitoring done by MOEF approved Third party.



Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012 )	Ground Water from Intake Well near Wadha Village
			22-08-2016
1.	Colour, Hazen units	5/15	<5.0
2.	Odour	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	8.21
4.	Taste	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	0.4
6.	Total dissolved solids, mg/l	500/2000	482.5
7.	Boron (as B) mg/l	0.5/1.0	0.04
8.	Calcium (as Ca) ,mg/l	75/200	51.7
9.	Chloride (as Cl), mg/l	250/1000	22.7
10.	Copper (as Cu), mg/l	0.05/1.5	0.008
11.	Fluoride (as F), mg/l	1.0/1.5	0.173
12.	Free Residual Chlorine, mg/l	0.2/1.0	<0.1
13.	Iron (as Fe), mg/l	0.3	<0.05
14.	Magnesium (as Mg), mg/l	30/100	19.1
15.	Manganese (as Mn), mg/l	0.1/0.3	0.014
16.	Nitrate (as NO <sub>3</sub> ), mg/l	45	0.62
17.	Sulphate (as SO <sub>4</sub> ), mg/l	200/400	37.3
18.	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	200/600	109.2
19.	Total Hardness (as CaCO <sub>3</sub> ) mg/l	300/600	207.8
20.	Zinc (as Zn) mg/l	5/15	0.241
21.	Lead (as Pb) mg/l	0.01	<0.01
22.	Mercury (as Hg) mg/l	0.05	<0.001
23.	Total Arsenic (as As) mg/l	0.01	<0.01
24.	Total Chromium (as Cr) mg/l	0.001	0.011
25.	Total Coliform Bacteria, (CFU /100 ml)	Shall not be Detectable	Not Detected
26.	Thermotolerant Coliform Bacteria/E. Coli (CFU /100 ml)	Shall not be Detectable	Not Detected

Note :- Monitoring done by MOEF approved Third party.

## ENCLOSURE - 3

### STACK EMISSION QUALITY STATUS

Sr. No .	Parameters	Concentration						
		April - 2016	May-2016		June-2016		July-2016	
			TPP Unit II	TPP Unit II (Shift -1)	TPP Unit II (Shift -2)	TPP Unit II		TPP Unit II
1.	Total Particulate Matter, mg/Nm <sup>3</sup>	20.2	25.8	15.7	23.8	13.9	23.1	40.5
2.	Sulphur Oxides as SO <sub>2</sub> , mg/ Nm <sup>3</sup>	1126.1	1164.8	1215.2	1183.7	1372.4	1204.1	1269.1
3.	Sulphur Oxides as SO <sub>2</sub> , Kg/Hr	779.0	780.6	748.7	851.3	976.1	842.3	916.3
4.	Oxides of Nitrogen as NO <sub>2</sub> , mg/Nm <sup>3</sup>	653.0	569.0	599.6	582.6	597.8	316.0	392.0
5.	Oxides of Nitrogen as NO <sub>2</sub> , ppm	347.1	302.4	318.4	309.7	317.8	167.9	4.51
6	Mercury as Hg, mg/Nm <sup>3</sup>	--	0.011	0.009	0.012	0.014	0.014	0.015

Note :- Monitoring done by MOEF approved Third party.



Sr. No.	Parameters	Concentration					
		August-2016				September -2016	
		D.G. Set No.1 1500 KVA (Left Bank)	D.G. Set No.2 1500 KVA (Left Bank)	D.G. Set No.1 1500 KVA Right Bank	D.G. Set No.2 1500 KVA (Right Bank)	TPP Unit- II	TPP Unit II
1.	Total Particulate Matter, mg/Nm <sup>3</sup>	31.2	28.6	31.6	26.1	14.8	19.2
2.	Sulphur Oxides as SO <sub>2</sub> , mg/ Nm <sup>3</sup>	85.6	78.5	60.8	50.5	1182.9	1080.4
3.	Sulphur Oxides as SO <sub>2</sub> , Kg/Hr	0.18	0.16	0.13	1.00	855.1	783.2
4.	Oxides of Nitrogen as NO <sub>2</sub> , mg/Nm <sup>3</sup>	116.0	114.0	97.0	98.0	338.0	379.0
5.	Oxides of Nitrogen as NO <sub>2</sub> , ppm	61.7	60.5	51.6	52.1	79.6	201.5
6	Mercury as Hg, mg/Nm <sup>3</sup>	--	--		--	0.014	0.016

## ENCLOSURE – 4

### AMBIENT NOISE QUALITY STATUS

Location			VIP Gate( Near AAOMS Cabin - 01)		ETP (near AAQMS Cabin -02 & RWH Pond )		Old Switch Yard (Near AAQMS Cabin-03)	
Parameters	Month	Reading	During Day Time	During Night Time	During Day Time	During Night Time	During Day Time	During Night Time
Noise Level in dB (A)	April-2016	Leq	61.7	51.2	52.3	44.1	55.6	46.4
	May-2016	Leq	59.3	45.5	50.9	41.7	56.8	42.7
	June-2016	Leq	56.7	45.6	55.6	46.9	57.5	45.8
	July-2016	Leq	64.2	55.1	57.8	50.5	55.2	51.9
	August-2016	Leq	60.0	53.7	53.0	51.2	54.6	48.8
	September-2016	Leq	51.5	46.8	53.6	47.1	57.6	50.0
Norms		Industrial Area	75	70	75	70	75	70

Note :- Monitoring done by MOEF approved Third party.



**1.0 Location: - VIP Gate (near AAOMS Cabin-01)**

Sr. No.	Parameters	Norms	Concentration					
			April-2016	May-2016	June-2016	July-2016	August- 2016	September - 2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	16.4	7.09	9.00	8.26	7.36	4.37
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	14.9	22.3	14.6	7.80	3.64	9.61
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	63.9	63.4	46.1	39.5	44.5	24.6
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	60	37.9	31.9	16.2	18.4	22.9	9.97
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	0.70	1.18	0.85	0.51	3.00	0.53
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.40	0.43	0.36	0.32	0.36	0.18
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	7.09	4.48	3.68	6.26	14.2	7.92
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	4.0	3.70	2.86	3.42	3.82	0.58
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.8	0.70	0.63	0.69	0.74	0.16
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	5.20	4.20	4.16	5.32	4.84	2.74
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	14.6	13.8	12.6	15.8	15.3	8.32

Note :- Monitoring done by MOEF approved Third party.

2.0 Location: - ETP (Near AAQMS Cabin-02 & RWH Pond )

Sr. No.	Parameters	Norms	Concentration					
			April-2016	May-2016	June-2016	July - 2016	August-2016	September-2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	8.39	7.27	26.0	4.89	4.33	4.06
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	11.9	21.7	10.8	6.83	6.04	11.5
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	68.5	64.9	59.1	41.8	42.8	22.6
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> )µg/m <sup>3</sup>	60	32.4	31.4	32.2	15.5	17.8	11.0
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	0.29	0.42	0.73	0.55	1.96	1.25
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.32	0.30	0.32	0.35	0.34	0.30
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	18.1	3.68	3.95	3.88	6.84	12.0
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	3.6	3.7	2.94	3.28	3.82	2.81
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.6	0.65	0.74	0.81	0.73	0.58
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	5.0	4.5	4.84	5.36	4.86	3.14
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	12.6	11.8	14.1	16.2	17.7	7.32

Note :- Monitoring done by MOEF approved Third party.



**3.0 Location: - Old Switch Yard (Near AAQMS Cabin-03)**

Sr. No.	Parameters	Norms	Concentration					
			April -2016	May-2016	June -2016	July-2016	August-2016	September-2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	11.9	22.1	32.7	12.3	8.31	4.74
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	12.8	19.6	8.04	9.40	5.67	6.44
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	71.3	52.3	55.9	40.5	43.7	31.7
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	60	31.9	36.6	26.8	18.8	22.5	14.8
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	0.19	0.67	0.65	0.89	1.61	0.49
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.26	0.37	0.31	0.36	0.34	0.22
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	35.3	3.84	4.43	6.03	15.0	9.90
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	4.7	3.6	3.82	3.41	3.72	1.58
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.8	0.6	0.58	0.76	0.74	0.31
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	5.4	4.0	3.96	5.43	4.80	2.76
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	16.8	10.7	15.1	17.4	18.4	5.88

Note :- Monitoring done by MOEF approved Third party.

4.0 Location: - Mr. Maroti Shankar Roge house Village-Sonegaon

Sr. No.	Parameters	Norms	Concentration					
			April -2016	May-2016	June-2016	July-2016	August-2016	September-2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	9.91	15.2	11.8	5.34	8.79	2.93
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	14.0	25.3	13.0	8.15	5.40	8.42
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	65.3	56.9	52.0	49.4	56.5	48.9
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> )µg/m <sup>3</sup>	60	37.9	23.1	24.4	22.3	28.1	21.2
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	0.59	1.05	0.78	0.35	7.72	1.04
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.36	0.41	0.44	0.45	0.48	0.44
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	5.76	4.37	4.62	20.6	13.6	8.88
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	3.1	4.3	3.96	4.82	3.90	1.30
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.4	0.93	0.61	0.92	0.76	0.30
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	3.2	4.9	4.08	5.84	4.87	2.58
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	11.8	18.3	11.8	18.4	17.8	5.16

Note :- Monitoring done by MOEF approved Third party.



**5.0 Location: - Terrace of Shri Bapurao Pimpalkar House, Village - Wandhri**

Sr. No.	Parameters	Norms	Concentration					
			April-2016	May-2016	June-2016	July-2016	August-2016	September - 2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	8.41	14.8	30.6	14.5	3.45	3.69
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	7.44	24.2	11.1	14.3	4.07	5.92
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	64.2	76.5	51.1	46.2	47.1	25.1
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> )µg/m <sup>3</sup>	60	34.4	27.7	26.9	22.3	19.3	10.4
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	0.29	0.75	0.87	0.78	0.57	0.73
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.40	0.45	0.46	0.38	0.32	0.45
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	8.12	4.78	5.45	3.79	4.55	7.63
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	4.8	4.53	4.18	3.14	3.73	1.82
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.9	0.82	0.83	0.56	0.76	0.70
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	5.5	4.87	5.16	4.80	4.92	3.04
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	16.8	14.2	16.3	11.7	16.4	7.12

Note :- Monitoring done by MOEF approved Third party.

6.0 Location: - Terrace of Gram Panchayat, Village- Yerur

Sr. No.	Parameters	Norms	Concentration					
			April -2016	May-2016	June - 2016	July-2016	August-2016	September - 2016
1.	Sulphur Dioxide ( SO <sub>2</sub> ) µg/m <sup>3</sup>	80	20.4	9.67	23.8	6.58	8.38	3.01
2.	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	9.66	21.6	10.8	5.72	4.42	5.46
3.	Particulate Matter of size less than 10 µm ( PM <sub>10</sub> ) µg/m <sup>3</sup>	100	78.9	81.5	66.6	51.1	51.1	31.5
4.	Particulate Matter of size less than 2.5 µm (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	60	37.9	37.0	35.6	23.9	24.2	12.6
5.	Ozone (O <sub>3</sub> ) (µg/m <sup>3</sup> )	100	1.09	0.84	0.87	0.36	10.1	0.68
6.	Lead (Pb) (µg/m <sup>3</sup> )	0.5	0.44	0.33	0.47	0.44	0.37	0.41
7.	Carbon Monoxide (CO) (mg/m <sup>3</sup> )	2	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
8.	Ammonia (NH <sub>3</sub> ) (µg/m <sup>3</sup> )	100	5.18	5.09	5.94	8.32	6.96	8.15
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) (µg/m <sup>3</sup> )	5	4.6	4.61	3.82	3.72	3.90	2.71
10.	Benzo(a) Pyrene (BaP) (ng/m <sup>3</sup> )	1	0.8	0.78	0.86	0.76	0.76	0.53
11.	Arsenic (As) (ng/m <sup>3</sup> )	6	5.3	4.53	4.96	4.16	4.82	3.83
12.	Nickel (Ni) (ng/m <sup>3</sup> )	20	18.2	11.6	16.2	14.8	16.9	8.18

Note :- Monitoring done by MOEF approved Third party



**ENCLOSURE -7**

**Monitoring the Implementation of Environmental Safeguards**

**Ministry of Environment & Forests**

**Regional Office (W), Nagpur**

Monitoring Report		
PART- I		
DATA SHEET		
Ref No.	DIL/MoEF/HSE/22	Date : 25-10-2016
1.	Project type : River-valley/Mining / Industry/Thermal/Nuclear/other (specify)	: Thermal Power Plant
2	Name of the project	: M/s. Dhariwal Infrastructure Ltd. Plot No. C-6, C-7 & C-8, Tadali Industrial Area, MIDC, Village – Tadali, Dist. - Chandrapur
3.	Clearance letter (s)/OM no and date	: J-13011/10/2009-IA. II (T) dated 04 -12-2009
4.	Location	
	a. District (s)	: Chandrapur
	b. State(s)	: Maharashtra
	c. Latitude/Longitude	: Latitude : 20°00'30" to 20°01'20" North Longitude 79°11'50" to 79°12'35" East
5.	Address for correspondence	
	a. Address of Concerned Project Chief Engineer (with pin code & telephone/telex/fax numbers)	: Shri. Rabi Chowdhury, Managing Director M/s. Dhariwal Infrastructure Ltd. Plot No. C-6, C-7 & C-8, Tadali Industrial Area, MIDC, Village – Tadali, Dist. – Chandrapur, PIN - 442406 Phone No. 07172-645911-13 Fax No.- 07172-237992
	b. Address of Executive Project Engineer/Manager (with pin code/fax numbers)	: Shri. Basab Ghose Vice President M/s. Dhariwal Infrastructure Ltd. Plot No. C-6, C-7 & C-8, Tadali Industrial Area, MIDC, Village – Tadali, Dist. – Chandrapur PIN - 442406 Phone No. 07172-645911-13 Fax No.- 07172-237992
6	Salient features	
	a. of the project	: Please refer <b>Annexure-1</b>
	b. of the environmental management plans	:
7.	Break up of the project area	
	a. submergence area : forest & non-forest	: Not applicable since the Unit is set up in



			MIDC Industrial Area																						
	b.	Others	: Total project area : 480 Acres Area earmarked for green belt development is 138 Acres																						
8.	Break up of the project affected population with enumeration of those losing houses/dwelling units only agricultural land only, both dwelling units & agricultural land & landless laborers/artisan (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)		: Not applicable since the Unit is set up in MIDC Industrial Area																						
9.	Financial details																								
	a.	Project cost as originally planned and subsequent revised estimates and the year of price reference	: Total project cost originally planned was Rs. 3054 Crores . The gross capital incurred as on date is Rs. 3938.11 Crores.																						
	b.	Allocation made for environmental management plans with item wise and year wise break-up																							
Sr.No.	Particular		<table><tr><th>Capital Cost (Rs. In lacs) Incurred from April 16 till 30<sup>th</sup> Sept.16</th><th>Recurring Cost (Rs. In lacs) Incurred from April 16 till 30<sup>th</sup> Sept.16</th></tr><tr><td></td><td>81.70</td></tr><tr><td>1</td><td>Air Pollution Control</td></tr><tr><td>2</td><td>Water Pollution Control</td></tr><tr><td>3</td><td>Noise Pollution Control</td></tr><tr><td>4</td><td>Environment Monitoring and Management</td></tr><tr><td>5</td><td>Reclamation borrow/mined area</td></tr><tr><td>6</td><td>Occupational Health</td></tr><tr><td>7</td><td>Green Belt and Land Environment</td></tr><tr><td>8</td><td>Others (Pl. Specify) Socio-economic Environment</td></tr><tr><td colspan="2">Total</td></tr></table>	Capital Cost (Rs. In lacs) Incurred from April 16 till 30 <sup>th</sup> Sept.16	Recurring Cost (Rs. In lacs) Incurred from April 16 till 30 <sup>th</sup> Sept.16		81.70	1	Air Pollution Control	2	Water Pollution Control	3	Noise Pollution Control	4	Environment Monitoring and Management	5	Reclamation borrow/mined area	6	Occupational Health	7	Green Belt and Land Environment	8	Others (Pl. Specify) Socio-economic Environment	Total	
Capital Cost (Rs. In lacs) Incurred from April 16 till 30 <sup>th</sup> Sept.16	Recurring Cost (Rs. In lacs) Incurred from April 16 till 30 <sup>th</sup> Sept.16																								
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4	Environment Monitoring and Management																								
5	Reclamation borrow/mined area																								
6	Occupational Health																								
7	Green Belt and Land Environment																								
8	Others (Pl. Specify) Socio-economic Environment																								
Total																									
			176.71																						
	c.	Benefit cost ratio/Internal rate of Return and the year of assessment	: The construction work is started in the financial year 2010-11 and Plant is commissioned in two phases in Aug.2014 and Nov. 2014.																						
	d.	Whether (c) includes the cost of environmental management as shown in the above	: Yes																						
	e	Actual expenditure incurred on the project so far	: Rs. 3938.11 Crores																						
	f.	Actual expenditure incurred on the environmental management plans so far	: Total Recurring Cost : Rs. 176.71 Lakh																						



10	Forest land requirement		
	a.	The status of approval for diversion of forest land for non-forestry use	: Not applicable, since the Unit is located in MIDC Industrial Area, Tadali, Chandrapur.
	b.	The status of clearing felling	: Not applicable
	c.	The status of compensatory afforestation, if any	: Not applicable
	d.	Comments on the viability & sustainability of compensatory afforestation programme in the light actual field experience so far	: Not applicable
11	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information		: Not applicable
12	Status of construction		
	a.	Date of commencement (Actual and/or planned)	: June 2010
	b.	Date of completion (Actual and/of planned)	: Aug. 2014
13	Reasons for the delay if the project is yet to start		: Work is completed.
14	Dates of site visits		
	a.	The dates on which the project was monitored by the Regional Office on previous occasions, if any.	: Nil
	b.	Date of site visit for this monitoring report.	: --
15	Details of correspondence with project authorities for obtaining action plans/information on status of compliance to safeguards other than the routine letters for logistic support for site visits.		: DIL is regularly submitting Half Yearly Compliance Reports since April 2010.
	(The first monitoring report may contain the details of all the letters issued so far, but the later reports may cover only the letters issued subsequently.)		

For DHARIWAL INFRASTRUCTURE LTD.

*Basab Ghose*  
(Basab Ghose)  
Vice President

## **ANNEXURE-1**

### **SALIENT FEATURES**

#### **1.0 Salient Features of the Project**

- ❖ It is a coal based Thermal Power Plant (TPP) of capacity @ 2 x 300 MW. The requirement of coal is 3.0 Million TPA and full fledged coal handling plant is installed in the Unit.
- ❖ Auxiliary fuel, LDO is stored in 2 X 1000 m<sup>3</sup> storage capacity tank.
- ❖ Total fresh water requirement is 19.272 Million KL Per Annum and it is fulfilled from Wardha River.
- ❖ Rail infrastructure & Road network is adequately available.
- ❖ The 400 KV Sub-Station - Chandrapur is located at 7.0 km towards East direction and connected for power evacuation.
- ❖ The ash handling system comprising dry extraction by pneumatic conveying system has been provided, Ash bund of adequate capacity is also provided. Ash disposal as per Fly Ash Notification Nov. 2008 is in progress.
- ❖ The operation of 2 x 300 MW TPP is started with all pollution control systems.

#### **2.0 Salient Features of Environment Management Plan**

The adequate pollution control measures with latest pollution control system are installed in the Plant.

The EMP has been prepared to further mitigate the impacts, if any, on environment due to the Unit and to ensure that the study area will be well conserved during construction and operation phase of the TPP.

##### **2.1.1 Construction Phase**

- ❖ For construction activities, local laborers were employed to maximum extent and the outside laborers were provided with temporary housing, at the site itself.
- ❖ Leveling activities and heavy vehicular movements normally cause increase in dust level. As a mitigation measure, water sprinkling in unpaved construction areas/roads were resorted at regular intervals
- ❖ The total noise effect on nearest villages during the construction stage were negligible.
- ❖ The onsite workers using high noise equipment and working in the noisy area adopted noise protection devices like ear muffs / plugs.
- ❖ Construction equipments are limited to the construction area only and the site were secured by boundary wall with adequate secured entry points.



- ❖ Adequate security arrangements were made to ensure that local residents and stray animals shall not expose during construction activities.

## **2.1.2 Operation Phase**

### **2.1.2.1 Land Environment**

The EMP for land environment is to scientifically utilize the capabilities of different plant species for attenuation of particulate and noise. Further, afforestation programme & green belt development programme is in progress on priority.

- ❖ The tree species selected for plantation are as per the CPCB Guidelines.
- ❖ Tree species are selected considering tolerance to specific conditions or alternatively wide adaptability to eco-physiological conditions.
- ❖ Fly ash is directly supplied to cement plants.
- ❖ Bottom ash is disposed at ash bund.
- ❖ Abandoned quarries/mines in the region will be studied for filling and leveling by bed ash as well as for green belt development.
- ❖ Generation of used/spent oil is insignificant and its disposal will be carried out scientifically.

### **21.2.2 Air Environment**

Generation of ambient air quality data helps to develop sustainable environment. Following measures are carried out for further environmental improvements:

- ❖ A system is developed for the regular check up and efficient maintenance of all the pollution control arrangements.
- ❖ Truck/wagon unloading operations are regularly supervised to reduce fugitive emissions.
- ❖ A green belt around the plant site and plantation within the plant premises especially around the possible sources of fugitive emissions is carried out
- ❖ Water sprinkling on roads is carried out to prevent dust pollution.

### **2.1.2.3 Noise Environment**

- ❖ The operator's cabins and control rooms are properly acoustically insulated with special doors and observation windows.
- ❖ Noise attenuating devices like ear plug and ear muffs are provided to protect the workers from high noise levels.
- ❖ Walls and ceilings are lined with sound absorbing materials, wherever required.
- ❖ The vent valves are equipped with silencers.

#### **2.1.2.4 Water Environment**

- ❖ The water conservation scheme is implemented in different sections/ operations so as to reduce water requirements.
- ❖ Regular monitoring and quantification of water requirement at various operations/sections is carried out.
- ❖ Rain water harvesting is carried out.
- ❖ All the pipeline/taps leakage are promptly attended to.

#### **2.1.2.5 Socio-Economic Environment**

Environmental Management Plan (EMP) is prepared considering the impacts which have manifested as a result of the ongoing activities i.e. existing socio-economic profile in the study area. The details are given below

- ❖ Though there is limited direct employment required in the TPP, still the local people are given opportunities for indirect jobs and business in the project.
- ❖ All workers, labours & staff are provided with personal protective appliances (PPEs') and safety gadgets.
- ❖ Social welfare programmes with reference to health, education, water conservation, income generation are organized in the nearby villages.
- ❖ For all the social welfare activities to be undertaken by the authorities, collaboration and consultation is sought with the local administration, grampanchayat, block development office, NGOs etc. for better co-ordination.
- ❖ Rest rooms, canteen, drinking water etc near the work place are provided for contract labours as well as transporters.





# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

## FORM V

Environmental Audit Report for the financial Year ending the 31st March 2016

### Company Information

**Company Name**

Dhariwal Infrastructure Limited

**Application UAN number**

MPCB-CONSENT 0000009208

**Address**

Dhariwal Infrastructure Limited

**Plot no**

C-6, C-7 & C-8

**Taluka**

Tadali Industrial area MIDC

**Village**

Tadali

**Capital Investment (In lakhs)**

393811

**Scale**

LSI

**City**

Chandrapur

**Pincode**

442406

**Person Name**

Devendra Tripathi

**Designation**

Manager-HSE

**Telephone Number**

9561112004

**Fax Number**

07172237992

**Email**

devendra.tripathi@rp-sg.in

**Region**

SRO-Chandrapur

**Industry Category**

Red

**Industry Type**

R81 Thermal Power Plants

**Last Environmental statement submitted online**

yes

**Consent Number**

BO/EIC no. CH-1764-15/CAC-CELL/CAC-13310

**Consent Issue Date**

19.10.2015

**Consent Valid Upto**

31.08.2016

**Product Information****Product Name**

Electricity generation

**Consent Quantity**

5256000

**Actual Quantity**

369154

**UOM**

Mwh

**By-product Information****By Product Name**

0

**Consent Quantity**

0

**Actual Quantity**

0

**UOM****1) Water Consumption in m3/day****Water Consumption for Process****Consent Quantity in m3/day**

5280

**Actual Quantity in m3/day**

219

**Cooling**

49440

8522

**Domestic**

40

35

**All others**

0

0

**Total**

54760

8776

**1) Effluent Generation in CMD / MLD****Particulars**

Trade Effluent

**Consent Quantity**

7776

**Actual Quantity**

134

**UOM**

CMD

Domestic Effluent

32

30

CMD

**2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)**

<b>Name of Products (Production)</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Power Generation	3.3	2.6	

**3) Raw Material Consumption (Consumption of raw material per unit of product)**

<b>Name of Raw Materials</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Coal	0.689	0.6643	
LDO	0.00000288	0.000001206	
Hydrochloric Acid	0.000206	0.0001143	
Caustic Lye	0.000088	0.00005086	
Sulphuric Acid	0.00036	0.00034	
Sodium hypochlorite	0.000179	0.000242	
Alum	0.000069	0.0000642	
Lime	0.000003	0.000023	

**4) Fuel Consumption**

<b>Fuel Name</b>	<b>Consent quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
Coal	4029600	245235	MT/A
LDO	4066	445	KL/A

**Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)**

**[A] Water**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour Concentration</b>	<b>Percentage of variation from prescribed standards with reasons %variation</b>	<b>Standard</b>	<b>Reason</b>
SS	3	22.55	0	100	0
OIL & GREASE	0.01	0.11	0	10	0
BOD	1.11	8.33	0	30	0
COD	14	107	0	250	0
TDS	188	1406	0	2100	0

**[B] Air (Stack)**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/NM3)</b>	<b>Percentage of variation from prescribed standards with reasons %variation</b>	<b>Standard</b>	<b>Reason</b>
TPM	465	25.37	0	50	0

**HAZARDOUS WASTES**

**1) From Process**

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
5.1 Used /spent oil	1.2	4.2	MT/A
34.2 Toxic metal-containing residue from water purificatio	3.2	0	MT/A
33.3 Discarded containers / barrels / liner	0	0	Nos./Y



2) From Pollution Control Facilities  
Hazardous Waste Type

	Total During Previous Financial year	Total During Current Financial year	UOM
34.4 Chemical sludge, oil and grease skimming residue	0	0	MT/A

**SOLID WASTES**

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
FLY ASH	85475	72385	MT/A
BOTTOM ASH	15963	10310	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
BIOLOGICAL SLUDGE	0	0	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
5.1 Used /spent oil	4.2	MT/A	Well below the norms
34.2 Toxic metal-containing residue from water purification	0	MT/A	0
34.4 Chemical sludge, oil and grease skimming residue	0	MT/A	0
33.3 Discarded containers / barrels / liner	0	Nos./Y	0

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
FLY ASH	72385	MT/A	NA
BOTTOM ASH	10310	MT/A	NA

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
After commissioning, plant run for very short duration	0	0	0	0	0	0

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection

Environmental Protection Measures

Capital Investment (Lacs)

Expenditure made on Air pollution, water pollution and land pollution control measures, Greenery development and other Environment protection measures

Expenditure made on Air pollution, water pollution and land pollution control measures, Greenery development and other Environment protection measures

0

**[B] Investment Proposed for next Year**

**Detail of measures for Environmental Protection**

**Environmental Protection Measures**

**Capital Investment (Lacs)**

Expenditure proposed on Air pollution, water pollution and land pollution control measures, Greenery development and other Environment protection measures

Expenditure proposed for on Air pollution, water pollution and land pollution control measures, Greenery development and other Environment protection measures as recurring is 206 lacs

111.50 lacs

**Any other particulars in respect of environmental protection and abatement of pollution.**

**Particulars**

Factory has already implemented all the necessary pollution control measures. Green belt development programme is a regular features.

**Name & Designation**

DEVENDRA PRASAD TRIPATHI, MANAGER HSE